



DEVELOPMENT STRATEGY OF LEISURE SPORTS TO IMPROVE  
PHYSICAL FITNESS FOR EMPLOYEES OF THE SMALL AND  
MEDIUM ENTERPRISE IN FUZHOU CITY



A Thesis Submitted in Partial Fulfillment of the Requirements  
for Doctor of Philosophy RECREATION TOURISM AND SPORT MANAGEMENT  
Department of Education Foundations  
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Mr.Xuanmin ZHU

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Title Development Strategy of Leisure Sports to Improve Physical Fitness  
for Employees of the Small and Medium Enterprise in Fuzhou City  
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Mr. Xuanmin ZHU : Development Strategy of Leisure Sports to Improve Physical Fitness for Employees of the Small and Medium Enterprise in Fuzhou City  
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In China, national policy initiatives include "Healthy China 2030" in creating conditions for easy access to physical fitness activities and implementation of projects on improving employee health in various industries, with particular emphasis on SMEs. The research aims are (1) to study the current situation of physical fitness of employees in small and medium enterprises (SMEs) in Fuzhou City. (2) to develop the strategy of leisure sports to improve physical fitness for employees of the small and medium enterprise (SMEs) in Fuzhou city. (3) to evaluate the leisure sport strategy aiming at improving the physical fitness of employees in SMEs in Fuzhou city. This study adopted the R&D research method, collected data by questionnaire with 400 SME employees and interview with 10 leaders in Fuzhou City. Then the researcher analyzed the data by descriptive statistical analysis and content analysis. A SWOT analysis was used to synthesise qualitative and quantitative data, then the strategy was developed through TOWS Matrix, and finally a two-month experiment was conducted with 54 participants to test the effectiveness of the strategy.

The results of this study found that:(1) The current state of employee leisure sports in Fuzhou City's small and medium-sized enterprises (SMEs) reveals 8 strengths, 6 weaknesses, 10 opportunities, and 5 threats. These findings highlight that while SMEs offer supportive policies and access to sports facilities, areas such as equipment funding, professional guidance, and dedicated sports venues still need improvement; (2) In response to the analysis of employee leisure sports participation in Fuzhou SMEs, this study proposes 4 SO strategies, 4 ST strategies, 4 WO strategies, and 4 WT strategies. These strategies focus on enhancing health management, securing sponsorships, expanding employee access to sports facilities, improving feedback systems, and providing necessary equipment and guidance; (3) The development strategies can significantly improve physical fitness for employees in SMEs. In general, If the development strategies proposed in this study are implemented, they are expected to enhance employee engagement in leisure sports, improve overall physical fitness, and contribute to the sustainable development of workplace health and wellness programs in Fuzhou's SMEs.

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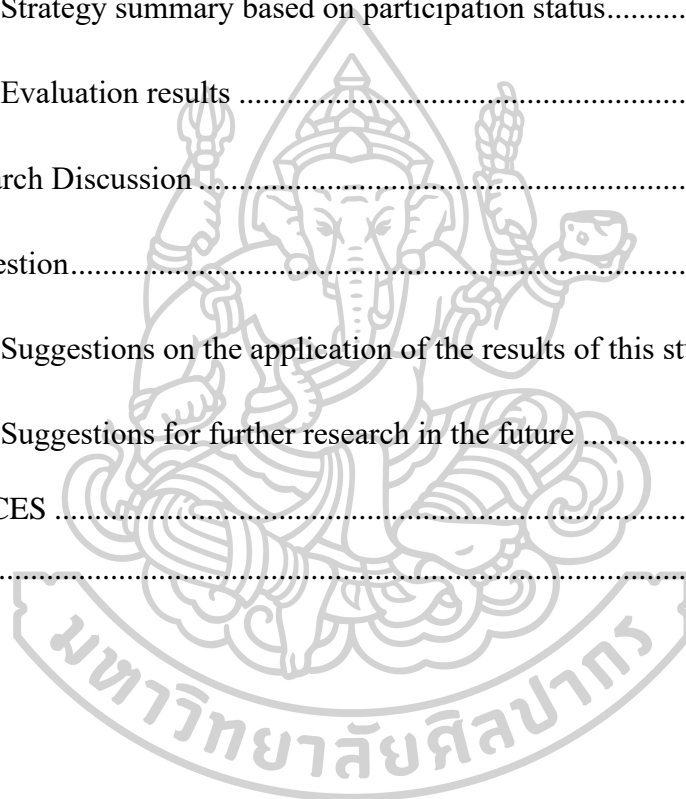
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# Chapter I: Introduction

## 1.1 Background to the Study

Leisure sports serve as a significant indicator of social development and national cultural progress. As China's comprehensive national strength and social civilization have advanced, leisure sports have gained considerable attention and importance. In recent years, the leisure sports industry has increasingly become an essential component of the broader sports sector. The industry reflects trends in modern, human-centered, and scientifically driven social progress, and these attributes will continue to be strengthened in the growth of leisure sports in China. Recent documents and policies aimed at supporting and fostering the leisure sports sector reveal unprecedented levels of promotion and development within this field.

National fitness is a social cause that can enhance the comprehensive strength of the country in many ways. In October 2014, the State Council issued the Opinions on Accelerating the Development of the Sports Industry and Promoting Sports Consumption (State Council of China, 2014a), which proposed that national fitness should be elevated to a national strategy and that by 2025, the per capita area of sports venues in our country will reach 2 square meters, and the number of people who regularly participate in physical exercise will reach 500 million people. If calculated according to the annual per capita sports consumption of 2,000 yuan, the daily sports consumption of residents in 2025 can reach 1 trillion yuan. China's sustained high economic growth in the past decade and the rapid improvement of people's living standards have enabled the state and local governments to have a large amount of money to build sports facilities, per capita sports consumption continues to increase per capita leisure time has gradually increased and the space and scope of people's activities are increasingly expanding. With the change of residents sports concepts, spending money to buy health, spending money to buy entertainment, spending money to buy happiness has begun to become a trend, and residents daily leisure sports with three major balls, badminton, ping-pong, swimming, hiking, fishing, sports dance, square dance, etc. as the main content is one of today's residents important lifestyles, and it is the core of China's residents leisure sports; since 2016, the state has been promoting the development of leisure Sports development on the successive introduction of the national fitness program (2016 ~ 2020) notice put forward (State Council of China, 2016d): by 2020, 700 million people were engaging in physical exercise at least once a week, with 435 million participating regularly. Sports consumption reached a total of 1.5 trillion yuan, establishing national fitness as a means to drive the growth of the sports industry. This shift has become a key factor in stimulating domestic demand and creating new economic growth opportunities. The Guiding Opinions on Accelerating the Development of the Fitness and Leisure Industry outlined five key objectives to support this advancement. (Office of the State Council, 2016), one is to popularize daily fitness, which mainly includes a number of sports that have wide popularity, high attention, and large market space; the second is to develop outdoor sports, which mainly includes ice and snow sports, mountain

outdoor sports, water sports, automobile, motorcycle sports, and aviation sports, etc.; and the third is to Developing national folk fitness and leisure programs such as martial arts, dragon boat, dragon and lion dances, etc.; promoting the interactive integration of industries and fostering the integration of fitness and leisure with culture, education, health, agriculture and other industries; and promoting the Internet Fitness and Leisure. Encourage the development of fitness and leisure services supported by mobile Internet, big data and cloud computing.

The Outline of the Healthy China 2030 Plan proposes accelerating the opening up of sports resources, innovating ways to promote and popularize fitness and leisure sports, encouraging various forms of sports and fitness clubs, and enriching amateur sports events; actively fostering fashionable leisure sports projects with consumer-led characteristics, such as ice, snow, mountain, and water sports; and creating fitness and leisure demonstration zones and fitness and leisure industrial belts with regional characteristics (State Council of China, 2016a). It will also create fitness and leisure demonstration zones and fitness and leisure industry belts with regional characteristics. The experience of leisure sports is mainly realized through the way of playing, and enjoyment, which is the realm of modern people's pursuit of a life of leisure. Teaching people to play, organizing people to play, leading people to play is the key to the development of leisure sports, so that people can play out of the culture, play out of the wonder, play out of the life, and that is the ultimate pursuit of leisure sports. We should make full use of all kinds of natural resources, social resources and cultural resources to develop recreational sports, through protecting the soul of mountains and waters, enriching the products of mountains and waters, guiding the vacation of mountains and waters, doing the creativity of mountains and waters, and optimizing the experience of mountains and waters, so as to make China's mountains and waters, coastal resources, ice and snow resources, and aviation resources into the place of ecological nourishment, leisure sports, and the national vacation place.

Opinions on Further Expanding Consumption in Tourism, Culture, Sports, Health, Pension, Education and Training, etc., the State General Administration of Sport, in order to implement the spirit of the State Councils Opinions on Accelerating the Development of the Sports Industry and Promoting Sports Consumption, the joint National Development and Reform Commission and other ministries and commissions formally issued the Mountain and Outdoor Sports Industry Development Plan (General Administration of Sport, 2016), Water Sports Industry Development Plan, Aviation Sports Industry Development Plan, and Ice and Snow Sports Development Planning (2016~2025). The National Tourism Administration and the State General Administration of Sports jointly issued the Guiding Opinions on Vigorously Developing Sports Tourism (General Administration of Sport, 2018). In just one year, such a series of high-profile documents have been issued around the health and leisure industry, and leisure sports will surely become a pillar industry in the development of tertiary industry.

Since the reform and opening up, the state has always attached great importance to the development of small and medium-sized enterprises (SMEs) and put forward a series of relevant policies and initiatives to support SMEs. 2003, the State Council for

the first time put forward the Law of the Peoples Republic of China on the Promotion of Small and Medium-sized Enterprises (State Council China, 2018), which provides a legal basis for the promotion of the healthy development of SMEs and expansion of urban and rural employment and provides a legal basis for the protection of the development of SMEs. Mass entrepreneurship, innovation, and deeply rooted in people's hearts for the development of small and medium-sized enterprises to bring opportunities. In October of the same year, the State Council issued on supporting the healthy development of small and micro-enterprises, clearly pointed out the future strategic direction for small and medium-sized enterprises into the rapid development stage (State Council China, 2012). From this point of view, the state, in recent years, pays more attention and constantly increase the support to small and medium-sized enterprises. Since the beginning of this century, China's largest and most dynamic types of enterprises are small and medium-sized enterprises. If SMEs want to occupy a place in the increasingly competitive market, it is fundamental for the survival and development of the enterprises to have advanced management concepts, to have the technical ability to innovate continuously, or to have employees who can grasp the pulse of the ever-changing market. With the continuous improvement of the market system in recent years, China's small and medium-sized enterprises have become the main force of GDP growth, they are the main creators of jobs, is the important force of technological innovation, and is the main promoter of the country's economic development. Employees of SMEs are the new generation of groups emerging from the process of reform and opening up and industrialization and urbanization, and as a force for modernization, they are related to the overall economic and social situation of our country and the future development of the country due to their large number and unique identity. Throughout urban development, small and medium-sized enterprise employees have become an important force in promoting urban development and modernization.

The World Health Organization speculates that globally, more than 2 million deaths per year are caused by insufficient physical activity, and the reasons for this can be attributed to two aspects: firstly, insufficient participation in physical activity during leisure time; and secondly, insufficient physical activity due to the prolonged sedentary state at work and the increasing prevalence of fast and easy transportation. According to a survey of urban residents in the center of Shanghai, less than 30% of the total surveyed population is able to maintain a moderate level of physical activity for at least 30 minutes five or more times per week, and less than 5% of the total surveyed population is able to maintain a high level of physical activity for at least 20 minutes three or more times per week (General Administration of Sport of China, 2022).

Since the reform and opening up, our country's political, economic, and international social status has advanced by leaps and bounds, the national standard of living has been improving, and the pace of life has been accelerated gradually. In order to meet the increasing demand, various units, with the government taking the lead, have launched the networked and electronic office to improve work efficiency

and promote environmental protection, which has also led to the expansion of modern civilization disease among the occupational groups. This has also led to the expansion of modern civilization disease among the working population. For this reason, developed countries have created a movement to enhance national fitness and health awareness, improve physical fitness, and motivate the public to participate in fitness activities for the purpose of the boom and in the international arena to produce more and more influence.

Along with the rapid development of urbanization in China, a large number of SME employee groups are flocking to the city to find their own positions and dreams there. As an important force in the construction and development of China's urbanization, it is the key to determining the success or failure of the enterprise, and its physical condition affects the overall work efficiency of the enterprise to a certain extent, which in turn relates to the economic construction and social progress of the country. In the twenty-first century, the competition between countries is becoming more and more intense; the quality of talent determines the level of national comprehensive national strength, the quality of people, including thought, ability, mental and physical quality. It is not difficult to see that the Party and the State attach great importance to the people's physical quality, and health condition and encourage people to carry out physical activities, while at the same time putting forward the requirements for the direction of the development of China's sports industry, measures to carry out the national fitness movement, and accelerating the process of achieving the goal of a sports power to put forward guiding opinions. The opinions. Therefore, the physical health condition of enterprise employees is very important.

In 2016, China began to implement the Healthy China 2030 planning program, which clearly states that the entire population should share fitness exercises so that people can achieve the purpose of health promotion in scientific fitness. As a high-level cultural activity of human society, leisure sports are an important part of people's spiritual life, and it has become the social behavior and social concept of people's pursuit of health and enrichment of their emotional life and has become a value system generally recognized by society (State Council of China, 2016c). In recent years, with the concept of urban leisure sports gradually warming up, leisure sports space, the facilities continue to improve, leisure sports development environment continues to optimize the development trend of leisure sports for the masses has become inevitable. As a high-pressure group in the city, employees of small and medium-sized enterprises (SMEs) have to work long hours and under great pressure, which adversely affects their physical and mental development. In this context, the demand of SME employees for pursuing health experience, participating in leisure activities and socializing in leisure sports has become more and more obvious. Leisure sports have become an indispensable part of SME employees' health enhancement and enjoyment of a better life and is an important source of happiness. Leisure sports participation has a positive effect on the promotion of physical and mental health, urban harmony and civilization progress of SME employees.

At the third session of the 11th National People's Congress of China, Minister of Industry and Information Technology, Li Yi, emphasized the vital role that small and



medium-sized enterprises (SMEs) play in China's national economy and social development. By the time of the conference, 10.23 million SMEs had registered with the Commerce and Industry Department, making up 99% of all enterprises. These businesses account for approximately 60% of the country's Gross Domestic Product (GDP), contribute roughly 50% of tax revenues, and provide about 80% of urban employment positions. Therefore, the development of SMEs is essential for addressing employment concerns and maintaining social stability. Against the backdrop of urbanization, employees of SMEs have emerged as a significant force in propelling urban growth. As China undergoes social and economic transformation, adjustments in economic and industrial structures are constant, leading to pronounced shifts in urban-rural dynamics. The workforce of SMEs, having emerged during the reform, opening-up, industrialization, and urbanization phases, represents a new generation. They serve as a driving force in the nation's modernization efforts, holding significant sway over China's comprehensive socio-economic trajectory and its future development due to their sheer numbers and unique position (Wen, 2009).

Fuzhou, located in the southeastern coastal region of Fujian Province, is the provincial capital. As a coastal city adjacent to the Taiwan Strait and overlooking the Pacific Ocean, Fuzhou holds strategic importance. It ranks as one of China's most crucial port cities and is recognized as a national historical and cultural city as well as a tourist destination. Fuzhou is also the political, economic, and technological hub of Fujian Province, functioning as the province's commercial and industrial center. Its primary industries include electronics and information technology, machinery manufacturing, chemicals, textiles, and food processing. SMEs in Fuzhou benefit from its location within China's prosperous coastal economic region, enjoying clear geographic and resource advantages. Because of the high concentration of related industries within specific areas, businesses within these clusters can access abundant resources required for industry competition, enabling them to garner support from suppliers at lower costs and through more stable channels. Observing the city's evolution, the employees of SMEs in Fuzhou have become a pivotal force in advancing the city's growth and modernization.

In recent years, leisure sports, as an important form of social and cultural activity, has gradually revealed the diversified value of leisure sports participation. The functions of leisure sports participation in improving people's quality of life, enhancing people's happiness index, and improving people's sense of acquisition have gradually been accepted by more people. However, even though the enthusiasm of the employees of SMEs to participate in leisure sports is increasing. However, because of the demand for leisure sports by the income level, leisure time, exercise skills, and other factors, small and medium-sized enterprise employees of leisure sports participation concept is still relatively lagging behind, participation in the form of a relatively single, most of the small and medium-sized enterprise employees to participate in leisure sports is still only satisfied with walking, playing cards, buying sportswear and other primary leisure sports, leisure sports in the overall satisfaction at

a lower level. The worrying leisure sports participation status of SME employees has a negative impact on the physical and mental health, and leisure spiritual and cultural life of this group. Although, in recent years, the society and the government have paid extensive attention to the leisure sports participation of SME employees and taken a series of relevant measures to promote it, according to the principles of TQM, TPM and Lean, and the urgent demand for leisure sports participation, it is imperative for us to analyze the crux of the problem from the macroscopic perspectives of the society, the city, and the culture, as well as the microscopic perspectives of the enterprises, the organizations, and the employees of SMEs themselves. It is imperative to do so. If the physical fitness of employees in small and medium-sized enterprises improves after using the strategies in this study, then the number of sick leaves taken within the enterprise will decrease significantly, which will greatly improve the efficiency of the enterprise.

## **1.2 Purpose of the Study and the research questions**

### **1.2.1 Purpose of the study**

1. To study the current situation of physical fitness of employees in small and medium enterprises (SMEs) in Fuzhou City.
2. To develop the strategy of leisure sports to improve physical fitness for employees of the small and medium enterprise (SMEs) in Fuzhou city.
3. To evaluate the development strategy of leisure sports to improve physical fitness for employees of the small and medium enterprise in Fuzhou city.

### **1.2.2 Research questions**

- 1.) What is the current situation of physical fitness for employees of SMEs in Fuzhou?
- 2.) What is the strategy development of leisure sports current improving physical fitness of employees in SMEs in Fuzhou city?
- 3.) What is the ability of leisure sports strategy can improve the physical fitness of employees in SMEs in Fuzhou City?

## **1.3 Scope of the study**

### **1.3.1 Content of the study**

The research of this study is about the strategy of leisure sports to improve physical fitness for employees of the small and medium enterprise (SMEs) in Fuzhou city.

### **1.3.2 Research population and sample**

#### 1) Population:

Employees and Leaders of the small and medium enterprise (SMEs) in Fuzhou city, about 700,000 people in total.

#### 2) Sample:

According to Krejci and Morgan Table, 400 employees of small and medium Enterprises (SMEs) in Fuzhou city will be selected as the sample for this research by using simple random sampling, and 10 leaders of SMEs in Fuzhou city will be

selected by snowball sampling.(Krejcie, 1970)

Experiment sample: A total of 56 people from the two companies signed up for the experiment, and 54 of them completed it. 37 of them were from medium-sized companies and 17 from small companies.

3) Key information providers:

General manager 2, Deputy general manager 3, Department manager 5

## **1.4 Definition of key terms**

### **1.4.1 SMEs**

The 2017 revision of the Law of the People's Republic of China on the Promotion of Small and Medium-sized Enterprises redefined SMEs as companies legally established in China, characterized by relatively smaller scales in personnel and operations. SMEs include medium-sized, small-sized, and micro-enterprises, with classification criteria based on employee count, revenue, total assets, and specific industry characteristics. This study adopts the definition of SMEs from the 2017 law revision.

### **1.4.2 Employees of SMEs**

Employees of SMEs typically refer to grassroots staff, including salespersons, technicians, and logistics personnel, who execute and complete operational tasks, distinct from middle and senior management (J. Ma, 2016). This article focuses on SME employees in Fuzhou City, defining them as the executors and finishers of specific tasks within the enterprise, excluding higher management roles.

### **1.4.3 Leisure sports**

Since the late 1980s, the term "leisure sports" in China has encompassed various definitions, viewing leisure as both a purpose and means of exercise. For this article, leisure sports are defined as physical activities like basketball, football, badminton, swimming, ping pong, and in-gym exercises, with leisure as their primary goal.

### **1.4.4 Physical fitness**

Physical fitness refers to an individual's capacity in areas like strength, speed, flexibility, coordination, sensitivity, and balance. This article categorizes physical fitness into speed, sensitivity, coordination, endurance, balance, flexibility, and strength based on national standards and research.

### **1.4.5 Strategy**

Some scholars define strategy as a set of plans designed to achieve goals by aligning with situational developments and organizational capabilities. This process involves identifying a target market and creating measures to ensure effective implementation, including strategic thinking, objectives, actions, focus areas, and stages of execution.

## **1.5 Benefits of the research**

### **1.5.1 Theoretical implications**

Based on traditional basic theories such as the theory of planned behavior, existential theory, lifelong sports theory, game theory, Maslow's hierarchy of needs



theory, and combined with SWOT analysis, we analyze in depth the internal theoretical logic that affects the participation of small and medium-sized enterprises (SMEs) employees in leisure sports and provide a systematic perspective for the study of leisure sports of SMEs employees. It advances the theoretical research on the influential relationship between the attitude of sport and leisure and the satisfaction of sport and leisure participation of employees in SMEs.

### 1.5.2 Relevance

To understand the current situation of physical fitness of employees of small and medium-sized enterprises (SMEs) in Fuzhou City and the advantages, disadvantages, opportunities, and obstacles of SMEs development; to propose leisure sports strategies to improve the physical fitness of employees of small and medium-sized enterprises (SMEs) in Fuzhou City and to find shortcomings for improvement.



## Chapter II: Literature Review

This study uses relevant theoretical studies at home and abroad to systematically analyse the combination theory of social ecological model and community sports development, health and leisure related theories sports, leisure restriction theories, 4M related theories, SWOT related theories, leisure sports related theories, physical fitness related theories, strategy related theories, Maslow's hierarchy of needs theories, and stakeholder theories. And the 4M related theories, SWOT related theories, leisure sport related theories, physical fitness related theories, strategy related theories, Maslow's hierarchy of needs theory, and stakeholder theories were mainly used in the process of questionnaire and interview outline. The study describes the characteristics of the study through bibliometrics and analyses the strengths and weaknesses of the current theories. It mainly includes the following aspects:

1. Theories related to Leisure Sports
  - Definition of Leisure Sports
  - Factors affecting Leisure Sports
  - Classification of Leisure Sports
  - Characteristics of Leisure Sports
2. Health Demand Theory and Theories related to physical Fitness
  - Definition of Health Needs
  - Definition of Health Needs in Recreational Leisure Sports
  - Factors Affecting Health Needs in Recreational Leisure Sports
  - Theories Related to Physical Fitness
  - The Effect of Leisure Sports on Physical Fitness Enhancement
  - Challenges in Conducting Leisure Sports Meets
  - The Current situation of Leisure Sports Development in Small and Medium-sized Enterprises in Fuzhou City
  - Analysis of the Development Trend of Leisure Sports for Small and Medium-sized Enterprises in Fuzhou City
  - Successful Case Studies in Leisure Sports
3. 4M Theory
  - Development History of 4M
  - Basic Components of 4M
  - Application of 4M in Leisure Sports
4. SWOT Theory
  - Development History of SWOT
  - Basic Components of SWOT
  - Application of SWOT in Leisure Sports
5. The context of Fuzhou
6. Previous studies

### 2.1 Theories related to Leisure Sports

#### 2.1.1 Definition of Leisure Sports

The theory of leisure sports participation is one of the very important theories in the field of sports, which was proposed by Icek Ajzen as an important theoretical

basis for the study of physical education. Leisure and recreation are free, voluntary activities that people engage in during their leisure time to enjoy themselves physically and mentally. As a physical activity that develops people's own nature, the individual and social functions played by sports in leisure and recreation are irreplaceable by other leisure and recreation activities. The main reasons why sports have the function of leisure and recreation are: Sports activities always pay attention to the development of man's own nature; sports activities have a lot of human interaction. There are two basic ways of realizing the leisure and recreational functions of sports: Firstly, personal participation in sports activities, and secondly, enjoyment of sports competitions.

Yu Fang in *Leisure Sports* gives the concept of leisure sports (F. Yu, 2020), which refers to a variety of sports activities that are carried out by individuals or groups of people in their free time for the purposes of recreation, fitness, socialising or leisure. This concept emphasises on the enjoyment and physical and mental relaxation of the participants rather than on competitiveness or performance excellence. Recreational sport wraps up a wide range of activities such as hiking, jogging, yoga, swimming, basketball, and football that are designed to be fun and adaptable to people of all ages and ability levels. Participation in recreational sports is flexible, and can involve individuals independently, group or team activities, one-time participation or sustained activity over a long period of time. Leisure sports activities should be open to all people, regardless of their age, gender, physical or socio-economic status, and they should be able to find an activity that suits them.

Recreational physical activity has significant positive effects on an individual's physical and mental health, including reducing stress, improving physical fitness, and enhancing state of mind. In addition, it facilitates socialisation and promotes interpersonal connections and a sense of community, while improving quality of life and well-being. At the societal level, recreational sport is an important way to promote public health, enhance social cohesion and foster economic development. The popularity and development of recreational sport is ultimately about enhancing people's quality of life and enabling them to find a source of relaxation and happiness in their busy lives.

V Päivärinne et al. defined leisure sports activities as any physical activity or exercise performed during free time or entertainment time. It includes walking, jogging, swimming, cycling, sports, and any other form of physical activity for enjoyment and health outside of work or other obligations (Päivärinne, Kautiainen, Heinonen, & Kiviranta, 2019).

In the study of G. Okano et al., leisure sports refer to any physical activity or exercise that an individual performs in his or her spare time or leisure time. It includes walking, jogging, swimming, cycling, exercise and any other form of physical activity unrelated to work or daily chores. G. Okano et al. have shown that the level of physical activity in leisure time is the determinant of self-perceived health and fitness of

middle-aged male employees. G. Okano et al. found that participation in a moderate level of physical activity index (PAI) is the only predictor of self-feeling good and healthy. Maintaining this habit throughout the year and starting at age 50-59 is also an important factor in achieving good self-health and fitness status (Okano, Miyake, & Mori, 2003).

To sum up, in this study, to sum up, in this study, leisure sports participation Leisure is a purpose of exercise, exercise is a means of leisure. According to research content, this article is defined as physical activities such as basketball, football, badminton, swimming, ping pong ball, in-gym activities and so on which target is leisure.

### **2.1.2 Factors affecting Leisure Sports**

Shang Haiwei pointed out in Research on Influencing Factors and Countermeasures of College Students Recreational Sports (Shang, 2016) that the participation and development of recreational sports are affected by a variety of factors, which can be analysed at the individual, social environment and policy levels: Individual level factors: 1) Physical health: physical health and fitness level are important factors affecting an individual's participation in recreational sports activities. Individuals in good health may be more able to participate actively in a variety of sporting activities. 2) Age and gender: Age and gender also affect people's propensity to choose and participate in leisure sporting activities. People of different age groups and genders may have different interests in and needs for physical activities. 3) Personal interests and preferences: Individual's interests in and preferences for specific physical activities are important factors in participation decisions. 4) Time and financial resources: Disposable time and financial status also have a significant impact on participation in recreational sport. Time constraints or financial constraints may prevent people from participating in sports activities. Socio-environmental factors: 1) Accessibility of facilities: Availability and accessibility of sports facilities play a key role in promoting leisure sports activities. More and better sports facilities can motivate more people to participate. 2) Community and cultural support: Community and cultural contexts can also influence an individual's willingness to participate in recreational sports. A community environment that encourages physical activity can help increase participation. 3) Socio-economic factors: Socio-economic status and educational attainment are also important factors that influence perceptions of leisure sport and opportunities for participation. Policy and institutional factors: 1) Government policy and investment: The level of government policy support and investment in recreational sports directly affects the construction, operation, and promotion of sports facilities, which in turn affects people's participation. 2) Physical education and promotion: Education and promotion of the importance of physical education and fitness within and outside of the education system can raise people's awareness of their health and encourage more people to participate in recreational sports activities.

These factors interact with each other and collectively affect the popularity of

leisure sports and the participation of individuals. Understanding these factors will help to develop effective strategies to promote greater participation in recreational sport and improve the physical and mental health of society as a whole.

### **2.1.3 Classification of Leisure Sports**

Lu Feng pointed out in his article Classification study of Leisure Sports (Lu, Liu, & Wen, 2006) that the classification of recreational sports can be based on a number of criteria, including the nature of the activity, the requirements of the venue, the number of participants, and the level of skills. Classification according to the nature of the activity can be divided into: Outdoor activities including hiking, mountaineering, kayaking, fishing, skiing, cycling, etc., which are usually carried out outdoors and not only exercise the body, but also get in touch with the nature; indoor activities, such as gym workouts, yoga, billiards, bowling, etc., which make indoor recreational sports an ideal choice in case of inclement weather or other specific circumstances; swimming, surfing, sailing, jet skiing, and other Water activities, these activities are mainly carried out in the waters, the skills and safety requirements are higher; although mainly for leisure purposes, but still have a certain competitive nature of the competition sports activities, such as amateur basketball matches, football matches and so on. Classification by venue requirements can be divided into: Nature-dependent activities such as mountaineering, hiking, kayaking, etc., which usually rely on specific natural environments; specialised facility-dependent activities, such as swimming, bowling, fitness, etc., which require specialised venues and equipment; and open-space activities, such as running, cycling, etc., which can be carried out in open spaces and have lower requirements for venues. Classified by the number of participants, they can be divided into: Individual activities, which are usually carried out alone, such as running, swimming or yoga alone; two-person or small group activities, which require the participation of two persons or a small team, such as badminton, table tennis, two-person kayaking, etc.; and team activities, which require more than one person to form a team to participate in, such as basketball, football and volleyball. Categorised by skill and intensity, they can be divided into: low-intensity activities such as walking, easy cycling, yoga, etc., which are suitable for people who want to relax or who are new to sports; medium-intensity activities such as running, badminton, swimming, etc., which are suitable for people with a certain level of sports fundamentals to participate in; and high-intensity activities, such as long-distance running, football, basketball, etc., which are suitable for people who have a high level of physical fitness and who are looking for a challenge.

