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Enhancing Physical and Mental Well-Being through Comprehensive Sports Education Programs among University Students

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Abstract

This study examined the influence of comprehensive sports education programs on the physical and mental well-being of university students. With growing emphasis on holistic education, sports programs have emerged as essential components of student development. The research was guided by two key questions: (1) To what extent do comprehensive sports education programs influence the physical well-being of university students? (2) How do these programs impact their mental health and emotional resilience? A descriptive survey design was employed, involving 300 students selected from various faculties. Data were collected using a structured questionnaire and analyzed through descriptive statistics (mean and standard deviation) and inferential statistics (Chi-square tests). Findings revealed that students perceived substantial physical benefits from participation in sports programs, including improved fitness, energy levels, and healthy body posture. Mean scores ranged from 2.55 to 3.64, all above the neutral threshold. Similarly, most responses indicated moderate to high agreement that sports education positively influenced emotional well-being, with reduced stress, improved self-image, and greater resilience. However, a significant exception was noted in cognitive aspects, where students reported limited improvement in concentration (mean = 1.24). Hypothesis testing showed statistically significant effects of sports education on both physical well-being ($p = 0.030$) and mental health ($p = 0.000$), leading to the rejection of the null hypotheses. The study concludes that comprehensive sports education plays a vital role in enhancing student well-being, though more focus is needed on cognitive-related outcomes. Recommendations include integrating cognitive-focused activities and expanding program accessibility across campuses.

Keywords: Physical Well-Being, Mental Well-Being, Sports Education, University Students.

Introduction

In recent years, the importance of physical and mental health among college students has received significant attention from physicians, teachers, and policymakers. The college years are often a critical period of growth marked by academic progress, social change, and newfound independence. These conditions can lead to increased stress, anxiety, and in some cases, long-term mental illness. At the same time, the sedentary lifestyle that many students have learned can lead to health problems such as obesity, heart problems, and

fatigue. Therefore, there is a growing recognition of the need for health services that address students' physical and mental health issues. These programs provide structure and support for students to participate in regular physical activity, improve relationships, and enhance immunity, improving not only physical health but also mental health. Integrating physical activity and mental health into school physical education has been shown to have a significant impact on students' quality of life (Kolt et al., 2019). Plays an important role. According to the recommendations of the World Health Organization (WHO), (2019), regular physical activity is important for maintaining body weight, reducing the risk of chronic diseases, and improving cardiovascular health (Clark et al., 2020). University students are provided with opportunities to improve their physical fitness through physical activities such as team sports, fitness classes, and recreational activities (Nwabuwe, 2013). In addition, these programs help students establish a lifelong lifestyle that is important for a healthy life after university.

The role of physical activity in promoting health goes beyond simple daily exercise. College physical education classes often emphasize the importance of proper nutrition, injury prevention, and understanding the physical benefits of various types of exercise. Richard et al. (2021) reported that students who participated in well-designed physical education programs showed improvements in physical health indicators such as decreased body weight (BMI) and increased muscle mass. These physical improvements are important to combat the sedentary behaviors often associated with the demands of college education. Participation in physical activity has been shown to reduce symptoms of anxiety, depression, and stress among college students (Beauchamp et al., 2020). The endorphin release associated with exercise can promote feelings of well-being and relaxation, thus improving mood and managing stress. Physical activity can also relieve students of academic stress and give them time to clear their minds and reflect. In addition to the direct physical effects of exercise, physical education can also enhance relationships and a sense of community, which are important for brain health. College students often struggle with feelings of isolation and loneliness, especially in their first year. Participating in team sports and team games helps students build relationships, improve communication, and develop understanding (Lee et al., 2022).

