



## Development of the Recreational Sports Programme to Enhance the Emotional Intelligence of Students at Fuzhou Institute of Technology

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### Abstract

**Background and Aim:** Under the influence of the novel coronavirus epidemic, has brought a serious negative impact on the emotional intelligence of college students. To improve the emotional intelligence of college students, a leisure sports program was developed and designed. The objectives of this study are: 1) To understand the current situation of college students participating in recreational sports in Fuzhou University of Technology; 2) Develop recreational sports programs to improve the emotional intelligence of Fuzhou University of Technology students; 3) Evaluate the effectiveness of the program.

**Materials and Methods:** A questionnaire was administered to 730 college students of Fuzhou Institute of Technology; interviews were conducted with 20 freshmen, 5 sports experts, 5 school physical education teachers, and 5 school leaders; 15 freshmen males, and 15 freshmen females were subjected to an 8-week experiment; the data obtained from the questionnaires and interviews were analyzed using descriptive statistics by using the SPSS software and a sample t-test was conducted on the data from the experiment.

**Results:** 1) Students of Fuzhou Institute of Technology tended to exercise twice a week; The strength tends to be low strength and medium and low strength. Each time is less than 1 hour; The types are yoga, basketball, jogging, and Taichi Chuan. 2) The FITT-SFD recreational sports program was developed. 3) T-tests before and after the experiment showed that the average values of emotional intelligence before and after the experiment were 110.2 and 137.8, and EI was significantly improved.

**Conclusion:** The experimental results show that this program has significant improvement in the dimensions of improving emotional perception, self-emotional management, others' emotional management, and emotional application. The experimental data verify the effectiveness of the research and development of recreational sports programs in improving students' emotional intelligence and provide empirical support for the promotion of research in related fields of emotional intelligence.

**Keywords:** Emotional Intelligence; Recreational Sports; Program

### Introduction

The physical and mental quality of a country and a nation is crucial to its global standing. Young people represent the future and hope of the country, and their physical and mental health directly affects the strength of the country, the rise and fall of the nation, the well-being of families, and the future of individuals. Improving physical and mental quality is the embodiment of the strength of the nation and the prosperity of the country. As the successors of our country's socialist cause, college students are responsible for the future of the country and the nation, and good physical and mental quality is the basic premise for college students to serve the motherland and the people; people with good mental health are more likely to have a high level of emotional intelligence, and good emotional intelligence can help people to better perceive stress, resist pressure and negative emotions, and thus improve the level of mental health.

However, Since the outbreak of the new crown epidemic began at the end of 2019, in recent years the influence of the epidemic of the new crown virus on students' lives, study, work, and other aspects, has had a very serious negative impact. Analysis of the results of the last three years of assessment found that the detection rate of mental health problems among college students has shown a year-on-year increase in the trend of new students who have just entered the school gate suffering from more psychological problems; The results of the survey show that under the influence of the epidemic, the anxiety level of university students is low, the depression situation is more obvious, and the stress of university students mainly comes from academic, material and interpersonal problems. Faced with an outbreak of a new coronavirus, outbreaks of infectious diseases such as COVID-19 can also lead to severe emotional distress, fear of illness, anxiety, depression, and anger, even in people who are not at high risk of disease. The psychological development of college students who are in the transition from immaturity to maturity has brought about a huge psychological impact, college students' lives, study, social, and other modes of life have changed to a certain extent, and college students are generally anxious, panic and interpersonal sensitivity and interaction disorders and other negative emotions, which led to the emergence of a large number of depression, anxiety, and post-traumatic stress disorder





and other psychological problems. It affects the emotional intelligence of college students, and if these negative emotions are not correctly guided, they may lead to mental illness or extreme behavior, resulting in adverse consequences.

