



Sports Participation of College Students Towards Youth's Physical Development in Anhui Province

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Abstract: This study investigates the impact of sports participation on the physical development of college students in Anhui Province, China, with a focus on Anhui Fuyang Institute of Technology. Against the backdrop of the institute's commitment to industry-education integration and the unique sociocultural context of Anhui Province, the research adopts a descriptive-comparative quantitative design. The study involves 377 randomly sampled full-time students, employing a comprehensive questionnaire to assess academic, emotional-social-moral, and physical dimensions. The findings reveal positive correlations between sports engagement and academic performance, self-confidence, social relationships, and physical well-being. While demonstrating a generally favorable association, the study identifies nuanced challenges, emphasizing the need for tailored sports programs to address specific physical issues. The research contributes valuable insights for educators, policymakers, and practitioners, proposing a development program to enhance sports participation and holistic development among college students at Anhui Fuyang Institute of Technology.

Keywords: sports participation, college students, youth physical development, Anhui province, holistic development

I. Introduction

Physical activity and sports participation play a crucial role in the holistic development of individuals, especially during the formative years of youth. As we focus on the context of Anhui Province, China, understanding the impact of sports participation on college students becomes imperative. The title of this study, "Sports Participation of College Students Towards Youth's Physical Development in Anhui Province," underscores the need to delve into the dynamics between sports engagement and the overall physical development of young individuals within the educational setting.

Anhui Fuyang Institute of Technology, a prominent technical college in China, serves as the backdrop for this research. With a history of ten years marked by reform and innovation, the institute has grown into a first-class educational institution, emphasizing the integration of industry and education, school-enterprise cooperation, and the unity of knowledge and action. Against this backdrop, the study aims to contribute valuable insights into how sports participation aligns with the educational philosophy of the institute and its impact on the physical development of college students.

Despite the institute's commitment to skills development and its recognition as a national skills talent cultivation outstanding contribution unit, there remains a gap in understanding the specific role sports play in the broader context of youth physical development. This research seeks to address this gap by exploring the relationship between sports participation and various facets of holistic learning, as well as the potential implications for the educational model that integrates industry and education.

Anhui Province, like many other regions, faces unique socio-cultural and economic challenges that can influence youth development pathways. These challenges may include limited access to sports facilities and programs, socioeconomic disparities impacting participation rates, cultural attitudes towards sports and physical activity, and competing priorities such as academic pressure. Moreover, the rapid modernization and urbanization occurring in Anhui Province may introduce additional complexities, such as sedentary lifestyles, changing leisure preferences, and environmental factors affecting outdoor activities. Understanding these challenges is crucial for designing effective interventions and policies that promote sports participation and maximize its benefits for youth development. Anhui Province's unique sociocultural context and the institute's emphasis on the combination of work and study provide a distinctive setting for the study. By focusing on college students and their involvement in sports, the research aims to uncover patterns, trends, and potential variations in physical development, contributing not only to the academic discourse but also providing practical insights for educators, policymakers, and practitioners involved in youth development. In essence, this research delves into the intersection of sports participation, academic endeavors, and the overall well-being of college students within the specific educational and cultural context of Anhui Province, shedding light on the potential role of sports in shaping the physical development of the youth and informing future strategies for educational institutions and policymakers alike.

II. Literature Review

Many studies on sports participation of college students have been conducted. The objective of Manzoor et al.'s study in 2020 was to investigate the cultural limitations inhibiting female athletes in sports participation at the college level in district Sialkot, Pakistan ^[1]. The researchers concluded that there is a significant impact of cultural limitations on



inhibiting female athletes in sports participation at the college level. In a study by Zhang et al. (2020), the application of a latent growth model was used to compare the teaching effect of college physical education between the sport education model and the traditional physical education model. The findings suggest that the sport education model is suitable for application to college physical education, and in comparison with the traditional teaching model, it could enhance college students' physical quality, improve sports enjoyment, and fulfill lifelong physical exercise to benefit the realization of sports participation, motor skills, and social adjustment^[2]. Ouyang et al. (2020) studied the influence of sports participation on body image, self-efficacy, and self-esteem in college students. The data obtained were processed using SPSS 19.0 and AMOS 21.0 statistical software, revealing that body image, self-efficacy, and self-esteem had a significant influence on sports participation in college students^[3].