There are various ways to categorise recreational physical activities, and different classifications focus on understanding and describing the different characteristics of recreational sport. Choosing the right recreational sport activity not only increases the enjoyment of exercise, but also improves the effectiveness and safety of the activity.

### **2.1.4 Characteristics of Leisure Sports**

Liu Guiwen pointed out in his article Characterisation of Leisure Sports in the Context of a Well-off Society (Liu, 2017) that leisure sports have the following



distinctive features: voluntariness, in which participants voluntarily choose whether or not to take part in leisure sports activities and what form of activities to choose. This self-selected characteristic allows people to feel pleasure and satisfaction rather than pressure and obligation in the activities; diversity, there are many kinds of leisure sports activities, from outdoor hiking and swimming to indoor yoga and fitness, and then to the more competitive basketball and football, etc., which satisfy the needs of people of different ages, genders, interests and physical conditions; randomness and flexibility, compared with formal competitive sports, leisure sports activities are Time and place are relatively flexible and not subject to strict regulations. Participants are free to choose when and how to participate according to their own time, place, moods, and socialisation. Recreational sport is not only an exercise in physical strength and skills, but also a way of communication and socialization between people. Through team sports or activity groups, people can make new friends and strengthen their ties with each other; recreational and health purposes, the main purpose of many people participating in recreational sports activities is to have fun and stay healthy. These activities provide them with a way to relax and improve their quality of life, which has benefits to physical and mental health. Regular participation in recreational sports can promote physical health, improve psychological state, increase self-confidence, and help to reduce stress and anxiety, thus improving overall well-being, which is Low threshold of participation. Compared to professional competitive sports, the threshold of participation in recreational sports is relatively low and does not require professional training and skills. and are more focused on the enjoyment of the participation process and personal wellbeing.

Min & Jin, the article Analysis of the nature, types and characteristics of recreational sports explores the nature of recreational sports, which are voluntary, non-competitive activities aimed at improving mental health. The authors classify recreational sports into four types: entertainment, fitness, adventure, and social activities. The main characteristics include diversity, voluntary participation, non-competitiveness and complexity. Recreational sports are described as a flexible way for people to participate in physical activities that can meet different preferences and abilities while enhancing physical and social well-being (Min & Jin, 2010).

## **2.2 Health Demand Theory and Theories related to Physical Fitness**

### **2.2.1 Definition of health needs**

Abraham Maslow's definition of health needs refers to people's desire or need for health care services and resources. It includes factors that influence an individual's decision to seek health care, such as their perceived health needs, preferences, and available resources. Health needs may be affected by factors such as demographics, socioeconomic status, cultural beliefs, and availability and accessibility of health care services. Understanding health needs is important for health care providers, policy makers, and researchers to effectively allocate resources and improve health care services (Lounsbury & Mitchell, 2009).

A Wagstaff believes that demand for health refers to an economic approach that emphasizes the role of economic factors in the formation of health-related behaviors. It believes that individuals require a commodity called health. This concept is based on the individual's emphasis on health and consumption activities, but they do not believe that physical health is the most important thing in life. The health needs theory holds that individuals seek to maximize their well-being by choosing a combination of health and consumption that provides the highest level of satisfaction. The theory also predicts that changes in factors such as health inputs and income prices may affect individual health and consumer demand. In addition, Abraham Maslow discussed the health needs theory and its application to various policy issues, such as socioeconomic inequalities in health and the design of prevention policies (Wagstaff, 1986). A Wagstaff emphasized the importance of non-medical factors in determining health, such as food, housing conditions and work environment. It also highlights the need to understand health-related behaviours in order to assess the effectiveness of prevention strategies, the causes of health inequalities and the impact of unemployment on health. This study introduces the basic concepts of economic methods, including indifference diagram and health production function. The main findings of the study include the recognition that health is not the only desirable thing in life, and that individuals can control their own health through consumption patterns, health care utilization, and the environment.

In the study of B Liljas, demand for health refers to the concept that individuals are willing to pay for improving their health status. This is a basic issue in health economics, involving understanding the factors that affect individual health-related behaviors. This knowledge is important for understanding risk behaviors (such as smoking and substance abuse) and evaluating health care plans based on individual preferences. The demand for health can be measured by methods such as condition assessment, that is, the maximum willingness of individuals to pay for health improvement in a hypothetical scenario. In the health demand model, uncertainty is an important factor to be considered because it affects the individual's assessment of health and its demand for health care. Insurance can also affect an individual's need for health because it provides protection against financial risks associated with illness or injury (Liljas, 1998).

### **2.2.2 Definition of Health Needs in Recreational Leisure Sports**

Wang Xiangsheng et al. suggested in their article *The Current Situation and Prospects of the Development of Leisure Sports in China's Colleges and Universities* that the health needs in recreational sports activities are a comprehensive concept covering three dimensions: Physical health, mental health, and social health. From the physical health perspective, participants seek to prevent chronic diseases, improve physical functioning, and effectively control weight and body fat through physical activity. On the mental health dimension, recreational sport became a stress-reducing avenue to help people manage their emotions and enhance their self-confidence and self-esteem, while finding pleasure and satisfaction in life. In terms of social health, sports activities provide a platform for people to enhance their social interactions and

strengthen their sense of social belonging through team sports and club activities, as well as to enhance their cultural participation and identity through participation, thereby improving their quality of life. Therefore, through these multidimensional health needs, recreational physical activity is an important means of enhancing an individual's overall well-being and quality of life (X. Wang & Wang, 2024).

### **2.2.3 Definition of Health Needs in Recreational Leisure Sports**

Abraham Maslow, the famous American psychologist, had specifically defined the health demand theory in his writings as the high degree of need for people's health capital. The two factors that influence people's health needs differently are investment and consumption. If physical health is regarded as a kind of commodity, then there will be corresponding effects. From the perspective of leisure sports, there is a closer link between leisure sports and people's physical health needs; the stronger people's needs to pursue physical health and prevent diseases, the more active they will be in participating in leisure sports. Taking the derivation of the health production function as an example, one of the important variables is whether or not to participate in sports activities and whether or not the participation in sports activities is active. People's psychological needs change gradually following the progress of human civilisation, the development of a harmonious society, and the continuous growth of people's cognitive level. In the early stage of the development of human society, health needs were mainly reflected in the rich and wealthy people, and most of the ordinary people were mainly concerned with survival. At this stage, people's basic needs for survival were basically satisfied, and they began to gradually realise the importance of health to people. The concept of health and its basic meaning are also changing, and active health interventions are gradually accepted by people, who participate in sports activities to actively promote physical health. In addition, in the process of health intervention, people gradually realise the importance of a healthy ecological environment, and that people's health is related to their living habits, psychological state and genes. With the progress of people's cognitive level and spiritual civilisation as well as changes in living habits, cardiovascular and cerebrovascular diseases. Cancer and other diseases are developing rapidly. Development is like a double-edged sword, there is a certain contradiction between people's healthy survival and healthy development, health will become the primary problem of people's social development, and health needs will become the most important psychological needs of people's life development. People who take sports as a form of leisure can effectively promote the improvement of people's physical fitness level, helping them to better integrate into social life, which in turn can affect their psychological health, helping them to improve their psychological health and overall self-esteem (Maslow, 2003).

### **2.2.4 Theories Related to Physical Fitness**

Lifelong sports are an international sports trend that started in the late 1960s and became popular in the 1990s as a necessary development of the lifelong education trend that became popular internationally after the Second World War. In 1965, the Frenchman Paul Langeland explained the need for lifelong education at the UNESCO Conference on Adult Education held in Paris. In 1965, the Frenchman Paul Lang Lang



in Paris held the UNESCO Conference on Adult Education to explain the necessity of lifelong education. At that time, some national sports scholars, influenced by the idea of lifelong education, put forward the idea of lifelong sports according to the law of human skill development and the role of physical exercise as well as the needs of modern society. As early as 1968, A. V. Knobkov, director of the Central Institute of Physical Education of the former USSR, and others had put forward the idea of exercising the body from the age of 0 to the age of 100. Lifelong physical education means that a person is physically active and receives physical education and instruction throughout his life. Lifelong physical education has developed along with lifelong education on the basis of the laws of development and change of the human body, the role of physical exercise and the requirements of the development of modern society for the individual.

The law of human functional activity requires that people must be persistent in their physical exercise; the lifestyle of modern society requires that physical exercise become an integral part of people's daily lives; and people's physical exercise and improvement of their physical fitness require scientific guidance and continuous physical education, so as to give full play to the role of sport, promote the development of the cause of national fitness, and improve the physical fitness of the entire nation. Lifelong physical education has two meanings: first, it means that from the beginning to the end of a person's life, he or she should learn and participate in physical exercise activities, so that there is a clear purpose for life and physical education becomes an indispensable and important part of a person's life; second, it is a practical process of providing people with opportunities to take part in physical education activities in different periods and areas of their lives, guided by the idea of lifelong physical education and with the goal of systematizing and holistically integrating physical education. It is a practical process that provides people with opportunities to participate in sports activities at different times and in different spheres of life.

Another theory similar to Life-long sports, Lifelong exercise, refers to regular physical activity and exercise throughout one's life. It recommends a long-term commitment to maintaining an active lifestyle and consistently participating in exercise activities. The study by Mathew G Wilson and Gregory P Whyte explores the potential damage to the heart caused by lifelong exercise. The authors discussed the prevalence of cardiac fibrosis in senior endurance athletes and the potential risks associated with high-intensity and sustained cardiovascular exercise. They examined the cardiac structure and function of a group of lifelong competitive senior endurance athletes and compared them with age-matched controls and young athletes. The study found that there is evidence that a considerable proportion of senior athletes have myocardial fibrosis, suggesting a potential link between lifelong high-intensity endurance competition and acquired cardiopathology. However, the authors also acknowledge that there is substantial evidence to support the beneficial effects of regular exercise on long-term cardiovascular health in the general population. Further research is needed to fully understand the relationship between lifelong exercise and its effect on the heart (Wilson & Whyte, 2012). In addition, Lifelong exercise is also

being studied as a project in the CHALLENGE experiment (Courneya et al., 2014). The CHALLENGE trial is a randomized controlled trial designed to determine whether organized exercise programs can improve disease-free survival (DFS) in colon cancer survivors compared to standard health education materials. The plan of Lifelong exercise is specifically designed for colon cancer survivors, including a physical activity counselor (PAC) who provides behavioral support to help participants increase and maintain their exercise levels. The program consists of three phases : intensive intervention phase in the first 6 months, reduced intervention phase in the last 6 months, and minimum intervention phase in the second and third years. The results of this study indicate that colon cancer survivors are able and willing to complete regular physical fitness tests and adhere to an actual behavioral change plan, which may increase their physical activity and health.

Lifelong exercise refers to engaging in regular physical activity or exercise throughout one's life. In the study of UR Mikkelsen et al., it is believed that individuals who have participated in endurance exercise for a long time, especially the elderly training group, are  $28 \pm 2$  years, and the young training group is  $6 \pm 1$  years. The subjects maintained a consistent level of physical activity and did not sedentary for a long time. Lifelong endurance exercise is associated with a reduction in thigh muscle size and the attenuation of age-related increases in inflammatory markers (CRP and IL-6). Regularly maintaining lifelong exercise, especially endurance exercise, may play a role in reducing systemic inflammation levels and maintaining muscle mass, with positive effects on all aspects of health (Mikkelsen et al., 2013).

To understand the physical health of enterprise employees before more systematically and after the experiment, this study adopts the National Student Physical Health Standard (revised in 2014) proposed by the Ministry of Education of China, and comprehensively evaluates the physical health level of enterprise employees from the aspects of body shape, body function and physical quality.

### **2.2.5 The effect of leisure Sports on physical fitness enhancement**

Hu Yanfang pointed out in her article Analysis on the Current Situation of the Development of Physical Leisure Sports in China (Y. Hu, 2009) that recreational sports have a significant impact on the improvement of physical fitness. An important health indicator is cardiorespiratory function, which is related to the body's ability to absorb and utilise oxygen. Participation in recreational sports activities, especially aerobic sports such as running, swimming, and cycling can significantly improve cardiorespiratory endurance. These activities require the heart and lungs to continuously supply oxygen to the body, which strengthens the heart muscle, improves respiratory efficiency and cardiac output, and effectively prevents cardiovascular diseases. By engaging in activities such as resistance training, gymnastics, and mountain climbing, the strength and endurance of the muscles and their surrounding structures can be strengthened. Strengthening muscles is not only beneficial for improving mobility in daily life but also helps maintain a healthy weight, increase basal metabolic rate, and strengthen bones. Activities such as gymnastics, yoga, and dance help improve flexibility and coordination. Flexibility is

the range of free movement that joints are able to make, and coordination is the ability of different body parts to work together in an activity. Enhancing both of these abilities not only improves athletic performance, but also reduces the risk of injury in everyday life and sports. Balance is essential for preventing falls and maintaining proper body posture, especially as we age. Participation in well-balanced recreational physical activities such as yoga and Tai Chi can significantly improve an individual's balance and fitness. Recreational physical activity is one of the effective ways to manage weight. Continued participation in physical activity burns calories and helps to achieve energy balance or energy deficit, which in turn controls or reduces body weight. In addition, physical activity can increase muscle mass and raise the body's metabolic rate, promoting long-term weight management. In addition to the above aspects, recreational physical activity also helps to improve sleep quality and enhance immune system function, which are important factors in improving overall health. Through regular participation in physical activities, people can also gain more opportunities for social interaction, enhance social support and further promote physical and mental health. Through multifaceted physical exercise, leisure sports activities can comprehensively improve the physical fitness and physical quality of individuals, which plays an important role in the prevention of chronic diseases and the maintenance and promotion of individual health.

Rodríguez-Bravo et al. the study on which the article *The impact of physical recreational activities on the mental health of adolescents* is based aims to explore the positive impact of engaging in physical activities in leisure time on the mental health of adolescents. The study shows that these activities not only help to improve physical health, but also enhance mental health by promoting self-acceptance, building positive interpersonal relationships and giving life purpose. The study found that young people who participate in physical recreational activities (both individual and team activities) have a higher overall level of mental health. These activities also help to develop resilience, decision-making skills and emotional management skills (Rodríguez-Bravo, De-Juanas, & García-Castilla, 2020).

### **2.2.6 Challenges in conducting Leisure Sports meets**

In his article *A Study on the Promotion of Leisure Sports to the Development of Urban Sports in China* (Y. Zhao, 2022), Eddie Zhao points out that for many people, time constraints are one of the biggest barriers to participation in recreational sports. Busy work and personal life schedules make it difficult for them to find regular time for physical activity. In addition, resource constraints, such as lack of adequate facilities, equipment or insufficient financial means to pay for gym membership fees, can also affect people's motivation and frequency of participation in recreational sport. Lack of motivation is another major challenge. Many people may initially be enthusiastic about physical activity, but this enthusiasm may wane over time. The lack of a stable social support network is a significant factor in the decline of motivation. It can be difficult for individuals to sustain their interest and participation in recreational sport if they are not participating in activities with friends. For some sports activities, a

lack of specific knowledge and skills can be a barrier to participation. Lack of understanding of how to properly perform sports activities or use equipment may lead to inefficient exercise and even cause injuries, which may further diminish an individual's willingness to participate. At the same time, health problems, including chronic illnesses and injuries, may limit people's ability to participate in recreational sport. For individuals with specific health problems, participation in certain activities without proper instruction may exacerbate health problems or increase the risk of injury. In addition, a lack of professional instruction and incorrect exercise practices may lead to new health problems and make people apprehensive about participating in recreational sport activities. Social and cultural factors similarly influence people's willingness and ways of participating in recreational sports. For example, certain cultures or societies may have conservative attitudes towards women's participation in public sports, while for people of different age groups, genders or ability levels, they may find it difficult to find suitable ways to participate in traditional sports settings. Societal expectations of body size and body image may also act as barriers to participation in recreational physical activity. Environmental factors, including adverse weather conditions, unsafe public spaces, and lack of suitable sports facilities, are also an important factor limiting participation in recreational sport. For people living in urban environments, problems such as air pollution and traffic congestion may reduce their interest in outdoor activities. Inadequate or asymmetric access to information is also a problem. Many people may not know enough about available sports resources and activities, the right way to exercise, and the health benefits, thus preventing them from making the best use of available resources or participating in recreational sports activities properly.

### **2.2.7 The Current Situation of Leisure Sports Development in Small and Medium-sized Enterprises in Fuzhou City**

According to the information released by the Fuzhou Municipal Peoples Government, the current status of the development of small and medium-sized recreational sports in Fuzhou City shows a certain development trend. In Fuzhou City, the sports industry has made new breakthroughs and achievements around the goal of building a strong sports city with special characteristics, with the main line of leapfrogging development of the sports service industry. In 2019, the total scale of the sports industry in Fuzhou City reached 48.587 billion yuan, and realised an added value of 20.159 billion yuan, of which the total scale of the sports service was 10.618 billion yuan. There are a total of 7,389 sports industry units in Fuzhou, with 161,900 employees. In addition, Fuzhou City has successfully organised a number of international and domestic large-scale events and activities, enhancing the influence of brand events. The Fuzhou Municipal Government has formulated the 14th Five-Year Plan for the development of the sports industry in Fuzhou, aiming to give full play to the important role of the sports industry in meeting the needs of the people for a better life, tapping the potential of consumption, fostering the new momentum of the economy, and promoting the high-quality development of sports. The planning period is 2021-2025, aiming at promoting the scale of sports industry in Fuzhou to reach



RMB 100 billion, realising the added value of sports industry of RMB 30 billion, and the proportion of the added value to GDP to reach 2.2%, etc. The plan will focus on innovation-driven to build a new sports industry.

Fuzhou City will focus on innovation drive, create a new high ground for digital sports, strengthen platform aggregation, highlight product innovation, enhance digital empowerment, implement sports industry digitalisation strategy, promote sports big data application and other measures in order to promote the high-quality development of sports industry in Fuzhou City.

### **2.2.8 Analysis of the Development Trend of Leisure Sports for Small and Medium-sized Enterprises in Fuzhou City**

The Fuzhou municipal government has introduced preferential policies and financial subsidy measures to promote the development of leisure sports for SMEs, such as providing tax incentives, assisting enterprises in scientific and technological innovation, and supporting enterprise brand building. These policies aim to reduce the operational burden of SMEs and promote the sustainable growth of enterprises and the healthy development of the sports industry ecosystem. At the same time, the government may also strengthen communication with enterprises to understand their needs and formulate more precise and effective support measures. The construction of digital Fuzhou and a strong sports city with special features promoted by the Fuzhou Municipal Government provides new development opportunities for SMEs. Digital transformation not only improves the internal operational efficiency of enterprises, but also helps them develop online markets and broaden sales channels. The construction of strong sports cities with special characteristics, on the other hand, provides a platform for enterprises to showcase their special products and services, encourages them to develop leisure sports projects that are in line with local characteristics and culture, and promotes the development of sports tourism and the local economy.

Through these aspects of expansion, we can see that the development of leisure sports for small and medium-sized enterprises in Fuzhou City faces many opportunities and challenges. Government support, changes in market demand, the introduction of scientific and technological innovation, and the promotion of the construction of Digital Fuzhou and a strong sports city with special characteristics.

### **2.2.9 Successful case studies in Leisure Sports**

Sport England Uniting the Movement initiative is a successful example of leisure sport. The initiative has a 10-year vision to transform people's lives and communities through sport and physical activity. This long-term, integrated goal helps to stimulate sustained interest among participants and encourages long-term commitment and support. Sport England provides resources such as funding, mentoring, support and promotional activities to realise the initiative. This investment of funding and resources has helped to drive the development and promotion of recreational sport programmes, providing opportunities for more people to participate in physical activity. GranSport has provided significant support to the development and implementation of recreational sport programmes by conducting research, collecting data and sharing expertise. This data and research based support helps to develop more

effective strategies and programmes to meet the needs of different groups. Through the administration of funds such as the Swimming Pool Support Fund, Sport England actively promotes public swimming. This promotion not only helps to improve people's health and lifestyles, but also provides an important leisure and sporting facility for communities.

The achievements of the Combined Sport initiative have been recognised not only in terms of improved health and quality of life for individuals, but also in terms of community development and positive social impact. The long-term sustainability of the initiative has resulted in the accumulation of impacts and benefits that have positively influenced the long-term development of the community.

Through a combination of financial support, resource investment, data research and social impact, the United Sports initiative has successfully promoted the development of recreational sport and brought about positive change and development for individuals, communities and society as a whole.

## **2.3 4M Theory**

### **2.3.1 Development History of 4M**

The 4M Management theory—comprising Man, Money, Material, and Management—originates from economic and production management theories. In this model, "Man" refers to the personnel or operators within the organization, "Money" represents the organization's costs, "Materials" include equipment and various resources used across the organization's facilities, and "Management" involves the overall business operations, covering areas like marketing, production, and service processes. (Bangmoo, 2002; Drucker, 2008; Drucker, 2011; Drucker, 2012). If the Ancient Chinese Chak-ngaew community market is well managed following the 4m theory, it can achieve the purpose of the Ancient Chinese Chak-ngaew community market, that is, tourists will visit, people in the community will earn revenue, and careers will be sustainable. (Saethow, Kanjanawanawan, & Tongkaw, 2020)

### **2.3.2 Basic Components of 4M**

The development and evolution of 4M management theory plays a key role in the field of organization and business management. As a comprehensive Management model, 4M management theory includes four core elements: Man, material, money and management (Saethow et al., 2020). Based on the review of relevant literature, this study deeply analyzes the various elements of 4M management theory, emphasizing its comprehensiveness, systematism, and adaptability in organizational management. The specific contents of 4M are as follows: 1) Man: As the soul and core resource of an organization, MAN occupies a crucial position in 4M management theory. The literature shows that people management is not only about recruitment and training, but also about incentives, leadership styles, and employee development. Effective people management helps create an organization with a culture of effective collaboration and positive development. 2) Material: Material management involves raw materials, parts, and finished products required by the organization. The literature points out that 4M theory emphasizes procurement, inventory control, and quality management in material management. Through proper material management,

organizations can achieve cost control, productivity improvement and product quality assurance. 3) Money: As the lifeline of enterprise operation, money has received full attention in 4M management theory. The literature review shows that fund management includes the source of funds, rational use and transparent use. Effective fund management not only contributes to the proper functioning of the organization, but also provides reliable financial support for activities. 4) Management: Management is the comprehensive core of 4M theory, which includes organizational decision-making, process specification and executive supervision. Relevant literature shows that management in 4M theory pays attention to systematicness and methodology and emphasizes standardization and innovation. Successful management helps an organization achieve its goals while maintaining flexibility to adapt to changing circumstances. In short, 4M management theory provides a comprehensive and systematic framework for organizational management through the comprehensive analysis of the four elements of personnel, materials, funds and management. Its comprehensiveness, systematicness and adaptability provide practical guidance for organizations of different types and sizes. Future research could further delve into the sub-fields of each element and verify the applicability of 4M theory across different cultures and industries to provide more specific and practical management recommendations for organizations.

The 4M theory is widely used in various fields. According to L.P. Bowo, R.E. Prilana & M. Furusho, 4M theory refers to the categorization of the Error Producing Conditions (EPCs) in the HEART - 4M method. In this method, the EPCs are categorized into four factors: man, machine, media, and management. These factors represent different aspects that can influence the human condition and contribute to human error in maritime accidents. The categorization helps to address the relationships between factors and the involvement of other factors in accidents (Bowo, Prilana, & Furusho, 2020). Moreover, the 4M theory refers to the ergonomic perspective of man-machine-media-management. It is a framework used to understand and analyze human behavior under emergency evacuation situations. The goal of the 4M framework is to stimulate appropriate human behavior during serious evacuations by considering the interactions between humans, machines, media, and management. This framework is utilized in the context of disaster risk management and is discussed in the ErgonomicThon workshop mentioned in the study (Goossens & Murata, 2019). In addition, N. Tubtimcharoon points out that 4M theory refers to the four key factors in management: Man, money, materials, and management. These factors are often used in the analysis of business situations and decision-making processes.

As can be seen, the 4M management theory is a holistic management model that focuses on four key elements: people, money, materials and management. The 4M theory plays an important role in the field of organisational and business management and provides the basis for a comprehensive, systematic and adaptive management framework. People, as the core resource of an organisation, feature prominently in the theory, and their effective management involves recruitment, training, motivation as well as leadership style and staff development. Materials management emphasises

purchasing, inventory control, and quality management, and helps to achieve cost control, productivity improvement and product quality assurance. Funds, as the lifeline of business operations, are given due importance in the 4M theory, and funds management includes the source, rational use, and transparent use of funds. Management is at the heart of the theory and includes organisational decision-making, process regulation and execution monitoring. Successful management helps organisations to achieve their goals while maintaining flexibility to adapt to changing environments. By analysing these four elements together, the 4M management theory provides a comprehensive and flexible framework for organisations of all sizes and types. The researcher calls for future in-depth research into the sub-areas of each element and validation of the theory's applicability across cultures and industries in order to provide organisations with more specific and practical management recommendations. In conclusion, the 4M management theory provides managers with a powerful set of tools to deal with the diversity and challenges of managing modern organisations.

## **2.4 SWOT Analysis and Tows Matrix Theory**

### **2.4.1 Development History of SWOT**

K. Nyarku, G. Agyapong explores the history, literature, and strategic implications of SWOT analysis. SWOT analysis is a decision-making tool used by companies to define their strategies by examining the strengths, weaknesses, opportunities, and threats within the firm and its external market. The document discusses the origin of SWOT analysis, which is credited to Albert Humphrey and his research team at Stanford University in the 1960s and 1970s. It also explores different views on the origin of SWOT analysis and its development over time. The document reviews related literature on SWOT analysis, highlighting its usefulness as a framework for reviewing strategy and position. However, it also acknowledges criticisms of SWOT analysis such as its potential to be a significant waste of time and the need for a more systematic and resource-based approach. The document concludes by discussing the marketing and strategic choices of using SWOT analysis, emphasizing the importance of conducting a thorough analysis to match the company's strengths to opportunities and minimize weaknesses and threats (Nyarku & Agyapong, 2011).

### **2.4.2 Basic Components of SWOT**

SWOT stands for strengths, weaknesses, opportunities, and threats. It is a widely used tool in strategic management and marketing research. SWOT analysis involves identifying and evaluating the internal strengths and weaknesses of a business or organization, as well as the external opportunities and threats it faces. The tool is used to assess alternatives and complex decision situations, and it can be constructed quickly and benefit from multiple viewpoints as a brainstorming exercise. SWOT analysis helps in identifying environmental relationships and developing suitable paths for countries, organizations, or other entities to follow. While SWOT is a popular and accepted concept, it has not been subjected to extensive analysis and



lacks theoretical support. There have been criticisms and proposed alternatives to SWOT analysis, but it remains a widely used tool in strategic planning (Helms & Nixon, 2010).

Hui-Lin Hai & Ming-Cheng Tsou delves into the strategic evolution of the Department of Information Management at Shih Chien University's Kaohsiung campus in Taiwan, employing a quantifiable SWOT analysis. The emphasis is on the significance of SWOT analysis in pinpointing an organization's strengths, weaknesses, opportunities, and threats before devising a corporate strategy. The quantifiable SWOT method integrates the concept of Multiple-Criteria Decision Making (MCDM) and employs a multi-hierarchy scheme to simplify intricate issues. The article presents a case study illustrating the competitive strategies of Shih Chien University's Kaohsiung campus and introduces a novel quantifiable SWOT analytic method incorporating the vote-ranking approach. Conclusively, the article deliberates on the research limitations and offers recommendations for future strategic planning within the education industry (Hai & Tsou, 2009).

The research of Frederick T.L. Leong & Mark M. Leach is a SWOT analysis of counseling psychology in the United States, focusing on its internationalization efforts. The authors provide a brief overview of the history of counseling psychology and its growth in the US. They discuss the movement towards multiculturalism and the inclusion of international multiculturalism as a natural transition for the field. The authors highlight the strengths of counseling psychology, such as its focus on vocational counseling and its emphasis on social justice and prevention efforts. They also discuss weaknesses, including the field's stepchild status compared to clinical psychology and its failure to capitalize on important areas such as rehabilitation and positive psychology. The authors mention the closure of prominent counseling psychology training programs as a recent concern. The document concludes by discussing the opportunities for counseling psychology to internationalize and the importance of a global vision for the field (Leong & Leach, 2007).

Combined with the above research, it can be seen that SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis is a widely used tool in strategic management and marketing research. Its core features include comprehensiveness, simplicity and flexibility. SWOT analysis provides a comprehensive view of an organisation by taking into account both internal and external factors to fully grasp its internal strengths and weaknesses, as well as external opportunities and threats. Its simplicity makes it applicable to organisations of all sizes and types, while its flexibility allows it to cross over into different fields, including business, education, psychology, etc. SWOT analysis plays multiple roles in practice. Firstly, it is a powerful tool for strategy development, helping organisations to identify inherent strengths and address weaknesses, as well as seize external opportunities and respond to threats. Second, as a decision-support tool, SWOT analysis helps evaluate alternatives and supports complex decision-making. In addition, by identifying weaknesses and threats, SWOT analysis helps to identify problems early and take

steps to address them, improving the organisations ability to cope with risks. It also has a strategic alignment function, helping organisations to respond flexibly to changing internal and external environments. In teamwork, SWOT analysis promotes co-operation and discussion among members and helps to reach consensus and common goals.