Recreational sports have a good effect on the emotional intelligence of college students. Recreational sports activities are conducive to expanding the social circle, improving social skills, slow down negative emotions such as tension, depression, and so on, with an optimistic mindset into learning and life, with an optimistic mindset, is conducive to college students learning to self-regulate their emotions, and know how to vent their bad emotions, so as not to be inferior, not to be discouraged, and full of the positive effects of happiness. Recreational sports activities are effective in alleviating anxiety and depression and reducing the risk of depression; improving cognitive function and sleep; and enhancing well-being, life satisfaction, and quality of life, which can help them regulate their emotions and overcome psychological barriers.

Therefore, it is especially important to have a good exercise regimen. At present, there is little research on the improvement of college students' emotional intelligence by leisure sports programs in China. How to effectively improve the EQ of college students is an urgent social problem to be solved. In this paper, a reasonable and effective leisure sports program is designed around Fuzhou Institute of Technology, and the students of Fuzhou Institute of Technology are experimentally studied and analyzed to improve their emotional intelligence. At the same time, providing experimental data for the study of improving the emotional intelligence of college students through leisure sports is conducive to guiding college students to do physical exercise more scientifically, which has far-reaching significance for promoting the development of college students' emotional intelligence.

## Objectives

- (1) To study the theories related to recreational sports and emotional intelligence and the current situation of recreational sports for college students at Fuzhou Institute of Technology.
- (2) To develop recreational sports programs that can improve the emotional intelligence of university students at Fuzhou Institute of Technology.
- (3) To evaluate the recreational sports programs for developing the emotional intelligence of university students at Fuzhou Institute of Technology.

## Literature review

In recent years, under the influence of the epidemic, the new coronavirus has had a very serious negative impact on all aspects of students' lives, studies, and work. Many college students have anxiety, and depression, and interpersonal relationship problems are more obvious, with the Ministry of Education, "General Higher Education Health Education Guidelines" "on strengthening the management of students' mental health," and other documents have been introduced, for the importance of improving the mental health of college students emotional intelligence to get strong support. In this context, it is urgent to develop a recreational sports program to improve the emotional intelligence of college students and to become an important force in promoting the development of emotional intelligence among college students.

Recreational sports is a kind of sports activity that people carry out in their recreational time to improve their mental health level, enrich and create life interest, and perfect themselves. It includes six dimensions of recreational sports: autonomy, social interaction, technical requirements, place, participation mode, and motivation.

**Wang (2012)** In the book 'Recreational Sports', it is written that recreational sports refer to all kinds of sports activities that people voluntarily engage in to relax their bodies and minds in their spare time, in a free environment and under free conditions, to enrich their lives, improve their health, and regulate their spirits; the text also deals with the fact that recreational sports have such elements as autonomy, social interaction, technical requirements, venues, modes of participation, motivation, and so on.

**Wu (2015)** In the article "Behavioral Research on the recreational sports of Females in Shanghai in the Context of Urbanization", the experimental questionnaire method was used, and the results of the research show that recreational sports have the elements of autonomy, social interaction, technical requirements, place, participation way, and motivation, etc., and also include safety, fun, and activity diversity. The article stresses that recreational sports require certain technical requirements, and the lack of technical guidance from professional coaches has become an obstacle to the recreational sports



behavior of many women who have not been educated in the school system, and they even give up choosing recreational sports activities. The article stresses that recreational sports require certain technical requirements, and the lack of professional coaches' technical guidance is an obstacle to recreational sports behavior for many women who have not received systematic physical education at school, and they even give up choosing recreational sports activities.

A plan is a specific and thorough plan, covering the purpose, requirements, ways, methods, and progress; It is composed of the FITT principle, including the frequency, intensity, time, and type of movement four dimensions, the scheme also needs to have the safety principle, the diversity principle and the fun principle.

**Medicine (2018)** In Guidelines for Exercise Testing and Prescription it is stated that the FITT principle is based on the available scientific evidence of the physiological, psychological, and health benefits of exercise. This principle emphasizes the importance of Frequency, Intensity, Time, and Type in designing an effective fitness program. The program follows the FITT principle to ensure that interventions are safe, scientifically sound, and reliable. By following the FITT principles, appropriate exercise can promote an overall improvement in physical and mental health, including reduction of stress and anxiety, improvement of mood and emotions, enhancement of self-confidence, enhancement of psychological well-being, and creation of a healthier and more active lifestyle for people.

