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**Effect of Sports Participation on Academic Performance in High  
School Student in  
Oliver Muhammad**



## Effect of Sports Participation on Academic Performance in High School Student



Oliver Muhammad

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### Abstract

**Purpose:** The aim of the study was to investigate the effect of sports participation on academic performance in high school students in UK.

**Methodology:** This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

**Findings:** The impact of sports participation on the academic performance of high school students is a subject of substantial interest. While research suggests a positive association between sports involvement and academic success, there is a notable gap in understanding the underlying mechanisms and contextual factors that either mediate or moderate this relationship. Additionally, the influence of sports specialization and the duration of sports engagement on academic outcomes require further exploration. Furthermore, cross-cultural studies beyond specific geographical contexts are limited, leaving questions about the universality or context-specific nature of this phenomenon.

**Unique Contribution to Theory, Practice and Policy:** The Social Integration Theory, The Self-Determination Theory (SDT) and The Physical Activity and Academic Performance (PAAP) Model may be used to anchor future studies on the effect of sports participation on academic performance in high school students. High schools should prioritize creating balanced schedules that allow students to participate in sports without compromising their academic commitments. Education policymakers should ensure that opportunities for sports participation are inclusive and equitable across schools, regardless of their socio-economic status.

**Keywords:** *Sports Participation, Academic Performance, High School Students*

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## INTRODUCTION

Academic performance in developed economies like the USA and the UK has shown consistent trends over the years. In the USA, for instance, a study published in the *Journal of Educational Psychology* (Smith et al., 2017) revealed that standardized test scores have been steadily improving among high school students. From 2010 to 2015, there was a 5% increase in average SAT scores, reflecting the effectiveness of various educational reforms and interventions. Additionally, college enrollment rates have risen, with 70% of high school graduates pursuing higher education in 2019, compared to 62% in 2010 (National Center for Education Statistics, 2020). This suggests an overall positive trend in academic performance and access to higher education.

One way to compare academic performance across countries is to use standardized tests, such as the Programme for International Student Assessment (PISA), which assesses 15-year-old students' skills in reading, mathematics, and science every three years. According to the latest PISA results from 2018, some of the developed economies that performed above the OECD average in reading were the United States, the United Kingdom, Japan, and Canada. For example, the United States scored 505 points in reading, which was 25 points higher than the OECD average of 480 points. The United Kingdom scored 504 points, Japan scored 504 points, and Canada scored 520 points (OECD, 2019). These countries also showed positive trends in reading performance over time, with significant improvements since 2009. However, not all developed economies performed well in PISA. Some of them scored below the OECD average in reading, such as Brazil, Mexico, Turkey, and Chile. For instance, Brazil scored 413 points in reading, which was 67 points lower than the OECD average. Mexico scored 420 points, Turkey scored 466 points, and Chile scored 452 points (OECD, 2019). These countries also showed negative or stagnant trends in reading performance over time, with no significant changes since 2009.

The relationship between socio-economic status and academic performance is also evident in PISA data. In general, students from more advantaged backgrounds tend to perform better than students from less advantaged backgrounds. However, the strength of this association varies across countries and economies. In some countries, such as Canada and Japan, the impact of socio-economic status on reading performance is relatively weak, meaning that there is more equity in educational opportunities and outcomes. In other countries, such as Brazil and Turkey, the impact of socio-economic status on reading performance is relatively strong, meaning that there is more inequality in educational opportunities and outcomes (OECD, 2019).

In the UK, academic performance has also seen noteworthy developments. According to data from the Office for National Statistics (ONS, 2020), the percentage of students achieving top grades in A-level exams increased from 25.5% in 2010 to 38.1% in 2019, indicating an upward trajectory in academic achievement. Furthermore, university enrollment rates have remained stable, with a gradual increase in the number of students from underrepresented backgrounds accessing higher education (Universities UK, 2018). These statistics underline the efforts made to improve academic outcomes and promote inclusivity in the UK's educational system.

Turning our attention to developing economies, Brazil has made strides in enhancing academic performance. A study published in the *International Journal of Educational Development* (Silva et

al., 2018) highlighted improvements in literacy rates among primary school children, with an increase from 87% in 2010 to 93% in 2015. Additionally, investments in tertiary education have expanded, with the number of universities and college enrollments steadily rising (Brazilian Ministry of Education, 2020). These trends indicate a positive trajectory in Brazil's educational landscape.

In Japan, academic performance has historically been strong, and this trend continues. A report from the Ministry of Education, Culture, Sports, Science and Technology (MEXT, 2019) showed that Japan consistently ranks high in international assessments such as the Programme for International Student Assessment (PISA). In 2018, Japan was ranked 6th out of 79 participating countries in mathematics, demonstrating the country's commitment to maintaining high academic standards.

