IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Physical Activity, Sports Involvement, and Their Influence on Learning Efficiency among Undergraduate Students

Dr.Ambadas S. Phatangare
Associate Professor in Physical Education,
Venutai Chavan Pratisthans Arts & Commerce Women's College, Ambajogai Dist.Beed

Dr.Namdev V. Phatangare
Director of Physical Education, Vishwakarma Institute of Technology, Bibewadi, Pune

Abstract : This research examines how staying active and playing sports directly boosts the academic performance and learning skills of undergraduate students. It defines "learning efficiency" through several lenses: memory, focus, time management, and classroom engagement. Evidence suggests that students who exercise regularly often develop better brain function and stress-management skills, leading to higher grades—with moderate exercise being particularly effective for mental clarity. Using a survey-based approach across various majors, the study confirms a strong link between movement and mental sharpness. However, it also notes a "tipping point" where over-committing to sports can sometimes cut into essential study time. Ultimately, the paper argues that colleges should integrate fitness into the curriculum to help students reach their full academic potential.

Keywords: Physical activity, sports involvement, learning efficiency, undergraduate students, academic performance, cognition, higher education

Introduction : In modern higher education, universities increasingly seek strategies to improve student performance, well-being, and academic success. Undergraduate students often face academic stress, sedentary lifestyles, irregular schedules, and mental fatigue. These factors can reduce learning efficiency, concentration, and motivation. One potential solution is increased engagement in physical activity and sports.

Physical activity includes bodily movement requiring energy expenditure, such as walking, jogging, cycling, gym workouts, and recreational games. Sports involvement refers to organized participation in competitive or non-competitive athletic activities such as football, basketball, badminton, swimming, and athletics.

Research indicates that physical activity improves brain health, memory, attention span, and executive function, all of which are essential for academic learning. Single exercise sessions and long-term participation may both enhance cognition and academic outcomes. Evidence also suggests mathematics and reading performance improve with increased physical activity.

This study explores how physical activity and sports involvement influence learning efficiency among undergraduate students.

Background of the Study :

These days, university students spend a lot of time using digital gadgets, studying online, and sitting through lectures. Fatigue, anxiety, poor concentration, and decreased productivity are all linked to sedentary lifestyles. On the other hand, students who participate in sports frequently acquire time management, discipline, collaboration, and resilience.

Exercise directly boosts academic accomplishment and indirectly increases academic mood and emotional intelligence, both of which improve learning outcomes, according to recent research on college students.

Problem Statement :

Ineffective study habits, poor focus, academic stress, and low productivity are common problems among college students. Many students stay sedentary because of academic pressure or ignorance, despite the fact that physical activity may increase learning efficiency.

The purpose of this study is to ascertain whether participation in sports and physical exercise has a major impact on undergraduate students' learning efficiency.

Objectives of the Study

1. To determine the level of physical activity among undergraduate students.
2. To examine students' involvement in sports activities.
3. To assess learning efficiency among undergraduate students.
4. To analyze the relationship between physical activity and learning efficiency.
5. To examine the effect of sports involvement on academic performance.
6. To recommend strategies for universities to improve student learning through physical activity.

Findings and Discussions : The findings of this study strongly suggest that physical activity and sports involvement play a substantial role in improving learning efficiency among undergraduate students. Learning efficiency refers not only to obtaining high grades, but also to the ability to understand concepts quickly, retain information for longer periods, manage study time effectively, remain motivated, and maintain concentration during academic tasks. In the context of modern higher education, where students are exposed to continuous academic pressure, deadlines, digital distractions, and sedentary lifestyles, physical activity becomes an important tool for cognitive and emotional support.

One of the most significant ways physical activity contributes to learning efficiency is through its positive effect on brain functioning. Scientific evidence indicates that exercise increases blood circulation and oxygen supply to the brain. This improved circulation supports neural activity and enhances the functioning of areas responsible for memory, concentration, and decision-making. When undergraduate students engage in regular exercise such as walking, running, cycling, swimming, or gym workouts, their brains receive greater stimulation, making them more alert and mentally prepared for learning tasks. As a result, students who exercise regularly often report improved focus during lectures, better comprehension while reading, and faster processing of information.

Another major contribution of physical activity is its effect on memory retention. Undergraduate students are required to absorb large volumes of information across multiple subjects. Many students struggle not because they lack intelligence, but because stress and fatigue reduce their ability to remember learned material. Exercise has been linked with the production of brain-derived neurotrophic factor (BDNF), a protein associated with the growth and maintenance of brain cells. Increased BDNF levels can strengthen

memory formation and learning capacity. Therefore, students who maintain active lifestyles may experience better recall during examinations and stronger long-term retention of academic content.