**Dong (2021)** In Research on the Design and Implementation Path of Action Programme to Promote College Students' Participation in Chinese Universities, the questionnaire survey method and the case study method were used. Case study method, mainly in the frequency of physical exercise, exercise intensity, exercise time, exercise projects, exercise venues, organizational forms, and sports consumption, the design of the sports action program highlights the value of diversification extremely important, to diversify the content of sports action programs, means of diversification and exercise effects, so that students can achieve a comprehensive and healthy development of the body and mind. The design principles are scientific, safe, educational, practical, and fun.

**Yang (2022)** In the article "A study of a basketball program for boys aged 9-12 years", the experimental method was used, in the process of establishing exercise prescription, the scientific formulation of exercise content, intensity, frequency, and exercise time are all the keys to obtaining a good intervention effect, the design principles of the exercise intervention program the design of this experimental program took full account of The design principles of this experimental program take full account of the safety, effectiveness, and fun of the exercise program, and the experimental group had a good effect on children's health by carrying out a 12-week basketball exercise program intervention.

Emotional intelligence refers to the ability of individuals to recognize, understand, express, and manage their own emotions and the emotions of others. It includes four dimensions: emotion perception, self-emotion management, others' emotion management, and emotion application.

**Salovey and Mayer (1990)** In the article Emotional Intelligence using the literature approach, the researcher classified emotional intelligence into 4 dimensions: emotional perception, self-emotional management, emotional management of others, and emotional use. People with high emotional intelligence have achieved at least some degree of positive mental health, and these people can be aware of their feelings and the feelings of others, and the awareness tends to effectively regulate their own and other people's emotions, and use integrated and complex approaches to regulating emotions in achieving important goals that promote physical and mental health.

**Huang (2015)** In The Effects of Physical Activity on College Students' Emotional Intelligence and Coping Styles, an experimental research method was used to test emotional intelligence, and the EI Emotional Intelligence Scale modified by Wang Caikang was chosen as the instrument for testing emotional intelligence. It was concluded that college students who exercised regularly for a long period had better emotional intelligence and coping styles than those who were sedentary for a long period and that long-term regular exercise not only directly promoted college students' emotional intelligence and coping styles, but also mediated the individual's perception and assessment of emotional intelligence, which resulted in college students' adopting fewer emotionally oriented and avoidance-oriented coping styles; sports could make college students' coping styles more positive. Styles to become more positive.

