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Leisure Sport Activities Model to Improve Well-Being for Zhengzhou Technology and Business University Students

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Abstract:

This study aims to investigate the participation in leisure sports activities and its impact on happiness among college students at Zhengzhou Technology and Business University, and to evaluate the effect of a newly developed leisure sports activity model on happiness. The R&D (research and development) method was used to systematically explore the impact of college students' participation in leisure sports activities on happiness. The research purposes include: 1) Investigate the participation in leisure sports activities of college students at Zhengzhou Technology and Business University and its impact on happiness; 2) Develop and design a leisure sports activity model suitable for college students to enhance their happiness; 3) Evaluate the model effect in practical applications. The research results are based on a questionnaire survey of 375 college students and found that students prefer to engage in light exercise, such as cycling and walking in the park, 1-2 times a week for 0.5-1 hour each time. These activities can help improve happiness. The researchers designed the PSDF-PERMA leisure sports activity model for college students. After experimental verification on 30 college students, the PSDF-PERMA model showed significant effects in improving happiness. Most participants were satisfied with the overall arrangement, time, project settings, facilities and equipment of the activities. Overall, participants generally believed that leisure sports activities have a positive impact on improving well-being, but there is still room for improvement in terms of enhancing social interaction.

Keywords: Leisure sports activities, Well-being, College students

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Introduction

The importance of leisure sports as a vital pathway to improving well-being has gained increasing attention in recent years. Leisure sports activities not only effectively relieve stress and improve physical fitness, but they also positively influence emotional states through active physical engagement, thereby enhancing social connections and fostering a sense of self-identity. For university students, participation in leisure sports activities not only enriches their extracurricular lives but also plays a crucial role in promoting mental health. Despite the generally ample free time available to university students, research indicates that their levels of well-being are not particularly high.(Cheng et al., 2021) Academic pressure, social challenges, and unclear life goals often lead many students to experience anxiety and loneliness in their daily lives. (Guo & Li, 2023)

The impact of leisure sports activities on well-being is multifaceted. Physical exercise can release tension and stress within the body, enhancing emotional states and fostering a more optimistic and positive outlook. (Guo & Li, 2023)Participation in sports not only bolsters self-esteem and self-identity but also promotes healthy social relationships and interpersonal interactions, further strengthening individuals' social support networks and thereby enhancing well-being. Regular physical exercise also cultivates self-discipline and perseverance, boosts self-achievement and personal growth, and inspires life with a stronger sense of meaning and purpose. Crucially, leisure sports activities indirectly contribute to the formation and enhancement of well-being by satisfying basic psychological needs, such as autonomy, competence, and relatedness. (Zhang, 2021)

Leisure sports activities play a pivotal role in enhancing college students' well-being. They not only directly boost well-being by improving physical health, emotional states, and social relationships, but also indirectly promote well-being by satisfying individual psychological needs such as autonomy and social connectedness. Despite having abundant free time, college students' well-being is often low due to academic pressure, social challenges, and unclear life goals. Therefore, in-depth research into the specific impact and mechanisms of leisure sports activities on college students' well-being will aid in designing effective interventions to promote the development of their physical and mental health. Simultaneously, governments, educational institutions, and social organizations should

collaborate to provide more leisure sports opportunities for college students, advocating for healthy lifestyles and achieving the dual goals of individual well-being and societal harmony.

Research purpose

1. To investigate the current status of sports participation and happiness of college students in Zhengzhou University of Technology.

2. To develop and design a leisure sports activity model to improve the happiness of students in Zhengzhou University of Technology.

3. To evaluate the leisure sports activity model of happiness of college students in Zhengzhou University of Technology.

Population and Sample

Population

According to the official website of Zhengzhou University of Technology, the number of students on campus is 15,000.

Sample

According to the (Krejcie & Morgan, 1970), the sample size is 375. From the 375 samples, 20-30 students who are interested in participating in leisure sports activities are pre-organized for testing and evaluation.

Research Methodology

The research methodology employed in this study follows the R&D approach, consisting of four sequential stages: R1 (Research and Literature Review); D1 (Development and Design of the Model); R2 (Implementation); D2 (Evaluation and Refinement).