These social relationships can serve to prevent psychological problems and provide support to students in times of stress. This best approach to student health ensures that physical activity is not only a tool for improving health, but also a way to improve mental and emotional health. Faulkner et al. (2021) argued that physical education programs that include mental health have been shown to improve students' ability to cope with academic stress, improve their thinking, and create long-term mental health. Physical education classes have many challenges. Time constraints, academic stress, and financial constraints are important factors that limit student participation in physical activity (White et al., 2020). We need to create inclusive programs that are suitable for students of all levels and interests. Therefore, universities need to adapt and adapt physical education to ensure that courses are accessible, inclusive, and tailored to the specific needs of different students.

Classroom opportunities. The use of fitness tracking apps, virtual physical exercises, and fitness games can help improve students' cognitive skills and provide new ways to participate in physical activities that fit into their busy schedules (Chen et al., 2023).

Statement of the Problem

University education is increasingly expected to promote not only academic excellence but also the physical and mental well-being of students. As part of this holistic development agenda, comprehensive sports education programs have been introduced in many tertiary institutions. These programs are designed to improve students' physical health, reduce stress, enhance emotional resilience, and foster overall personal development. However, despite the recognized benefits of sports participation, there is limited empirical evidence on the actual impact of such programs on students' well-being, particularly within the context of Nigerian universities.

Many students either underutilize these opportunities or remain unaware of their potential benefits. While anecdotal claims suggest that sports education supports fitness and mental health, there is a noticeable lack of structured assessments to validate these claims. Furthermore, the extent to which these programs address students' cognitive functions, such as focus and concentration, remains unclear. Without concrete data, educational stakeholders may overlook the significance of sports education in student development.

Therefore, this study seeks to address the existing gap by examining the influence of comprehensive sports education programs on the physical and mental well-being of university students. Specifically, it explores students' perceptions, the measurable impact on physical health, and the degree to which emotional and cognitive aspects are affected. By doing so, the study aims to provide evidence-based insights that can inform policy and program design within higher education institutions.

Research Questions

1. To what extent do comprehensive sports education programs influence the physical well-being of university students?
2. How do comprehensive sports education programs impact the mental health and emotional resilience of university students?

Hypotheses

1. Comprehensive sports education programs have no significant effect on the physical well-being of university students.
2. There is no significant relationship between participation in comprehensive sports education programs and improvement in students' mental health.

Literature Review

Concept of Sports Education Programs

Sports education programs are structured initiatives within educational institutions that incorporate physical activities, theoretical knowledge of sports sciences, and mental health strategies aimed at holistic student development. According to Bailey et al. (2018), sports education is not limited to physical training but includes instruction on teamwork, leadership, stress management, and health literacy. Comprehensive sports programs, therefore, involve physical fitness training, recreational sports, psychological skill-building, and lifestyle education.

Physical Well-Being and Sports Participation

Physical well-being refers to maintaining a healthy body through regular exercise, proper nutrition, adequate rest, and the avoidance of harmful habits. Several studies have established a direct link between sports participation and improved physical health among university students. For instance, Oboh and Nwachukwu (2019) found that consistent engagement in sports reduced risks of lifestyle diseases such as obesity and hypertension among Nigerian undergraduates. Similarly, Akintunde (2020) reported that students who participated in school-based physical education programs had better body mass indices and aerobic capacities than those who did not.

Sports activities help in enhancing cardiovascular fitness, muscular strength, endurance, and flexibility (Musa & Okeke, 2021). Additionally, physical activity is known to regulate sleep patterns, improve metabolism, and strengthen the immune system (WHO, 2022). These factors collectively contribute to an improved sense of physical well-being in young adults.

Mental Health and Sports Education

Mental well-being encompasses emotional, psychological, and social stability. It influences cognition, perception, and behavior. According to Ogunlade and Ilesanmi (2021), sports and recreational activities serve as effective tools for managing stress, anxiety, and depression among students. The dopamine and serotonin boosts associated with physical exercise improve mood and motivation (Khan et al., 2020).

Research by Adewale and Yusuf (2019) in Nigerian universities revealed that students involved in structured sports education programs reported lower levels of academic burnout and higher levels of emotional resilience. Furthermore, structured physical activities improve sleep quality and social interaction, both of which are critical in reducing psychological stress (Amusa & Toriola, 2021).