## Conceptual Framework

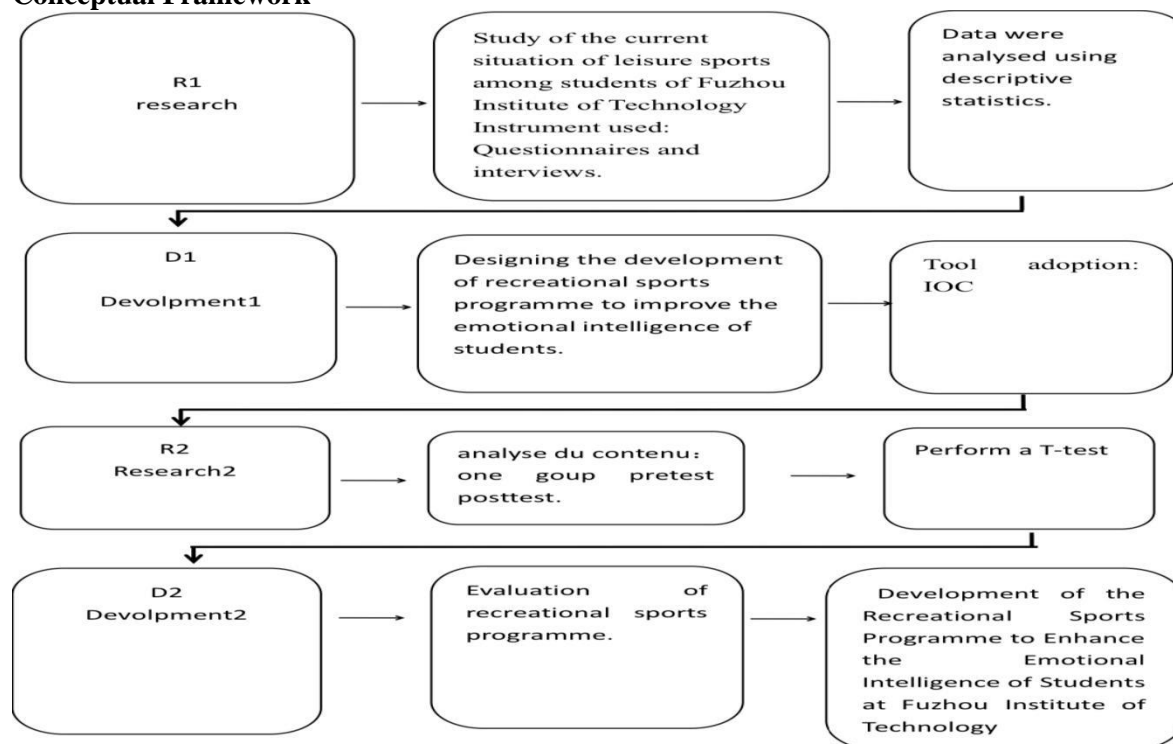


Figure 1 Conceptual Framework

## Methodology

**1. Population and Sample:** The population of this study was 11,643 college students at Fuzhou Institute of Technology. Freshmen have 4,353 students and sophomores, juniors, and seniors have a total of 7,290 students. The sample of this study was mainly randomly selected using Krejcie and Morgan table sampling for freshman and other year (sophomore, junior, and senior) students, with 360 freshmen sampled and a total of 370 sampled from other years (sophomore, junior, and senior). This study mainly used freshmen as the test subjects, to ensure the controllability of the test and the accuracy of the data, the researcher used the purposive sampling method among the freshmen, 15 male and 15 female students with similar levels of emotional intelligence were selected as the samples among the 94 freshmen volunteers called, which made a total of 30 people.

**2. Tool:** This study used research tools such as questionnaires, interviews, and experimental methods to investigate and develop the current status of college students' recreational sports participation and recreational sports programs at Fuzhou Institute of Technology.

**3. Data collection:** The data collection was carried out using questionnaires, interviews, and focus group discussions as follows:

**3.1 Questionnaire:** A questionnaire survey was conducted on 370 college students in their first year at Fuzhou Institute of Technology and 369 college students in other grades, with the main content of participation in recreational sports.

**3.2 Interviews:** Interviews with 20 students, 5 experts, 5 leaders, and 5 physical education teachers to obtain the feasibility of developing the perception and implementation of a recreational physical activity program to improve emotional intelligence.

**3.3 Experimental method:** An 8-week pre- and post-test experiment of a recreational sports program to improve emotional intelligence was conducted with 15 male freshmen and 15 female freshmen at Fuzhou Institute of Technology. The aim was to assess the effectiveness of the leisure sports program.

**4. Data analysis:** SPSS was used to analyze the information obtained from the questionnaire with descriptive statistics, including frequency, percentage, mean and standard deviation, etc., to obtain from the data the basic information about the usual participation of college students in recreational sports in the Fuzhou Institute of Technology. The contents of the interview transcripts were analyzed classified and coded according to dimensions to extract key information, themes, and suggestions; the experimental data were analyzed according to the t-test.





## Results

The findings of this study are divided into 3 parts, The details are as follows:

### Section 1 The current situation of recreational sports

(1) The recreational sports program for improving emotional intelligence mainly revolves around the four dimensions of the FITT principle and the six dimensions of recreational sports.