R1 (Research and Literature Review)

This stage aims to explore the relationship between college students' well-being and their engagement in leisure sports activities. 1) Finding and analyzing relevant literature to look into how college students currently participate in leisure sports, including how often, how intensely, how long, and what kinds of sports they do, as well as how these activities contribute to their well-being; 2) Looking at well-being theories, especially Seligman's Well-Being 2.0 theory, to understand the link between leisure sports and well-being; and 3) Making

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questionnaires and interviews to find out what students like about leisure sports, what drives them, and what factors affect their choices. We will analyze the collected data using a diverse sample and expert opinions to provide empirical evidence for optimizing leisure sports activities and enhancing college students' well-being.

D1 (Develop and design the model)

To improve college students' well-being, this stage focuses on developing a leisure sports activity model. We design the model based on qualitative and quantitative analyses, ensuring that the activities are both relaxing and entertaining. The PERMA theory and the FITT principles serve as the foundation for the development of this model. Within the PSDF model, "P" represents the purpose of students' participation, including relaxation, interest development, socialization, self-esteem enhancement, and health maintenance. In this context, instructors play a critical role in organizing and executing the activities. The FITT principles (frequency, intensity, type, and time) guide the "D" design, which effectively plans the activities. "F" refers to facilities, which include the equipment and spaces required for successful execution and achievement of the desired outcomes. By engaging in leisure sports activities, students can enhance five key elements of well-being as outlined in the PERMA model: positive emotion, engagement, relationships, meaning, and achievement.

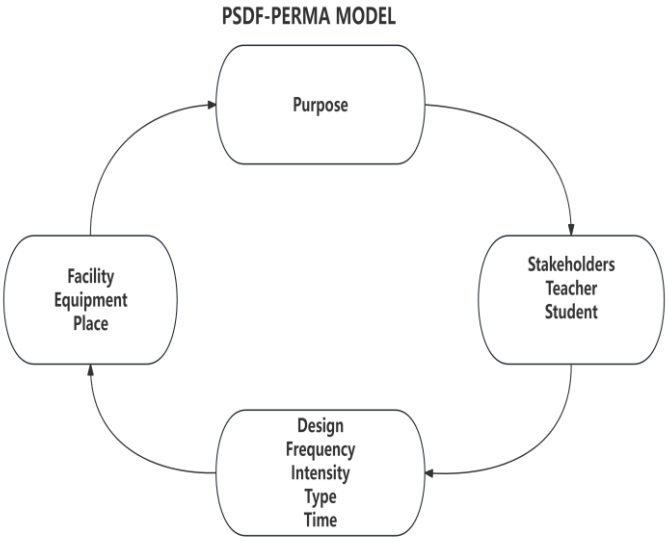


Figure1: PSDF-PERMA Model Design Drawing

R2 (Implementation of the Leisure Sports Activity Model)

At this stage, we will implement a leisure sports activity model with the aim of enhancing the well-being of college students. We will conduct the study over an 8-week period, organizing a variety of activities and ensuring adequate resource support, including venues, equipment, and personnel. The specific steps are as follows: 1) administering the PERMA-Profiler Well-Being Scale to students prior to the commencement of the activities to assess their initial well-being levels; 2) collecting baseline data from the first administration of the scale; 3) organizing a range of leisure sports activities; and 4) administering the PERMA-Profiler again at the conclusion of the activities to collect post-intervention data on well-being.

D2 (Evaluation and Refinement)

This stage concentrates on assessing and improving the leisure sports activity model, which aims to improve the well-being of college students. We will conduct a thorough assessment to validate the effectiveness of this model, examining both the immediate and long-term effects of the activities on students' well-being. The collected data will provide robust scientific evidence to inform the optimization of leisure sports activities, ensuring their sustainability and effectiveness in ultimately improving college students' well-being.

Population and Sample Size:

According to the official website of Zhengzhou University of Technology and Business College, the institution enrolls approximately 15,000 students. Krejcie and Morgan (1970) provided a sample size table, which determined a sample size of 375 for this study. We randomly selected 20–30 students from this sample who expressed interest in participating in leisure sports activities for practical testing and evaluation.

Result

The researcher will conduct a descriptive analysis of the basic demographic information of college students, focusing on variables such as gender, age, and other fundamental characteristics.

The survey encompasses a total of 375 participants, including 215 females (57.333%) and 160 males (42.667%). Most participants are first-year students, with 237 individuals (63.200%), followed by third-year students with 93 individuals (24.800%), and second year and fourth-year students with 17 (4.533%) and 28 (7.467%), respectively. In terms of academic majors, students majoring in sports constitute the largest group with 213 individuals (56.800%),

followed by those in the humanities with 108 (28.800%) and in the sciences with 52 (13.867%), while students majoring in the arts are the least represented with only 2 individuals (0.533%). These data indicate that the survey predominantly attracted female participants, first-year students, and those majoring in sports.