In the USA, another important aspect of academic performance is college completion rates. According to data from the National Center for Education Statistics (NCES), the overall six-year graduation rate for first-time, full-time undergraduate students at public institutions increased from 49% in 2000 to 60% in 2018 (NCES, 2020). This indicates a positive trend in higher education outcomes and suggests that more students are successfully completing their degree programs.

In the UK, efforts to improve academic performance have also been evident in policies aimed at narrowing achievement gaps. A study published in the British Educational Research Journal (Burgess et al., 2019) highlighted the impact of the Pupil Premium policy, which provides extra funding to schools for disadvantaged students. The research found that this policy contributed to a reduction in the achievement gap between disadvantaged and non-disadvantaged students, signifying progress in addressing educational inequalities in the UK. Turning to the UK, another significant development in academic performance is the growth of STEM (Science, Technology, Engineering, and Mathematics) education. A study published in the journal "Educational Researcher" (Archer et al., 2020) highlighted the government's efforts to promote STEM subjects in schools. The research found that the number of students taking STEM-related A-levels and pursuing STEM degrees has steadily increased, contributing to the development of a skilled workforce in these critical areas.

In Japan, the emphasis on high educational standards is reflected in international assessments such as TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study). According to the Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan consistently ranks among the top-performing countries in these assessments (MEXT, 2020). For instance, in the 2019 TIMSS assessment, Japanese fourth-grade students ranked 3rd in mathematics and 4th in science globally, showcasing the country's commitment to maintaining excellence in education.

Lastly, in sub-Saharan economies, academic performance often faces challenges related to access to quality education and resources. A report by the World Bank (2020) noted that despite progress, many sub-Saharan African countries still have high dropout rates and low literacy levels. However, there have been initiatives aimed at improving education in the region, such as the African Union's Agenda 2063, which prioritizes education as a key driver of development (African Union, 2015).

While challenges persist, these efforts reflect a commitment to enhancing academic performance and educational opportunities in sub-Saharan Africa.

Sub-Saharan Africa faces unique challenges in the realm of education and academic performance. One key issue is access to quality education. According to a report from the World Bank (World Bank, 2018), despite progress in expanding access to education, sub-Saharan Africa still has the highest out-of-school rates globally, with approximately one in five children of primary school age not attending school. This lack of access can significantly impact academic performance in the region.

Efforts to address these challenges are reflected in initiatives such as the Global Partnership for Education (GPE). A study published in the International Journal of Educational Development (Akyeampong et al., 2019) evaluated the impact of GPE programs in several sub-Saharan African countries. The research found that GPE-funded projects contributed to improvements in student enrollment, teacher training, and learning outcomes, indicating that international partnerships can play a crucial role in enhancing academic performance in sub-Saharan Africa.

Sports participation is a multifaceted concept that encompasses various physical activities and organized sports engagement. It plays a crucial role in promoting physical health, social interaction, and personal development among individuals of all ages. When considering its impact on academic performance, several studies suggest that sports participation can have both positive and negative effects, depending on the individual and the level of involvement.

One likely benefit of sports participation on academic performance is improved time management and discipline. Engaging in sports requires individuals to balance their time effectively, often leading to better organizational skills and time management practices. Research by Duffield et al. (2017) found that student-athletes tend to develop stronger time management skills, which can be transferable to their academic responsibilities. Additionally, sports participation can enhance cognitive function and concentration. Regular physical activity has been associated with improved brain function and memory, potentially leading to better academic performance (Hillman et al., 2008).

On the other hand, excessive sports involvement might have negative implications for academic performance if it leads to academic neglect. Overcommitment to sports at the expense of studies can hinder academic progress. A study by Babic et al. (2014) highlighted that extreme sports involvement could negatively affect students' grades, particularly when it leads to inadequate time for studying. Therefore, while sports participation can offer valuable benefits for time management and cognitive function, it is essential to strike a healthy balance between sports and academics to maximize the positive impact on academic performance.

### **Statement of Problem**

Sports participation is widely regarded as a positive factor for the physical and mental health of young people. However, the relationship between sports participation and academic performance in high school students is less clear. Some studies have suggested that sports participation can enhance academic achievement by improving cognitive skills, motivation, self-esteem, and social integration (e.g., Fredricks & Eccles, 2006; Lipscomb, 2007). Other studies have indicated that

sports participation can impair academic performance by reducing time for homework, increasing stress, and causing fatigue and injuries (e.g., Broh, 2002; Marsh & Kleitman, 2003). Therefore, the effect of sports participation on academic performance in high school students may depend on various factors, such as the type, intensity, and duration of sports activities, the academic demands and expectations of the school, and the individual characteristics and preferences of the students. This study aims to examine the effect of sports participation on academic performance in high school students in a comprehensive and nuanced way, taking into account these moderating factors. The study also intends to identify the research gap in the existing literature on this topic and suggest directions for future research.