(2) The frequency of college students' participation in recreational sports is 2 times per week, the intensity tends to be low intensity and medium-low intensity, within 1 hour each time, and the type of program prefers ball games and fitness sports.

(3) Recreational sports are recognized for developing emotional intelligence.

(4) In the recreational sports program to enhance emotional intelligence because of its safety, fun, and diversity; four of the projects, yoga, basketball, running, and Tai Chi Chuan, were unanimously endorsed by the experts.

(5) School leaders and physical education teachers are actively developing relevant programmes, and the school is committed to supporting students' participation in recreational sports activities and creating conditions for them.

### Section 2: Development of the Recreational Sports Programme

According to the research and analysis data, the research and design were carried out to develop a recreational sports program for Fuzhou University of Technology students, to improve students' emotional intelligence level. The recreational sports improvement emotional intelligence program passed the consistency test of 5 sports experts and the review of the tutor. Finally, the researcher proposed program suggestions to 5 sports experts and mentors and finally revised the program, which was mainly formulated around the FITT-SFD principle.

#### Principles

The design of the recreational sports program unfolds according to the following 4 principles, which are mainly based on the FITT-SFD principles.

1) FITT principle: The FITT principles to ensure that interventions are safe, scientifically sound and reliable are described below:

Frequency: Where the total period of the recreational sports program was 8 weeks and the frequency of activities was 2 times per week;

Intensity: The intensity of the sport is divided into two levels, light intensity, and medium-low intensity, depending on the type of program.

Time: The total duration of each recreational sports activity in this program is set at 70 minutes;

Type: The types of recreational sports programs are composed of four programs: yoga, basketball, jogging, and taichiquan.

Type in FITT will mainly use recreational sports, recreational sports in this study contain 6 elements: autonomy, social interaction, technical requirements, place, participation way, and motivation.

2) Safety principle: Guarantee the physical safety of students in the activities and eliminate potential risks in advance.

3) Fun principle: Ensure that the activities are interesting and attractive and can stimulate students' participation.

4) Diversity principle: A wide range of different types of recreational sports activities are provided to meet the different interests and needs of students.

### Section 3: Evaluation of the Recreational Sports Programme

#### 1) Pre-experiment

To ensure the smooth running of the recreational sports program experiment the researcher randomly selected 20 pre-experimenters from the freshman class to conduct the pre-experiment in the pre-experimental period, in the process of pre-experiment the recreational sports program was carried out smoothly and no problems were found in the pre-experiment.

#### 2) Experimental pre and post-test test

The reliability of the recreational sports program was ensured through the pre-experiment, and then the researcher randomly recruited 94 voluntary students, conducted the pre-test of emotional intelligence on 94 freshmen, and 30 students at the same level were selected as the official experimental subjects from the 94 freshmen, including 15 male students and 15 female students, and the whole experiment contained the pre and post-tests of emotional intelligence scales; the researcher conducted the pre and post-tests through the data from the 30 participants' data by conducting the experimental pre and post-test paired t-test, the data are as follows:



Table 1 Paired Sample Statistics

EI		n	Mean	S.D	t	P
Emotional Perception	Pre-test	30	38.9	2.753	-20.38	< 0.001
	Post-test	30	49.8	1.808		
Self-Emotion Management	Pre-test	30	27	1.722	-17.39	< 0.001
	Post-test	30	33.5	1.889		
Emotional Management of Others	Pre-test	30	20.7	1.911	-20.32	< 0.001
	Post-test	30	26.7	1.022		
Emotional Use	Pre-test	30	23.5	1.995	-18.64	< 0.001
	Post-test	30	27.8	1.704		
Overall Emotional Intelligence	Pre-test	30	110.2	3.547	-39.35	< 0.001
	Post-test	30	137.8	3.312		

1) Emotion perception: the mean value was 38.9 (S.D = 2.753) before the experiment and increased significantly to 49.8 (S.D = 1.808) after the experiment.  $p < 0.001$ , with a significance level much lower than 0.05. This suggests that the difference between the positive emotion scores before and after the experiment was statistically significant, suggesting that the experimental intervention had a significant effect in enhancing the dimensions of emotional perception.