The analysis of the data yields the following conclusions: In terms of gender, the survey shows a higher participation rate among females, who constitute the majority, while male participation is relatively lower. Regarding academic year distribution, first-year students are the predominant group, making up most of the sample, followed by third-year students. The sample size of second-year students is relatively small, which may warrant attention in future surveys. In terms of academic majors, sports students dominate, whereas the number of students majoring in the arts is minimal. This suggests a need for further investigation into the reasons or barriers affecting art students' participation in leisure sports activities.

The study reveals a series of noteworthy trends through an investigation of college students' preferences for leisure sports activities. Specific aspects such as activity frequency, intensity, and duration reflect students' attitudes towards healthy living and their exercise preferences. Additionally, the research explores the relationship between types of exercise and well-being. Findings indicate that college students prefer engaging in light exercise 1-2 times per week, with sessions lasting 0.5-1 hour. Popular activities include cycling, hiking in parks, Tai Chi, and basketball. These results not only highlight the students' attention to physical and mental health but also provide a diverse range of exercise options that contribute to enhancing well-being and quality of life.

Data analysis reveals that the primary purpose for college students' participation in leisure sports activities is relaxation and entertainment, which constitutes a significant proportion of the motivations. This indicates that amidst their busy academic schedules, students are inclined to engage in sports to relieve stress, unwind, and seek enjoyment. Furthermore, health maintenance and physical exercise are considered important motivations for participating in such activities, reflecting a high level of concern for personal health and physical fitness. Students aim to maintain their health and enhance their physical condition through regular sports involvement.

College students perceive gyms as their preferred venue for leisure sports. Gyms offer diverse sports facilities, professional guidance, and a comfortable and safe environment, which may contribute to this preference. People also favor parks and sports fields because they

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provide natural and open environments, allowing them to enjoy the beauty of nature and fresh air. These findings provide valuable insights for researchers, indicating the need to focus on these popular venues to improve the leisure sports experience for college students.

The newly developed leisure sports model will be subjected to rigorous testing during empirical research and evaluation. Thirty students from Zhengzhou University of Industrial and Commercial College will be invited to participate in the new model's implementation. The model's effectiveness will be assessed by comparing changes in well-being before and after the experiment. Additionally, feedback and suggestions from participants will be collected to further refine and optimize the model.

Table 1: Well-being status before and after the leisure sports activity model experiment

Paired Sample Statistics

		N	Mean	S.D.	T	P
Pre-Exp	Positive Emotions	30	2.533	0.311	-20.834	0.000
Post-Exp			4.30	0.449		
Pre-Exp	Engagement	30	2.489	0.336	-16.678	0.000
Post-Exp			4.311	0.517		
Pre-Exp	Relationship	30	2.589	0.272	-17.753	0.000
Post-Exp			4.422	0.517		
Pre-Exp	Meaning	30	2.533	0.346	-17.057	0.000
Post-Exp			4.333	0.532		
Pre-Exp	Accomplishment	30	2.589	0.358	-15.364	0.000
Post-Exp			4.467	0.544		
Pre-Exp	Health	30	2.633	0.237	-19.746	0.000
Post-Exp			4.467	0.484		
Pre-Exp	Negative Emotion	30	2.478	0.312	-19.822	0.000
Post-Exp			4.289	0.485		
Pre-Exp	Lonely	30	2.633	0.49	-12.835	0.000
Post-Exp			4.367	0.718		
Pre-Exp	Overall	30	2.55	0.153	-25.194	0.000
Post-Exp			4.377	0.412		

Data analysis will confirm that the leisure sports activity model significantly enhances college students' well-being. Across multiple dimensions, including emotion, engagement, interpersonal relationships, sense of meaning, achievement, and physical health, participants

will show significantly higher scores after the experiment compared to before. This conclusion further validates the effectiveness of the leisure sports activity model in improving students' well-being and provides critical empirical support for efforts to promote well-being in related fields.

Conclusion

The research results indicate that, through quantitative analysis, most college students hold a positive attitude towards participating in sports activities, perceiving these activities as significantly enhancing their well-being. These activities help students adapt to their environment, focus on the task at hand, alleviate stress, and promote family communication and friendship. Despite differences in personal life goals, the majority of respondents still feel that their lives are meaningful and valuable. College students tend to engage in light exercise 1-2 times per week, with sessions lasting 0.5-1 hour, favoring outdoor activities such as cycling and park hiking. These findings provide crucial insights for developing leisure sports activity models that align with students' interests and needs.