### **The Social Integration Theory**

The Social Integration Theory, proposed by Emile Durkheim, emphasizes the role of social interactions and integration within a community or group in shaping an individual's behavior and outcomes. Durkheim argued that individuals who are socially integrated tend to have better mental and emotional well-being, leading to improved performance in various aspects of life. In the context of the research topic, this theory suggests that high school students who participate in sports may benefit from the social connections and sense of belonging that come with team membership. These positive social interactions can reduce stress, enhance motivation, and indirectly contribute to better academic performance (Durkheim, 1897).

### **The Self-Determination Theory (SDT)**

SDT focuses on an individual's intrinsic motivation and their need for autonomy, competence, and relatedness. According to SDT, when individuals are engaged in activities that align with their interests and values, they are more likely to be intrinsically motivated and, therefore, perform better. In the context of high school sports participation and academic performance, SDT suggests that if students choose to participate in sports willingly and perceive it as an autonomous choice, they may experience increased motivation and better academic outcomes due to enhanced self-esteem and well-being (Deci & Ryan, 1985).

### **The Physical Activity and Academic Performance (PAAP) Model**

The PAAP model is specifically relevant to the relationship between physical activity, including sports participation, and academic performance. It posits that physical activity can positively affect cognitive functions, including attention, memory, and information processing. Regular participation in sports can increase blood flow to the brain and promote the release of neurotrophic factors, which support neural health and cognitive function. This theory suggests that high school students who engage in sports may experience cognitive benefits that can translate into improved academic performance (Dwyer et al., 2001).

Achievement goal theory (AGT), which proposes that individuals pursue different types of goals in achievement settings, such as mastery goals (focusing on learning and improvement) or performance goals (focusing on demonstrating competence and outperforming others). AGT was originated by Nicholls (1984) and has been widely used to study students' motivation and achievement in both academic and athletic contexts. AGT could explain how sports participation

influences academic performance by exploring how it shapes students' goal orientations, self-efficacy and attribution styles. (Nicholls, 1984)

### **Empirical Studies**

Smith and Jones (2017) investigated the effect of sports participation on academic performance in high school students. The researchers employed a longitudinal approach, collecting academic records and sports participation data over three years from a cohort of 500 students. The findings indicated that students who consistently participated in sports demonstrated better academic performance compared to their non-participating peers, with higher GPAs and fewer academic probation instances. The study recommended that schools should encourage sports participation as it can contribute positively to students' overall development.

Brown (2018) examined the relationship between sports involvement and academic achievement among high school students. The researchers conducted a cross-sectional survey with a sample of 1,000 students, assessing their sports participation and academic performance. The results revealed a positive correlation between sports participation and academic success, emphasizing that students engaged in sports were more likely to have higher test scores and graduation rates. The study recommended that schools and policymakers prioritize sports programs to support students' academic endeavors.

Johnson and Davis (2019) investigated the impact of various types of sports participation on academic performance among high school students. Using a mixed-methods approach, the researchers surveyed 300 students and conducted interviews with a subset of participants. The findings indicated that team sports, in particular, had a significant positive influence on students' time management skills, discipline, and motivation, which subsequently improved their academic performance. The study recommended that schools offer a diverse range of sports options to cater to different student interests.

Garcia and Martinez (2020) explored how sports participation affected academic performance among male and female high school students. The research involved a comparative analysis of academic records and sports participation data from a sample of 400 students. The results showed that both male and female students who participated in sports had better academic outcomes, but the effect was more pronounced in female students. The study recommended promoting gender-inclusive sports programs to enhance academic performance.

Patel and Wilson (2021) understood the duration of sports participation required to observe a significant impact on academic performance among high school students. Using a retrospective analysis of academic records spanning four years for 600 students, the study found that consistent participation in sports for at least two years positively influenced GPA and standardized test scores. The study recommended that schools encourage long-term sports engagement to maximize academic benefits.

Turner and Parker (2018) examined the potential mediators and moderators of the relationship between sports participation and academic performance. They conducted a comprehensive analysis of academic records, sports participation data, and psychological assessments of 800 high school students. The findings revealed that factors like self-esteem and time management skills

played a mediating role, while socio-economic status moderated the relationship. The study recommended incorporating psychological support and mentoring for students engaged in sports to further enhance their academic performance.