(2) Self-emotional management: In the comparative analysis before and after the experiment, the researcher observed that the mean scores of the experimental participants before and after the experiment were 27 and 33.5, while their (S.D) were 1.722 and 1.889, respectively. Which corresponds to a  $p < 0.001$ , a significance level far lower than that of the commonly used 0.05 level. The researcher has good reasons to believe that there is a significant difference between the scores before and after the experiment in the dimension of self-emotional management.

(3) Emotional management of others: In the comparative analysis before and after the experiment, the researcher observed that the mean scores of the experimental participants before and after the experiment were 20.7 and 26.7, respectively, while their (S.D.) were 1.911 and 1.022, respectively. Which corresponds to a  $p < 0.001$ , a level of significance that is much lower than that of 0.05, a level that is usually adopted. Adopted level of 0.05. The researcher has good reasons to believe that there is a significant difference between the scores before and after the experiment in the dimension of emotion management of others.

(4) Emotional application: In the comparative analysis before and after the experiment, the researcher observed that the mean scores of the participants before and after the experiment were 23.5 and 27.8, respectively, and their (S.D.) were 1.995 and 1.704, respectively, which corresponds to a  $p < 0.001$ , a level of significance that is much lower than that of 0.05, the level normally adopted. Adopted level of 0.05. The researcher has good reasons to believe that there is a significant difference between the scores before and after the experiment in the emotional application dimension.

5) Overall Emotional Intelligence: the researcher observed that the mean scores before and after the experiment were 110.2 medium level and 137.8 at a higher level with (S.D) of 3.547 and 3.312 respectively. By comparing and analyzing the scores before and after the test, which was found to be  $< 0.001$  indicating that the difference was statistically significant and the level of significance was lower than the 0.05 level normally used. It can be concluded that there is a significant difference in the scores on the overall emotional intelligence level before and after the experiment.

The analysis of the data confirms that the recreational sports program has a significant effect on improving the emotional intelligence of university students. In terms of emotional perception, self-emotional management, others' emotional management, and emotional application, the scores of college students who participated in this program were significantly higher after the experiment than before. This finding further validates the significance of the recreational sports program in enhancing the emotional intelligence of college students and provides important empirical support for research in the field of emotional intelligence.

### 3) Evaluation Summary

According to the evaluation of the participants, it can be seen from the collected data analysis that this activity has achieved remarkable results, but there is still room for improvement to better meet the needs of students. The specific content is summarized as follows:



- ① This recreational sports program to develop emotional intelligence has achieved remarkable results, with significant improvements in emotional perception, self-emotion management, others' emotion management, and emotional application. And overall satisfaction.
- ② Participants performed well in terms of their satisfaction with the recreational sports program after participating in the activity.
- ③ Students have diversified expectations and needs for such activities in the future, and are eager to be further cultivated in more aspects related to emotional intelligence.
- ④ The activity has brought many benefits to students and has exerted a positive and comprehensive influence on their personal growth and ability development.
- ⑤ Students are satisfied with the activity as a whole, but also hope to improve the activity time and site conditions, reflecting their higher pursuit of the quality of the activity.

## Discussion

By combining quantitative and qualitative methods and through the analysis of data from questionnaires and interviews, the researcher has developed a recreational sports program "FITT-SFD" for the development of emotional intelligence, which is developed for the current situation of university students at Fuzhou Institute of Technology and is suitable for improving the development of emotional intelligence of university students in Fuzhou Institute of Technology. Recreational Sports Programme.