Using the Education Longitudinal Study and multilevel modeling, Tompsett et al. (2021) examined the extent to which high school indicators predict the likelihood of becoming a college athlete. High school sport participation characteristics, academic expectations and knowledge, and school contexts were found to offer independent contributions to the odds of becoming a college athlete^[4]. Luo et al. (2021) used a systematic thematic analysis to analyze the literature on the research topic and found that the use of technology can effectively promote higher participation of students in low-intensity exercises^[5]. In the context of the NCP, Jin (2021) investigated the physical exercise behavior of college students and found individual differences in the enthusiasm of college students to participate in physical exercise. The study also highlighted gender differences in self-efficacy and expectations of results, emphasizing the importance of creating a strong atmosphere of physical exercise and sports culture to improve students' physical health^[6].

Soria et al. (2022) aimed to examine the effects of participation in five different recreational activities on undergraduates' resilience and sense of belonging. Ordinary least squares analyses suggested that participation in various recreational activities had positive effects on students' resilience and sense of belonging^[7]. Liu et al. (2023) explored potential categories of college students' sports behavior motivation and the differences between different family social classes. Using the "College Students' Sports Behavior Motivation Questionnaire," the study surveyed 1,092 college students using the whole group sampling method^[8]. Lin's (2023) study aimed to explore the mechanism of action of Trait Mindfulness (TM) on well-being in college students. The findings suggested that college students' trait mindfulness can predict well-being and has an indirect impact on well-being through flow experience and sports participation^[9]. Helms et al. (2020) also conducted influential work on the relationship of athletic identity to selected health behaviors among college students^[10].

III. Research Design

3.1 Research Approach

This study employs a quantitative research design to comprehensively assess the impact of sports participation on the holistic development of adolescents in Anhui, China, specifically focusing on students at Anhui Fuyang Institute of Technology. The research design adopted is descriptive-comparative, utilizing a comparative descriptive approach to describe variables and examine differences within and between groups that naturally exist in the college setting. The questionnaire survey will be the primary data collection method, conducted in Chinese Mandarin, to gather insights into specific facets of academic and holistic development.

3.2 Sample and Sampling Technique

The participants for this study will be drawn from the total population of approximately 18,000 full-time students at Anhui Fuyang Institute of Technology. Employing a random sampling technique is crucial to ensure the representative selection of participants. The rationale behind using random sampling is to minimize selection bias and enhance the generalizability of the study's findings to the larger student body. To determine the sample size, the study will adhere to a 5% margin of error. Utilizing the Qualtrics sample calculator, this criterion results in an estimated sample size of around 377 students, providing a robust representation of the diverse student population at the institute. The random sampling process will involve assigning a unique identifier to each student and using a random number generator to select the participants. The inclusion criteria encompass full-time students who willingly participate in the study, ensuring voluntary and informed involvement. This systematic approach to sampling aims to capture a comprehensive snapshot of the student body's perspectives on sports participation and its influence on holistic development.

3.4 Research Instruments

The questionnaire employed in this study is intricately designed to investigate the complex relationship between sports participation and the holistic development of college students in Anhui Province. Focused on academic, emotional-social-moral, and physical dimensions, the instrument aims to extract valuable insights from respondents. The initial section establishes a demographic profile, considering sex, age, and grade level, to contextualize subsequent responses. Part II delves into the academic and cognitive aspects, employing a Likert scale for nuanced reflections on the interplay between sports and academic performance. Part III explores emotional-social-moral dimensions, capturing participants' perceptions of self-confidence, social relationships, and moral beliefs in the context of sports involvement. The final section, Part IV, investigates the physical aspects, prompting participants to express their comfort with physical activities, challenges faced, and the perceived impact of sports on their overall physical well-being.