Taken together, SWOT analysis provides a powerful strategic tool for organizations due to its simplicity, practicality, comprehensiveness and flexibility. In the face of complex business and management environments, SWOT analysis not only provides insightful problem identification and resolution, but also provides substantial support for organizational strategy development and teamwork, making it an indispensable method for practical management and decision-making.

### **2.4.3 Theories related to Sport and Leisure Participation**

Cheng Wenhao et al. pointed out in the article SWOT analysis and development countermeasures research on youth leisure sports in Xinyang city (Chen, Zhan, & Liu, 2023) that the advantages of youth leisure sports development in Xinyang city are the improvement of residents income and the deepening of the concept of health. Meanwhile, Xinyang City has abundant professional human resources in sports and sports training institutions; disadvantages are the influence of the pressure of higher education and the insufficient leading and guiding role of campus sports, obsolete recreational sports programmes and high consumption costs; opportunities are the governments support and the realisation of the after-school extended hours service to lay the foundation for the development of recreational sports; threats are the unbalanced allocation of sports resources and the impact of non-sporting ways of recreation, which lead to the young people's participation in sport. The threat is the unbalanced allocation of sports resources and the impact of non-sports leisure methods, resulting in young people's participation in sports with a weak sense of awareness and low enthusiasm. The countermeasures are to create an atmosphere of sports participation inside and outside the education system, and to change student's concepts of sports and leisure. At the same time, the Xinyang municipal government should do a good job of regional top-level design, increase the financial investment in sports resources, and improve sports infrastructure and hardware facilities; it should also combine with the actual development of the regions special leisure sports and industrial economy, and improve the policy of introducing sports talents and the system of cultivating and competing for teenagers, so as to promote the development of youth leisure sports.

## **2.5 The context of FuZhou**

Fuzhou, the capital city of Fujian Province, is a major economic and cultural hub in southeastern China, playing a vital role in regional trade and development. With its rapid urbanization and economic growth, Fuzhou has attracted a substantial number of small and medium-sized enterprises (SMEs) that contribute significantly to the local economy. SMEs serve as the backbone of Fuzhou's economic ecosystem, providing widespread employment and supporting various sectors, from manufacturing to technology. This high concentration of SMEs underscores the importance of employee

health and productivity in sustaining the city's economic momentum, making Fuzhou an ideal setting for examining strategies that enhance employee well-being through leisure sports.

In recent years, national sports policies have placed a growing emphasis on promoting physical fitness across diverse demographic groups, including workplace settings. The National Fitness Plan (2021-2025) by the General Administration of Sport of China highlights the importance of integrating physical activity into everyday life, aiming to increase the proportion of people who regularly exercise. This policy advocates for stronger support for fitness facilities and sports programs within communities and workplaces, especially in urban areas where sedentary lifestyles and high job demands pose health risks (State Council of China, 2021a). Additionally, the "Outline for Building a Leading Sports Nation" emphasizes the role of sports in improving public health, advocating for programs that encourage regular exercise among employees, which can positively impact workplace morale and productivity. Fuzhou, aligning with these national goals, has the potential to implement effective strategies that support employee fitness, thereby contributing to a healthier workforce and a more dynamic economy (State Council of China, 2021b).

Despite supportive national policies, SMEs in Fuzhou face unique challenges in implementing fitness and wellness programs for employees. Many SMEs operate on limited budgets, which can restrict their ability to offer organized sports or fitness activities in the workplace. Furthermore, high workloads and limited leisure time can reduce employees' motivation to engage in physical activities, contributing to a sedentary lifestyle that impacts both health and job satisfaction. Research suggests that integrating structured sports programs within workplace environments can help counteract these issues, enhancing physical fitness while fostering a positive work culture. Therefore, promoting leisure sports participation among SME employees in Fuzhou not only aligns with national fitness goals but also addresses specific local needs, helping companies reduce absenteeism and boost productivity through healthier employees.

Fuzhou cultural landscape further supports its selection as a study site. The city's rich cultural heritage and strong sense of community provide a foundation for promoting group-based sports and fitness initiatives. Residents in Fuzhou are generally receptive to community-driven activities, which can be leveraged to increase employee engagement in organized leisure sports. By creating a supportive environment that integrates physical activity into workplace culture, SMEs in Fuzhou can leverage national policies to foster a culture of health and fitness that benefits both the workforce and the broader community (Government of Fujian Province, 2017).

In summary, Fuzhou's unique combination of economic significance, rapid urbanization, and the health needs of SME employees make it an exemplary case for studying strategies to promote leisure sports participation. This study aims to develop and implement targeted strategies to improve the physical fitness of SME employees, ultimately contributing to a healthier, more productive workforce. By focusing on

**Fuzhou, the findings of this research** can provide valuable insights for other urban areas in China, supporting broader efforts to enhance employee health and well-being within the framework of sustainable economic development.

## 2.6 Previous Studies

### 2.6.1 Previous studies in China

Niu Chen, In his master's thesis, the author argues that physical fitness testing in colleges requires substantial funding, covering areas such as initial promotion, equipment purchase and maintenance, and tester labor costs. To meet these financial needs, colleges must seek diverse funding sources. Possible approaches include leveraging social resources, strengthening partnerships between banks and educational institutions, and introducing financial leasing options to support fitness testing programs in colleges and universities. (Niu, 2024).

Duan Yanchun, in Establishment of physical fitness evaluation standards for U13 male football players in Xian campus football, uses the literature method, expert survey method, inspection method, analytic hierarchy process and mathematical statistics, uses SPSS25.0 and Excel software to organize and analyze the data, calculates the weight of each indicator, and finally gives the Xian campus football U13 male In the football player physical quality evaluation index system, the first-level index weight values from high to low are: agility quality, speed quality, endurance quality, flexibility quality, and strength quality (Duan, 2023).

Zhao Xuan, in Research on the relationship between leisure sports behaviors and subjective well-being of coal miners—Based on a survey of Shanxi Jannen Group Coal Mine, uses research methods such as literature, questionnaires, interviews, field observations, and mathematical statistics were used to take the relationship between coal miners leisure sports behaviors and subjective well-being as the research object. The results show that a large number of coal miners participate in leisure sports activities in their spare time, but the overall frequency is low; coal miners participation in leisure sports activities can improve psychological resilience and reduce occupational burnout; coal miners participation in leisure sports activities can further enhance subjective well-being by improving psychological toughness (X. Zhao, 2022).

Chunli Zhong study, Research on the early warning and guidance of college students' physical health based on physical health test, uses the feedback, education and guidance functions of improving the evaluation effect of college students' physical fitness tests. The measured data is combined with evaluation theory, early warning theory, exercise prescription theory and mathematical statistics (using Python's data processing capabilities to analyse the correlation between physical fitness test data and BMI and the development trend of other items for students at H University from 2018 to 2021). and Delphi method to provide early warning and guidance on the physical health of college students, warn them about their physical health status and guide them in physical exercise, so as to promote their physical health (Zhong, 2022).

In his study Employee Shareholding and SMEs Innovation, Ma Shi empirically tests the impact of employee shareholding on SMEs innovation by adopting the data



on the implementation of employee shareholding in China's small and medium-sized enterprises (SMEs) and GEM listed companies, and empirically examines the impact of employee shareholding on SMEs innovation by using the PSM method of sample matching, and further comparatively analyzes the impact differences of the firms with different property rights nature. The study shows that: double difference regression results find that employee shareholding is significantly positively related to SME innovation; multiple regression results find that employee shareholding incentive intensity is significantly positively related to SME innovation; and the promotion effect of employee shareholding on SME innovation is more significant in non-state-owned enterprises (S. Ma, 2021).

Yu Qiaoyan & Deng Chenliang, in the article *The Impact of Square-Dancing Practice on the Physical Fitness of Elderly Women*, 135 healthy elderly women aged 60 to 69 years old in Changhua District, Chengdu City were randomly divided into two groups, including 69 cases in the experimental group and 66 cases in the control group. The experimental group performed square dancing exercises for 12 weeks, while the control group mainly performed daily activities and housework. During labor and irregular physical exercise, the two groups of elderly women were tested for physical fitness indicators such as handgrip strength, seated forward bending, choice reaction time, and standing on one leg with eyes closed before and after the intervention. The results show that regular square dance practice with a certain intensity, duration and frequency has varying degrees of impact and improvement on various physical qualities of elderly women. Among them, the selected response time, seated forward bending and standing on one foot with eyes closed have the greatest impact. As the degree increases, there is no obvious improvement in grip strength (Q. Yu & Deng, 2021).

Hu Qijing in the article *Shao guan City, private small and medium-sized enterprise employees leave the problem of research*, the use of literature research method, questionnaire survey method, statistical analysis method, and other three total method of combining the private small and medium-sized enterprise employees leave the problem of research, and found that the tendency to leave the pay equity, personal factors are correlated, and growth and promotion, interpersonal relationships, organizational identity does not present a significant; The tendency to leave shows significant differences between different age stages, education, working years and different industries, and also shows significant differences in the factors affecting the departure (Q. Hu, 2020).

Chong qing, in his article *Research on the Impact of Employee Total Compensation on Task Performance in Small and Medium-sized Enterprises (SMEs) in Cultural and Creative Industries*, through literature review, questionnaire survey, in-depth interviews and statistical analysis, combined with the characteristics of personnel in SMEs in cultural and creative industries, concluded that the total compensation of employees in SMEs in cultural and creative industries, compensation and benefits, performance appraisal, personal development and career opportunities, and work-life balance all have a positive impact. Total compensation has different degrees of positive influence on the three dimensions of task performance, and the



total compensation sub-dimension has different degrees of compensation preference for personnel in different departments and job categories (Chong, 2020).

In the article *The Path of Mutual Construction of Psychological Ownership between Small and Medium Enterprises and Employees*, Li Sizhi et al., from the perspective of reciprocity theory, proposed that small and medium enterprises (SMEs) and their employees should build psychological ownership of each other, in response to the shortcomings of the research on psychological ownership construction that focuses on unidirectionally constructing the psychological ownership of the employees-enterprises only. Especially after the impact of the epidemic, on the one hand, it is necessary to actively promote the construction of employee-enterprise psychological ownership by appropriately adjusting down the task objectives, comprehensively mobilizing and encouraging employees, and strengthening communication-driven inputs; on the other hand, it is necessary to effectively promote the construction of enterprise-employee psychological ownership with the help of re-conceptualizing the role relationship, strengthening the degree of familiarity of the employees, increasing the inputs of employees training, and actively creating common experiences (Sizhi Li, Kai Yao, & Wang, 2020).

Yang Ye et al., in *Technological Innovation and Employment Demand in SMEs - A Reexamination Based on Employee Skill Structure*, empirically examined the impact of technological innovation in SMEs on their hiring growth by utilizing data from the 2012 World Bank survey on the operating environment of SMEs in China, and the results of the study showed that the impact of technological innovation on the impact of technological innovation on the employment growth of medium- and low-technology manufacturing enterprises is more sensitive. This study confirms the significant impact of skill-biased technological progress on the employment demand of Chinese SMEs at the micro level, and also provides a policy basis for alleviating the structural problems of difficulty in employment and difficulty in recruiting labor in China (Ye Yang, Zhu, & Tan, 2019).

Shi Xin, in the article *Research on Employee Motivation Problems of Small and Medium-sized Enterprises in the Land Service Industry-Taking Shandong YH Company as an Example*, through carefully analyzing the current status quo of the incentive mechanism of Shandong YH Company, combining questionnaires, interviews, and other research methods, and comprehensively taking into account the direction of the company and its business development, it puts forward a proposal to optimize the remuneration and benefits structure of the company by optimizing the remuneration Benefits structure, enhance the level of employee compensation and benefits, strengthen the construction of the performance appraisal system, establish a fair and impartial assessment system, improve the education and training system, enhance the professional and technical level of employees, and improve the employee career development system, etc., to build a more comprehensive incentive mechanism for the employees of Shandong YH Company (Shi, 2019).

Ren Yanyan, in the article *The Influence of Employee-Organization Relationships on Employee Loyalty in Small and Medium-sized Enterprises--Based on the Perspective of the Psychological Contract*, based on combing domestic and

international references, firstly, constructed the theoretical model, and secondly, classified the dimensions of the selected variables and selected the maturity scale to prepare the questionnaire, and finally, the collected data were analyzed and processed with the help of statistical software, and it was found that employee-organization relationship has a significant positive correlation with employee loyalty; psychological contract has a partial mediating role between employee-organization relationship and employee loyalty (Ren, 2019).

Yuan Yang, in the article *Research on the Relationship between Employees Sense of Organizational Support, Employee Loyalty and Job Performance in Small and Medium-sized Enterprises*, used the method of empirical analysis to explore the relationship between employees' sense of organizational support, employee loyalty and job performance in small and medium-sized enterprises in China. It is found that the sense of organizational support of SME employees can have a significant positive effect on both employee loyalty and job performance, and it is further concluded that employee loyalty also has a significant positive contribution to their job performance and has a mediating role in the independent and dependent variables, and some of the control variables related to SME employees education, age and so on can have an effect between the variables (Yuan, 2019).

Zhu Ju, in the article *Research on Sports Leisure Constraints and Participation from the Perspective of Gender Theory - Using Gender Bias as Moderator*, deployed a questionnaire survey to collect sample data, and SEMs path analysis, correlation test and regression analysis were used to study Correlation between physical leisure constraints and physical leisure participation. It is concluded that: for the correlation relationship, sports leisure constraints have a significant negative direct impact on sports leisure participation; for the moderating effect of gender bias, the moderating effect of gender bias on the relationship between sports leisure constraints and sports leisure participation is significant (J. Zhu, 2019).

Zhiqiang Zhu & Lin Lan's article *The Influence of Urban Residents Sports, Fitness and Leisure Constraints and Leisure Participation - An Empirical Analysis Based on Fuzhou City* based on 929 questionnaires on Fuzhou residents fitness, leisure constraints and leisure participation, principal component analysis and structural equation model were used to empirically explore the relationship between Fuzhou residents physical fitness, leisure constraints and leisure participation. The research results show that: personal constraints, service management, interpersonal constraints, environmental conditions and leisure opportunities are the five important factors affecting urban residents' participation in sports, fitness and leisure. Among them, personal constraints have the greatest direct impact on leisure participation, followed by service management and interpersonal constraints, environmental conditions have the smallest direct impact, and leisure opportunity factors indirectly affect residents' sports, fitness and leisure participation. In addition, urban residents participation in sports, fitness and leisure is also affected by varying degrees of interaction among the five major constraints, thus showing the characteristics of a complexity effect (Z. Zhu & Lan, 2017).

Wei Guokai in the master's thesis, *Research on the Present Situation and*

Improving Countermeasure of College Students' Physical Health Test in Private Higher Vocational Colleges in Shanxi Province, Wei Guokai used research methods such as interviews and questionnaires to study the problems that have arisen in the process of carrying out physical fitness tests for college students at private higher vocational colleges in Shanxi Province, and to propose corresponding countermeasures. It was found that the management of physical fitness testing did not receive much attention from the leadership. Although every school has a publicity component, the methods are too traditional, and the content that is emphasised in the physical fitness testing is relatively outdated, a show of face and formalistic. The five private higher vocational colleges did not benefit from the convenience brought about by the 'Internet +' WeChat mobile network platform to promote publicity. It is proposed that the convenience of information dissemination brought about by the use of online self-media be utilised to increase the intensity of seeking sponsorship (Wei, 2017).

Mei Qiang et al. in the article *Research on the Relationship between Safety Culture, Safety Climate and Employee Safety Behavior - Empirical Evidence Based on Small and Medium-sized Enterprises in High-risk Industries*, selected small and medium-sized enterprises in high-risk industries as the research object, and constructed a structural model of the influence of safety culture on employee safety behavior with safety climate as the mediating variable. The results of the study show that: the three dimensions of safety culture have a direct or indirect influence on employee safety behavior; the dimensions of enterprise safety culture directly have a positive influence on the safety atmosphere, and at the same time, the safety atmosphere also directly has a positive influence on the dimensions of employee safety behavior; and there is a mediating role of the safety atmosphere in the relationship between the safety culture and the employee safety behavior (Mei, Zhang, Lin, & Liu, 2017).

Yang Yi et al. in *Analysis of Different Leadership Styles in SMEs Affecting Employees Affective Commitment - Comparison Based on the Moderating Effects of Employees Emotional Intelligence*, explored the best leader-subordinate match through regression and moderating effects based on two dimensions of transactional/transformational leadership styles and employee's emotional intelligence in order to improve employee's emotional commitment. The study shows that both transactional/transformational leadership styles can increase employees affective commitment, but the positive effect of transformational style is greater; employees who are more capable of assessing the emotions of others can help their external motivation switch to internal motivation through self-internal push, which can moderate the strong behavior of transactional leaders; the influence of transformational leaders on employees is similar to a kind of internal push; and the influence of transformational leaders on employees is similar to a kind of internal push. The influence of transformational leaders on employees is similar to a kind of external pull, regardless of the employees high or low emotional intelligence, can compensate for employees with low emotional intelligence (Yi Yang & Luo, 2017).

Yang Jingnuan and Liu Yuantian's article *Research on the design of a scientific fitness and health promotion guidance system*, studied the system that uses scientific and technological means to provide personalised fitness guidance, using scientific principles to develop personalised exercise plans based on individual health needs, and real-time monitoring and guidance to help users maintain and improve their health through exercise (Yan & Liu, 2014).

The main ideas put forward by Ruiyuan Wang in his book *Exercise Physiology* includes "The comprehensive impact of exercise on bodily functions: Exercise is not just physical activity which has a significant impact on various systems of the body (such as the nervous system, internal system, circulatory system, etc. During exercise, the body undergoes a series of complex physiological responses to adapt to and support the needs of exercise. Fundamental characteristics of life activities: He explained excitability, excitability, sleep, etc. as the basis of life activities, and exercise enhances the body's adaptability and health through these processes. Exercise intensity and functional adaptation: Through continuous exercise, the body gradually adapts to different intensities of load, thereby improving the body's work capacity and recovery capacity, emphasizing the principle of gradualness in exercise (R. Wang, 2002).

### 2.6.2 Previous Studies Abroad

Marques et al., in *Understanding university-industry collaboration: a social exchange perspective on the entrepreneurial university* explore the dynamics of collaboration between universities and industry, emphasising the mutual benefits of such partnerships. The central focus of the article is on how universities (particularly entrepreneurial universities) exchange knowledge with industry, providing intellectual resources, technology and expertise. It explains how universities and industry exchange value through collaboration, enabling businesses to utilise academic expertise and facilities to improve their projects, including sports and recreational activities (Marques, Ferreira, Marques, & Leal, 2024).

Marin-Farrona et al., in the article *Effectiveness of worksite wellness programs based on physical activity to improve workers' health and productivity: a systematic review* emphasises that workplace wellness programmes centred on physical activity can effectively improve employee health and productivity, found that aerobic exercise (AE) programmes were particularly effective in improving work capacity and reducing absenteeism, while strength training showed more mixed results. The economic benefits, such as medical savings, were less certain, and their impact varied depending on programme design, duration and the specific workplace environment (Marin-Farrona et al., 2023).

Bonilla et al., in *Profiling Physical Fitness of Physical Education Majors Using Unsupervised Machine Learning*, used clustering algorithms after setting the optimal number of clusters through an internal validation using R packages. The matching analysis revealed that physical fitness explained the variation in the data, with Cluster 2 as a sex-independent and more physically fit group. all variables differed significantly between the All variables differed significantly between the sexes (except



the body mass index ( $p = 0.218$ ) and the generated profiles (except stature [ $p = 0.559$ ] and flexibility [ $p = 0.115$ ]). A multidimensional analysis showed that the body mass, cardiorespiratory fitness, and agility contributed the most to the data variation so that they can be used as profiling variables (Bonilla et al., 2022).

Islam et al.'s article *The effect of leisure-time physical activity on the control of hypertension*, explores how participation in leisure-time physical activity (LTPA) can help control and reduce hypertension, which is a significant risk factor for cardiovascular disease. The study systematically reviews and analyses various studies, focusing on different forms of physical activity such as walking, jogging and recreational sports, and their impact on blood pressure management. The main findings of the article show that long-term LTPA can help significantly reduce systolic and diastolic blood pressure levels and is particularly effective for people with hypertension. The studies emphasise that moderate to vigorous physical activity is most effective in controlling hypertension, while sedentary behaviour can lead to a deterioration in blood pressure status. Furthermore, the studies highlight that physical activity in leisure time not only helps to control hypertension, but also improves overall cardiovascular health and reduces the risk of other related diseases. In summary, this article emphasises the importance of regular, moderate and long-term physical activity as an effective non-pharmacological intervention to help control hypertension and improve overall physical health (Islam, Rabbani, Fardousi, Sizar, & Saif-Ur-Rahman, 2021).

Islam et al., in his article *Factors associated with participation in physical activity among adults: a systematic review and update*, discusses the various personal and environmental factors that influence adults' participation in physical activity. The review identified 117 factors, which were divided into four main categories: demographics/biology, psychology, behaviour and sociology. Among these, factors such as age, gender, self-efficacy and income are important personal predictors, while factors such as facility use, neighbourhood safety and sidewalks have a positive impact on physical activity participation. The study highlighted that self-efficacy (i.e., a person's confidence in their ability to succeed) was one of the most important correlates, along with other correlates such as intention to exercise and perceptions of physical health. In addition, environmental factors such as access to physical facilities and community safety play a crucial role in determining physical activity during leisure time. These findings provide insights for designing interventions and policies aimed at increasing physical activity participation by addressing both individual motivations and the surrounding environment (Islam et al., 2021).

Byung et al. The study compared adolescents' physical fitness levels using fitness assessments alongside a circuit training program. Findings revealed notable differences in fitness improvement systems and circuit training results across grade levels. Furthermore, the circuit training outcomes showed significant variation according to specific physical fitness variables assessed by the Physical Activity Promotion System (PAPS) for each grade. A strong correlation was found between the PAPS fitness metrics and circuit training outcomes. These results suggest that circuit



training programs can serve as an effective tool for evaluating adolescent physical fitness, offering practical advantages for school physical education and providing valuable insights into students' fitness levels. (Lee, Shin, & Han, 2021).

Dobson, in *Instructional and Non-Instructional Staff Perceptions on At-Risk Males in a Structured After-School Sport and Recreational Program: A Qualitative Case Study*, explores how structured programs such as recreation, sport, and leisure activities can help elementary school at-risk youth in an afterschool program at a K-5 elementary school in central North Carolina. The central research questions for this study include the following: What are the perceptions of instructional and non-instructional staff on the academic and behavioral influence of a structured after school program on at-risk males? What is the influence of adequate mentoring on academic success and decreasing problematic behaviors when providing a sport and recreation afterschool program for at-risk males? The study findings revealed four themes, consistency, accountability, communication, and school-based teacher mentors vs. outside mentors (Dobson, 2021).

Wade, in the article *Exploring Strategies Small Business Owners Use to Improve Employee Retention*, explores strategies small business owners in central Alabama use to use minimum wage employees to improve employee retention. This study was conducted among small business owners located in central Alabama. This study adopted a purposive sampling strategy. Examining the lived experiences of the participants and strategies and strategies used to increase minimum wage employee retention was necessary for this study. The contribution of the findings is to help small business owners understand strategies used to increase minimum wage employee retention. When businesses and organizations understand the strategies and practices used to retain employees, they can leverage these strategies to thrive in their industry and market (Wade, 2020).

Kim et al.'s the article *Leisure sports participants' engagement in preventive health behaviors and their experience of constraints on performing leisure activities during the COVID-19 pandemic* investigates how participants in leisure sports adopted preventive health behaviors during the COVID-19 pandemic. The study explores the demographic characteristics of 544 leisure sports participants in Korea, examining differences in preventive health behaviors (such as hygiene practices and social distancing) and the constraints they experienced while participating in both indoor and outdoor leisure sports. Findings suggest that women and married individuals showed a higher engagement in health prevention behaviors. The study also highlights interpersonal and structural constraints that affected participation in leisure activities, particularly during the pandemic (Kim, Cho, & Park, 2020).

Callaghan conducted a quantitative study to assess physical fitness improvements after a nine-week dynamic stretching program. The study used a convenience sample of 6th-grade PE classes from a school district in the southern suburbs of Chicago. Students' aerobic capacity and hamstring flexibility were measured using the Fitnessgram® PACER test and Sit-and-Reach test. Findings indicated that students who followed a dynamic stretching routine experienced a

significantly greater increase in flexibility in both legs and in aerobic capacity compared to those who used a static stretching routine. (Callaghan, 2020).

Fredrick & Silverman, in *The Relationship between Urban Middle School Physical Education Teachers Attitudes toward Fitness Testing and Student Performance on Fitness Tests*, investigated the attitudes of urban middle school physical education teachers toward physical fitness tests and their relationship with student performance on fitness tests. Data were analyzed using descriptive statistics for overall teacher attitude and teacher attitude subdomains and correlations. Data were analyzed using descriptive statistics for overall teacher attitude and teacher attitude subdomains and correlational statistics to examine the relationship between each component of teacher attitude (overall, affective, and cognitive) and the percentage of teacher attitude in the overall teacher attitude. Data were analyzed using descriptive statistics for overall teacher attitude and teacher attitude subdomains and correlational statistics to examine the relationship between each component of teacher attitude (overall, affective, and cognitive) and the percentage of students in the Healthy Fitness Zone (HFZ) on various components of the FITNESSGRAM. The findings suggest that The findings suggest that teacher's affective attitude may have a relationship with students' performance on fitness tests and that relationships The findings suggest that teacher's affective attitude may have a relationship with students' performance on fitness tests and that relationships may be different for boys and girls. The relationships for teachers attitude toward enjoyment of using fitness tests results suggests teachers may use them to design activities and lessons that lead students to engage in more physical activity and thus improve their levels of fitness (Fredrick III & Silverman, 2020).

Barranco et al., in the article *Health-Related Physical Fitness Benefits in Sedentary Women Employees after an Exercise Intervention with Zumba Fitness*, analyzed the effect of two exercise interventions on health-related physical fitness in sedentary employed females. Methods: A total of 98 physically Methods: A total of 98 physically active adult women were randomly assigned to 3 study groups. Conclusions: There were no significant differences after the intervention between the two exercise intervention groups. Exercise interventions based on Zumba fitness or Zumba fitness combined with an extra muscle-strengthening workout are effective based on bodyweight training exercises. Exercise interventions based on Zumba fitness or Zumba fitness combined with an extra muscle-strengthening workout based on bodyweight training exercises are effective strategies to improve the health-related physical fitness in sedentary women employees (Barranco-Ruiz & Villa-González, 2020).

Mug Wedi, in the article *A Framework for Managing Sports and Recreation Facilities as Social Anchors in the Context of Rural Community in Vhembe District, Limpopo Province, South Africa*, develops a framework for managing sports and recreation facilities as social spaces to promote rural community in Vhembe District. Inclusive access and inclusion. It further explores how different programs delivered in sports and recreation facilities in rural communities can promote outcomes that meet

the needs of different sectors within the community. The study was descriptive, using a simultaneous mixed methods approach that included quantitative and qualitative data collection for the evaluation study. The results revealed various manifestations of chronic poverty in poor rural communities, with sports and recreation facilities poorly maintained, not regularly cleaned, and not strategically planned and managed (Mugwedi, 2020).

Rose et al.'s article *The Role of Government Policy in Promoting Physical Activity*, argue that governments can directly influence the construction, operation and promotion of sports facilities through policy formulation and capital investment. These policies can increase the frequency of public participation in physical activity by providing more opportunities and facilities (Rose & Fisher, 2018).

Prince et al.'s article *Device-measured physical activity, sedentary behaviour and cardiometabolic health and fitness across occupational groups: a systematic review and meta-analysis* examined how physical activity (PA) and sedentary behaviour (SB) affect cardiometabolic health in different occupational groups, used device-measured data from accelerometers and pedometers to assess PA and SB levels. The results focused on comparing various occupational groups, including office workers, factory workers, healthcare workers, etc., and analysing work-related activities and leisure-time activities. Key findings included associations between physical activity levels and cardiometabolic health indicators such as body mass index (BMI), waist-to-hip ratio, blood pressure, cholesterol levels and fitness levels as measured by peak  $VO_2$ . The study highlighted that sedentary behaviour was particularly common in occupations such as office work, while more active jobs such as healthcare or factory work exhibited better cardiometabolic outcomes. However, insufficient moderate-to-vigorous physical activity (MVPA) and long sedentary time were common challenges leading to poorer health outcomes across all occupational groups. The study highlights the need for workplace interventions to reduce sedentary behaviour and promote more physical activity at work and in leisure time to improve overall health and reduce the risk of cardiometabolic diseases (Prince, Elliott, Scott, Visintini, & Reed, 2019).