Programme FITT: The protocol for the study revolved around the FITT including the 4 key factors of frequency, type, duration, and intensity. Consistent with the statement in the book "ACSM's Guidelines for Exercise Testing and Prescription\_ (Medicine, 2018) ", which states that the FITT Principles are based on the available scientific evidence on the physiological, psychological, and health benefits of exercise; that following The FITT Principles, when followed by appropriate exercise, can promote a combination of physical and mental health enhancements, including reduced stress and anxiety, improved mood and emotions, and increased self-confidence. These studies are consistent with the FITT factors in the FITT-SFD program and emphasize that following the FITT principles ensures that interventions are safe, scientifically valid, and reliable and that they have an important role to play in reducing stress and anxiety, and in improving mood and emotions to promote physical and mental health.

Combining quantitative and qualitative methods, by analyzing the data from questionnaires and interviews, the researcher found through the data that college students tend to participate in light exercise 1-2 times a week for less than 1 hour each time and prefer recreational sports activities such as ball games and fitness activities. This finding is consistent with the findings of the study "A Study of the Effects of Yoga Classes on the Emotional Intelligence Level of Female College Students\_ (Ma & Li, 2011) ", in which the researcher found that college students participated in yoga exercise 2 times a week for less than 1 hour at a time. The results of the study show that yoga courses can improve college students' perceptual ability, self-emotional management ability, and emotional application ability and that mastering scientific methods of exercising the body and the mind can play a very positive role in helping college students improve their level of emotional intelligence.

The results of the study are Research on the Impact of Taichi Teaching on the Psychological Health of Vocational College Students—Based on the Analysis of the Mediating Effect Between Trait Mindfulness and Emotional Intelligence\_, which also found that the practice of taijiquan by college students can help them to improve their ability of emotional perception, self-emotional management, and application of emotions, and thus improve their emotional intelligence. These similarities further emphasize the importance of taijiquan for the development of emotional intelligence in university students and the necessity of choosing a program that is suitable for their exercise regimen.

The results of the study are in line with the results of the study "The Influence of Sunshine Long Distance Running on Emotional Intelligence of Male College Students ---Take Hangzhou Dianzi University as an Example \_ (Wang et al., 2018) ", which showed that college boys with regular running, after a period of intervention their self-emotional management ability can be to the enhancement; these similarities progress to emphasize the importance of the importance for college students running on the development of emotional intelligence.

A study showed that by participating in basketball, students participated in a significant improvement. This finding 'The Study of the Influence of Basketball Sports on Emotional Intelligence of Junior High School Students \_ (Zhang, 2021) ' is in line with the results of a study in which they also found that students who participated in basketball had an improvement in the dimensions of emotional perception and self-emotional management, and that participation in basketball contributes to an increase in the level of emotional intelligence, and that similar studies have found that physical activity is not only beneficial to physical health, but also enhances the psychological well-being of students,

including Reducing stress, alleviating anxiety and depression, and promoting positive emotional experiences.

The study found that college students like to participate in sports by choosing the group participation mode, and this finding coincides with An experimental study of the effect of embodied gymnastics instruction on the emotional intelligence of junior high school students\_, which shows that there is a positive correlation between the group participation mode of sports and emotional intelligence and that there is a positive correlation between group participation mode of sports and emotional intelligence, which affects the improvement of emotional perception, self-emotional management, other people's emotional management, and the application of emotions, especially in the improvement of emotional perception, especially in the improvement of emotional intelligence. Perception in particular. As well as (Castro-Sánchez et al., 2018) in 'Emotional intelligence, motivational climate, and anxiety levels in athletes of different sports: an analysis using structural equations', results coincide with the fact that group exercise can be emotional perception, emotional management, and emotional application dimensions, especially in terms of emotional management dimensions and emotional application dimensions; these similarities serve as an important recreational sports program component.

Experts, students, school leaders, and teachers all agree that recreational sports are helpful for emotional intelligence and the activities are crucial for improving the emotional intelligence of college students. This view coincides with the findings of The Influence of sports on college students' emotional intelligence \_, which provides favorable support for the design of recreational sports programs to enhance emotional intelligence.