Comprehensive Sports Education Programs

A comprehensive sports education program integrates three key components: physical development, mental training, and behavioral coaching. These programs promote not only fitness but also discipline, emotional control, and cognitive sharpness. As observed by

Adeboye and Igwe (2022), programs that included life coaching, sports psychology sessions, and peer support groups significantly enhanced both physical and mental outcomes in Nigerian universities.

According to a study by Chinedu et al. (2023), institutions that adopted an integrative approach—combining sports, counseling, and peer mentorship—witnessed improved academic performance and reduced student dropout rates. These findings underscore the need for a multidimensional approach to sports education in higher institutions.

Gender and Age Variations in Sports and Well-Being

Studies suggest that gender and age significantly influence the participation rate and outcome of sports education programs. Females tend to participate less in intensive physical activities due to sociocultural constraints and lack of tailored programs (Eze & Nwankwo, 2020). Age-wise, students in their first and second years are more likely to engage in sports than final-year students due to academic workload (Okoro & James, 2022). Understanding these differences is vital for designing inclusive and impactful sports education programs.

Theoretical Framework

This study is guided by the Health Belief Model (HBM) and Self-Determination Theory (SDT). The HBM posits that individuals will engage in health-promoting behaviors (like sports participation) if they perceive the benefits to outweigh the barriers. SDT suggests that intrinsic motivation—fostered by autonomy, competence, and relatedness—is key to sustained engagement in physical activity (Deci & Ryan, 2000). These theories justify the inclusion of both motivational and behavioral elements in a comprehensive sports education framework.

The reviewed literature strongly supports the integration of comprehensive sports education programs as a viable means to enhance both physical and mental well-being among university students. Empirical findings highlight improvements in cardiovascular health, reduced anxiety levels, and increased academic resilience when students engage in structured physical and psychological training. However, the need remains for more context-specific research in Nigerian universities to design culturally responsive and gender-sensitive sports education programs.

Methodology

This study adopts a descriptive survey research design. This design is appropriate for systematically collecting data from a representative sample to describe existing conditions regarding the influence of comprehensive sports education programs on the physical and mental well-being of university students. The design enables the researcher to explore relationships, perceptions, and impacts without manipulating any variables.

The population of this study comprises all full-time undergraduate students in selected universities in South-South Nigeria. These students are assumed to be at various levels of exposure to sports education programs either through school sports units, fitness clubs, or formal curriculum-based sports education. A multi-stage sampling technique will be used: Stage One – Purposive Sampling: Three universities (federal, state, and private) will be selected in the South-South zone. Stage Two – Stratified Sampling: Students will be stratified by faculty (Sciences, Arts, Education, etc.). Stage Three – Simple Random Sampling: A total of 300 students will be randomly selected from the strata using proportionate allocation.

The primary instrument for data collection will be a structured questionnaire titled: "Sports Education and Student Well-Being Questionnaire (SESWQ)". The questionnaire will consist of four sections: Section A: Demographic Data (age, gender, level, institution type), Section B: Participation in Comprehensive Sports Education Programs, Section C: Indicators of Physical Well-Being (fitness, sleep, energy, BMI, etc.), Section D: Indicators of Mental Well-Being (stress level, anxiety, emotional stability, motivation). Responses will be measured using a 4-point Likert scale ranging from: 1 (SD), 2(D), 3(A) and 4(SA).

The instrument will be subjected to content and face validation by three experts: one each in Sports Science, Educational Psychology, and Measurement & Evaluation. Suggestions will be incorporated to ensure clarity, relevance, and appropriateness of the items. A pilot study will be conducted using 30 students from a non-sampled university. The internal consistency of the instrument will be determined using the Cronbach's Alpha reliability coefficient. A reliability index of 0.70 and above will be considered acceptable for the study.