Song & Baicker explored the impact of workplace wellness programmes in their journal article *Effect of a workplace wellness program on employee health and economic outcomes: a randomized clinical trial*. The study involved a large sample of employees from a US warehouse retail company and assessed the effects of a multi-component wellness programme with modules on nutrition, physical activity and stress reduction. The study found that while the programme increased employee participation in certain health behaviours, such as regular exercise and weight management, it did not significantly reduce clinical health indicators such as blood pressure or reduce healthcare costs after 18 months. This suggests that workplace wellness programmes may improve certain behaviours, but may not significantly improve health or save financial costs in the short term. (Song & Baicker, 2019).

Obazee, The article *Exploring Financial Management Practices of Small and Medium-sized Enterprises in Nigeria* investigates how SME owners in Edo State, Nigeria, can effectively adopt financial management practices to ensure business

sustainability. The study focused on the perspectives of experienced SME owners on acquiring essential financial management skills needed for long-term business success in Edo State. Data were gathered through semi-structured interviews and field notes from 15 SME owners with at least three years of experience and background knowledge in financial management. Using Yin's 5-step data analysis process, along with member checking and triangulation, the research identified key themes such as strategic accounting practices, financial planning knowledge, hiring professional accountants, maintaining accurate records, seeking accounting education, and using technology and financial management software. The findings from this study suggest that improved financial practices could enhance SME contributions to employment generation, business sustainability, and the overall quality of life in the community. (Obazee, 2019).

Peters examined the leadership skills utilized by SME owners and managers to successfully maintain their businesses beyond a five-year period. This research focused on four owner-managers from the manufacturing sector in Trinidad and Tobago who had sustained their enterprises for at least five years. The study was guided by the contingency and skill-based leadership models. Data collection involved semi-structured interviews and direct observations, while data analysis employed Miles and Huberman's analytical methods alongside Morse's approach to coding, pattern matching, interpretation, and summarization. Analysis revealed five key themes: leadership skills, leadership values, skill development, leadership challenges, and skill improvement. The study's findings offer valuable insights into leadership practices that may help SME leaders ensure long-term stability for their businesses. Reducing SME failure rates could contribute to better economic conditions, potentially alleviating poverty among families and within communities (Peters, 2019).

Miller, in a quasi-experimental quantitative study examining the impact of heart rate monitors on ninth-grade students' physical activity and fitness in PE classes, a pretest-posttest design with archived data was used to assess how wearing heart rate monitors affected students' cardiovascular fitness and physical activity levels. Additionally, the study aimed to measure the time students spent in moderate to vigorous physical activity (MVPA) during PE. Quantitative analysis through One-Way ANOVA showed a significant difference in the One-Mile Run/Walk results between groups,  $F(1, 240) = 61.385$ ,  $p = .000$ , though no significant difference was found for the PACER test,  $F(1, 240) = 0.943$ ,  $p = .332$ . For the second research question, ANOVA results were significant,  $F(17, 6616) = 86.98$ ,  $p = .000$ , indicating differences in time spent in the target heart rate zone across various PE classes. The findings revealed that 83% of the PE units met the NASPE standard by engaging students in MVPA for at least 50% of class time. (Miller, 2019).

Walters, in an Analysis of the Relationship of Performance on Health-Related Fitness Standards and Academic Achievement for Eighth Grade Campuses, the study investigated how student performance on FITNESSGRAM® Health-Related Fitness Standards—specifically in the areas of Muscular Endurance and Strength—relates to the average STAAR scores in 8th grade Reading and Math at the campus level. The sample included stratified random selections from school populations within each of Texas's 20 Educational Service Center Regions. To clarify the connection between Health-Related Fitness Standards (HRFS) performance and STAAR scores, regression



analysis was utilized. Additionally, a Pearson correlation analysis showed a positive association between HRFS scores and students' academic performance. Through further regression analysis, the study confirmed that students' HRFS performance has a notable impact on campus-level STAAR results, linking fitness standards with academic achievement. achievement (Walters, 2019).

Valianto & Budi, in the article Effectiveness of physical fitness model with game approach in improving physical fitness of students at Gajah made elementary school in Medan, uses a pre-experimental approach methodology in the form of one group pre-test and post-test design. To analyze the results of the pre-test and post-test using statistical methods (t-test) to find out the significant effect. the results of the average value of the post-test are The results of the average value of the post-test are greater than the average value of the pre-test. the physical fitness activity model of students in elementary school at Gajah Made Medan is effective for The physical fitness activity model of students in elementary school at Gajah Made Medan is effective for use in improving learning outcomes and increasing forms of physical activity as well as Rdio respiratory endurance, strength, endurance and determination of elementary school students. determination of elementary school students (Valianto, 2019).

Flanagan et al., in Perception of Physical Fitness and Exercise Self-Efficacy and Its Contribution to the Relationship between Body Dissatisfaction and Physical Fitness in Female Minority Children, surveyed and found that twenty-eight Latina and Black children enrolled in an elementary afterschool program, aged 8 In the article, twenty-eight Latina and Black children enrolled in an elementary afterschool program, aged 8-12, completed surveys evaluating body dissatisfaction, exercise efficacy, PFP, and measures of physical fitness. Findings suggest that exercise efficacy and PFP can mediate the relationship body image and aerobic fitness. These findings suggest that PFP, more so than measured physical fitness, was associated with lower body image and aerobic fitness. These findings suggest that PFP, more so than measured physical fitness, was associated with lower levels of BD in minority female children. These results have important implications for programs designed to improve physical fitness and mental health in minority children (Flanagan & Perry, 2018).

Nicola Magnavita's article Medical surveillance, continuous health promotion and a participatory intervention in a small company examines the importance of integrating health monitoring and promotion into the workplace environment. The article highlights how regular medical monitoring can identify potential health problems at an early stage, which can then be managed through continuous health promotion efforts (Magnavita, 2018).

Bakhit et al., the article The role of financial management in the decision-making of business, highlights how financial management is crucial to effective business operations. Key points include the management of capital, financial planning, and investment decisions, which are essential for the long-term sustainability of a business. The article emphasizes that financial decisions, such as managing cash flows, investing in assets, and determining profit distribution, support daily business functions and overall strategic goals, ensuring both liquidity and profitability (Bakhit



& Alamin, 2016)

Watt's article *Life and Health: A Value in Itself for Human Beings?* published in the HEC Forum primarily discusses the intrinsic value of health within the broader context of human life. The main argument centers on the notion that while health is a significant component of a good life, it is not the only goal worth pursuing. The article emphasizes that individuals have the capacity to shape their health through lifestyle choices such as consumption patterns, healthcare decisions, and the way they interact with their environment. It also explores the moral and philosophical implications of health in relation to other life values, stressing that health should be balanced with other aspects like social, emotional, and ethical well-being (Watt, 2015).

Mujtaba & Cavico's *the Corporate wellness programs: implementation challenges in the modern American workplace* explores the 'carrot and stick' approach, where employees are either rewarded for adopting a healthy lifestyle or punished for not doing so. This presents challenges, particularly in terms of fairness and the impact on employees with pre-existing health conditions. The article also discusses the importance of aligning health policies with legal and ethical guidelines and provides advice on ensuring that programmes are not only effective but also fair and reasonable. The article provides 'best practice' for overcoming these challenges, such as ensuring that health programmes are voluntary, non-discriminatory and well-designed (Mujtaba & Cavico, 2013).

Mayer, in *An empirical analysis of factors that affect student non-attendance at Mississippi State volleyball to examine which factors were influences in students choosing to not attend women's volleyball games at Mississippi State University during the 2011 season*, utilized a survey to measure the impact of 41 factors on non-attendance of 620 students in the constructs of non-venue structural constraints (Leisure Activities, Other Sport Entertainment, Financial Cost, Social Commitments, Game On Radio/TV, Work/School/Church Commitments), internal constraints (Lack of Knowledge, Lack of Someone to Attend With, Lack of Success, No Interest from Others) and external constraints (Arena Location and Parking). The results of a chi-square analysis indicated there were significant differences on 22 factors in the decision to not attend games between attendees (those who attended at least one game during the season) and non-attendees (those who did not attend any games). Marketing implications of these results were then discussed to help convert non-attendees to game attendees (Mayer Jr, 2012).

Literature review found that, in China, from the research content, the previous researchers have both empirical research on the psychological contract, dedication, loyalty, psychological attachment, etc. of SMEs employees, as well as applied research from the theory of SMEs employees planned behavior, problems and countermeasures, construction of non-material incentive model, AHP, ERP, TIM, etc., and development research on human resource management, employee training, salary management, policy support, etc. The above research provides more theoretical and practical basis for the research on the strategy of developing recreational sports to improve physical fitness of SMEs employees. The above studies provide more

theoretical and practical basis for the research on the strategy of SME employees development of recreational sports to improve their physical fitness; from the perspective of research paradigm and methodology, more research is carried out with the help of measurement scales, questionnaires, structural equation modeling, and case studies, and less research is carried out after theoretical discussions. There are studies from qualitative or quantitative perspectives, but there is a lack of mixed research.

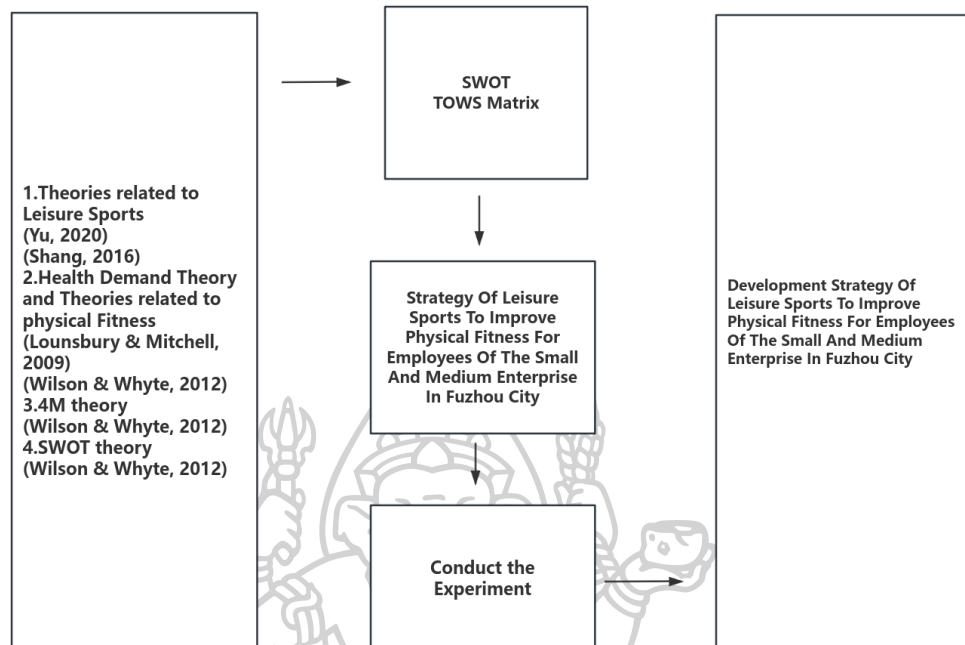
Literature review found that in foreign countries, from the content of the research, the previous researchers have both empirical research on the happiness, integrity perception, and satisfaction of SME employees, as well as developmental research on management innovation, sustainability performance, and innovation ability of SME employees; from the research paradigm and methodology, quantitative is the main focus, and the quantitative is usually unfolded with the help of questionnaires, and there are also part of the qualitative and mixed-methods research, and the qualitative research is more often adopted by the expert interviews, and the use of the Zerzarian theory methodology for the assessment of the transcribed expert interviews, but it lacks more of longitudinal research.

In summary, the above domestic and international literature on leisure sports or small and medium-sized enterprises (SMEs) has become mature, not only proposing solutions to the development and problems of SMEs, but also providing new insights into the emergence and impact of individual employee behavior. However, there is no specific research on leisure sports participation in the above literature, as well as a lack of problems and solutions for employees' leisure sports participation in small and medium-sized enterprises. Therefore, in this study, the development Strategy of Leisure Sports will be proposed to improve the physical fitness of employees in small and medium-sized enterprises.



## 2.7 Research theoretical framework

Figure 1 Research theoretical framework



## Chapter III: Research Methodology

The research methods used to explore strategies aimed at increasing participation in leisure sports to improve the physical fitness of employees of small and medium-sized enterprises (SMEs) in Fuzhou. This study adopts an integrated research and development (R&D) approach, combining quantitative and qualitative data collection methods. Through surveys, interviews and SWOT analysis, Researcher aim to develop targeted strategies to promote leisure sports participation among SME employees. This chapter details the research area, sample selection, instruments used, data collection and analysis process, and the methods used to ensure reliability and validity. By applying these methods, this study aims to provide development strategy of leisure sports to improve physical fitness for employees of the small and medium enterprise in Fuzhou city.

### 3.1 Type of Research Methodology

This research used research and development (R&D) as the research method.

### 3.2 Research area

1) Population:

Employees and Leaders of the small and medium enterprise (SMEs) in Fuzhou city, about 700,000 people in total.

2) Sample:

According to Krejci and Morgan Table, 400 employees of small and medium Enterprises (SMEs) in Fuzhou city will be selected as the sample for this research by using simple random sampling, and 10 leaders of SMEs in Fuzhou city will be selected by snowball sampling. (Krejcie, 1970)

Experiment sample: A total of 56 people from the two companies signed up for the experiment, and 54 of them completed it. 37 of them were from medium-sized companies and 17 from small companies.

3) Key information providers:

General manager 2, Deputy general manager 3, Department manager 5

### 3.3 Research process

R1: Search for data to study current situations physical fitness related to leisure sports participation of SMEs through various search engines and analyze the collected literature

Designing the interview outline (IOC value to test the validity): through the interview, we grasp the core issues such as the participation of SME employees in leisure sports and provide support for the development of countermeasures to promote the participation of SME employees in leisure sports.

Questionnaire reliability and validity test: reliability (Cronbach's alpha coefficient) validity (IOC).

The questionnaire was used to understand the level of physical fitness, leisure

sports participation attitudes and satisfaction of employees of small and medium - sized enterprises (SMEs) in Fuzhou City.

SWOT Analysis: Analyze the strengths, weaknesses, opportunities, and threats to the development of the enterprise and use TOWS Matrix analysis to formulate strategies.

D1: we propose preliminary strategies for leisure sports participation that can improve the physical fitness of employees in small and medium-sized enterprises (SMEs) in Fuzhou City.

R2: Apply the strategy proposed by D1 to Fuzhou Xinshulian Group Co., Ltd. (medium-sized, 40 people) and Zhongxing Certified Public Accountants Co., Ltd. (small, 20 people) and carry out experimental implementation. The content of the pre- and post-test is the BMI of men and women, the 50-meter run of men and women, the sit and reach of men and women, the standing long jump of men and women, the vital capacity of men and women, the pull-ups of men, the sit-ups of women, the 1000-meter run of men, and the 800-meter endurance run of women.

D2: Evaluate, summarize strengths and weaknesses, and optimize the strategies used.

### **3.4 Research instruments**

#### **3.4.1 Questionnaire**

The Questionnaire On Leisure Sports Participation Behavior of Employees of Small and Medium-Sized Enterprises in Fuzhou City was compiled according to the expert appraisal and modification opinions, and snowball sampling with non-random sampling was used to investigate the status of leisure sports participation (including attitudes toward leisure sports participation and satisfaction with leisure sports participation) of employees of small and medium-sized enterprises in Fuzhou City. The first part of the questionnaire was designed to understand the basic situation of the respondents, the second part was designed to understand the physical activities and leisure situations of the respondents, and the third part was designed to understand the attitudes towards leisure sports participation and the satisfaction of leisure sports participation of the respondents.

#### **3.4.2 Interview form**

According to the expert appraisal and modification opinions, we prepared the Interview Outline of Leisure Sports Participation of Employees of SMEs in Fuzhou City and the Interview Outline of Leisure Sports Participation of Management of SMEs in Fuzhou City and used convenience sampling among non-randomized sampling to investigate the strengths, weaknesses, opportunities, and threats of leisure sports participation of small and medium-sized enterprises (SMEs) and employees in Fuzhou City. It laid the foundation for the proposal of preliminary strategies. The first part of the Interview Outline was designed to understand the basic situation of the interviewees, and the second part was designed to understand the interviewee's leisure sports participation.

#### **3.4.3 Physical Fitness**



The programme uses the Physical Assessment Scale for Schoolchildren (PASS), which measures a number of physical fitness indicators, including BMI (Measures body weight relative to height. A BMI in the range of 18.5 - 24.9 indicates a healthy weight, generally ideal for fitness., If the value decreases, it indicates weight loss.), vital capacity (Higher lung capacity suggests better respiratory health and endurance, with larger volumes indicating stronger aerobic fitness.), 50-metre run (Measures speed; shorter times indicate better sprinting ability and anaerobic power.), sit and reach (Assesses flexibility, with greater forward reach showing better flexibility, especially in the lower back and hamstrings.), standing long jump (Reflects leg strength; longer jumps indicate more power in the lower body.), one-minute sit-ups (Measures core endurance; a higher count within a minute shows stronger core fitness.), pull-ups (Tests upper body strength; more pull-ups indicate greater arm and back strength.) and endurance run (Measures aerobic endurance; shorter completion times suggest better stamina.). The scoring criteria are based on national student physical fitness standards. The aim of the programme is to assess the physical fitness of participants.

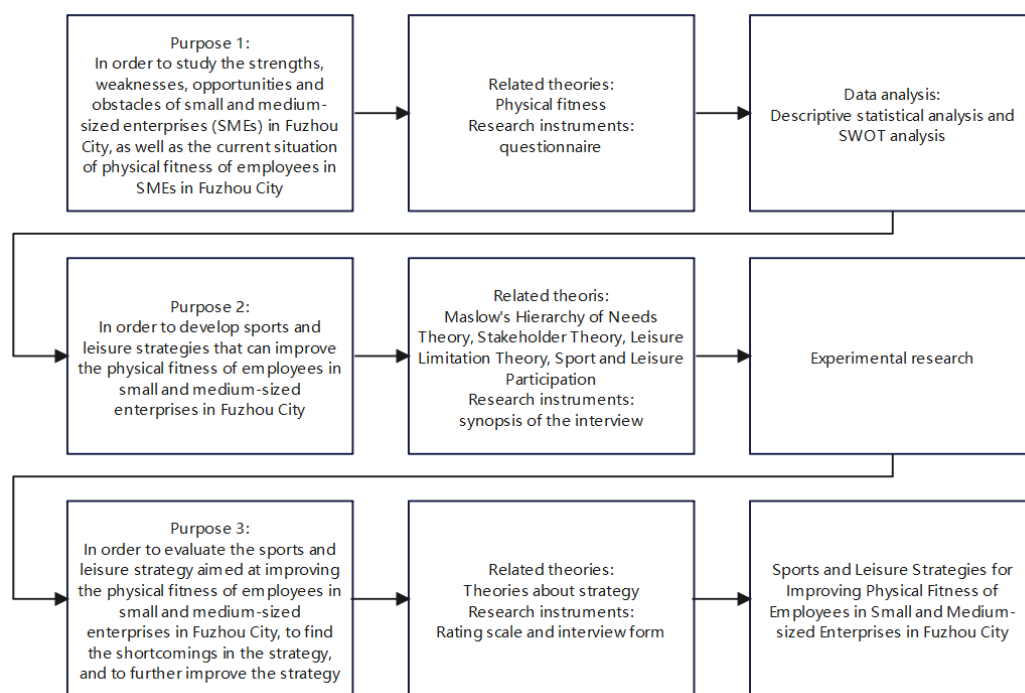
### 3.5 Research timeline

**Table 1 Research schedule**

Serial number	Research progress	Beginning and end
1	Determine the topic, review relevant books and journals, collect relevant literature at home and abroad, and write the first three chapters of the dissertation.	2022.12-2023.5
2	The questionnaire was revised to test the reliability and validity of the questionnaire, and the process solicited the opinions of relevant experts and teachers for modification and finalization of the official questionnaire.	2023.5-2023.09
3	Conduct field visits, distribution and collection of questionnaires, and analysis.	2023.09-2024.5
4	Conduct interviews, case studies	2024.05-2024.10
5	Analyze results and write subsequent sections of the study. Discuss the content of the study with the instructor and make iterations	2024.10-2024.11

### 3.6 Research design

Figure 2 Research design



### 3.7 Research methods

#### 3.7.1 Questionnaire method

Following the established theories and literature, the physical quality of SME employees was investigated by drawing on mature scales; the Questionnaire on Leisure sports Participation Behavior of Employees of Small and Medium-sized Enterprises in Fuzhou City was compiled according to the needs, and at the same time, two scales, namely, the Attitude of Employees of Small and Medium-sized Enterprises in Fuzhou City in Leisure sports Participation Scale and the Satisfaction of Employees of Small and Medium-sized Enterprises in Fuzhou City in Leisure sports Participation. At the same time, two scales were revised based on the research results of domestic scholars, i.e., Attitude Scale of Leisure Sports Participation of Employees in SMEs in Fuzhou and Satisfaction Scale of Sports and Leisure Participation of Employees in SMEs in Fuzhou

#### 3.7.2 Interview method

Through interviews and observations, qualitative research on the current situation of leisure sports participation of employees in small and medium-sized enterprises (SMEs) in Fuzhou City was carried out to analyze the underlying causes. According to the needs of the study, interviews were conducted with employees of

small and medium-sized enterprises in Fuzhou City to grasp the core issues such as the participation of small and medium-sized enterprises in leisure sports, and to provide support for the formulation of countermeasures to promote the participation of small and medium-sized enterprises in leisure sports and to refine the corresponding points according to the records.

1) Designing interview outlines

According to the needs of the study, the interview outline was designed in terms of the leisure sports participation of SME employees.

2) Identification of interviewees

In order to better enhance the accuracy of the interview data and improve the quality of the interviews, based on the interviewed employees of SMEs, different age, gender, education, marital status and other characteristics of the targeted interviews (the selection of the interviewees, the use of snowball sampling, to meet the SMEs for the employees, relevant sports hobbies, non-Fuzhou household conditions can be).

**Table 2 Basic information about the interviewees**

Name	Gender	Age	Educational attainment	Careers	Sporting interest
Z*M	male	31	Undergraduate	Company Manager	Gym, Basketball
W*L	male	36	Undergraduate	deputy director	basketball
Z*X	male	54	Undergraduate	Corporate Vice President	ping-pong
Z*M	a male	52	Undergraduate	deputy director (of a company etc.)	Badminton, Billiards
L*Y	female	58	Undergraduate	Corporate Finance Director	Badminton, walking
L*W	male	27	Undergraduate	company employee	billiards
L*F	females	24	Undergraduate	company employee	run
Y*	females	22	Undergraduate	company employee	Fitness exercise, Gym
L*F	a male	25	Undergraduate	company employee	Table tennis, badminton
Y*R	a male	31	Undergraduate	company employee	basketball

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Name	Gender	Age	Educational attainment	Careers	Sporting interest
L*J	females	43	Undergraduate	company employee	shuttlecock
X*S	a male	26	Undergraduate	company employee	run
L*M	females	28	Undergraduate	company employee	ping-pong

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### 3) Development of an interview implementation program

According to the needs of the research, the researchers developed the interview subjects, contacted the interview place, and sent the interview content in advance. The interviews were divided into on-site interviews and online interviews, and the contents of the interviews were organized as the support content of the thesis.

### 3.7.3 SWOT analysis and TOWS Matrix

Conducted a SWOT analysis using quantitative and qualitative data to identify the strengths, weaknesses, opportunities and threats of employee participation in recreational sports activities in small and medium-sized enterprises in Fuzhou. We then proposed a recreational sports strategy using a TOWS matrix. the internal and external environments of your company based on the.

## 3.8 Data Collection

**Qualitative data:** Qualitative data was primarily collected through interviews. Before conducting the interviews, consent was obtained from the participants to record the sessions. The interview materials were then organized and analyzed to draw conclusions.

**Quantitative data:** Data collection for quantitative research mainly came from a questionnaire survey. The questionnaire data came from a combination of online and offline methods. Online data was mainly collected through Questionnaire Star software, while offline, the author personally contacted respondents to complete a study version of the questionnaire.

**Experimental data:** After the experimental plan was determined, the experiment officially began on August 14.

## 3.9 Data Analysis

1) For the quantitative data collected during the questionnaire and experimental process, this study mainly used descriptive statistics to analyze the data.

2) For the qualitative data collected during the interviews, this study mainly used the method of content analysis to analyze the data.

3) SWOT Analysis

### 3.10 Validity and Reliability of the Study

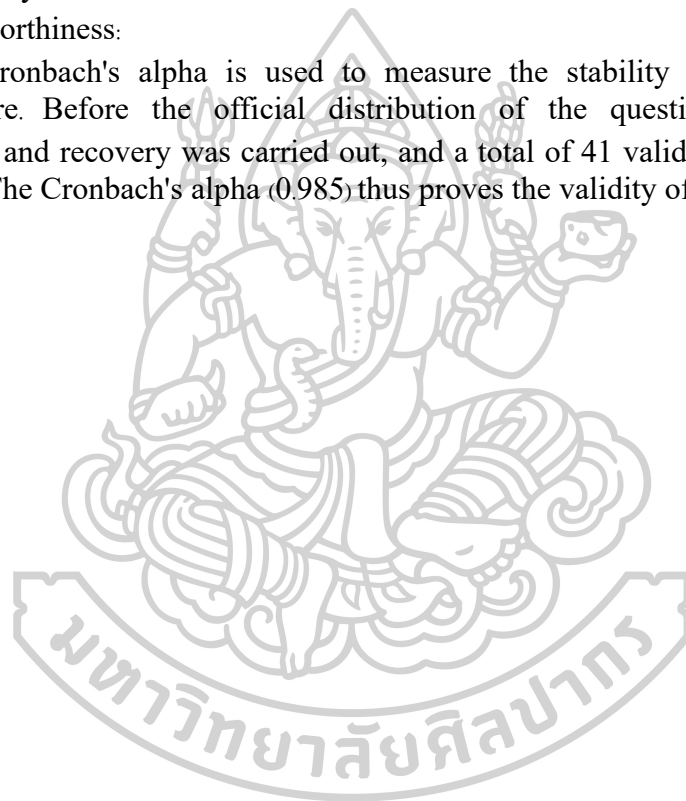
Validity:

Validity of the questionnaire: 5 experts in the relevant field were asked to rate each question on the questionnaire. The researchers used the IOC value to determine the validity of the questionnaire. After testing, the IOC value was found to be greater than 0.5, which proves validity.

Interview outline validity: 5 experts in the relevant field were asked to rate each topic on the interview outline. The IOC value was used to determine the validity of the interview outline. After testing, the IOC value was found to be greater than 0.5, which proves validity.

Trustworthiness:

The Cronbach's alpha is used to measure the stability and reliability of a questionnaire. Before the official distribution of the questionnaire, small-scale distribution and recovery was carried out, and a total of 41 valid questionnaires were recovered. The Cronbach's alpha (0.985) thus proves the validity of the questionnaire.





## **Chapter IV: Analyzed and Discussed**

This study aims to investigate the current situation of leisure sports participation among employees of small and medium-sized enterprises in Fuzhou, propose relevant strategies with the aim of improving their physical fitness, and verify and improve a series of strategies with a view to maximising the attractiveness of tourist attractions in Fuzhou. This chapter uses descriptive statistics to quantitatively analyse the questionnaire data, followed by content analysis. The authors conducted a SWOT analysis to integrate quantitative and qualitative data to identify the strengths, weaknesses, opportunities and threats of leisure sports participation among employees of small and medium-sized enterprises in Fuzhou. Using the TOWS matrix, the authors proposed relevant strategies such as ST strategies, SO strategies, WT strategies and WO strategies. Then, based on the strategies, an experimental plan was formulated to verify the feasibility of these strategies through a two-month experiment, and a T-test and a satisfaction survey were conducted to re-verify the final strategies.

### **4.1 Current of the physical fitness of employees in small and medium sized enterprises in Fuzhou City.**

#### **4.1.1 Documentary Analysis of Fuzhou**

##### **1. Analysis of the advantages of Fuzhou sports leisure participation in high-quality development (Strengths )**

###### **1) Policy guidance and support, policy system establishment**

The completeness of policy is an important indicator of the maturity of leisure sports development. The construction of policy system and the implementation of supporting policies also point out the direction for the development of leisure sports. The leisure sports policy is a series of measures that the state actively intervenes in order to accelerate the development of the leisure and fitness industry, reflecting the government's high attention and support for the development of the industry. On the one hand, these policies are to make up for the defects of market failure. If only relying on the market mechanism and ignoring government regulation and control, it is difficult to avoid the occurrence and spread of insufficient funds, investment chaos, monopoly disorder, vicious competition, waste of resources and other phenomena. On the other hand, it is to promote the rationalization and stability of industrial structure and optimize the allocation of sports resources. The market mechanism is affected by market changes, there is blindness and lag, it is inevitable that a lot of waste of resources, the government's industrial policy, scientific prediction, macro adjustment, to achieve the optimal allocation of resources. In order to promote the full implementation of leisure sports industry projects, the General Administration of Sport of China, together with relevant ministries and commissions, has clarified the development content and objectives of various leisure sports industry projects. Fujian Province's policy also responds to the call of national policy and has issued a series of relevant policies to adapt to the development of leisure sports industry in the local

social environment and sports resources. In addition, according to the development status and objectives of the local leisure sports industry, the Fuzhou Municipal Government and the Municipal Sports Bureau have issued documents such as the outline of Fuzhou's leisure sports development plan and the high-quality development suggestions of Fuzhou's leisure sports. In these relevant leisure sports development planning policy documents, it can reflect the urgency and importance of Fuzhou's development of leisure sports. This series of policy measures that can continuously promote the development of leisure sports industry, as a strong support, plays an important role in promoting the development and growth of leisure sports market in Fuzhou. Whether it is from the number of policies, the type of policies, the content of policies, and the implementation of policies, it can reflect the government's emphasis on the high-quality development of the leisure sports industry. In response to the requirements of national policies, we should give full play to the overall role of the government, strengthen policy guidance, scientifically and rationally use industrial project funds, financial support, tax relief and loan discount policies and other measures to improve the sound policy system, create an open and harmonious social policy environment, and promote the development of Fuzhou's leisure sports industry.