Qualitative analysis, incorporating opinions from experts, students, and faculty, suggests that the most effective leisure sports activity models should feature teamwork and social interaction, such as soccer, basketball, and group fitness activities like yoga and tai chi. These activities not only contribute to physical health but also enhance social networks, thereby increasing well-being. Factors affecting college students' well-being include academic pressure, interpersonal relationships, financial status, and self-perception. We recommend stimulating participation for students who are less engaged in leisure sports activities by offering diverse activity options, organizing engaging team events, and enhancing promotion and education.

The research also developed a new leisure sports activity model, named the “PSDF-PERMA Model,” which includes purpose, stakeholders, design, facilities, positive emotion, engagement, relationships, meaning, and achievement. Empirical testing has validated the model's practicality and effectiveness. Experimental results show a significant improvement in students' well-being before and after participating in the activities. Feedback questionnaires reveal that most participants are satisfied with the activity arrangements, timing, project settings, and facilities, and are willing to recommend the activities to others and explore different sports. However, some participants expressed dissatisfaction with the opportunities for social interaction, indicating room for improvement in enhancing social engagement.

Overall, leisure sports activities have a positive impact on improving college students' well-being.

Discussion

Developing a leisure sports activity model for college students represents a crucial approach to enhancing their well-being. Through the analysis of questionnaire data, employing both quantitative and qualitative methods, the researchers have proposed a novel leisure sports activity model aimed at improving college students' well-being, termed the "PSDF-PERMA Model." This model incorporates several key elements, including purpose, stakeholders, design, facilities, and the dimensions of well-being (positive emotion, engagement, relationships, meaning, and achievement). Collectively, these components form a comprehensive framework that ensures the positive impact of leisure sports activities on college students' well-being.

Purpose(P)

Research on leisure sports activity models widely recognizes relaxation and entertainment as primary purposes, aligning with numerous studies' findings. For instance, (Zhang, 2020) thoroughly analyzed the purposes behind college students' participation in sports activities, revealing that entertainment is one of the main reasons for their involvement.

Stakeholders (S)

In developing leisure sports activity models, the involvement of stakeholders is crucial, particularly the active participation of both teachers and students. Research indicates that stakeholder engagement and support can significantly enhance the effectiveness of program implementation. For example, (Chen & Tang, 2020), in his Stakeholder Theory, emphasizes that the interests of all participants should be adequately considered to ensure the success of a project.

Design (D)

In designing leisure sports activities for college students, researchers found that students tend to engage in light exercise 1-2 times per week, with each session lasting between 0.5 and 1 hour, and show a preference for outdoor activities such as cycling and park hiking. This finding aligns with Yu Zekun's findings in The Chain Mediation Effect of Companionship Relations," in which Yu Zekun also noted college students' preference and frequency of light exercise. (Yu, 2022)

Facilities (F)

Well-developed facilities are fundamental to the successful execution of leisure sports activities, encompassing both equipment and venues. Research indicates that high-quality facilities can enhance participants' comfort and sense of safety, thereby improving their overall experience. (Qiao & Xie, 2020) for example, emphasized the critical role of facilities in sports management, noting that high-quality facilities significantly increase participants' satisfaction and well-being.

Recommendations

The researcher recommends the following measures to enhance college students' engagement and effectiveness in sports activities:

1) Optimize Resource Utilization: Maximize the use of existing sports facilities and equipment within the institution, as well as explore opportunities for collaboration with other schools or organizations, including seeking community sponsorships to facilitate resource sharing.

2) Establish regular evaluation and feedback mechanisms. Implement a system for continuous assessment and feedback to gather students' opinions and suggestions on activities. Use this information to make timely adjustments and improvements to the activities' content and organization.

3) Innovate Activity Planning: Create a diverse range of sports activities tailored to students' interests and needs to increase their appeal and participation rates. Additionally, strengthen promotion efforts by utilizing campus media, social networks, and other communication channels to increase awareness and willingness to participate.

4) Implement a Mentorship System: Develop a mentorship program for leisure sports activities, involving experienced students or faculty members as mentors. This system will provide guidance and support to newcomers and participants, facilitating the smooth execution of activities and boosting participation levels.

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