3.5 Data Analysis

The data analysis in this study employs a multifaceted approach to comprehensively explore the relationships between sports participation and various aspects of college students' lives. Initially, demographic profiling involves calculating frequencies and percentages for sex, age range, and grade level, establishing a foundation for subsequent analyses. Academic and cognitive aspects are assessed by computing mean scores and standard deviations for statements related to

academic performance, worries, and preferences. Emotional, social, and moral aspects are scrutinized through similar statistical measures, providing insights into participants' self-confidence, social relationships, and moral beliefs. The impact of sports on the physical well-being of participants is evaluated by examining mean scores for statements related to physical activities, breathlessness, and overall health. Finally, the integration of findings involves synthesizing quantitative results to derive a cohesive narrative that considers patterns and correlations across various dimensions. This rigorous analytical methodology aims to unravel the nuanced and holistic impact of sports participation on college students in Anhui Province, informing educational and sports-related policies.

IV. Results and Discussion

Table 1, Demographic Profile

Sex	Frequency	Percentage
Male	188	50%
Female	189	50%
Age Range	Frequency	Percentage
16-17	100	26.50%
18-19	150	39.70%
20-21	80	21.20%
Above 21	47	12.50%
Grade Level	Frequency	Percentage
Freshman	90	23.80%
Sophomore	110	29.20%
Junior	95	25.20%
Senior	82	21.80%
Total	377	100%

Table 1 presents the demographic profile of the participants, including sex, age range, and grade level. The sample consisted of 377 college students, with an almost equal distribution of males (50%) and females (50%). This gender balance indicates that both male and female perspectives on sports participation and physical development were represented in the study. In terms of age range, the majority of participants fell within the 18-19 age group, accounting for 39.70% of the sample. This was followed by the 16-17 age group, representing 26.50% of the participants. The remaining participants were distributed among the 20-21 age group (21.20%) and those above 21 years old (12.50%). These results suggest that the study captured a diverse range of college students within the targeted age range, enabling a comprehensive exploration of their sports participation and its relationship with youth's physical development.

Regarding grade level, the sample included students from all four years of college. The largest proportion of participants were sophomores, comprising 29.20% of the sample, followed by juniors (25.20%), freshmen (23.80%), and seniors (21.80%). The distribution of participants across different grade levels indicates that the study considered the experiences and perspectives of students at various stages of their college education.

Table 2, Academic/Cognitive Aspect

Statement	Mean	SD	Verbal Interpretation
Sports helped me improve in my academics.	3.75	0.80	Agree
I worry about my exams.	2.80	1.10	Neutral
I get good grades in my exams.	3.90	0.70	Agree
I enjoy reading after sports.	3.20	1.00	Neutral
I worry if I could finish my school work on time.	2.60	1.20	Disagree
I often get left out during class discussions.	2.40	0.90	Disagree
I worry about getting low grades.	2.70	1.15	Neutral
I prefer training than studying.	3.60	0.85	Agree
Sports gets over my academics.	3.30	1.05	Neutral

Table 2 presents the results of the analysis examining the academic and cognitive aspects related to sports participation. In terms of the academic aspect, participants were asked to rate their agreement or disagreement with specific statements. The mean scores for each statement ranged from 2.40 to 3.90. The statement with the highest mean score (3.90) was "I get good grades in my exams," indicating that the majority of college students perceived a positive correlation between their sports participation and academic performance. Additionally, the statement "Sports helped me improve in my academics" also received a relatively high mean score of 3.75, further supporting the notion that sports participation is seen as beneficial for academic achievement.

On the other hand, statements related to academic concerns and preferences yielded mixed results. The statements "I worry about my exams" (mean = 2.80) and "I worry if I could finish my school work on time" (mean = 2.60) received neutral mean scores, suggesting that sports participation may not significantly alleviate or exacerbate academic worries among college students. Similarly, the statement "I prefer training than studying" received a mean score of 3.60, indicating a moderate preference for sports over studying but not a strong preference. In terms of the cognitive aspect, participants were asked about their enjoyment of reading after sports and their feelings of being left out during class discussions. The statement "I enjoy reading after sports" received a mean score of 3.20, indicating a moderate level of enjoyment. However, the statement "I often get left out during class discussions" received a relatively low mean score of 2.40, suggesting that sports participation may have a limited impact on students' sense of inclusion in academic settings.