**Table 3 A list of policies related to the development of leisure sports industry in Fujian Province in recent years**

<b>particular year</b>	<b>Policy name</b>
2015	Notice on Ten Measures to Accelerate the Development of Sports Industry and Promote Sports Consumption
2017	Implementation Opinions on Accelerating the Development of Fitness and Leisure Industry
2018	Fuzhou City Public Sports Facilities Special Plan ( 2018-2035 )
2019	Notice of Fujian Province on Several Measures to Promote the High-quality Development of Sports Industry
2020	On the implementation of the all-round promotion of high-quality development beyond the comprehensive promotion of the sports industry to attract investment action plan .
2020	Fuzhou to promote the national sports consumption pilot city construction work plan ( 2020-2022 )
2021	Fujian Province 14th Five-Year Sports Industry Development Plan
2021	Some Measures of Fujian Province on Promoting the Healthy Development of Sports Social Organizations
2021	Fuzhou National Fitness Implementation Plan ( 2021-2025 )
2021	Fuzhou to promote the national sports consumption pilot city construction work plan ( 2020-2022 )
2022	Fujian National Fitness Regulations

particular year	Policy name
2023	Fujian Province Sports Development Special Fund Project Management Implementation Rules
2023	Eight measures to promote the high-quality development of e-sports and digital sports industry in Fuzhou

(Data source: Fuzhou municipal government document)

## 2) Leisure sports resources and the continuous development of sports events

Fuzhou is located in the eastern part of Fujian Province, the lower reaches of Minjiang River and coastal areas. It is located on the Gold Coast of southeast China in the Asia-Pacific economic circle. It is adjacent to the East China Sea in the east, Nanping and Sanming in the west, Ningde in the north and Putian in the south.

In the West Minqing East Bridge of Fuzhou, there is a nine-field town. The town relies on 100% of the original natural ecology to create the product content of two streams and one island, five gardens and three houses, and twenty-four scenes according to local conditions, forming an idyllic sports culture town with sports culture as the theme and integrating tourism experience, agricultural sightseeing, leisure, and health care. In Jiuye Town, you can have a hearty outdoor leisure sports which is in the Dongshan Ocean Sports Town of Tonging Town, Songshan County, Zhangzhou City, relying on the advantages of blue sea, blue sky and silver beach with the theme of ocean sports as the link, the development of marine sports and leisure products such as sea fishing, diving, sailing, surfing, gliding and cycling, sea fishing, mountain pulling and other interesting sports have added a lot of sports fun, beach football, volleyball, sea walking ball and other sports, so that tourists can experience the unique charm of marine leisure sports in an all-round way. It is reported that Tonging Town is not only a sports town, but also an ancient cultural city with a history of more than 600 years. It is rich in cultural relics and historical sites, known as seaside Zoulu which is in Longmen Town, Anxi County, Quanzhou, the town's tourism resources are very rich, and the integration of tea tourism culture and sports is the characteristics of the town. The characteristic town of Luolindun Ledong Valley is located in Chagatai County, Zhangzhou. In 2017, Lindunle mobile valley town was included in the list of pilot projects of national sports and leisure characteristic towns by the General Administration of Sports of the People's Republic of China, focusing on creating one core, one belt, two axes and five areas. One core is the guide belt, two axes are waterfront sports and mountain sports, and the five areas are an experience trade area, health resort area, traditional culture area and Ledong town guests, respectively, to create a healthy sports characteristic town integrating sports and leisure, health and health preservation and cultural tourism (Sports Bureau of China, 2017).

Longmen Town has various terrains and landforms. The mountains are stretched, the granite walls are towering, the mountain trails are intricate, and the existing reservoirs and rivers are suitable for extreme sports competitions such as triathlon, mountaineering, directional cross-country, and river car races. There are also many sports that are favored by young people, such as passion rafting, jungle field combat,

natural rock climbing, and field survival. Xiaodong Town is located in Jian ou, Nanping. The town realizes the organic integration of sports, health, culture, tourism and other multiple elements through the mode of sports, health, culture, agriculture, leisure, and tourism. Starting from Mawien, Jian ou, a fitness greenway was built along the bank of Xiaodong River Basin, connecting six villages along Shang yuan, Mudun, Houtou, Liyuan, Ding Gao and Xiaodong. Xiaodong Reservoir, located in the Xia Kou of Jianjun Mountain in Xiaodong Creek, is suitable for water activities such as canoeing, paddleboarding and fishing. In addition, Xiaodong Town has built a 30 km. bicycle track, left and right main canals and Qianfan Power Station and other canals around the trail, the south and north slopes of Jianjun Mountain and Yindongzi Mountain hiking trail, Houtou Village, Ding Gao Village, Fishing Village and other seven hundred mu leisure fishing centers. Participants can not only carry out a variety of indoor activities but also experience outdoor leisure, outdoor hiking, climbing, camping, exploring sports, mountain cycling, river rafting and other outdoor fitness and entertainment activities.

Rich natural resource reserves and a long history of cultural heritage, for the excavation and development of leisure sports resources to provide congenital advantages. Fuzhou has unique advantages such as historical culture, red resources, beautiful environment and ecological livability. Guided by the construction of cultural tourism ecology, Fuzhou vigorously develops sports leisure, tourism vacation, mountain outdoor, sports festivals and other formats, enriches leisure sports tourism products, explores resources conducive to the development of leisure sports, and makes use of unique historical culture and natural resources. Advantages, positioning the sports needs of the social masses, and promoting more leisure sports.

## **2. Weaknesses of Fuzhou sports leisure participation in high-quality development (Weaknesses)**

### **1) The level of regional economic development is obviously different, and the development of sports fitness and leisure industry is not balanced.**

Affected by location factors, different regions are different in natural resources, geographical location, industrial structure, development history, population density, marketization degree and other aspects. The superposition of factors will accelerate the imbalance of regional development. In recent years, the social economy of Fuzhou has shown a good trend of rapid growth as a whole, but there is a big gap in the level of economic development between regions. According to the 2022 Fuzhou Statistical Yearbook, from the data information of the GDP of each district and county, it can be clearly observed that the GDP of Gulou District is in a far-reaching leading position, which has opened a large gap with other regions. The level of economic development in Pingtan County is far behind, and the degree of economic development between districts and counties is quite different (Bureau of Statistics, 2022). The high-quality development of leisure sports requires a certain economic foundation as a support, and the level of economic development will also affect people's consumption of leisure sports. If the level of economic development between regions is quite different, it will lead to regional differences in the supply and demand of leisure sports products



in the sports market, unbalanced industrial structure, and unbalanced development of leisure sports industry. Due to the obvious imbalance of economic development in different regions, the imbalance is not only reflected in the structure of sports infrastructure and sports industry, but also in the shortage of leisure sports infrastructure and leisure sports consumption places among regions, which gradually makes the problem of unbalanced development of leisure sports in Fuzhou more prominent. The contradiction of unbalanced and inadequate development of leisure sports will exist for a long time and is not easy to solve.

**Table 4 Gross Domestic Product ( GDP ) of Fuzhou Municipality in 2022**

	<b>Region</b>	<b>Regional GDP(100 million yuan)</b>
Fuzhou Area	Fuzhou city	12308.23
	Gulou District	2609.06
	Taijiang district	679.57
	Cangshan district	1045.07
	Mawei district	675.34
	Jinan district	1137.19
	Changle district	1218.08
	Fuqing city	1604.42
	Minhou county	1009.21
	Lianjiang county	731.46
	Luoyuan county	417.04
	Minqing county	446.26
	Yongtai county	367.83
	Pingtai county	367.71

(Data source: Bureau of Statistics, 2022)

## **2) Leisure Awareness and Importance of Consumption expenditure for Leisure sport**

The rapid growth of consumption capacity and the increase of consumption contribution are important ways and typical characterizations to achieve high-quality development. The consumption expenditure of urban and rural residents, including leisure sports consumption, is an important engine of economic growth. Leisure sports consumption is a new driving force to promote the high-quality development of China's economy. It has become a strong support for stimulating domestic demand and a key factor in improving people's good life. Leisure sports consumption concept and sports consumption behavior are closely related, leisure sports consumption concept can affect the resident's leisure sports consumption behavior, so as to determine the actual level of leisure sports consumption expenditure. With the increase of consumers' disposable income and the awakening of leisure sports consciousness, the consumption consciousness of leisure sports has gradually shifted from traditional, physical and functional consumption to participatory, experiential and enjoyable consumption. It pays more attention to its own spirit, feels the experience and



satisfaction of body and mind, and is no longer constrained by traditional psychology and conformity psychology. It is no longer blindly limited to following the trend and hot spots and does not simply adhere to the pursuit of popular leisure sports. As the material basis of leisure sports consumption, income directly affects the level of sports consumption expenditure. The higher the income, the stronger the awareness of participating in leisure sports, the higher the frequency of participating in leisure sports, and the higher the consumption expenditure. As the living conditions, economic level and leisure time of rural residents are still significantly different from those of urban residents, there is a big gap between the development level of leisure sports of rural residents and that of urban residents. The sports infrastructure is relatively backward compared with that of urban residents, and there is a big gap between the per capita leisure sports consumption of rural residents and that of urban residents. The leisure sports consumption expenditure of rural residents and how the city changes the leisure sports consumption concept of rural residents and guides the leisure sports consumption expenditure are the key points to promote the coordinated development of leisure sports consumption of urban and rural residents. Therefore, in the context of the current new era of high-quality development, how to guide the change of leisure sports consumption concept and how to continue to expand and upgrade leisure sports consumption expenditure is an important proposition.

**Table 5 Per capita living consumption expenditure of urban residents in Fuzhou from 2017 to 2022 (unit :Rmb)**

Item	2017	2018	2019	2020	2021	2022
Living consumption expenditure	25980	28145	30946	30487	33942	35692
Food tobacco and alcohol dressing	8552	9001	9537	9673	10612	11145
habitation	1438	1554	1659	1443	1741	1769
Daily necessities and services	6829	7716	8955	9356	10349	10679
Transportation and communication	1478	1516	1557	1519	1794	1913
Education culture	3353	3631	3715	3755	3656	3949
Entertainment	2483	2728	3066	2301	3120	3376
medical care	1235	1375	1692	1774	1939	2064
Other Supplies and Services	612	625	765	665	731	797

(Data source: Fuzhou municipal government, 2022)

**Table 6 Capita living consumption expenditure of rural residents in Fuzhou from 2017 to 2022 (unit : Rmb)**

Item	2017	2018	2019	2020	2021	2022
living consumption expenditure	14003	14943	16281	16339	19290	20467
Food tobacco and alcohol	5162	5340	5784	6274	6765	7061
clothing	631	677	774	755	918	963
habitation	3548	3649	3799	3943	4894	5176
Daily necessities and services	721	765	809	874	939	1034
transportation and communication	1555	1817	1903	1688	2232	2323
Education	1175	1359	1615	1232	1662	1844
Culture						
Entertainment						
medical care	907	1016	1210	1271	1484	1634
Other Supplies and Services	305	320	386	302	397	433

(Data source: Fuzhou municipal government, 2022)

### 3) Insufficiency of Activities and supporting factors in Fuzhou

Leisure sports are the premise basis for the public to participate in physical exercise and enjoy the fun of leisure sports, and also the basic conditions for the development of leisure sports industry. Whether it is leisure sports venues, national fitness facilities, or sports service complex, sports characteristic town, sports industry demonstration area, etc., are the core carriers of daily leisure sports activities. At present, there is still a gap in the construction of sports facilities in Fuzhou. In terms of the number of stadiums, the area of sports facilities, the quality of sports service complexes, and the area of sports venues per capita, it is difficult to meet the growing sports and leisure needs of the public, and it has not yet adapted to the requirements and goals of high-quality development of leisure sports. From the perspective of the regional distribution of leisure sports venues, there is a regional structural imbalance in Fuzhou's sports venues and facilities. Among them, the distribution density of venues and facilities in Cangshan District and Gulou District is more than that in other areas. The planning and construction of sports venues and leisure venues in the city needs to be further improved and optimized. In addition, in terms of the number of stadiums and the area of sports venues, urban areas are far superior to rural areas. There are prominent imbalances in the allocation of sports resources and the imbalance of regional layout. Effective measures need to be taken to alleviate them. In addition, the uneven distribution of sports venues resources and the single type of sports venues will also affect the deepening and development of local social leisure

sports activities. Traditional mass leisure sports events with high attention and large number of participants such as various ball games, swimming, aerobics and running, are still hot spots. The number and area of these types of sports venues occupy a large proportion in the city. However, in the process of consumption transformation and upgrading, consumers are increasingly in favor of diversification and personalization. Consumer demand is more reflected in the pursuit of novelty, difference and beauty, which promotes consumers to shift their preference for leisure sports to irreplaceable niche leisure sports with characteristics, personality and differences. At present, the construction of sports venues and facilities in Fuzhou is still dominated by traditional projects, lack of diversified leisure sports, such as camping, horse riding, mountaineering, racing, extreme sports, music performance, dance, go, fencing, outdoor sports and other emerging niche leisure sports, in the leisure sports market in a state to be activated, the lack of standardized venues, social attention is still small, not fully integrated into the public view. Only when the sports market planning is equipped with more complete and diversified leisure sports venues and venues, can we better meet the diversified and niche leisure sports needs of the masses (Sports Bureau of Fujian Province, 2019).

#### **4) Insufficient supply of leisure sports products and services, the quality of products and services needs to be further improved.**

Only when the sports market planning is equipped with more complete and diversified leisure sports venues and venues, can we better meet the diversified and niche leisure sports needs of the masses. The premise of high-quality development of leisure sports is to have sufficient human resources and absorb high-level professionals with comprehensive literacy. When leisure sports products and services are consumed by residents, the commercialization and marketization of leisure sports industry begin to accelerate. However, what the public constantly pursues is the unique, personalized, diversified, quality and refined leisure sports demand, which is still in contradiction with the actual supply of leisure sports market. The supply problem of leisure sports market is mainly manifested in the following aspects: The effective supply of leisure sports products and services is insufficient, the supply subject and structure are unreasonable, the high-quality leisure sports products and services lack innovation, and the homogenization is serious. It is difficult to form brand benefits and cannot meet the urgent needs of leisure sports consumers for leisure sports consumption products and services. There is a huge consumption market of leisure sports population in Fuzhou, but there is not only a shortage of quantity in the supply of leisure sports products and services, but also a problem of poor quality. With the upgrading of leisure sports consumption, the optimization of leisure sports industry structure and the trend of high-quality and diversified leisure sports demand, the current supply growth rate and quality level of leisure sports products and contents have not reached consumers' expectations. Compared with the purchasing power of Fuzhou citizens, the existing leisure sports products and services in the leisure sports market are difficult to meet the leisure sports needs of consumer groups. Although in recent years, the construction of leisure sports infrastructure has achieved certain

results, in the face of increasing demand, the supply side supply is still insufficient. On the one hand, there are few comprehensive leisure sports venues, and the available area is not large; the development and revitalization of some parks, public green spaces, urban outdoor leisure spaces and other places are not enough, lack of convenience and benefit, and some popular and popular leisure sports are difficult to participate. On the other hand, some emerging leisure sports, which are gradually popular and sought after, are in a situation of insufficient supply and low quality. For example, outdoor sports infrastructure is weak, and some campsites, fitness trails, cycling lanes and other facilities have not yet formed a reasonable planning layout in the city. Extreme sports and golf lack standardized venues and equipment, and the consumer experience is low. At the same time, high-quality and high-quality products and services are more scarce. The most essential feature of leisure sports is a sense of participation and experience. The quality of service can directly affect consumer satisfaction and consumption stickiness, and further affect the development of leisure sports industry. The quality of products and services in the supply market of leisure sports cannot be ignored (Government of Fujian Province, 2017).

### **3. Opportunities for the high-quality development of leisure sports in Fuzhou (Opportunities)**

#### **1) National strategy to lead the leisure sports industry into the golden period of development**

National fitness strategy: Set off a national fitness boom. Due to the in-depth implementation of the national fitness program, mass sports have developed rapidly, China's sports population base has been expanding, and the number of leisure sports fitness people has been increasing, which has played a strong foundation for the development of leisure sports industry. The effect of strengthening the foundation has made the leisure sports industry receive attention at the top-level design level. The government departments have integrated and allocated the resources of the leisure sports industry in a macro-control manner, effectively reducing the idleness and waste of sports resources. The development plan of the leisure sports market has carried out a scientific and reasonable layout, providing suitable development paths and measures for the high-quality development of the leisure sports industry. The national promotion of the national fitness strategy has attracted a large number of participants and experiencers of leisure sports, stimulated the residents demand for leisure sports, bred potential consumer groups for the leisure sports industry, and opened up a broader market development space (State Council of China, 2014b).

#### **2) Double circulation development pattern has become the supporting power of leisure sports development.**

The construction of a double cycle development pattern is a major decision-making judgment made by the country after coordinating the development situation at home and abroad. It not only considers the instability of the external economic environment, but also strengthens the basic plate of high-quality development of the domestic economy. Restricted by the traditional economic growth model, China's leisure sports have been unable to meet the actual needs of high-quality development



under the influence of the global science and technology industry reform. The double cycle development pattern will undoubtedly inject a strong needle into the development of leisure sports, guide leisure sports to adjust the development direction, adapt to the upgrading of domestic sports consumption demand, and release new development momentum. The double cycle development pattern is an important engine to promote the high-quality development of leisure sports. More importantly, as the key to the development of sports industry, leisure sports needs to establish a set of modern industrial system based on the background of the double cycle development pattern, and then explore the high-quality development path to meet the needs of the times. Under the background of the new development pattern of double circulation, the high-quality development of leisure sports industry needs a complete set of industrial supply and demand system, smooth and orderly sports market, which urges the leisure sports industry to realize the transformation of industrial kinetic energy, the realization of industrial value and the improvement of industrial development efficiency through scientific and technological innovation, management innovation, model innovation, product innovation and service innovation. In addition, there is still much room for improvement in the proportion of leisure sports in the scale of the sports industry. Many leisure sports enterprises are weak in strength, lack of sports consumption capacity and sports consumption awareness at the corresponding demand side, and the vitality of the supply and demand subject of the sports market needs to be stimulated. It is still necessary to dredge the structural problems such as output value structure, demand structure and supply structure faced in the process of transformation and upgrading of the leisure sports industry. We should make good use of the opportunity of the new development pattern of double circulation, optimize the development environment of the leisure sports industry, cultivate a new supply and demand system of sports market, promote the new growth point of the leisure sports industry, and establish a complete industrial chain, supply chain, and value chain system (Xinhua News Agency, 2020).

### **3) Leisure sports + mode and format integration development has become a major trend**

Integration is one of the important characteristics in the development of the leisure sports industry. Leisure sports + mode has become an important way to realize the innovation of leisure sports industry. The integration of leisure sports and health, culture, tourism, ecology, the internet, and other formats has spawned new integration formats such as leisure sports tourism, leisure sports health care, leisure sports cultural and creative industries. In the development process of the leisure sports industry, it will also follow the evolution path of format integration. The nature of its service industry determines the important trend of its integration with other new service industries, and the traces of integration with tourism, culture, the internet, and other industries will be more obvious. In the integrated development of leisure sports format and tourism format, namely leisure sports + tourism and leisure sports + ecology, it not only promotes the birth of leisure sports characteristic towns but also reflects the unique role of the leisure sports industry in driving tourism and promoting the protection and development of natural ecological environment. Make full use of



outdoor natural resources and characteristics of leisure sports, outdoor sports will become an important object of development, such as hiking, mountaineering, cycling, camping, rafting, gliding and other leisure sports activities and events have been publicized and developed, but also encourage the natural scenic spots with perfect infrastructure, the construction of ecological leisure sports industry demonstration base, the development of ecological leisure sports park, leisure sports tourist attractions, sports and leisure demonstration area and other leisure sports industry ecological projects. The deep integration of leisure sports and tourism is not only a choice to revitalize ecological and leisure sports resources and promote the quality and efficiency of the leisure sports industry, but also an innovative development path to cultivate new kinetic energy for economic development and expand economic development space. In the integration and development of leisure sports and the Internet industry, that is, leisure sports + Internet, through the big data platform and network resources, the integration of leisure sports fitness products, leisure sports events, sports venue services, fitness data evaluation and other information, actively promote the development and application of online platforms for leisure sports enterprises, support Internet + sports consumption, expand online and offline models, and pay attention to experience sharing new forms of leisure sports consumption. In the integration and development of sports and the Internet industry, that is, leisure sports and health, we advocate the concepts of sports promote health and spending money to buy health, give full play to the positive role of sports fitness and sports rehabilitation, strengthen the scientific fitness guidance for leisure sports consumers, actively promote sports health services, develop leisure sports services for the aged and rehabilitation, and form a leisure sports health industry pattern that integrates health care sports leisure tourism and other functions. Therefore, the integration of leisure sports and related industries can promote the development of new formats and new products, which is also a regenerative driving force for the high-quality development of the leisure sports industry and an inherent need to extend the value chain of the leisure sports industry (Government of Fujian Province, 2021).

#### **4) Technological innovation and change are accelerating, and the digital economy has become the driving engine.**

Under the current trend of emerging scientific and technological revolution, the cycle of scientific and technological innovation is shortened, the frequency of information alternating update is accelerated, and the digital economy has become a new form of social and economic development. It is the product of industrialization and marketization in the information technology revolution. It changes the traditional mode of information transmission and the mode of supply and demand exchange, realizes the cross-integration of information technology and the real economy, promotes the continuous enhancement of the linkage between industries, and promotes the continuous expansion of the scale of industrial integration and the continuous improvement of the ability to absorb employment. The deepening of technological change in the field of leisure sports drives the high-quality development of the leisure sports industry, especially the application of digital economy, which makes intelligence one of the main trends in the development of the leisure sports industry and provides more convenient and personalized leisure sports products and

services for leisure sports consumers. User experience and consumption stickiness are the core factors for the leisure sports industry to enhance its competitiveness. The integration of digital economy can promote the development of user experience in the direction of intelligence. Especially under the influence of the epidemic, the leisure sports industry, which is dominated by traditional offline operation, has been transformed into digital, giving birth to new formats and business models. The comprehensive coverage of the Internet, VR, AI, and 5G networks enables sports consumers to break the limitations of time and space and participate in online leisure sports activities. The continuous penetration of digital technology in leisure sports will indirectly change the consumption habits and consumption patterns of leisure sports consumers. Through information technologies such as artificial intelligence and big data, we will deeply explore consumers consumption preferences, create rich, highly personalized and customized leisure sports products for consumers, give full play to online leisure sports marketing, and enhance consumers immersive, scene-based and interactive experience. Digital economy can effectively adapt to the needs of economic transformation and upgrading in the new era and promote the maximization of high-quality development benefits of the leisure sports industry. Therefore, the high-quality development of the leisure sports industry requires the industrial subject to take digital information as the core element, make rational and efficient use of digital information, digital technology, digital scenes, etc., optimize the quality and efficiency of supply, empower the leisure sports market more innovative vitality, and create new formats and new business models (State Council of China, 2021a).

#### **4. Threats analysis of high-quality development of leisure sports in Fuzhou (Threats)**

##### **1) Leisure time is limited, sports fitness leisure activities are easy to be replaced by other entertainment.**

One of the prerequisites for the development of leisure sports activities is that participants have discretionary leisure time and choose their favorite leisure sports to carry out physical activities through autonomy, so as to achieve a social activity process of pleasure and enjoyment of life. With the continuous progress of society, the daily lifestyle of the public has also changed. The speed of economic development and the pace of life have accelerated, and the pressure on people's work, study and life has increased invisibly. In the case of involution in society, time has become a scarce and precious resource. How to choose and allocate leisure time in daily life has become a problem to be considered. Participating in leisure sports activities for physical exercise, playing games, watching TV, watching movies, shopping and other activities can become the choice of the public to spend their leisure time. However, because sports need to consume more physical strength and energy, and need to learn and master certain skills, some entertainment projects other than sports are still people's preference options in most leisure time. This also reflects the lack of physical exercise and insufficient physical activity of the masses in our country, which has become the main factor affecting physical health. In the modern and fast-paced social development environment, people's leisure time will become less and show a trend of

fragmentation. Therefore, how to activate people's interest in participating in leisure sports in a limited leisure time and attract more people to participate in leisure sports activities has become a major challenge for the development of leisure sports industry (Sports Bureau of Fujian Province, 2019).

**2) The awareness of information storage and protection in the era of big data is weak, and there is a risk of data information security.**

In the era of big data with the rapid development of science and technology, information resources are expanding rapidly. Informatization means that can obtain useful information through exchange and grasp the initiative of market competition. Leisure sports industry is also inseparable from the mining and analysis of data information. By mining valuable data information, making it a valuable and important resource for enterprises or managers, so that leisure sports market players and managers can timely understand the current market trends and consumer demand trends, understand consumer demand preferences and trends, conduct more accurate market positioning and investment, and create products and services that meet the needs of leisure sports consumers. However, at this stage, China's sports departments have insufficient awareness of data and information protection in the field of the leisure sports industry and have not yet established a leisure sports database information base that can store massive data, and also lack a perfect leisure sports data information system. With the involvement of mobile internet, internet of things, cloud computing, 5G, ChatGPT, and other technologies, the growth and dissemination of data information is extremely fast, but not all data and information are safe and important. It is a huge challenge for the main body of leisure sports market to store and extract safe and valuable information from massive or even TB-level data. The deep mining and analysis of data information plays an important role and has broad prospects in the field of leisure sports. Only by storing a large amount of information while doing fine processing, timely obtaining useful information data feedback to consumers, is the key to making good use of big data. The most exposed data in the field of the leisure sports industry is the personal information of leisure sports consumers. In the network environment where the sports laws and regulations are not perfect and the information technology supervision is not perfect, if there are no legal provisions and institutional constraints, the personal privacy information of leisure sports consumers is very easy to be leaked and abused. In the process of collecting, storing, analyzing and exchanging leisure sports consumer information, leisure sports enterprises will have the risk of leaking and abusing leisure sports consumer information if they are improperly handled and used (General Administration of Sport of China, 2021).

**3) Vulnerability of ecological environment, scarcity of natural resources**

Leisure sports activities need to rely on ecological environment and natural resources. A large part of leisure sports projects needs to develop and utilize outdoor land resources and water resources. For example, the development of outdoor sports such as camping, rock climbing and hiking, and leisure sports such as horse riding need to build and create special sports venues and sports facilities in the natural ecological environment. The ecological environment is originally fragile. The

unreasonable development and utilization of scarce natural resources will cause irreversible and devastating damage. It will not only cause environmental pollution, destruction of biological habitats, destruction of animals and plants, and affect the lives of local residents, but also waste natural resources and make them scarcer. The degradation of the ecological purification function of the natural environment will have a greater negative impact on people's lives in the long run. Ecological environment and natural resources can not only become an important selling point for the development of leisure sports, but also easily become victims. The development of leisure sports needs to meet the requirements of the national environmental protection policy. Only on the premise of not destroying the natural ecological environment and ensuring the safety of land resources and water resources, can further market development and operation be carried out. Taking environmental protection, rational development and obedience to ecology as the standard red line, we should abide by the ecological environment protection system and implement the ecological environment supervision mechanism to escort the sustainable development of leisure sports (State Council of China, 2016b).

#### 4.1.2 Basic information analysis

##### 4.1.2.1 Basic Information

**Table 7 Basic information**

Subject	Option	Frequency	Percentage
Gender	Male	232	52.4
	Female	211	47.6
Age	Under 20	12	2.7
	20-25	43	9.7
	26-30	77	17.4
	31-35	130	29.3
	36 and over	181	40.9
	Educational level	Junior high school and below	34
Junior high school/secondary school/technical school		96	21.7
College		165	37.2
Bachelors degree		99	22.3
E Masters degree and above		49	11.1
Marital status		Unmarried	211
	Married	232	52.4
Occupation	Company Managers	46	10.4
	Company	75	16.9

Subject	Option	Frequency	Percentage
	Executives Company	48	10.8
	Logistics Staff Company	209	47.2
	Grassroots Staff	65	14.7
	Others		
Type of organization	State-owned and State-controlled enterprises	89	20.1
	Collective private enterprises	107	24.2
	Foreign invested enterprises	126	28.4
	Individuals and private persons	121	27.3
Type of industry	Manufacturing	88	19.9
	Wholesale	58	13.1
	Construction	67	15.1
	Accommodation & Food	110	24.8
	Other	120	27.1
Monthly income	Less than 5,000 yuan	65	14.7
	5,001 yuan- 10,000 yuan	249	56.2
	More than 10,001 yuan	129	29.1
accommodation	Unit dormitory	79	17.8
	Renting (single or sharing with others)	69	15.6
	Renting (sharing with the whole family)	77	17.4
	With the help of relatives or friends	79	17.8
	Buying your own house	139	31.4
	grand total	443	100

Firstly, a descriptive statistical analysis of the basic information was conducted.



As can be seen in Table 7, can understand the socio-economic characteristics of the research subjects, including gender, age, education level, marital status, occupation, nature of work, industry, monthly income and housing situation.