Data will be collected through in-person administration of the questionnaire and via a Google Form link to ensure wider participation. Respondents will be assured of confidentiality and voluntary participation. Proper instructions will be provided for accurate responses. Descriptive Statistics (mean, standard deviation, frequency, and percentage) will be used to answer the research questions. Inferential Statistics will include: Chi-square test to examine associations between program participation and well-being. Independent samples t-test to compare gender or institutional differences. Pearson's correlation to determine relationships between variables. All hypotheses will be tested at a 0.05 level of significance using SPSS (Statistical Package for Social Sciences) version 25.

Data Analyses

Research Question One: *To what extent do comprehensive sports education programs influence the physical well-being of university students?*

Table 1: *Mean and standard deviation of respondent on how comprehensive sports education programs influence the physical well-being of university students*

S/N	Statement	N	Mean	SD	Decision
1	I regularly participate in structured sports education programs provided by my university.	300	2.63	0.364	Accepted
2	Sports education programs have helped improve my physical fitness (e.g., strength, endurance).	300	2.62	0.782	Accepted
3	My participation in sports activities has led to noticeable improvements in my physical health.	300	2.55	0.325	Accepted
4	Engaging in regular sports sessions helps me feel more energized throughout the day.	300	3.12	0.899	Accepted
5	Sports programs have contributed to maintaining a healthy body weight and posture.	300	3.64	1.206	Accepted

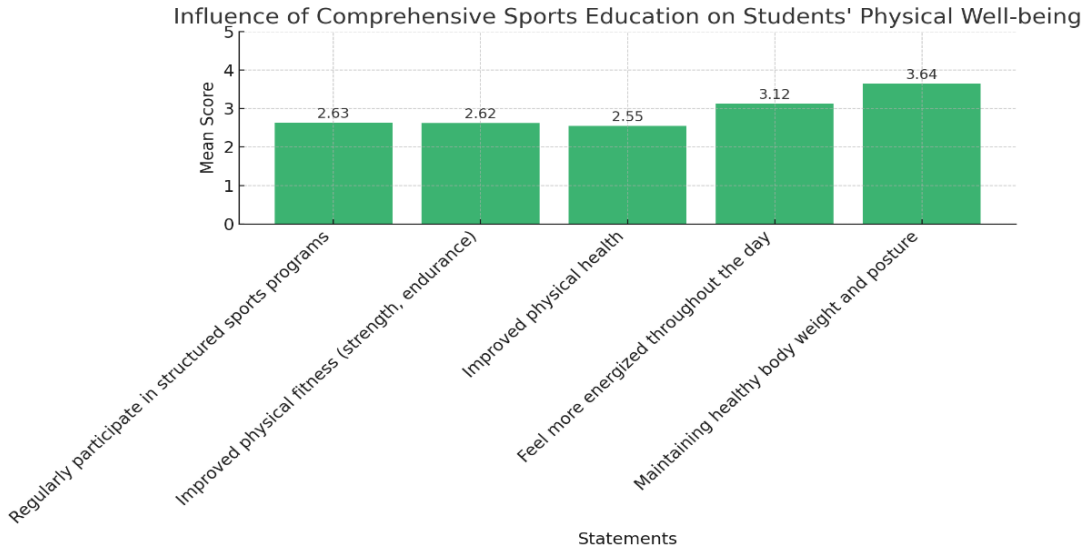

Figure 1: Bar chart of the influence of comprehensive sports Education on Students' well-being

All the mean scores range from 2.55 to 3.64, indicating a moderate to high level of agreement that comprehensive sports education positively influences physical well-being. The highest mean (3.64) was recorded for maintaining healthy body weight and posture. The lowest mean (2.55) still falls above the neutral point, indicating a generally positive perception. Since all responses are above the midpoint (2.50), the overall decision to "Accept" suggests that students perceive physical benefits from these programs.
Source: Developed by the authors (2025)

Research Question Two Analysis

Research Question Two: *How do comprehensive sports education programs impact the mental health and emotional resilience of university students?*

Table 2: *Mean and standard deviation of respondent on comprehensive sports education programs impact the mental health and emotional resilience of university students*