Table 3, Emotional-Social-Moral Aspect

Statement	Mean	SD	Verbal Interpretation
I am confident about myself.	3.80	0.75	Agree
I know my direction in life.	3.60	0.90	Agree
I prefer leaving things to luck.	2.90	1.15	Neutral
I believe people have equal chances.	3.70	0.80	Agree
I believe my skills are at par with others.	3.85	0.70	Agree
I often feel anxious.	2.40	1.10	Disagree
I have episodes that I see myself as someone hopeless.	2.30	1.20	Disagree
I see others as my incorporators rather than rivals in my development.	3.45	0.95	Agree
I am proud of myself and am content with what I have.	3.75	0.85	Agree
I am sensitive to others' feelings.	3.50	0.90	Agree
I have good relationships with my family and peers.	3.65	0.80	Agree
I usually get accused as a snob or arrogant.	2.20	1.00	Disagree
People treat me as a model student/role model.	3.90	0.70	Agree
I rarely encounter miscommunication with people.	3.80	0.75	Agree
I always reflect on myself and think if I have been a good person.	3.70	0.85	Agree
I have friends outside of my usual peers in-campus.	3.20	1.10	Neutral

Table 3 presents the results of the analysis focusing on the emotional, social, and moral aspects related to sports participation. The participants were asked to rate their agreement or disagreement with specific statements, and the mean scores for each statement ranged from 2.20 to 3.90. The statements related to emotional well-being and self-confidence received relatively high mean scores. For instance, the statements "I am confident about myself" (mean = 3.80) and "I know my direction in life" (mean = 3.60) both received agreement scores, indicating that sports participation is associated with increased self-assurance and a sense of purpose among college students.

Regarding social and moral aspects, the participants generally expressed positive attitudes. Statements such as "I believe people have equal chances" (mean = 3.70), "I believe my skills are at par with others" (mean = 3.85), and "I see others as my incorporators rather than rivals in my development" (mean = 3.45) received agreement scores, suggesting that sports participation fosters a sense of fairness, self-efficacy, and cooperation among the participants. In terms of emotional well-being, the statements "I often feel anxious" (mean = 2.40) and "I have episodes that I see myself as someone hopeless" (mean = 2.30) received relatively low mean scores, indicating that sports participation may have a positive impact by reducing feelings of anxiety and hopelessness among college students. Regarding social relationships, the statements "I have good relationships with my family and peers" (mean = 3.65) and "I rarely encounter miscommunication with people" (mean = 3.80) received agreement scores, suggesting that sports participation can contribute to the development of positive interpersonal connections and effective communication skills.

However, the statement "I usually get accused as a snob or arrogant" received a relatively low mean score of 2.20, indicating that sports participation may not necessarily lead to negative perceptions of arrogance or snobbishness among college students.

Table 4, Physical Aspect

Statement	Mean	SD	Verbal Interpretation
I am comfortable with doing physical activities.	3.75	0.80	Agree
I encounter shortness of breath when doing physical activities.	2.20	0.90	Disagree
I have trouble walking upstairs.	2.60	0.95	Disagree
I encounter joint stiffness.	2.40	1.00	Disagree
I have a normal Body Mass Index.	3.90	0.70	Agree
I often have extra energy for studying and other activities.	3.80	0.75	Agree
I have a good sense of balance.	3.50	0.85	Agree
I sometimes feel weak after rough physical activities.	2.30	1.05	Disagree

Table 4 presents the results of the physical aspect assessment among the respondents. The majority of respondents expressed a high level of comfort with physical activities, with a mean score of 3.75, indicating an overall agreement. This positive response suggests that students generally feel at ease engaging in various physical exercises, highlighting the potential positive influence of sports participation on their physical well-being. In contrast, the mean scores for encountering shortness of breath (2.20), having trouble walking upstairs (2.60), and experiencing joint stiffness (2.40) lean towards disagreement. These findings may indicate that while students generally feel comfortable with physical activities, some encounter challenges or discomfort in specific situations. This nuanced perspective emphasizes the need for tailored sports programs that address individual physical needs and promote inclusivity.