The data show that in terms of gender, men account for 52.4% of the total, slightly higher than women's 47.6%, and the distribution of men and women is more balanced. In terms of age distribution, people aged 36 and above account for 40.9%, which is the largest age group, followed by people aged 31-35, accounting for 29.3%, while employees under 20 years old are the least, only 2.7%. In terms of education level, most employees have received higher education, including 37.2% of college education, 22.3% of undergraduate education, and 11.1% of master's degree or above. Marital status was almost equal, unmarried accounted for 47.6%, married accounted for 52.4%. In the occupational distribution, the proportion of the company's grassroots employees is the highest, reaching 47.2%, the company's executives account for 16.9%, and the company's managers account for 10.4%. The organizational nature of the work is dominated by foreign-invested enterprises (28.4%), collective private enterprises (24.2%) and state-owned holding enterprises (20.1%). The industries in which employees are mainly engaged include accommodation and catering (24.8%) and manufacturing (19.9%). In terms of monthly income, most people's income is between 5,001 yuan and 10,000 yuan, accounting for 56.2%, while more than 10,001 yuan accounted for 29.1%. In terms of accommodation, the largest number of people have their own housing, accounting for 31.4%, while the rest are distributed in unit dormitories, renting houses and living with the help of relatives and friends.

From these descriptive statistics, can see the basic distribution of the research objects in terms of gender, age, education level, marital status, occupation, organizational nature of work, industry, monthly income and accommodation conditions, reflecting a certain socio-economic background and living conditions.

#### 4.1.2.2 Basic information on participation in leisure sports activities

**Table 8 Basic information on participation in leisure sports activities**

Subject	Option	Frequency	Percentage
leisure sports	Running	74	16.7
	Basketball	56	12.6
	Soccer	30	6.8
	Badminton	28	6.3
	Table tennis	23	5.2
	Swimming	66	14.9
	Yoga	58	13.1
	Gym activities	35	7.9
	Square dancing	32	7.2
	Others	41	9.3

Subject	Option	Frequency	Percentage
frequency, weekly leisure sports	1 time	77	17.4
	2 times	128	28.9
	3 times	89	20.1
	3 or more times	149	33.6
duration, each leisure activity	Less than 30 minutes	89	20.1
	30-45 minutes	112	25.3
	60 minutes	97	21.9
	More than 60 minutes	145	32.7
location, leisure sports	Gymnasiums	77	17.4
	Company-prepared spaces	89	20.1
	Outdoor parks	164	37
	Indoor specialized venues	68	15.3
	Other	45	10.2
preferred intensity, leisure sports	(Very mild (50-60% of maximum heart rate)	69	15.6
	Mild (60-70% of maximum heart rate)	112	25.3
	Moderate intensity (70- 80% of maximum heart rate)	179	40.4
	High intensity (80-90% of maximum heart rate)	64	14.4
	Maximum (90-100% of maximum heart rate)	19	4.3
type, enjoyed leisure sports	Individual sports	212	47.9
	Dual sports	109	24.6
	Team sports	122	27.5
weekly budget, leisure sports	0 yuan	61	13.8
	Within 50 yuan	134	30.2
	50-100 yuan	132	29.8
	Over 100 yuan	116	26.2
grand total		443	100

Next, Researcher can observe in detail from Table 8 the specific circumstances of employees in terms of their exercise preferences, frequency of participation, activity time, activity location, exercise intensity, exercise type, and budget allocation.

Running and swimming are the most popular leisure sports activities, accounting for 16.7% and 14.9% respectively, followed by yoga and basketball, accounting for

13.1% and 12.6% respectively. This reflects that the movement that individuals can carry out independently and the activities that can be carried out in groups are also favored.

Regarding the frequency of participation, 33.6% of employees said they participate in leisure sports more than three times a week, indicating that a certain proportion of people are committed to maintaining an active lifestyle.

In terms of activity duration, 32.7% of employees exercise more than 60 minutes each time, indicating that many people tend to exercise for a longer period of time to obtain better health effects.

The most popular sports venues are outdoor parks, accounting for 37%, followed by space and gymnasiums prepared by the company, accounting for 20.1% and 17.4% respectively, which may be related to the accessibility and natural environment of outdoor parks.

Most employees prefer moderate-intensity leisure sports, accounting for 40.4%. This may be because moderate-intensity exercise can not only improve health, but also not lead to excessive fatigue.

In terms of sports forms, individual sports are the most popular, accounting for 47.9%, indicating that many people prefer sports activities that can be carried out independently, while team sports also have a higher preference, accounting for 27.5%, reflecting the value of social interaction in sports.

Regarding the sports budget, most of the employees weekly leisure sports budget is concentrated within 50 yuan, accounting for 30.2%, and 29.8% of the employees budget is 50-100 yuan, indicating that most people's financial investment in leisure sports activities is limited.

These data reveal the diverse choices and preferences of leisure sports in different aspects, showing people's pursuit of a healthy lifestyle and their personalized needs in terms of exercise intensity, type, place selection and cost. From individual to team, from indoor to outdoor, from mild to moderate intensity exercise, employees make a variety of choices based on their interests, time and budget.

#### 4.1.2.3 Physical Fitness Scale

**Table 9 Leisure sports participation**

Subject	Option	Frequency	Percentage	mean	S.D
1. Current physical condition, perception	Strongly agree	44	9.93	2.34	1.283
	Comparative consent	47	10.61		
	Basic consent	104	23.48		
	Disagree	118	26.64		
	Very disagree	130	29.34		
2. Willingness, participation in leisure sports	Strongly agree	132	29.80	3.54	1.330
	Comparative consent	93	20.99		

Subject	Option	Frequency	Percentage	mean	S.D
	Basic consent	108	24.38		
	Disagree	63	14.22		
	Very disagree	47	10.61		
3. Satisfaction, company policy, leisure sports activities	Strongly agree	31	7.00	3.38	1.177
	Comparative consent	45	10.16		
	Basic consent	117	26.41		
	Disagree	136	30.70		
	Very disagree	114	25.73		
4. Feeling, leisure sports activities	Strongly agree	84	18.96	3.61	1.246
	Comparative consent	126	28.44		
	Basic consent	138	31.15		
	Disagree	37	8.35		
	Very disagree	58	13.09		
5. Acceptance, injuries, leisure sports participation	Strongly agree	70	15.80	2.41	1.292
	Comparative consent	92	20.77		
	Basic consent	113	25.51		
	Disagree	102	23.02		
	Very disagree	66	14.90		
6. Budget, leisure sports, improve physical fitness	Strongly agree	89	20.09	2.25	1.292
	Comparative consent	94	21.22		
	Basic consent	123	27.77		
	Disagree	82	18.51		
	Very disagree	55	12.42		
7. Challenge, physical development, leisure sports participation	Strongly agree	84	18.96	2.33	1.345
	Comparative consent	74	16.70		
	Basic consent	123	27.77		
	Disagree	86	19.41		
	Very disagree	76	17.16		
8. New channel, improve physical fitness, leisure sports	Strongly agree	110	24.83	3.47	1.287
	Comparative consent	60	13.54		
	Basic consent	160	36.12		
	Disagree	63	14.22		

Subject	Option	Frequency	Percentage	mean	S.D
	Very disagree	50	11.29		
Grand total		443	100.0		

Table 9 shows the following:

In the cognition of physical condition, the mean value was 2.34, the mean value was low, and 195 (44.02%) employees basically agreed that their physical condition was better, of which 44 (9.93%) and 47 (10.61%) agreed very and relatively, respectively. There were 104 employees (19.9%) who thought they were basically good. There were also 248 (55.98%) employees who did not recognize their physical condition. Employees do not recognize their physical condition. This may be due to cognitive bias, lack of health awareness, unhealthy lifestyles, psychological factors and social comparison and other factors. In order to improve this situation, it is necessary to strengthen health education, provide mental health support, and promote a healthy lifestyle to improve employees' awareness and recognition of their physical condition.

Regarding the willingness to participate in leisure sports, more than half of the employees (333 employees, 75.17%) agreed to participate in leisure sports at least, and 110 (24.83%) said they were not willing to participate, with an average of 3.54, which is the highest among all items, indicating that employees generally tend to be willing to participate in leisure sports. Employees who have a positive attitude towards participating in leisure sports may be affected by the company's culture and available facilities. If the company encourages sports activities, provides convenient facilities and time flexibility, it can enhance the willingness of employees to participate. At the same time, employees may also be willing to participate because of their personal preferences for sports activities, increased health awareness, or awareness of the physical and mental benefits of sports. Employees who are reluctant to participate may be limited by personal interests, schedules or physical conditions.

Satisfaction with the company's recreational sports policy, there are 193 employees who are at least basically satisfied with the company's leisure sports policy, accounting for 43.57%, and 250 (56.43%) employees are not satisfied, with an average of 3.38, indicating that employees are less satisfied with the company's leisure sports policy. This may be due to the lack or imperfection of the company's policy itself, resulting in employees' dissatisfaction with the sports opportunities provided. Secondly, employees may lack interest or motivation in leisure sports activities, resulting in lower satisfaction with the policy. In addition, companies may fail to effectively advertise or promote leisure sports activities, making employees unaware of their opportunities to exist or participate. In general, improving the satisfaction of the company's leisure sports policy may require improving the policy itself, increasing employees' interest and participation in sports activities, and strengthening the promotion and promotion of the policy.

For the feeling of leisure sports, 348 (78.56%) employees at least basically agreed that leisure sports made them feel better, and 95 (21.44%) employees disagreed, with an average of 3.61. It can be seen that employees generally believe that leisure sports



make them feel better, show a positive feeling of leisure sports, and reflect the positive role of leisure sports in improving personal feelings and quality of life. Most employees believe that physical activity can improve mood and health, which may be related to the physical and psychological benefits of physical activity itself. Neurotransmitters such as endorphins released by exercise can improve mood and enhance physical fitness, thus making people feel better.

For the acceptance of injury caused by leisure sports, 275 (62.08%) employees said they could at least basically accept the injury caused by participating in leisure sports, and 168 (37.92%) employees said they could not accept it, with an average of 2.41. This phenomenon may reflect the different attitudes of employees towards the risk of leisure sports. On the one hand, some employees may think that the health benefits of exercise are greater than the potential risks, so they are willing to accept the possibility of injury. On the other hand, other employees may be more concerned about the harm that leisure sports may cause, which is cautious. Possible reasons include personal health status, confidence in sports skills, and cognitive level of leisure sports. In general, employees' acceptance of injuries caused by leisure sports is affected by factors such as individual health awareness, risk awareness and personal preferences. In order to improve employees' health participation and reduce sports injuries, companies may need to provide more comprehensive health education and safety measures to meet employees' diverse needs and attitudes.

In terms of budget arrangements, more than half of the employees (306, accounting for 69.07%) at least agreed to arrange budgets to improve their physical fitness, and 137 (32.9%) employees disagreed, with an average of 2.25, indicating that a considerable number of people think it is worthwhile to invest in their health and physical fitness. Employees who are willing to invest in health and physical fitness may realize the importance of long-term health or be positively motivated by the company's health promotion policy. At the same time, there are still a proportion of people who have reservations about this. Employees who disagree may have concerns about the specific amount of money spent or think that they can maintain health through other non-cost methods.

For the challenge of leisure sports on physical development, 281 (63.43%) employees believe that participating in leisure sports is a challenge to physical development, and 162 (36.57%) employees disagree, with an average of 2.33. Most people believe that participating in leisure sports is a challenge to physical development, and employees' feelings about sports may be affected by their past sports experience. Employees who often participate in sports may feel that exercise is less challenging to the body. At the same time, the health status of employees may also affect their perception of sports challenges. Health problems or physical limitations may make exercise a challenge. Employees who do not like high-intensity or competitive sports may be more inclined to think that sports are a challenge.

Finally, in terms of using leisure sports activities as a new channel to improve their physical fitness, 330 (74.49%) employees at least basically agreed that leisure sports activities provided a new channel for them to improve their physical fitness, but

113 (25.51%) employees still disagreed, with an average of 3.47. This indicates that leisure sports activities are widely accepted as a means of health promotion, but there are still some people who have reservations or objections. Employees who have reservations about leisure sports activities may lack sufficient information, and their lack of understanding of the effects and methods of sports activities may lead to their skepticism. More information or incentives are needed to change these views. At the same time, the personal experience of employees will also affect their views. If they feel the actual health improvement or encounter bad experience after participating in sports activities, these may affect their attitude towards leisure sports activities.

From the perspective of the data obtained, questions 3 and 8 are divided into advantage development (S); questions 1 and 6 are divided into disadvantage development (S); the second and fourth questions are divided into opportunity development (O); questions 5 and 7 are divided into threat development (T).

This study comprehensively analyzes the data of employees' cognition of physical condition, willingness to participate in leisure sports, satisfaction with the company's leisure sports policy, feelings of leisure sports, acceptance of injuries caused by leisure sports, budget arrangements to improve physical fitness, challenges of leisure sports to physical development, and leisure sports as a new channel for improving physical fitness. It is found that there is a certain deviation in the overall cognition of employees' physical condition, of which about 55.98% of employees do not recognize their physical condition. It may be affected by many factors, such as cognitive bias, lack of health awareness, unhealthy lifestyle, psychological factors and social comparison. Although there is an unacceptable view of the harm caused by leisure sports, more than half of employees expressed their willingness to participate in leisure sports, and most employees believe that leisure sports have a positive effect on improving personal feelings and quality of life. However, the company's leisure sports policy satisfaction is low, probably because the policy itself is not perfect or employees lack of interest in leisure sports activities. In order to improve this situation, the company can strengthen health education, provide mental health support, and promote a healthy lifestyle to improve employees' awareness and recognition of their physical condition. At the same time, by encouraging sports activities, providing convenient facilities and flexible schedules, employees' willingness to participate in leisure sports can be further improved and their satisfaction with leisure sports policies can be improved.

## 4.1.2.4 Leisure sports participation behavior

Table 10 Leisure sports participation behavior

Leisure Sports Participation Behavior	Option	Frequency	Percentage	Mean	S.D
9.Budget, leisure sports participation	Strongly agree	39	8.80	2.31	1.250
	Comparative consent	42	9.48		
	Basic consent	113	25.51		
	Disagree	116	26.19		
	Very disagree	133	30.02		
10.Need, professional equipment, leisure sports	Strongly agree	112	25.28	2.35	1.424
	Comparative consent	79	17.83		
	Basic consent	101	22.80		
	Disagree	74	16.70		
	Very disagree	77	17.38		
11.Need, professional equipment, leisure sports	Strongly agree	106	23.93	2.35	1.227
	Comparative consent	97	21.90		
	Basic consent	146	32.96		
	Disagree	54	12.19		
	Very disagree	40	9.03		
12.Company arrangement, specialized venues, leisure sports	Strongly agree	74	16.70	2.41	1.273
	Comparative consent	79	17.83		
	Basic consent	146	32.96		
	Disagree	78	17.61		
	Very disagree	66	14.90		
13.Willingness, popular leisure sports, society	Strongly agree	112	25.28	3.52	1.307
	Comparative consent	89	20.09		

<b>Leisure Sports Participation Behavior</b>	<b>Option</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>	<b>S.D</b>
14.Willingness, participation, leisure sports	Basic consent	141	31.83	3.64	1.376
	Disagree	44	9.93		
	Very disagree	57	12.87		
	Strongly agree	115	25.96		
	Comparative consent	112	25.28		
15.Encouragement, colleagues, leisure sports participation	Basic consent	93	20.99	3.50	1.338
	Disagree	58	13.09		
	Very disagree	65	14.67		
	Strongly agree	115	25.96		
	Comparative consent	100	22.57		
16.Technical support, colleagues, leisure sports	Basic consent	108	24.38	3.35	1.233
	Disagree	65	14.67		
	Very disagree	55	12.42		
	Strongly agree	109	24.60		
	Comparative consent	107	24.15		
17.Willingness, overcoming obstacles, leisure sports participation	Basic consent	120	27.09	2.31	1.352
	Disagree	74	16.70		
	Very disagree	33	7.45		
	Strongly agree	112	25.28		
	Comparative consent	95	21.44		
18.Willingness,	Disagree	62	14.00	2.25	1.256
	Very disagree	61	13.77		
	Strongly	39	8.80		

<b>Leisure Sports Participation Behavior</b>	<b>Option</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>	<b>S.D</b>
self-funded participation, leisure sports	agree				
	Comparative consent	46	10.38		
	Basic consent	104	23.48		
	Disagree	122	27.54		
	Very disagree	132	29.80		
19.Responsiveness, company policy, leisure sports	Strongly agree	67	15.12		
	Comparative consent	107	24.15		
	Basic consent	142	32.05	3.10	1.260
	Disagree	59	13.32		
	Very disagree	68	15.35		
20.Willingness, free leisure sports, company-provided	Strongly agree	111	25.06		
	Comparative consent	115	25.96	3.48	1.217
	Basic consent	132	29.80		
	Disagree	47	10.61		
	Very disagree	38	8.58		
21.Satisfaction, personal leisure sports activities	Strongly agree	110	24.83		
	Comparative consent	108	24.38		
	Basic consent	108	24.38	3.54	1.279
	Disagree	76	17.16		
	Very disagree	41	9.26		
22.Mood improvement, leisure sports	Strongly agree	138	31.15		
	Comparative consent	99	22.35	3.62	1.317



<b>Leisure Sports Participation Behavior</b>	<b>Option</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>	<b>S.D</b>
participation	Basic consent	118	26.64		
	Disagree	37	8.35		
	Very disagree	51	11.51		
23.Sense of accomplishment, completing leisure sports activity	Strongly agree	122	27.54		
	Comparative consent	111	25.06		
	Basic consent	95	21.44	3.21	1.321
	Disagree	68	15.35		
	Very disagree	47	10.61		
24.Self-funded, purchase sports equipment, leisure sports	Strongly agree	44	9.93		
	Comparative consent	47	10.61		
	Basic consent	90	20.32	2.16	1.251
	Disagree	150	33.86		
	Very disagree	112	25.28		
25. Advise, company development, leisure sports	Strongly agree	100	22.57		
	Comparative consent	81	18.28		
	Basic consent	121	27.31	3.52	1.332
	Disagree	82	18.51		
	Very disagree	59	13.32		
26.Feedback, unreasonable company policy, leisure sports	Strongly agree	64	14.45		
	Comparative consent	107	24.15		
	Basic consent	161	36.34	3.61	1.099
	Disagree	84	18.96		
27. Assistance,	Very disagree	27	6.09		
	Strongly	98	22.12	3.16	1.351

<b>Leisure Sports Participation Behavior</b>	<b>Option</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>	<b>S.D</b>
financial support, community, company	agree				
	Comparative consent	83	18.74		
	Basic consent	120	27.09		
	Disagree	75	16.93		
	Very disagree	67	15.12		
28. Volunteer, help organize, leisure sports activities	Strongly agree	37	8.35		
	Comparative consent	39	8.80		
	Basic consent	125	28.22	3.21	1.196
	Disagree	131	29.57		
	Very disagree	111	25.06		
29. Willingness, publicize, company policy, leisure sports	Strongly agree	82	18.51		
	Comparative consent	135	30.47		
	Basic consent	103	23.25	3.57	1.296
	Disagree	61	13.77		
	Very disagree	62	14.00		
Grand total		443	100.00		

Table 10 shows the following:

Researcher can gain an in-depth understanding of employees attitudes towards leisure sports participation and their views on the company's support in this regard. The data shown in Table 10 provides a comprehensive view of employees preferences and willingness in different dimensions, including budgetary arrangements, the need for professional guidance, the need for professional equipment, the company's site hopes, the desire to participate in popular sports, the willingness to participate in leisure sports, and more attitudes related to company policies and community support.

Here are the key analyses and observations of these data:

Arranging the budget for participating in leisure sports, 194 people chose at least basic consent, accounting for 43.79%, and 249 people chose not to agree, accounting for 56.21%, with an average of 2.31. Most people will not arrange the budget, probably because some people are cautious about the financial situation, or the importance of sports is not high, while the other part of the staff believe that the investment is

worthwhile, may be motivated by health investment or recognition of sports activities.

Need for professionals to guide your leisure sports, 292 people choose at least basic consent, accounting for 65.91%, and 151 people choose not to agree, with an average of 2.35, which reflects the recognition and demand of employees for sports guidance. Some people realize the importance of professional guidance for safety and sports effects, but some employees may think that they have enough sports knowledge or skills and do not need the guidance of professionals.

Need for professional equipment to assist your leisure sports, 349 people choose at least basic consent, accounting for 78.78%, and 94 people choose not to agree, accounting for 21.22%, with an average of 2.35. Most employees believe that appropriate sports equipment is crucial to the comfort and effect of sports and have a greater demand for equipment. Employees who disagree may think that they have the necessary equipment or do not agree with the importance of sports equipment.

Company arranges special venues to assist you in participating in leisure sports, 299 people choose at least basic consent, accounting for 67.49%, 144 people choose to disagree, with an average of 2.41, which reflects the needs of employees for suitable sports venues. Most employees want the company to provide a more convenient and safer sports environment.

Willingness to participate in the popular leisure sports in the current society, 342 people choose at least basic consent, accounting for 77.20%, and 101 people choose to disagree, with an average of 3.52. Most employees are willing to follow the trend of the times to participate in leisure sports, probably because they want to keep up with society, or think that popular sports are more interesting and social.

Willingness to participate in leisure sports activities, 320 people chose at least basic consent, accounting for 72.23%, and 123 people chose not to agree, with an average of 3.64. This shows that most employees have a positive attitude towards participating in leisure sports activities, may be affected by health awareness, and hope to maintain physical health through exercise. Employees who do not want to participate may be due to lack of interest in sports or other personal factors.

Being willing to encourage your colleagues to participate in leisure sports activities together, 323 people chose at least basic consent, accounting for 72.91%, and 120 people chose not to agree, with an average of 3.50. This reflects the team cooperation and mutual friendly company atmosphere, and most employees are willing to improve the health of the entire team through mutual encouragement and support. There are also some employees who are reluctant, probably because of personal preferences or lack of awareness of leisure sports activities.

Being willing to provide technical support for your colleagues to participate in the company's leisure sports, 336 people chose at least basic consent, accounting for 75.85%, and 107 people chose not to agree, with an average of 3.35. Most people are willing to share their professional knowledge and skills to help colleagues better participate in leisure sports activities, thereby promoting team cohesion and cooperation. Some employees may be reluctant because of factors such as time or personal interests.

Willingness to overcome obstacles to participate in leisure sports, 320 people chose at least basic consent, accounting for 72.23%, and 123 people chose not to agree, with an average of 2.31. Most employees have a positive attitude towards overcoming difficulties and challenges, and they are willing to overcome various obstacles to participate in sports activities. A small number of employees are reluctant, perhaps because of personal preferences or the perception that barriers are insurmountable.

Willingness to participate in leisure sports at their own expense, 189 people chose at least basic consent, accounting for 42.66%, and 254 people chose not to agree, accounting for 57.34%, with an average of 2.25. The proportion of people who are willing to invest in their own health is less than half, and more than half of them are unwilling, which may be due to different financial conditions, personal values or attitudes towards sports.

Whether they are willing to respond to the company's policy on leisure sports, 316 people chose at least basic consent, accounting for 71.33%. Only 127 people chose not to agree, with an average of 3.10. Most employees have a positive attitude towards the company's leisure sports policy. They think that the company cares about the health and welfare of employees and is satisfied with it and is willing to participate in the company's sports activities. Employees who disagree may have reservations about the company's policies, possibly because they believe that the company's policies are not perfect or are not interested in leisure sports activities.

Willingness to participate in free leisure sports provided by the company, 358 people choose at least basic consent, accounting for 80.81%, and 85 people choose not to agree, with an average of 3.48. Most employees are willing to use the free leisure sports provided by the company. They can participate in sports activities after work, improve physical and mental health, and do not need additional expenses. Employees who disagree may be because they are not interested in the sport itself or have other schedules.

Satisfaction with personal leisure sports, 326 people chose at least basic consent, accounting for 73.59%, and 117 people chose not to agree, with an average of 3.54. Most employees have a positive attitude towards personal leisure sports activities, probably because they think that such activities can bring physical and mental health benefits and increase the fun of life. Employees who disagree may be dissatisfied with the effect of exercise or do not like leisure sports.

Participating in leisure sports will make you happy, 355 people choose at least basic consent, accounting for 80.14%, and 88 people choose not to agree, with an average of 3.62. The vast majority of employees can get a pleasant mood by participating in leisure sports, because sports can release pressure and increase happiness. Employees who disagree may be because they are not interested in the sport itself or the way of exercise is not suitable for their personal preferences.

Sense of achievement you will gain by completing leisure sports, 328 people choose at least basic consent, accounting for 74.04%, and 115 people choose to disagree, with an average of 3.21. Most employees can gain a sense of achievement

through leisure sports. During the exercise, they can overcome challenges and enhance self-confidence. Employees who disagree may be due to insufficient awareness of sports or less participation in leisure sports activities.

Being willing to buy sports equipment at your own expense to supplement your participation in leisure sports, 181 people chose at least basic consent, accounting for 40.86%, and 262 people chose not to agree, accounting for 59.14%, with an average of 2.16. Most employees are reluctant to spend extra money on their leisure sports activities, probably because they are skeptical of the value and role of sports equipment, or they do not have high demand for personal sports.

Providing advice to the company on the development of leisure sports, 302 people chose at least basic consent, accounting for 68.17%, and 141 people chose not to agree, with an average of 3.52. Most employees are willing to make suggestions on the company's leisure sports, probably because they want better sports arrangements or suggestions for improvement. Employees who disagree may think that the company has done well enough, or that they do not pay much attention to leisure sports.

Opinions on the company's unreasonable policies for leisure sports, 332 people chose at least basic consent, accounting for 74.94%, and 111 people chose not to agree, with an average of 3.61. Most employees are willing to give opinions on the company's leisure sports policies, probably because they want better policies or more reasonable arrangements. Employees who disagree may think that the company's policies are reasonable enough, or they have a negative attitude towards leisure sports.

Assisting the company to seek financial support outside the community, 201 people chose at least basic consent, accounting for 45.37%, and 242 people chose to disagree, accounting for 54.63%, with an average of 3.16. More than half of employees are willing to assist the company in seeking external financial support, probably because they believe that the company needs more resources to support leisure sports. Employees who disagree may think that the company should rely on their own resources, or they are not interested in the company's leisure sports activities.

Willingness to volunteer to help the company organize leisure sports, there are 201 people who choose at least basic consent, accounting for 43.79%, and 249 people who choose not to agree, accounting for 56.21%, with an average of 3.21. Only less than half of employees are willing to volunteer to help the company organize sports activities. Employees who disagree may think that this is not their responsibility or that they are not interested in leisure sports.

Being willing to publicize the company's policy on leisure sports to colleagues, 320 people chose at least basic consent, accounting for 72.23%, and 123 people chose not to agree, with an average of 3.57. Most employees are willing to publicize the company's leisure sports policy to colleagues, probably because they think it is beneficial to the health and welfare of employees. Employees who disagree may feel that this is not their responsibility, or that they have a more negative attitude towards leisure sports.

From the perspective of the data obtained, questions 16, 19, 20, 23, 27 and 28



are divided into advantageous development ( S ); questions 9, 12, 18, 24, are divided are divided into inferior development ( W ); title 13, title 14, title 15, title 21, title 22, title 25, title 26, title 29 are divided into opportunity development ( O ); questions 10, 11, 17, are divided are divided into threat development ( T )

The survey data show the attitude and behavior intention of employees to participate in leisure sports. First of all, in terms of budget arrangements, more than half of employees are reluctant to participate in leisure sports at their own expense, which may be affected by financial status, personal values or different attitudes towards sports. Secondly, most employees are aware of the importance of professional guidance and appropriate equipment for sports, but there are still some employees who believe that they have the necessary knowledge and equipment and do not need additional investment. In addition, employees generally want the company to provide special venues and free leisure sports to enhance the convenience and accessibility of sports. In addition, most employees are willing to participate in socially popular leisure sports and maintain a healthy lifestyle through sports, but some employees lack interest in sports or have a low awareness of personal health. Although most employees are willing to improve the health of the team through teamwork and mutual assistance, individual employees may have insufficient awareness of leisure sports or are reluctant to devote time and energy. In general, although employees have a positive attitude towards leisure sports, there is a certain degree of difference in specific actions. It is necessary to comprehensively consider individual needs and company support to promote the enthusiasm of employees to participate in leisure sports activities.