Furthermore, physical activity helps reduce psychological barriers to learning, especially stress, anxiety, and depression. Many undergraduate students experience emotional strain due to examinations, financial pressure, family expectations, or uncertainty about future careers. High stress levels negatively affect concentration, sleep quality, and motivation. Exercise acts as a natural stress reliever by stimulating endorphin production and reducing cortisol levels. Students who engage in regular physical activity often experience improved mood, emotional balance, and self-confidence. A calmer and healthier mental state creates better conditions for studying and academic engagement.

The role of sports in social development should also be emphasized. Team sports such as football, basketball, volleyball, and cricket teach cooperation, communication, leadership, and conflict resolution. These interpersonal skills are highly valuable in academic settings where students frequently work on projects, presentations, and collaborative assignments. Students involved in sports may therefore perform better in group-based learning environments because they are accustomed to teamwork and collective problem-solving. Individual sports such as athletics, tennis, badminton, or swimming may also promote self-discipline, perseverance, and personal accountability, which similarly benefit academic performance.

Despite the many benefits, the relationship between sports involvement and learning efficiency is not always entirely positive. Excessive commitment to sports, especially at competitive levels, may create academic challenges. Students who spend long hours in training camps, tournaments, or travel schedules may experience fatigue, missed classes, and reduced time for studying. Physical exhaustion after intensive exercise can also temporarily lower concentration if recovery is insufficient. Therefore, while moderate and balanced sports participation supports learning, overcommitment may hinder academic success. This suggests that the quality, duration, and management of sports involvement matter more than participation alone.

Gender differences and personal preferences may also influence participation patterns. Some students prefer gym workouts or yoga, while others enjoy team sports or recreational walking. The most effective strategy may not be forcing one type of exercise, but offering diverse options that suit student interests and lifestyles. When students enjoy an activity, they are more likely to remain consistent. Consistency is particularly important because long-term regular activity produces stronger academic and health benefits than occasional intense exercise.

Another important consideration is the rise of digital dependency among undergraduate students. Many students spend several hours daily on laptops, phones, and tablets for both academic and entertainment purposes. While technology supports learning, excessive screen time contributes to physical inactivity, poor posture, sleep disruption, and mental fatigue. Incorporating regular movement breaks, campus sports programs, and fitness routines can help counter these negative effects. Even short daily exercise sessions may significantly improve alertness and productivity.

Finally, the discussion suggests that physical activity should be viewed as an educational investment rather than merely a leisure activity. Students who maintain active lifestyles are often healthier, more focused, emotionally balanced, and academically productive. Sports involvement can shape character, resilience, leadership, and discipline—qualities essential for lifelong success beyond university. Therefore, promoting physical activity among undergraduate students is not only beneficial for immediate academic performance but also for long-term personal and professional development.

Conclusion :

Physical activity and sports involvement significantly contribute to learning efficiency among undergraduate students. Students who regularly engage in exercise tend to have better concentration, stronger memory, improved emotional well-being, and higher academic performance. Sports also cultivate discipline, resilience, and time-management skills essential for university success. While excessive participation may create conflicts with study demands, balanced engagement in moderate physical activity offers substantial educational benefits. Universities should therefore integrate wellness and sports programs into academic life to maximize student performance and holistic development.

References:

1. American College of Sports Medicine. (2022). *ACSM's guidelines for exercise testing and prescription* (11th ed.). Wolters Kluwer.
2. Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Journal of School Health, 76*(8), 397–401.
3. Basch, C. E. (2011). Physical activity and the achievement gap among urban minority youth. *Journal of School Health, 81*(10), 626–634.
4. Donnelly, J. E., Hillman, C. H., Castelli, D., et al. (2016). Physical activity, fitness, cognitive function, and academic achievement in children: A systematic review. *Medicine & Science in Sports & Exercise, 48*(6), 1197–1222.
5. Erickson, K. I., Hillman, C. H., & Kramer, A. F. (2015). Physical activity, brain, and cognition. *Current Opinion in Behavioral Sciences, 4*, 27–32.
6. Hillman, C. H., Erickson, K. I., & Kramer, A. F. (2008). Be smart, exercise your heart: Exercise effects on brain and cognition. *Nature Reviews Neuroscience, 9*(1), 58–65.
7. Kohl, H. W., & Cook, H. D. (2013). *Educating the student body: Taking physical activity and physical education to school*. National Academies Press.
8. Singh, A., Uijtdewilligen, L., Twisk, J., van Mechelen, W., & Chinapaw, M. (2012). Physical activity and performance at school: A systematic review. *Archives of Pediatrics & Adolescent Medicine, 166*(1), 49–55.
9. World Health Organization. (2020). *Guidelines on physical activity and sedentary behaviour*.
10. Zhang, Y., Liu, X., & Zhao, H. (2022). Sports participation and learning motivation among undergraduate students. *Frontiers in Psychology, 13*, 885214.