The FITT-SFD recreational sports activity program was validated by the participants, the EI level was significantly improved, the content arrangement of the FITT-SFD program consistently received a high degree of satisfaction from the participants, and the experimental data provided a theoretical lead for the provision of for the promotion of the development of college students' emotional intelligence by recreational sports in China's colleges and universities.

## Conclusion

### Section 1 The current situation of recreational sports

(1) The recreational sports program for improving emotional intelligence mainly revolves around the four dimensions of the FITT principle and the six dimensions of recreational sports.

(2) The frequency of college students' participation in recreational sports is 2 times per week, the intensity tends to be low intensity and medium-low intensity, within 1 hour each time, and the type of program prefers ball games and fitness sports.

(3) Recreational sports are recognized for developing emotional intelligence.

(4) In the recreational sports program to enhance emotional intelligence because of its safety, fun, and diversity; four of the projects, yoga, basketball, running, and Tai Chi Chuan, were unanimously endorsed by the experts.

(5) School leaders and physical education teachers are actively developing relevant programmes, and the school is committed to supporting students' participation in recreational sports activities and creating conditions for them.

### Section 2: Development of the Recreational Sports Programme

Through the analysis of the data from the first step of the mixed-mode study, the researcher designed and developed a recreational sports program "FITT-SFD" suitable for improving the emotional intelligence of the university students at Fuzhou Institute of Technology. FITT-SFD stands for the following components, which are as follows: 1) "F" stands for "Frequency" 2) "I" stands for "Intensity". 3) "T" stands for "Time". 4) "T" stands for "Type". 4.1) "A" stands for "Autonomy". 4.2) "S" stands for "Social interaction". 4.3) "T" stands for "Technical requirements". 4.4) "P" stands for "Place". 4.5) "P" stands for "Participation way". 4.6) "M" stands for "Motivation". 5) "S" stands for "Safety". 6) "F" stands for "FUN". 7) "D" stands for "Diversity".

### Section 3: Evaluation of the Recreational Sports Programme

From the analysis of the data collected, it is evident that this program was effective, but there is still room for improvement to better meet the needs of the students, as summarised in the following 5 points:

1) The effectiveness of this recreational sports program for the development of emotional intelligence was remarkable, with significant improvements in the areas of emotional perception, self-emotional management, emotional management of others, application of emotions, and excellent performance in terms of overall satisfaction.

2) Participants performed well in terms of satisfaction with the recreational sports program after participating in the activities.





3) Students have diverse expectations and needs for such activities in the future and desire further development in more emotional intelligence-related areas.

4) The program has provided students with a wide range of benefits and has had a positive overall impact on their personal growth and ability development.

5) Students were satisfied with the program as a whole but would like to see improvements in terms of program time and venue conditions, reflecting their pursuit of higher quality.

## Recommendation

### *Recommendations for the application of research results*

To better implement and promote the program, the following six aspects should be paid attention to during the implementation process: 1) timely adjustment and improvement in response to the suggestions made by the experimenters; 2) optimization of the use of resources; 3) enhancement of publicity and promotion; 4) education and guidance; 5) long-term tracking and evaluation; and 6) policy support.

### *Recommendations for future research*

1) Promotion to other colleges and universities: The program should not only be promoted at Fuzhou Institute of Vocational Technology but also actively introduce this special sports activity program to other colleges and universities to cover a wider range of student groups. When selecting colleges and universities to cooperate with, we should focus on selecting colleges and universities with similar educational backgrounds, student characteristics, needs, etc. for pilot promotion, to better evaluate the adaptability and effectiveness of the program.

2) Implementing experiments: Carefully plan pilot experiments in other universities to comprehensively collect authentic feedback and constructive suggestions from students on the program. In this way, the applicability of the program in different school environments can be thoroughly explored, potential room for improvement can be accurately identified, and strong data support can be provided for the optimization of the program.

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