## 4.2 Development of the strategie of leisure sports to improve physical fitness for employees of the small and medium enterprise in Fuzhou city

### 4.2.1 Physical Fitness and Participation in Recreational Sports SWOT

**Table 11 Analysis of employees' participation in recreational sports**

<b>Strengths</b>	<b>Average</b>	<b>Sorting</b>	<b>Sn</b>
20.You are willing to participate in free leisure sports activities offered by the company	3.48	1	S1
8.You feel that participation in leisure sports activities provides a new channel for you to improve your physical fitness	3.47	2	S2
3.You are satisfied with your company's policy on leisure sports activities	3.38	3	S3
16.You are willing to provide technical support for your colleagues to participate in leisure sports activities in the company	3.35	4	S4

<b>Strengths</b>	Average	Sorting	Sn
23.You get a sense of accomplishment from completing a leisure sports activity	3.21	5	S5
28.You willing to volunteer to help the company organize leisure sports activities	3.21	6	S6
27.You will assist the company in seeking financial support from outside the community	3.16	7	S7
19.You willing to respond to the company's policy on leisure sports activities	3.10	8	S8
<b>Weaknesses</b>	Average	Sorting	Wn
24.You are willing to purchase sports equipment at your own expense to supplement your participation in leisure sports activities	2.16	1	W1
6.You are willing to arrange the budget for participation in leisure sports activities to improve physical fitness	2.25	2	W2
18.You are willing to participate in leisure sports activities at your own expense	2.25	3	W4
9.You would arrange a budget for participation in leisure sports activities	2.31	4	W4
1.You feel that your current physical condition is better	2.34	5	W5
12.You would like the company to arrange specialized venues to assist you in participating in leisure sports	2.41	6	W6
<b>Opportunities</b>	Average	Sorting	On
14.You are willing to participate in leisure sports activities	3.64	1	O1
22.You would be moved to a happy mood by participating in leisure sports activities	3.62	2	O2
26.You will provide comments on the company's unreasonable policy on leisure sports activities	3.61	3	O3
4.You feel better about leisure sports activities	3.61	4	O4
29.You are willing to publicize the company's policy on leisure sports activities to your colleagues	3.57	5	O5
2.You are willing to participate in leisure sports activities	3.54	6	O6
21.You are satisfied with your personal leisure sports activities	3.54	7	O7
25.You would advise the company on the development of leisure sports activities	3.52	8	O8
13.You are willing to participate in the current popular leisure sports activities in the society	3.52	9	O9

15.You willing to encourage your colleagues to participate in leisure sports activities together?	3.50	10	O10
<b>Threats</b>	Average	Sorting	Tn
17.You are willing to overcome obstacles to participate in leisure sports	2.31	1	T1
7.You find participation in leisure sports a challenge to your physical development	2.33	2	T2
11.You need to have professional equipment to assist your leisure sports activities	2.35	3	T3
10.You need to have a professional to guide you in your leisure sports activities	2.35	4	T4
5.You are able to accept injuries resulting from participation in leisure sports activities	2.41	5	T5

By analyzing the above table 11, researcher can systematically understand the strengths, weaknesses, opportunities, and threats of physical fitness and participation in recreational sports, providing a basis for formulating strategic plans.

#### 4.2.2 Interviews

##### 4.2.2.1 Management Interviews

In the management interviews, respondents generally expressed a liking for physical exercise, typically working out twice a week or engaging in daily exercise for two hours. Most enjoy watching sports events but rarely attend them in person. During their school years, most respondents liked sports and had good physical fitness, with some improving their previously poor fitness through exercise. Their preferred sports activities include basketball, and badminton.

Currently, some management personnel still exercise regularly, while others exercise less frequently or have stopped due to time constraints or other reasons. Monthly spending on sports-related activities varies significantly; some spend a considerable amount on gym memberships and sports equipment, while others spend very little. After becoming part of the management, their involvement in sports activities did not show significant differences. They all consider sports and leisure activities crucial for the development of the

Regarding the organization of corporate sports activities, some companies flexibly organize activities without significant difficulties, while others do not prioritize sports activities, resulting in unclear development and fewer group activities, focusing more on individual exercise. Some companies offer a one-hour exercise policy, but overall, there is a lack of formal regulations and distinct characteristics. Respondents believe that the benefits of sports and leisure activities outweigh the drawbacks, as these activities can alleviate conflicts, increase cohesion, improve physical fitness, and enhance work efficiency. However, they also mentioned that there might be some additional costs and that the benefits are not fully utilized.

#### **4.2.2.2 Employee Interviews**

In order to better understand the content, the author talked to the company's employees. Overall, in the interviews, most employees indicated that they enjoy physical exercise, especially in their younger years, being passionate about activities such as running, badminton, table tennis, billiards, and basketball. Although their exercise frequency has decreased due to time and venue constraints after starting work, some employees still maintain a routine of exercising two to three times a week, mainly engaging in running, swimming, and gym workouts. However, some employees mentioned that their interest in physical exercise has diminished or that they find it difficult to find time for physical activities due to their busy work schedules.

During their school years, most employees liked sports and believed their physical fitness was good, although some described their fitness as average or poor. Currently, many employees sports-related expenditures mainly focus on gym fees, sports equipment, and clothing, with annual spending ranging from a few hundred to several thousand yuan. Some employees reported that their companies do not organize sports activities or join any sports associations or organizations. Despite this, employees generally believe that sports activities positively impact their physical health and mental state, helping them relax, reduce stress, and maintain a positive attitude. They also think participating in sports promotes communication and cooperation among colleagues, enhancing team cohesion.

Although some employees are unfamiliar with or uninterested in Fuzhou's sports facilities and activities, they are still willing to engage in sports matches and exchanges with colleagues when time permits. The main factors influencing employees participation in sports include time, venue availability, social circles, and work pressure. Many employees stated that if they had more time and suitable venues, they would increase their exercise frequency. Additionally, they prefer to participate in sports activities with friends or colleagues to make the experience more enjoyable and motivating. Overall, employees hold a positive attitude towards leisure sports, but their actual participation varies, necessitating a balance between individual needs and company support to encourage active participation.

#### **4.2.3 SWOT Analysis**

Based on the survey and interviews, it was found that most employees and managers enjoy sports, particularly running and badminton in their younger years. However, due to time and venue constraints after starting work, their exercise frequency has decreased, though some still maintain regular weekly exercise routines such as running, swimming, and gym workouts. Despite considering their physical fitness to be good during their school years, current sports expenditures are mainly focused on gym fees, sports equipment, and clothing, ranging from a few hundred to several thousand yuan annually.

Some units do not organize sports activities, but some provide flexible team-building arrangements and exercise time policies. About 55.98% of employees have a skewed perception of their physical condition, primarily due to a lack of health

awareness and unhealthy lifestyles. Although some employees worry about potential injuries from leisure sports, more than half are willing to participate and believe these activities positively impact their quality of life. Most employees hope that the company will provide dedicated venues and free leisure sports programs to enhance exercise convenience.

However, satisfaction with the company's sports policies is low, possibly due to incomplete policies or a lack of employee interest. Both leaders and employees agree that sports and leisure activities are important for the company's development, as they help enhance physical strength, energy, and team cohesion, improve health and mental state, and promote communication and cooperation among colleagues.

The company may face issues such as additional expenses and underutilized benefits when organizing sports activities. The main factors influencing sports participation include time, venue availability, social circles, and work pressure. Many employees stated that if they had more time and suitable venues, they would increase their exercise frequency and prefer to participate in sports activities with friends or colleagues to make the experience more enjoyable and motivating. Overall, employees hold a positive attitude towards leisure sports, but there are differences in actual participation, necessitating a balance between individual needs and company support to encourage active participation in leisure sports activities. The following table is derived from this analysis:

**Table 12 TOWS matrix of the current situation of corporate employee participation in leisure sports**

<b>Strengths</b>	<b>Weaknesses</b>
S1: The company provides free recreational sports activities.	W1: The budget for purchasing equipment needs to be increased.
S2: Recreational sports activities offer new channels for improving physical fitness.	W2: The budget for recreational Sports activities needs to be raised.
S3: The company's policies support recreational sports activities.	W3: Self-funded participation in recreational sports.
S4: Providing technical support to colleagues to participate in recreational sports activities.	W4: The budget allocation for recreational sports needs improvement.
S5: Gaining a sense of Accomplishment through completing recreational sports activities.	W5: Current physical condition affects participation in sports.
S6: Voluntarily helping the company organize recreational sports activities.	W6: Hope the company will provide dedicated venues for sports.



<b>Strengths</b>	<b>Weaknesses</b>
S7: Seeking financial support.	
S8: Supporting the company's series of policies.	
<b>Opportunities</b>	<b>Threats</b>
O1: Willingness to participate in recreational sports activities.	T1: Overcoming obstacles to participate in recreational sports activities.
O2: Recreational sports activities improve mood.	T2: Participation in recreational sports is a challenge for physical health.
O3: Providing feedback on the company's recreational sports policies.	T3: Need for professional equipment to assist in recreational sports activities.
O4: Feeling better about participating in recreational sports activities.	T4: Need for professional guidance to assist in recreational sports activities.
O5: Promoting the company's recreational sports policies to colleagues.	T5: Accepting the risk of injuries caused by participating in recreational sports activities.
O6: Willingness to participate in recreational sports activities.	
O7: Satisfaction with personal recreational sports activities.	
O8: Providing suggestions to the company for the development of recreational sports activities.	
O9: Participating in popular recreational sports activities.	
O10: Encouraging colleagues to participate in recreational sports activities together.	

From the table 12:

Based on the comprehensive SWOT analysis and the content from the surveys and interviews, the company should fully utilize existing policies and technical resources, increase budget and venue investments, and provide professional

equipment and guidance. This will help overcome participation barriers and physical challenges, ensuring that employees can improve their physical fitness in a safe and enjoyable environment. Most employees and managers enjoy sports, but time and venue constraints have reduced their exercise frequency. Although some employees are concerned about sports injuries, more than half are willing to participate and believe it enhances their quality of life. The company should provide dedicated venues and free programs to improve exercise convenience, and improve sports policies to enhance employee satisfaction and team cohesion.

#### 4.2.4 TOWS Matrix Analysis and Strategy Research on Participation in Leisure Sports to Improve the Physical Fitness of Employees in Small and Medium sized Enterprises in Fuzhou

##### 4.2.4.1 Constructing the TOWS Matrix

By combining the TOWS matrix with the 4M theory and leisure sport theory and Health Demand Theory, we can comprehensively analyze and address the strengths, weaknesses, opportunities, and threats faced by the enterprise during project implementation, ensuring the successful execution of the project.

**Table 13 Strategies to increase employees' participation in leisure sports**

SO Strategies	WO Strategies
<p><b>SO1:</b> Through providing free projects and a sense of accomplishment, stimulate employees willingness and enthusiasm to participate while maintaining a happy mood. Encourage employees to provide feedback and improve project content. Promote smooth progress of activities through voluntary company organization and colleague encouragement. (S1+O1,S1+O2,S1+O3,S1+O4,S5+O4,S6+O1,S3+O10)</p>	<p><b>WO1:</b> Enhance employee's willingness and satisfaction to participate, reduce the burden of self-funded expenses, and improve physical condition through personalized health management. Combine popular recreational sports and colleague encouragement to enhance employee's participation enthusiasm. (W1+O1,W5+O7,W1+O9,W5+O10,W6+O1)</p>
<p><b>SO2:</b> Use technical support and popular recreational sports to enrich activity content and improve employee's physical fitness. Enhance employee's willingness to participate through colleague encouragement and policy support, promoting smooth progress of activities. (S4+O2,S4+O9,S4+O10,S4+O6)</p>	<p><b>WO2:</b> Utilize popular recreational sports and promotional policies to provide more free activities, optimize site coverage and resources, and improve activity diversity and attractiveness. Enhance employees' willingness and safety to participate through a sense of accomplishment and technical support. (W6+O9,W1+O5,W5+O2,W4+O6,W6+O4)</p>
<p><b>SO3:</b> Combine the company's publicity policies, promote free projects to attract</p>	<p><b>WO3:</b> Increase budget support through</p>

<p>more employees to participate. Continuously optimize project content through financial support and satisfaction surveys. Provide financial support to enhance employee's physical fitness and willingness to participate. (S1+O5,S7+O7,S1+O8,S7+O9,S7+O1)</p> <p><b>SO4:</b> Leverage company promotion to encourage employees to provide feedback and improve project content. Optimize projects through voluntary company organization. Enhance employee's willingness to participate through company and promotion, attracting more employees to participate (S3+O3,S6+O8,S3+O6,S3+O4,S3+O5)</p>	<p>internal and external sponsorship, optimize expenditure, and improve activity quality and cost-effectiveness. Ensure sustainable development of activities through technical support and a sense of accomplishment. (W2+O5,W3+O8, W4+O5)</p> <p><b>WO4:</b>Collect employee feedback to improve satisfaction, optimize management processes, increase activity participation and effectiveness, reduce self-funded costs, and optimize site utilization. Enhance management effectiveness and employees participation enthusiasm through popular recreational sports and colleague encouragement.(W4+O3,W6+O7,W5+O9, W1+O10, W4+O5)</p>
<b>ST Strategies</b>	<b>WT Strategies</b>
<p><b>ST1:</b>Provide a sense of accomplishment and technical support to help employees overcome participation obstacles and challenge themselves, solving technical problems through training and support. Enhance employee's confidence in overcoming obstacles through company policies and colleague encouragement. (S5+T2,S4+T1,S3+T2,S3+T1,S6+T2)</p> <p><b>ST2:</b>Use company policies and technical support to make up for the lack of equipment and guidance, providing safety protection measures. Ensure safety through equipment maintenance and online training. Enhance employee's safety and participation enthusiasm through a sense of accomplishment and technical</p>	<p><b>WT1:</b>Provide personalized health management and training to help employees improve their physical condition, reduce sports injuries, and ensure safety. Enhance employees health management effectiveness through technical support and a sense of accomplishment. (W5+T5, W1+T1, W5+T4, W4+T5, W1+T2)</p> <p><b>WT2:</b> Provide internal training or online guidance to make up for the lack of equipment and guidance, improving safety and optimizing site utilization. Enhance employee's willingness and safety to participate through popular recreational sports and a sense of accomplishment. (W6+T3, W4+T4,</p>

<p>support.(S4+T4,S3+T5,S5+T4,S4+T3)</p> <p><b>ST3:</b> Ensure sufficient project funds through company policies and financial support, providing protective equipment and training to reduce sports injury risks. Enhance employees participation enthusiasm and ensure smooth progress of the project through a sense of accomplishment and technical support.(S3+T5,S7+T1,S5+T5,)</p> <p><b>ST4:</b>Optimize management processes, improving activity organization efficiency through policies and management measures to ensure employee safety and encourage active participation. Enhance management effectiveness and employee safety through technical support and a sense of accomplishment.(S3+T2,S5+T5,S4+T1, S3+T4,S4+T3)</p>	<p>W5+T3, W6+T1, W4+T2)</p> <p><b>WT3:</b> Reduce self-funded expenses through company or external sponsorship, ensuring sufficient funds, reducing sports injury risks, and alleviating the burden of self-funded expenses. Improve project effectiveness and employees safety through external sponsorship or internal resources. (W2+T5, W1+T3, W3+T5, W2+T1, W1+T4)</p> <p><b>WT4:</b>Improving activity organization efficiency, designing activities suitable for different physical conditions to encourage employees to challenge themselves and optimizing site utilization. Enhance management effectiveness and employees participation enthusiasm through popular recreational sports and colleague encouragement. (W4+T4,W6+T1,W5+T2,W1+T5,W4+T3)</p>
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From the Table 13:

### SO Strategies

**SO1:** Through providing free projects and a sense of accomplishment, stimulate employee's willingness and enthusiasm to participate while maintaining a happy mood. Encourage employees to provide feedback and improve project content. Promote smooth progress of activities through voluntary company organization and colleague encouragement.

**SO2:** Use technical support and popular recreational sports to enrich activity content and improve employee's physical fitness. Enhance employee's willingness to participate through colleague encouragement and policy support, promoting smooth progress of activities.

**SO3:**Combine the company's publicity policies, promote free projects to attract more employees to participate. Continuously optimize project content through financial support and satisfaction surveys. Provide financial support to enhance employee's physical fitness and willingness to participate.

**SO4:** Leverage company promotion to encourage employees to provide feedback and improve project content. Optimize projects through voluntary company organization. Enhance employee's willingness to participate through company and promotion, attracting more employees to participate.

#### **WO Strategies**

**WO1:** Enhance employee's willingness and satisfaction to participate, reduce the burden of self-funded expenses, and improve physical condition through personalized health management. Combine popular recreational sports and colleague encouragement to enhance employee's participation enthusiasm.

**WO2:** Utilize popular recreational sports and promotional policies to provide more free activities, optimize site coverage and resources, and improve activity diversity and attractiveness. Enhance employee's willingness and safety to participate through a sense of accomplishment and technical support.

**WO3:** Increase budget support through internal and external sponsorship, optimize expenditure, and improve activity quality and cost-effectiveness. Ensure sustainable development of activities through technical support and a sense of accomplishment.

**WO4:** Collect employee feedback to improve satisfaction, optimize management processes, increase activity participation and effectiveness, reduce self-funded costs, and optimize site utilization. Enhance management effectiveness and employees participation enthusiasm through popular recreational sports and colleague encouragement.

#### **ST Strategies**

**ST1:** Provide a sense of accomplishment and technical support to help employees overcome participation obstacles and challenge themselves, solving technical problems through training and support. Enhance employee's confidence in overcoming obstacles through company policies and colleague encouragement.

**ST2:** Use company policies and technical support to make up for the lack of equipment and guidance, providing safety protection measures. Ensure safety through equipment maintenance and online training. Enhance employee's safety and participation enthusiasm through a sense of accomplishment and technical support.

**ST3:** Ensure sufficient project funds through company policies and financial support, providing protective equipment and training to reduce sports injury risks. Enhance employees participation enthusiasm and ensure smooth progress of the project through a sense of accomplishment and technical support.

**ST4:** Optimize management processes, improving activity organization efficiency through policies and management measures to ensure employee safety and encourage active participation. Enhance management effectiveness and



employee safety through technical support and a sense of accomplishment.

#### **WT Strategies**

**WT1:** Provide personalized health management and training to help employees improve their physical condition, reduce sports injuries, and ensure safety. Enhance employees health management effectiveness through technical support and a sense of accomplishment.

**WT2:** Provide internal training or online guidance to make up for the lack of equipment and guidance, improving safety and optimizing site utilization. Enhance employee's willingness and safety to participate through popular recreational sports and a sense of accomplishment.

**WT3:** Reduce self-funded expenses through company or external sponsorship, ensuring sufficient funds, reducing sports injury risks, and alleviating the burden of self-funded expenses. Improve project effectiveness and employees safety through external sponsorship or internal resources.

**WT4:** Improving activity organization efficiency, designing activities suitable for different physical conditions to encourage employees to challenge themselves, and optimizing site utilization. Enhance management effectiveness and employee's participation enthusiasm through popular recreational sports and colleague encouragement.

#### **4.2.5 Strategies for develop leisure sports program**

Based on the content of my research, I have selected the following strategies as the basis for the design: SO1, SO2, SO4, ST2, ST3, ST4, WO1, WO4, WT2, WT3, WT4. I have deleted the other strategies, which are as follows.

**SO3:** Combine the company's publicity policies and promote free projects to attract more employees to participate. Continuously optimize project content through financial support and satisfaction surveys. Provide financial support to enhance employees' physical fitness and willingness to participate.

**Reason:** Limited promotional effectiveness and coverage, resulting in low employee awareness and participation. Financial support is unstable and highly influenced by market conditions and performance. Satisfaction surveys are complex to design and implement, increasing costs.

**Explanation:** Due to multiple challenges and complexities, this strategy is difficult to implement with uncertainty. Removing this strategy allows resources to be focused on more feasible strategies.

**ST1:** Provide a sense of accomplishment and technical support to help employees overcome participation obstacles and challenge themselves, solving technical problems through training and support. Enhance employees' confidence in overcoming obstacles through company policies and colleague encouragement.

**Reason:** Technical support and training are costly and require a lot of resources. Some employees have a low level of acceptance of new technology and are slow to adapt..

Explanation: Due to high costs and difficulty in acceptance, removing this strategy helps to focus resources on more feasible tactics.

WO2: Utilize popular recreational sports and promotional policies to provide more free activities, optimize site coverage and resources, and improve activity diversity and attractiveness. Enhance employees' willingness and safety to participate through a sense of accomplishment and technical support.

Reason: Budget pressure from increasing free activities and optimizing venue coverage. Uncertain promotional effectiveness and participation, complex management.

Explanation: Due to budget pressure and uncertain promotional effects, removing this strategy can reduce budget pressure and focus resources on optimizing existing activities and venues.

WO3: Increase budget support through internal and external sponsorship, optimize expenditure, and improve activity quality and cost-effectiveness. Ensure sustainable development of activities through technical support and a sense of accomplishment.

Reason: Difficulty and low success rate in obtaining external sponsorship and budget support. Complexity in optimizing spending and improving cost efficiency, high management difficulty.

Explanation: Due to the difficulty of obtaining external sponsorships and the complexity of optimizing spending, removing this strategy avoids resource dispersion and focuses efforts on internal optimization.

WT1: Provide personalized health management and training to help employees improve their physical condition, reduce sports injuries, and ensure safety. Enhance employees' health management effectiveness through technical support and a sense of accomplishment.

Reason: High costs for personalized health management and training require professional support. Reducing sports injuries and ensuring safety is complex and difficult to manage.

Explanation: Due to high costs and complexity, removing this strategy can reduce budget pressure and focus resources on more feasible safety measures.

Overall Explanation:

Removing the strategies SO3, ST1, WO2, WO3, and WT1 can reduce resource and effort consumption, allowing focus on more feasible, manageable, and executable strategies to ensure effective implementation and achievement of expected goals. This helps the company utilize resources more efficiently and enhance overall employee participation in sports activities and satisfaction.

Therefore, I finally chose the following strategies as the basis for the design: SO1, SO2, SO4, ST2, ST3, ST4, WO1, WO4, WT2, WT3, WT4. Details are shown in the table below.

**Table 14 Design of the experimental plan**

Applied strategies	Program
<p>SO1: Through providing free projects and a sense of accomplishment, stimulate employees' willingness and enthusiasm to participate while maintaining a happy mood. Encourage employees to provide feedback and improve project content. Promote smooth progress of activities through voluntary company organization and colleague encouragement.</p>	<p>Rewarding Healthy Behaviors in the End Stage: Through providing free projects and a sense of accomplishment, stimulate employees' willingness and enthusiasm to participate while maintaining a happy mood.</p>
	<p>Providing Tea and Rest Time: Through providing free projects and a sense of accomplishment, stimulate employees' willingness and enthusiasm to participate while maintaining a happy mood.</p>
<p>SO2: Use technical support and popular recreational sports to enrich activity content and improve employees' physical fitness. Enhance employees' willingness to participate through colleague encouragement and policy support, promoting smooth progress of activities.</p>	<p>Cooling Down and Stretching in the End Stage: Use technical support and popular recreational sports to enrich activity content and improve employees' physical fitness.</p>
<p>SO4: Leverage company promotion to encourage employees to provide feedback and improve project content. Optimize projects through voluntary company organization. Enhance employees' willingness to participate through company and promotion, attracting more employees to participate.</p>	<p>Discussion and Policy Optimization in the End Stage: Leverage company promotion to encourage employees to provide feedback and improve project content.</p>
	<p>Activity Summary: Leverage company promotion to encourage employees to provide feedback and improve project content.</p>
	<p>Personal Experience Sharing: Leverage company promotion to encourage employees to provide feedback and improve project content.</p>
<p>ST2: Use company policies and technical support to make up for the lack of equipment and guidance, providing safety protection measures. Ensure safety through equipment maintenance and online training. Enhance employees' safety and participation enthusiasm through a</p>	<p>Warm-up Activities in the Basic Stage: Use company policies and technical support to make up for the lack of equipment and guidance, providing safety protection measures.</p>
	<p>Guidance During Activities: Use company policies and technical support to make up for the lack of</p>

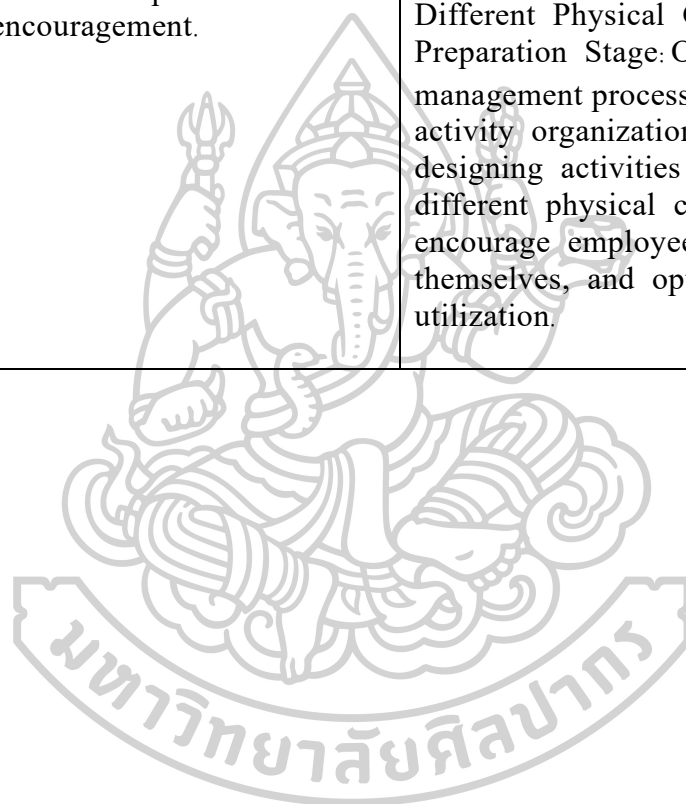
Applied strategies	Program
sense of accomplishment and technical support.	equipment and guidance, providing safety protection measures.
ST3: Ensure sufficient project funds through company policies and financial support, providing protective equipment and training to reduce sports injury risks. Enhance employees participation enthusiasm and ensure smooth progress of the project through a sense of accomplishment and technical support.	Warm-up Activities: Ensure sufficient project funds through company policies and financial support, providing protective equipment and training to reduce sports injury risks.
	Stretching Activities: Ensure sufficient project funds through company policies and financial support, providing protective equipment and training to reduce sports injury risks.
ST4: Optimize management processes, improving activity organization efficiency through policies and management measures to ensure employee safety and encourage active participation. Enhance management effectiveness and employee safety through technical support and a sense of accomplishment.	Management Leading by Example in the Preparation Stage: Optimize management processes, improving activity organization efficiency through policies and management measures to ensure employee safety and encourage active participation.
WO1: Enhance employees' willingness and satisfaction to participate, reduce the burden of self-funded expenses, and improve physical condition through personalized health management. Combine popular recreational sports and colleague encouragement to enhance employees' participation enthusiasm.	Safety Principle: Enhance employees' willingness and satisfaction to participate, reduce the burden of self-funded expenses and improve physical condition through personalized health management.
	Effectiveness Principle: Enhance employees' willingness and satisfaction to participate, reduce the burden of self-funded expenses and improve physical condition through personalized health management.
	Comprehensiveness Principle: Enhance employees' willingness and satisfaction to participate, reduce the burden of self-funded expenses and improve physical condition through personalized health management.
	Introducing Health Management System in the Preparation Stage: Enhance employees willingness and satisfaction to participate, reduce the



Applied strategies	Program
	<p>burden of self-funded expenses, and improve physical condition through personalized health management.</p> <p>Organizing Health Education Training in the End Stage: Enhance employees willingness and satisfaction to participate, reduce the burden of self-funded expenses, and improve physical condition through personalized health management.</p>
<p>WO4: Collect employee feedback to improve satisfaction, optimize management processes, increase activity participation and effectiveness, reduce self-funded costs, and optimize site utilization. Enhance management effectiveness and employees participation enthusiasm through popular recreational sports and colleague encouragement.</p>	<p>Approach: Collect employee feedback to improve satisfaction, optimize management processes, increase activity participation and effectiveness, reduce self-funded costs, and optimize site utilization.</p> <p>Finding Suitable Venues and Equipment in the Preparation Stage: Collect employee feedback to improve satisfaction, optimize management processes, increase activity participation and effectiveness, reduce self-funded costs, and optimize site utilization.</p>
<p>WT2: Provide internal training or online guidance to make up for the lack of equipment and guidance, improving safety and optimizing site utilization. Enhance employees willingness and safety to participate through popular recreational sports and a sense of accomplishment.</p>	<p>Precautions: Provide internal training or online guidance to make up for the lack of equipment and guidance, improving safety and optimizing site utilization.</p>
<p>WT3: Reduce self-funded expenses through company or external sponsorship, ensuring sufficient funds, reducing sports injury risks, and alleviating the burden of self-funded expenses. Improve project effectiveness and employees' safety through external sponsorship or internal resources.</p>	<p>Team Photos: Reduce self-funded expenses through company or external sponsorship, ensuring sufficient funds, reducing sports injury risks, and alleviating the burden of self-funded expenses.</p> <p>Sponsorship in the Preparation Stage: Reduce self-funded expenses through company or external sponsorship, ensuring sufficient funds, reducing sports injury risks, and alleviating the</p>



Applied strategies	Program
	burden of self-funded expenses.
<p>WT4: Improving activity organization efficiency, designing activities suitable for different physical conditions to encourage employees to challenge themselves and optimizing site utilization. Enhance management effectiveness and employees' participation enthusiasm through popular recreational sports and colleague encouragement.</p>	<p>Activity Rules: Optimize management processes, improving activity organization efficiency, designing activities suitable for different physical conditions to encourage employees to challenge themselves, and optimizing site utilization.</p> <p>Designing Activities Suitable for Different Physical Conditions in the Preparation Stage: Optimize management processes, improving activity organization efficiency, designing activities suitable for different physical conditions to encourage employees to challenge themselves, and optimizing site utilization.</p>



**Table 15 Time and content of the programme**

<b>1-4 Week</b>		
Time	Content	Intensity
Tuesday	Self-made warm-up exercise + upper limb strength training + aerobic training ( fat burning exercise + Yoga stretching	Low-intensity exercise – moderate-intensity exercise
Thursday	Self-made warm-up exercise + lower limb strength training + aerobic training ( dumbbell exercise )+ Yoga stretching	
Saturday	Self-made warm-up exercise + upper and lower limb strength training + aerobic training ( HIIT )+ Yoga stretching	
<b>4-8 Week</b>		
Time	Content	Intensity
Tuesday	Self-made warm-up exercise + upper limb strength training + aerobic training ( fat burning exercise + Yoga stretching	Moderate-intensity exercise
Thursday	Self-made warm-up exercise + lower limb strength training + aerobic training ( dumbbell exercise )+ Yoga stretching	
Saturday	Self-made warm-up exercise + upper and lower limb strength training + aerobic training ( HIIT )+ Yoga stretching	

### **4.3 Analysis of the results from development strategy of leisure sports to improve physical fitness for employees of the small and medium enterprise in Fuzhou city**

#### **4.3.1 Basic Information of the Sample**

In order to understand the current physical fitness of employees in small and medium-sized enterprises in Fuzhou, the physical fitness test data of 56 employees from two small and medium-sized enterprises in Fuzhou were collected through

voluntary registration. However, since two employees did not complete the test, in order to eliminate interference factors as much as possible and ensure the homogeneity of the survey results in the process of collecting data on employees of small and medium-sized enterprises in Fuzhou in different age groups, the physical fitness and health test data of only 54 employees were collected. In order to eliminate as many interfering factors as possible and ensure the homogeneity of the survey results, the gender ratio, age group ratio, and the proportion of enterprises of different sizes were taken into account in the process of collecting the physical fitness test data of employees of small and medium-sized enterprises in Fuzhou. The statistical results are shown in Table 16 below.