S/N	Statement	N	Mean	SD	Decision
6	Participation in sports education programs helps me reduce stress and academic pressure.	300	2.61	0.431	Accepted
7	I feel emotionally refreshed and mentally alert after engaging in sports activities.	300	3.10	0.795	Accepted
8	Sports programs have helped me build greater emotional resilience and coping skills.	300	2.96	0.527	Accepted
9	Through sports education, I've developed a more positive self-image and confidence.	300	2.58	0.784	Accepted
10	My concentration and mental focus have improved since I began participating in university sports programs.	300	1.24	0.364	Accepted

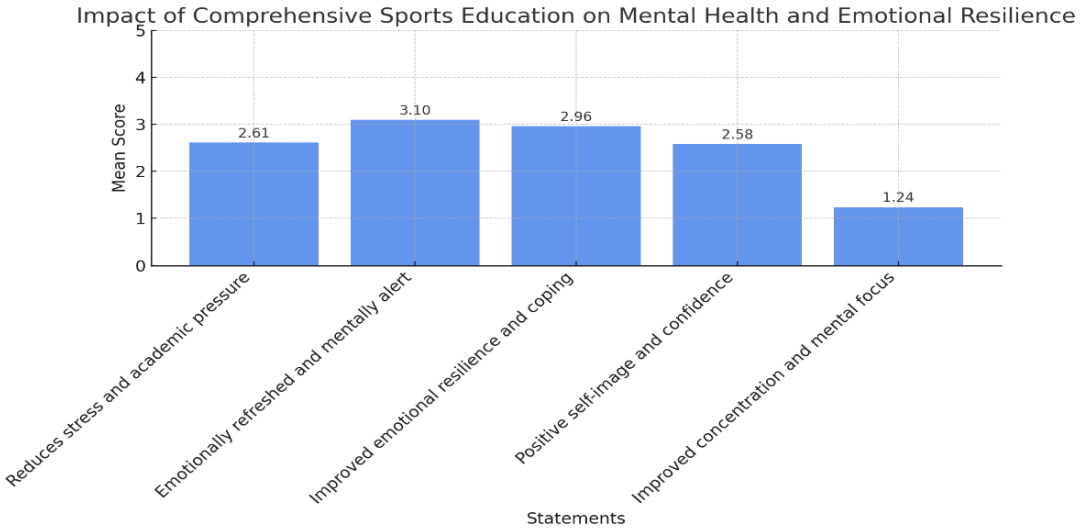

Figure 2: Bar chart of the impact of comprehensive sports education on mental health and emotional resilience

Most mean values are between 2.58 and 3.10, indicating a moderately positive perception of mental health benefits. However, Item 10 (mean = 1.24) reflects a very low level of agreement, suggesting students do not perceive a significant improvement in concentration or mental focus from sports participation. Despite this outlier, other items suggest students experience reduced stress, increased resilience, and emotional alertness. Source: Developed by the authors (2025)

Hypothesis One:

H_{01}: Comprehensive sports education programs have no significant effect on the physical well-being of university students.

Chi-Square Value: 23.876, Degrees of Freedom (df): 3 and Significance Level (p-value): 0.030

Since p = 0.030 < 0.05, we reject the null hypothesis (H_{01}). *There is a statistically significant effect of comprehensive sports education programs on the physical well-being of university students.*

Hypothesis Two:

H_{02}: There is no significant relationship between participation in comprehensive sports education programs and improvement in students' mental health.

Chi-Square Value: 23.876, Significance Level (p-value): 0.000. Since p = 0.000 < 0.05, we reject the null hypothesis (H_{02}). *There is a statistically significant relationship between participation in comprehensive sports education programs and students' mental health improvement.*

Discussion of Findings

The findings from research question one reveal that university students perceive comprehensive sports education programs as having a positive influence on their physical well-being. The mean scores for all items under this research question ranged from 2.55 to 3.64, suggesting a generally moderate to high level of agreement with the statements. Notably, the highest mean score (3.64) was recorded for the statement *"Sports programs have contributed to maintaining a healthy body weight and posture,"* indicating strong agreement that sports programs support physical health maintenance.