The responses concerning Body Mass Index (BMI) indicate a positive trend, with a mean score of 3.90, suggesting agreement. This implies that students perceive their BMI to be within the normal range, reinforcing the potential role of sports participation in maintaining healthy body weight. Furthermore, the high mean scores for having extra energy for studying and other activities (3.80), possessing a good sense of balance (3.50), and rarely feeling weak after rough physical activities (2.30) align with an overall agreement. These outcomes suggest that sports participation positively contributes to students' energy levels, balance, and resilience.

V. Recommendations

Building upon these results, several recommendations can be made to further enhance the impact of sports programs on youth's physical development and overall well-being.

First and foremost, it is recommended that educational institutions design tailored sports programs to address the specific challenges identified in the physical aspect. These programs should take into account the issues of shortness of breath and joint stiffness, providing students with opportunities to engage in physical activities comfortably. By offering inclusive and targeted sports programs, institutions can ensure that all students can participate and benefit from sports activities.

Furthermore, it is crucial to promote holistic development by integrating sports more comprehensively into the educational model. Institutions should consider implementing programs that leverage sports as a tool for fostering self-confidence, social relationships, and emotional well-being. By recognizing the positive correlations between sports participation and various dimensions of development, educational institutions can create an environment that nurtures the overall growth of college students.

To address any academic worries or preferences that may arise, it is recommended that institutions establish student support services. These services can provide resources for managing academic stress, such as counseling, time management workshops, and academic guidance. By offering comprehensive support, students will be better equipped to balance their academic responsibilities and sports-related commitments.

In order to enhance the understanding of the role of sports in youth development, it is important to invest in faculty development. Workshops, training sessions, and seminars can be organized to equip educators and physical education teachers with the knowledge and skills needed to support students effectively in both academic and sports endeavors. By promoting professional development, institutions can ensure that educators are well-prepared to guide and mentor students in their sports participation.

In addition, establishing community engagement initiatives is recommended to foster a supportive environment for youth sports development. Collaborative efforts involving parents, local sports clubs, and community leaders can create opportunities for students to engage with the broader community. By strengthening community ties, institutions can enhance the overall sports experience and provide students with a network of support beyond the educational setting.

However, the implementation of these recommendations may face several challenges. One challenge is the allocation of resources, including funding, facilities, and personnel, to support the development and implementation of tailored sports programs and student support services. Institutions may also encounter resistance or skepticism from stakeholders who may not fully recognize the importance of sports in youth development or may prioritize other educational initiatives. Additionally, addressing academic worries and preferences while promoting sports participation may require a delicate balance and coordination between academic and sports departments within educational institutions. Overcoming these

challenges will require strong leadership, collaboration, and a commitment to prioritizing youth development through sports participation.

VI. Conclusion

In conclusion, this study underscores the significant role of sports participation in shaping the holistic development of college students in Anhui Province, China. The findings reveal a positive correlation between sports engagement and academic achievement, with students reporting improvements in their academics and favorable exam outcomes. Moreover, the emotional-social-moral aspects highlight enhanced self-confidence, a sense of direction in life, and positive social relationships fostered by sports participation. While the physical aspect indicates an overall comfort with physical activities, the study identifies specific challenges, emphasizing the need for tailored sports programs to address individual needs and promote inclusivity.

The diverse demographic representation of college students across genders, age groups, and grade levels strengthens the study's validity, providing a comprehensive understanding of sports participation in the unique context of Anhui Fuyang Institute of Technology. To capitalize on the positive outcomes and address identified gaps, a targeted development program is proposed. This program aims to cultivate an environment that encourages sports participation and supports the holistic development of college students. In essence, this research offers practical insights for educators, policymakers, and practitioners, contributing to the ongoing discourse on sports, education, and youth development within the specific cultural and educational landscape of Anhui Province.

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