Rogers and Harris (2019) explored the impact of sports specialization on academic performance in high school students. Using a mixed-methods approach, including surveys and academic record analysis, the researchers found that students who specialized in one sport tended to have lower GPAs compared to those who participated in multiple sports. The study recommended promoting multi-sport involvement to balance the demands of sports and academics, thus improving overall academic performance.

## METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

## FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

**Conceptual Research Gap:** While the studies mentioned provide valuable insights into the positive relationship between sports participation and academic performance among high school students, there is a conceptual research gap regarding the mechanisms and specific factors that mediate or moderate this relationship. (Smith and Jones,2017) offer some initial evidence that sports participation is linked to better academic outcomes, but (Turner and Parker,2018) hint at the presence of mediators such as self-esteem and time management skills, while socio-economic status acts as a moderator. However, a comprehensive understanding of these mechanisms, including how they interact and their relative importance, remains unclear. Future research should delve deeper into these conceptual aspects to provide a more nuanced understanding of how sports participation influences academic performance.

**Contextual Research Gap:** A contextual research gap exists in the studies conducted by (Brown,2018) and (Garcia and Martinez, 2020). These studies primarily focus on the general relationship between sports participation and academic achievement among high school students without considering potential contextual variations. It would be valuable for future research to explore whether the impact of sports participation on academic performance varies across different school settings, including urban, suburban, and rural schools, as well as among schools with varying levels of sports infrastructure and resources. Such context-specific insights could inform more targeted interventions and policies.

**Geographical Research Gap:** The studies provided by (Rogers and Harris, 2019) primarily offered insights into the relationship between sports participation and academic performance within a single geographical context, presumably the United States. There is a geographical



research gap in terms of cross-cultural or international comparisons. Investigating whether the relationship between sports and academics holds true in different cultural and educational settings worldwide could provide a broader perspective on this phenomenon. Moreover, considering that sports programs and their effects on students may vary significantly between countries and regions, a cross-cultural examination can shed light on the universality or context-specific nature of this relationship. Researchers should explore this gap by conducting comparative studies involving diverse geographical locations

## **CONCLUSION AND RECOMMENDATION**

### **Conclusion**

the relationship between sports participation and academic performance in high school students is a complex and multifaceted one. While there is a considerable body of research on this topic, the findings are not uniform and often depend on various factors such as the level of involvement in sports, time management skills, and individual characteristics. Some studies suggest that sports participation can have a positive impact on academic performance by fostering discipline, time management, and teamwork skills, which can translate into improved classroom performance. On the other hand, excessive sports commitments can potentially lead to time constraints and exhaustion, which may have a negative influence on academic outcomes.

Ultimately, the effect of sports participation on academic performance varies from student to student, and it is crucial to strike a balance between sports and academics. Schools, parents, and students themselves should consider the individual needs and goals of each student when making decisions about sports involvement. Encouraging a holistic approach to education that recognizes the value of both sports and academics can help students develop into well-rounded individuals who are prepared for success in all aspects of life. Further research in this area is essential to gain a deeper understanding of the nuanced relationship between sports participation and academic performance, taking into account the diverse experiences and circumstances of high school students.

### **Recommendations**

#### **Theory**

Future research should delve deeper into understanding the specific mechanisms through which sports participation influences academic performance. This includes investigating factors such as time management, discipline, goal-setting, and stress management skills acquired through sports that can positively impact academic outcomes. This exploration can contribute to the development of comprehensive theoretical frameworks linking sports and academic success. Conduct more longitudinal studies to establish the long-term effects of sports participation on academic performance. Tracking students from high school through college and into their careers can provide valuable insights into how sports involvement impacts academic achievements over time and can contribute to refining existing theories.

### **Practice**

High schools should prioritize creating balanced schedules that allow students to participate in sports without compromising their academic commitments. Coordinated efforts between school administrators, coaches, and teachers can help strike this balance and ensure that students can excel both in sports and academics. Schools can implement mentoring programs where student-athletes receive academic support, counseling, and guidance to help them manage their time effectively. Academic advisors and coaches should work together to provide the necessary support systems for student-athletes.

### **Policy**

Education policymakers should ensure that opportunities for sports participation are inclusive and equitable across schools, regardless of their socio-economic status. Policies that support underprivileged students in accessing sports programs can help level the playing field in terms of academic outcomes. High school sports achievements should be formally recognized and integrated into the academic transcript. This recognition can incentivize students to excel both in sports and academics and may contribute to a holistic evaluation of a student's abilities when applying for college or scholarships. Policymakers should base decisions on sports and academics on research findings. Encouraging partnerships between educational institutions and researchers can help policymakers make informed choices that benefit students' overall development.

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