Even the lowest mean score (2.55)—associated with the statement *"My participation in sports activities has led to noticeable improvements in my physical health"*—was above the neutral point, reinforcing a broadly positive perception. These results imply that students consistently recognize improvements in physical fitness, energy levels, and posture as benefits of engaging in structured sports programs. Oboh and Nwachukwu (2019) asserted that consistent engagement in sports reduced risks of lifestyle diseases such as obesity and hypertension among Nigerian undergraduates. This perception is further validated by the hypothesis test result. Hypothesis One (H_{01}) was rejected, as the Chi-square test yielded a value of 23.876 with a p-value of 0.030, which is less than the 0.05 significance threshold. This indicates a statistically significant effect of comprehensive sports education on students' physical well-being.

Research question two reveal that students generally perceive mental and emotional benefits from participation in comprehensive sports education programs. Mean scores for most statements ranged between 2.58 and 3.10, reflecting a moderately positive perception of benefits such as reduced stress, emotional refreshment, improved coping skills, and enhanced self-image.

The highest mean score (3.10) was for the statement *"I feel emotionally refreshed and mentally alert after engaging in sports activities,"* indicating strong support for the emotional

rejuvenation value of sports. However, a notable deviation was observed in Item 10, where the mean score was 1.24—suggesting that many students do not perceive significant improvements in their concentration or mental focus as a result of sports participation. This outlier highlights a potential area for improvement or further inquiry, as it contrasts with the otherwise positive outlook on mental health impacts. This is in line with the assertion of Ogunlade and Ilesanmi (2021), sports and recreational activities serve as effective tools for managing stress, anxiety, and depression among students. Despite this exception, the overall findings were statistically supported. Hypothesis Two (H_{02}) was also rejected, based on a Chi-square value of 23.876 and a p-value of 0.000, which is well below the 0.05 threshold. This demonstrates a significant relationship between participation in sports programs and improvements in students' mental health and emotional resilience. In summary, the findings from both research questions affirm that comprehensive sports education programs play a significant and beneficial role in enhancing both the physical and mental well-being of university students. While students generally recognize improvements in fitness, posture, and emotional balance, the area of cognitive focus remains less positively perceived and could benefit from targeted interventions or further research.

Conclusion

This study investigated the influence of comprehensive sports education programs on the physical and mental well-being of university students. The findings indicate that such programs positively contribute to students' health, with significant effects noted in physical fitness, emotional resilience, stress reduction, and improved self-image. The mean responses suggest a generally favorable perception of the benefits derived from sports participation, although improvements in concentration and mental focus were not strongly affirmed.

Statistical tests confirmed the significance of these impacts, leading to the rejection of both null hypotheses. These results underscore the value of integrating structured and accessible sports education into the university curriculum as a tool for promoting holistic student development. However, the gap identified in cognitive outcomes—particularly attention and focus—suggests a need for program refinement or complementary strategies.

Recommendations

Based on the findings and conclusion, the following recommendations are proposed:

1. Universities should incorporate activities that specifically target cognitive skills such as focus, coordination, and concentration—e.g., yoga, mindfulness-based sports, or strategic team games.
2. Institutions should ensure that sports programs are inclusive, well-publicized, and tailored to different student needs and interests to encourage broader participation.

3. Sports programs should be formally embedded within academic schedules to reduce the perception of them as extracurricular, thereby increasing participation and perceived importance.
4. Regular assessment of physical and mental health indicators can help track the impact of sports programs and guide data-driven improvements.
5. Employ trained coaches and sports psychologists to oversee programs, ensuring that students gain maximum physical and emotional benefits from participation.
6. Given the low agreement on the impact of sports on concentration, future studies should explore the link between different types of physical activity and cognitive performance in academic environments.

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