**Table 16 Basic Information of the Employees (N=54)**

		Number of people	Percentage	Cumulative percentage
Gender	Male	32	59.3%	59.3%
	Female	22	40.7%	100%
Different age groups	18–44	31	57.4%	57.4%
	45–59	18	33.3%	90.7%
	≥60	5	9.3%	100%
Different sizes of enterprises	Medium-sized enterprises	36	66.7%	66.7%
	Small enterprises	18	33.3%	100%

From Table 16, can see that among the employees who registered, the proportion of employee physical examination data is distributed as follows: Gender distribution: Male: 32 people, accounting for 59.3%, and a cumulative proportion of 59.3%. Female: 22, accounting for 40.7%, cumulative proportion 100%. Distribution by age group: 18 to 44 years old: 31, accounting for 57.4%, cumulative proportion 57.4%. 45 to 59 years old: 18, accounting for 33.3%, cumulative proportion 90.7%. 60 years old and above: 5, accounting for 9.3%. Distribution of company size: Medium-sized enterprises: 36 people, accounting for 66.7%, cumulative proportion 66.7%. Small enterprises: 18 people, accounting for 33.3%, cumulative proportion 100%.

**Table 17 Comparison of the results of the physical fitness test before and after the experiment Male (N=32)**

Test item	Mean	S.D.	t	p
BMI—pretest	23.7	4.4	15.1	0.000*
BMI—posttest	23.2	4.3		
Vital capacity—pretest	3750.4	602.9	-3.9	0.001*
Vital capacity—posttest	3761.8	598.9		
50m Run—pretest	9.1	0.7	3.8	0.001*
50m Run—posttest	8.9	0.7		
Sitting forward flexion—pretest	3.2	1.5	-3.5	0.001*
Sitting forward flexion—posttest	3.3	1.5		
Standing long jump—pretest	206.3	14.3	-3.4	0.002*
Standing long jump—posttest	208.6	14.4		
Pull-up—pretest	3.5	1.1	-2.9	0.006*
Pull-up—posttest	3.8	1.2		
1000m—pretest	294.6	42.6	2.3	0.030*
1000m—posttest	283.8	46.2		
Total per-test score	51.3	12.8	-12.8	0.000*
Post test total score	63.4	8.3		

(A P-value of less than 0.05 indicates a significant difference. Less than 0.05 marked with \*)

As can be seen in Table 17, the results of the paired-sample t-test among the male participants in this study show that there were significant differences in the various physical fitness indicators before and after the test. In terms of BMI, the average pre-test score for male subjects was 23.7, with a standard deviation of 4.4, and the average post-test score was 23.2, with a standard deviation of 4.3 ( $t=15.1$ ,  $p<0.05$ ), indicating that after the project training, the BMI of male subjects decreased significantly, and a decrease in BMI value represents weight loss. For vital capacity, the mean value before the test was 3750.4 ml, with a standard deviation of 602.9, and the mean value after the test was 3761.8 ml, with a standard deviation of 598.9 ( $t=-3.9$ ,  $p<0.05$ ). The higher the spirometry value, the more significant the improvement in cardiopulmonary function in men. In the 50-metre running test, the average value before the test was 9.1 seconds, with a standard deviation of 0.7 seconds, and the

average value after the test was 8.9 seconds, with a standard deviation of 0.7 seconds ( $t = 3.8, p < 0.05$ ), indicating a significant improvement in speed and explosive power in men. The mean value before the sit-and-reach test was 3.2 cm, with a standard deviation of 1.5, and the mean value after the test was 3.3 cm, with a standard deviation of 1.5 ( $t = -3.5, p < 0.05$ ). Although the change was not significant, it indicates a significant improvement in flexibility. In the standing long jump test, the average value before the test was 206.3 cm, with a standard deviation of 14.3, and the average value after the test was 208.6 cm, with a standard deviation of 14.4 ( $t = -3.4, p < 0.05$ ), indicating a significant increase in lower limb strength and explosive power. The average score before the pull-up test was 3.5 times, with a standard deviation of 1.1, and the average score after the test was 3.8 times, with a standard deviation of 1.2 ( $t = -2.9, p < 0.05$ ), indicating a significant increase in upper body strength in men. 1000 m 10 The average score before the 1000-metre run test was 294.6 seconds, with a standard deviation of 42.6. The average score after the test was 283.8 seconds, with a standard deviation of 46.2 ( $t = 2.3, p < 0.05$ ), indicating that the men's endurance had improved significantly. The average score of the male subjects before the test was 51.3 points, with a standard deviation of 12.8. The average score after the test was 63.4 points, with a standard deviation of 8.3. ( $t = 12.8, P < 0.05$ ) indicates that the physical fitness of male subjects has improved.

The overall results show that the p-value for all physical fitness items is less than 0.05, indicating that the indicators have been significantly improved through the training.

**Table 18 Comparison of the results of the physical fitness test before and after the experiment Female (N=22)**

Test item	Mean	S.D.	t	p
BMI—pretest	21.7	4.6	10.8	0.000*
BMI—posttest	21.3	4.6		
Vital capacity—pretest	2355.5	468.7	-3.8	0.001*
Vital capacity—posttest	2356.2	468.9		
50m Run—pretest	10.1	0.7	3.2	0.004*
50m Run—posttest	9.9	0.8		
Sitting forward flexion—pretest	18.1	3.2	-2.9	0.008*
Sitting forward flexion—posttest	18.8	3.1		



Test item	Mean	S.D.	t	p
Standing long jump—pretest	141.6	10.4		
Standing long jump—posttest	143.5	10.0	-4.1	0.001*
Sit-ups—pretest	19.1	5.6		
Sit-ups—posttest	20.6	5.4	-2.8	0.011*
800m—pretest	295.3	22.7		
800m—posttest	292.0	23.2	3.5	0.002*
Total per-test score	53.4	13.1		
Post test total score	66.4	9.7	-13.4	0.000*

(A P-value of less than 0.05 indicates a significant difference. Less than 0.05 marked with \*)

According to the data shown in Table 18, among the female participants in this study, the results of the paired sample t-test showed significant differences in each physical fitness indicator between the pre-test and the post-test. In terms of BMI, the mean pre-test score for the female participants was 21.7, with a standard deviation of 4.6, and the mean post-test score was 21.3, with a standard deviation of 4.6 ( $t = 10.8$ ,  $p < 0.05$ ), indicating that through training, the female participants body mass index decreased significantly and their physical condition improved. The pre-test mean value for vital capacity was 2355.5 ml, with a standard deviation of 468.7, and the post-test mean value was 2356.2 ml, with a standard deviation of 468.9 ( $t = -3.8$ ,  $p < 0.05$ ). The results show that the cardiopulmonary function of the female participants improved significantly after training. In the 50-metre run, the pre-test mean was 10.1 seconds, with a standard deviation of 0.7, and the post-test mean was 9.9 seconds, with a standard deviation of 0.8 ( $t = 3.2$ ,  $p < 0.05$ ), indicating that the female participants speed and explosive power had significantly improved. The pre-test mean for sit-and-reach was 18.1 cm, with a standard deviation of 3.2, and the post-test mean was 18.8 cm, with a standard deviation of 3.1 ( $t = -2.9$ ,  $p < 0.05$ ), indicating a significant improvement in flexibility. The mean pre-test standing long jump was 141.6 cm, with a standard deviation of 10.4, and the mean post-test standing long jump was 143.5 cm, with a standard deviation of 10.0 ( $t = -4.1$ ,  $p < 0.05$ ), indicating a significant increase in lower limb strength and explosive power. In the sit-up test, the mean score of the pre-test was 19.1 times, with a standard deviation of 5.6, and the mean score of the post-test was 20.6 times, with a standard deviation of 5.4 ( $t = -2.8$ ,  $p < 0.05$ ), indicating a significant improvement in core strength. The mean score of the pre-test for the 800 The pre-test mean for the 800-metre run was 295.3 seconds, with a standard deviation of 22.7, and the post-test mean was 292.0 seconds, with a standard deviation of 23.2 ( $t = 3.5$ ,  $p < 0.05$ ), indicating that the female participants endurance improved

significantly after training. The mean score of the pre-test for women was 53.4, with a standard deviation of 13.1, and the mean score of the post-test was 66.4, with a standard deviation of 9.7. ( $t = -13.4$   $p < 0.05$ ) The results are significant, indicating that the physical fitness of female testers has improved.

Overall, the p-value for all physical fitness items was less than 0.05, indicating that after the training intervention, the physical fitness of female participants improved significantly.

#### 4.3.2 Satisfaction survey of experimenters

**Table 19 Satisfaction survey of experimenter**

Subject	Option	Frequency	Average	Standard deviation
1.Venue, event	Strongly agree	35	4.65	0.48
	Comparative consent	19		
	Basic consent	0		
	Disagree	0		
	Very disagree	0		
2. Project	Strongly agree	41	4.76	0.43
	Comparative consent	13		
	Basic consent	0		
	Disagree	0		
	Very disagree	0		
3. Activity frequency	Strongly agree	29	4.31	0.81
	Comparative consent	13		
	Basic consent	12		
	Disagree	0		
	Very disagree	0		
4. Activity results	Strongly agree	45	4.83	0.37
	Comparative consent	9		
	Basic consent	0		
	Disagree	0		
	Very disagree	0		
5. Coaches	Strongly agree	50	4.93	0.26
	Comparative consent	4		
	Basic consent	0		
	Disagree	0		
	Very disagree	0		

Subject	Option	Frequency	Average	Standard deviation
6. Equipment	Strongly agree	37	4.61	0.62
	Comparative consent	13		
	Basic consent	4		
	Disagree	0		
	Very disagree	0		

As seen from Table 19 after the experiment, a satisfaction survey was conducted among the 54 participants, and the results showed that the participants were very satisfied with the overall programme of the event. In response to the question Are you satisfied with the venue of the event? 35 people said they were very satisfied and 19 said they were relatively satisfied, with a mean score of 4.65 and a standard deviation of 0.48, indicating that most participants approved of the venue conditions. For the question “Are question,” 41 people said they were very satisfied and 13 people said they were relatively satisfied, with a mean score of 4.76 and a standard deviation of 0.43, indicating that the design of the event programme was highly recognised. In the question “Are you satisfied with the frequency of the activities?” 29 people said they were very satisfied, 13 people were relatively satisfied, and 12 people were generally satisfied, with a mean score of 4.31 and a standard deviation of 0.81. Although satisfaction with the frequency was slightly lower, it was still at a high level. In the question “Are you satisfied with the final effect of the activity?” 45 people were very satisfied and 9 were relatively satisfied, with a mean value of 4.83 and a standard deviation of 0.37, indicating that the vast majority of participants highly approved of the final effect. For the question “Are you satisfied with the coach of the activity?” 50 people were very satisfied and 4 were relatively satisfied, with a mean value of 4.93 and a standard deviation of 0.26, indicating that the performance of the coach was highly praised by almost all participants. Finally, in response to the question “Are you satisfied with the equipment for the activity?” 37 people were very satisfied and 13 were relatively satisfied, with a mean value of 4.61 and a standard deviation of 0.62, indicating that the quality of the equipment and the experience of using it were also generally well received by the participants. Overall, the participants expressed a high level of satisfaction with all aspects of the event, especially the coaches and the programme design.

## **Chapter V: Research Conclusions, Discussions and Suggestions**

The research objectives of this study are (1) To study the current situation of physical fitness of employees in small and medium enterprises (SMEs) in Fuzhou City.(2) To develop the strategy of leisure sports to improve physical fitness for employees of the small and medium enterprise (SMEs) in Fuzhou city.(3).To evaluate the development strategy of leisure sports to improve physical fitness for employees of the small and medium enterprise in Fuzhou city.

This study adopted the research method of R&D, based on domestic and international related studies, based on relevant domestic and international research. Quantitative data was collected from 443 employees of small and medium-sized enterprises in Fuzhou through a questionnaire survey, and qualitative data was collected through interviews with 10 members of the management of the enterprises. The quantitative data was analyzed descriptively after collation, and the qualitative data was analysed using content analysis. Finally, by integrating the quantitative and qualitative data, a SWOT analysis was conducted to study the advantages, disadvantages, opportunities and threats of leisure sports participation among employees of small and medium-sized enterprises in Fuzhou. Then, a TOWS matrix was used to propose strategies related to the organization of tourism routes in Fuzhou, including 4 SO strategies, 4 ST strategies, 4 WO strategies and 4 WT strategies. Finally, 11 strategies were selected to design an experimental plan and an 8-week experiment was conducted. The effectiveness of the final strategy was verified using a T test through pre- and post-tests to maximize the participation of Fuzhou SME employees in recreational sports and thereby improve their physical fitness. This chapter contains the following three main sections:

1. Research conclusions
2. Research discussion
3. Research recommendations

### **5.1 Research Conclusions**

#### **5.1.1 Conclusion of the current situation of leisure sports participation of employees of small and medium-sized enterprises in Fuzhou City**

Participation status: running and swimming are the most popular leisure sports activities, followed by yoga and basketball; 33.6 % of employees said they participated in leisure sports more than 3 times a week; 32.7 % of the employees spent more than 60 minutes per exercise; the most popular sports place is outdoor park, followed by the company's prepared space and gymnasium; most employees prefer moderate-intensity leisure sports; individual sports are the most popular, and team sports also have a higher preference; the weekly leisure sports budget of 30 % employees is concentrated within 50 yuan.

Physical fitness status: 44.02 % of employees basically agree that their physical condition is better; more than half of the employees (333 employees, 75.17 %) at least basically agreed to participate in leisure sports; there were 193 employees who were at least basically satisfied with the company's leisure sports policy, accounting for 43.57 %; 348 (78.56 %) employees at least basically agreed that leisure sports made them feel better; 275 (62.08 %) employees said they could at least accept the injury caused by taking part in leisure sports. More than half of the employees (306, accounting for 69.07 %) at least basically agreed to be willing to arrange budgets to improve their physique; 281 (63.43 %) employees considered that participating in leisure sports was a challenge to physical development. There are 330 (74.49 %) employees at least basically agree that leisure sports activities provide a new channel for them to improve their physique.

Leisure sports participation behavior: 194 people (43.79 %) in the budget for leisure sports, 292 people (65.91 %) in the need for professionals to guide your leisure sports, 349 people (78.78 %) in the need for professional equipment to assist your leisure sports, 299 people (67.49 %) in the hope that the company will arrange special venues to assist you in leisure sports, 342 people (77.20 %) in the willingness to participate in the current social popular leisure sports, 320 people (72.23 %) in the willingness to participate in leisure sports activities, 323 people (72.91 %) in the willingness to encourage your colleagues to participate in leisure sports activities, 336 (75.85 %) were willing to provide technical support for your colleagues to participate in the company's leisure sports, 320 (72.23 %) were willing to overcome obstacles to participate in leisure sports, 189 (42.66 %) were willing to participate in leisure sports at their own expense, 316 (71.33 %) were willing to respond to the company's policy on leisure sports, 358 (80.81 %) were willing to participate in the free leisure sports provided by the company, A total of 328 (74.04 %) people will gain a sense of accomplishment by completing leisure sports, and 181 (40.86 %) people are willing to purchase sports equipment at their own expense. In order to supplement your participation in leisure sports, 302 people (68.17 %) provide advice to the company on the development of leisure sports, 332 people (74.94 %) advise the company on the unreasonable policy of leisure sports, 201 people (45.37 %) assist the company to seek financial support outside the community, 201 people (43.79 %) are willing to volunteer to help the company organize leisure sports, 320 people (72.23 %) are willing to promote the company's policy on leisure sports to colleagues. The choice is at least basic agreement.

### **5.1.2 Strategy summary based on participation status**

**SO1:** Through providing free projects and a sense of accomplishment, stimulate employees' willingness and enthusiasm to participate while maintaining a happy mood. Encourage employees to provide feedback and improve project content.



Promote smooth progress of activities through voluntary company organization and colleague encouragement.

**SO2:** Use technical support and popular recreational sports to enrich activity content and improve employees' physical fitness. Enhance employees' willingness to participate through colleague encouragement and policy support, promoting smooth progress of activities.

**SO3:** Combine the company's publicity policies, promote free projects to attract more employees to participate. Continuously optimize project content through financial support and satisfaction surveys. Provide financial support to enhance employees' physical fitness and willingness to participate.

**SO4:** Leverage company promotion to encourage employees to provide feedback and improve project content. Optimize projects through voluntary company organization. Enhance employees' willingness to participate through company and promotion, attracting more employees to participate.

**WO1:** Enhance employees' willingness and satisfaction to participate, reduce the burden of self-funded expenses, and improve physical condition through personalized health management. Combine popular recreational sports and colleague encouragement to enhance employees' participation enthusiasm.

**WO2:** Utilize popular recreational sports and promotional policies to provide more free activities, optimize site coverage and resources, and improve activity diversity and attractiveness. Enhance employees' willingness and safety to participate through a sense of accomplishment and technical support.

**WO3:** Increase budget support through internal and external sponsorship, optimize expenditure, and improve activity quality and cost-effectiveness. Ensure sustainable development of activities through technical support and a sense of accomplishment.

**WO4:** Collect employee feedback to improve satisfaction, optimize management processes, increase activity participation and effectiveness, reduce self-funded costs, and optimize site utilization. Enhance management effectiveness and employees' participation enthusiasm through popular recreational sports and colleague encouragement.

**ST1:** Provide a sense of accomplishment and technical support to help employees overcome participation obstacles and challenge themselves, solving technical problems through training and support. Enhance employees' confidence in overcoming obstacles through company policies and colleague encouragement.

**ST2:** Use company policies and technical support to make up for the lack of equipment and guidance, providing safety protection measures. Ensure safety through equipment maintenance and online training. Enhance employees' safety and participation enthusiasm through a sense of accomplishment and technical support.

**ST3:** Ensure sufficient project funds through company policies and financial support, providing protective equipment and training to reduce sports injury risks. Enhance employees' participation enthusiasm and ensure smooth progress of the project through a sense of accomplishment and technical support.

**ST4:** Optimize management processes, improving activity organization efficiency through policies and management measures to ensure employee safety and encourage active participation. Enhance management effectiveness and employee safety through technical support and a sense of accomplishment.

**WT1:** Provide personalized health management and training to help employees improve their physical condition, reduce sports injuries, and ensure safety. Enhance employees health management effectiveness through technical support and a sense of accomplishment.

**WT2:** Provide internal training or online guidance to make up for the lack of equipment and guidance, improving safety and optimizing site utilization. Enhance employees willingness and safety to participate through popular recreational sports and a sense of accomplishment.

**WT3:** Reduce self-funded expenses through company or external sponsorship, ensuring sufficient funds, reducing sports injury risks, and alleviating the burden of self-funded expenses. Improve project effectiveness and employees safety through external sponsorship or internal resources.

**WT4:** Improving activity organization efficiency, designing activities suitable for different physical conditions to encourage employees to challenge themselves, and optimizing site utilization. Enhance management effectiveness and employee's participation enthusiasm through popular recreational sports and colleague encouragement.

### **5.1.3 Evaluation results**

To reduce resource consumption and simplify management processes. These strategies are difficult to implement in practice due to high costs, complex implementation processes and uncertain promotional effects. By focusing resources on more feasible and practical solutions, higher employee engagement and more effective results can be ensured, while at the same time optimising the use of existing resources and avoiding the distraction of efforts on unachievable goals.

Therefore, the author chose SO1, SO2, SO4, ST2, ST3, ST4, WO1, WO4, WT2, WT3, and WT4, and designed a planned and scientific exercise plan based on the principles of safety, effectiveness, and comprehensiveness, with the aim of ensuring the safety of the exercises while improving the physical health of SME employees. The plan selected 54 employees of SMEs in Fuzhou as the training subjects and conducted a two-month experiment. The results showed that there were significant differences between male and female employees in terms of body mass index, vital capacity, 50-metre running, sit-and-reach, standing long jump, sit-ups, men's 1000-metre running and women's 800-metre running, as well as body measurement scores.

The p-values were all less than 0.05. At the same time, a satisfaction survey was conducted at the end, and the results showed that the participants were very satisfied with the overall arrangement of the activities. Overall, participants expressed a high level of satisfaction with all aspects of the event, especially the coaches and the programme design. This shows that the experimental plan can effectively improve the physical fitness test scores of employees of small and medium-sized enterprises in Fuzhou, and that strategies based on the current situation of participation in recreational sports can effectively improve the physical fitness of employees of small and medium-sized enterprises in Fuzhou.

## 5.2 Research Discussion

Joining the status quo, running and swimming are the most popular leisure sports activities, followed by yoga and basketball. Consistent with the research results proposed by Hu (2009) (Analysis on the Current Situation of the Development of Physical Leisure Sports in China—YanFan Hu), participating in leisure sports activities, especially aerobic exercise such as running and swimming, can significantly improve cardiopulmonary endurance; through resistance training, the strength and endurance of muscles and their surrounding structures can be enhanced. Activities such as yoga help to improve flexibility and coordination. Flexibility is the range of free movement that joints can perform, and coordination is the ability of different body parts to work together in an activity. Enhancing the above abilities can not only improve athletic performance, but also reduce the risk of injury in daily life and sports. In the current situation of participation, individual sports are the most popular, and team sports also have higher preferences. Nearly 30 % of employees exercise for more than 60 minutes. Consistent with the research results proposed by (leisure sports—Yu Fang) (F. Yu, 2020), participating in leisure sports is flexible and can involve personal independence, group or team activities, one-time participation or long-term continuous activities.

In terms of physical fitness, nearly 78.56% of employees at least generally agree that recreational sports make them feel better. Consistent with the research results proposed by Yu (2020) (leisure sports—Yu Fang), the perception of recreational sports activities not only has a significant positive impact on an individual's physical and mental health, including reducing stress, improving physical fitness and enhancing mental state. In addition, it also promotes socialisation, promotes interpersonal relationships and a sense of community, while improving quality of life and happiness. At the social level, recreational sports are an important way to promote public health, enhance social cohesion and promote economic development. The popularisation and development of recreational sports is ultimately to improve people's quality of life and enable them to find a source of relaxation and joy in their busy lives.

Nearly 67.49% of employees at least agree that there is a need for professionals to guide recreational sports and for professional equipment to assist in recreational sports in the current situation of recreational sports participation. This is consistent

with the research results proposed by Y. Zhao (2022) (*A Study on the Promotion of Leisure Sports to the Development of Urban Sports in China—Yun Zhao*). Resource constraints, such as a lack of adequate facilities, equipment or the financial means to pay for gym memberships, can also affect people's motivation and frequency of participation in recreational sports. In terms of recreational sports participation, nearly 70% of employees at least agree that they are willing to encourage their colleagues to participate in recreational sports activities together. Consistent with the research results proposed by Y. Zhao (2022) (*A Study on the Promotion of Leisure Sports to the Development of Urban Sports in China—Yun Zhao*), lack of motivation is another major challenge. Many people may be keen on physical exercise at first, but this enthusiasm may wane over time. The lack of a stable social support network is an important factor in this decline in motivation.

The strategy for SO1 is to motivate employees' willingness and enthusiasm to participate by providing free items and a sense of accomplishment, while maintaining a pleasant mood. Employees are encouraged to provide feedback to improve the content of the plan. Company volunteers and encouragement from colleagues facilitate the activities. Through this strategy, I designed the rewards at the end of the healthy behaviour: by providing free items and a sense of accomplishment, motivate employees' willingness and enthusiasm to participate in the activities, while maintaining a pleasant mood. The plan also provides tea breaks: By providing free items and a sense of accomplishment, motivate employees' willingness and enthusiasm to participate in the activities, while maintaining a pleasant mood. This is in line with the findings of Yu (2020) (*leisure sports—Fan Yu*) which suggests that recreational sports activities can motivate participants by satisfying their sense of achievement, and that sports activities can bring physical and mental pleasure. Providing participants with feedback channels and the support of the company's volunteer organisation can effectively promote employee participation and enhance the attractiveness of the programme.

The SO2 strategy is to use technical support and mass leisure sports to enrich the content of activities and improve the physical fitness of employees. Employee participation is increased through peer encouragement and policy support to promote the smooth implementation of activities. I used this strategy to design the relaxation and stretching exercises (YUJA) at the end of the project. In addition, I also designed a team encouragement mechanism among colleagues to promote mutual support among colleagues and strengthen policy orientation, so as to increase employee participation and improve the results of participation. This strategy is consistent with the research results of Päivärinne et al. (2019) (*Relationships of leisure-time physical activity and work ability between different occupational physical demands in adult working men—Päivärinne et al.*), that is, through peer technical support and encouragement, participation rates can be significantly increased, and employee health can also be improved.



The content of the SO4 strategy is to use company publicity to encourage employees to provide feedback and improve the content of the project. Optimise the project through voluntary company organisations. Increase employee participation through company and publicity to attract more employees to participate. Using this strategy, I designed these parts in the programme design, and later discussed and optimised the policy: use company publicity to encourage employees to provide feedback and improve the content of the project. There is also an overview of activities: use company publicity to encourage employees to provide feedback and improve the content of the project. and personal experience sharing: Using company publicity to encourage feedback and improve project content. This is also consistent with the research results of Helms & Nixon study (2010) (Exploring SWOT analysis—where are we now? A review of academic research from the last decade), which proposed that the publicity and feedback mechanisms in the SWOT analysis effectively promote employee participation and project success.

The ST2 strategy involves using company policy and technical support to compensate for the lack of equipment and guidance, and to provide safety protection measures. Safety is ensured through equipment maintenance and online training. Employee safety awareness and engagement are improved through a sense of accomplishment and technical support. Through this strategy, I studied the programme design of the project foundation stage. Using company policy and technical support to compensate for the lack of equipment and guidance, and to provide safety protection measures. The guidance of project activities: Using company policy and technical support to compensate for the lack of equipment and guidance, and to provide safety protection measures. This is consistent with the research results proposed by Shang Haiwei (Research on Influencing Factors and Countermeasures of College Students' Recreational Sports—Hai Wei Shang)(Shang, 2016). Policies can also affect the participation and development of recreational sports and require the support and investment of both companies and the government. The degree of policy support and investment in recreational sports by companies and the government directly affects the construction, operation and promotion of sports facilities, which in turn affects people's participation.)

The content of the ST3 strategy is as follows: Ensuring sufficient project funding through company policy and financial support and provide protective equipment and training to reduce the risk of sports injuries. Ensure the smooth operation of the plan through a sense of accomplishment and technical support, thereby increasing employee participation. This strategy has been applied to the design of the planned warm-up activities: Ensuring sufficient project funding through company policy and financial support and provide protective equipment and training to reduce the risk of sports injuries. Additionally, the design of stretching exercises: Ensuring adequate project funding through company policy and financial support, providing protective equipment and training to reduce the risk of sports injuries. This strategy is consistent with the findings of Ren's perspective (The Influence of Employee-organization Relationship on Employee Loyalty in Private Small and Medium-sized Enterprises—



From the Perspective of Psychological Contract—Yan Yan Ren). The article shows that the necessary financial support and safety training and policy measures effectively reduce the risk of sports hazards when participating in recreational sports projects. Through the proper design and implementation of policies, companies can further ensure the smooth progress of the project while also improving employee participation and project safety.

The content of the ST4 strategy is to optimise management processes, improve the efficiency of activity organisation through policies and management measures, ensure employee safety and encourage active participation. Management efficiency and employee safety are improved through technical support and a sense of achievement. Using this strategy, I designed the preparatory stage of the plan. Management sets an example: Optimise management processes, improve the efficiency of activity organisation through policies and management measures, ensure employee safety, and encourage employee participation. The research results are consistent with those presented by Zhong Chunli (Investigation and optimisation of physical fitness tests for Jinan university students—Zhong Chunli). From the perspective of management psychology, when managing students' physical health in universities, both positive and negative reinforcement should be considered. Positive reinforcement involves encouraging and motivating measures, while negative reinforcement employs warning and punitive means to achieve results. In the context of physical health management, optimizing management processes tends to favor negative reinforcement measures that clearly identify the risks to health and their severity, serving as a preemptive warning for physical health risks.

The strategic content of WO1 is to increase employee willingness to participate and satisfaction, reduce out-of-pocket expenses, and improve physical condition through personalised health management. Popular recreational sports are combined with peer encouragement to increase employee enthusiasm. In the programme design, I have designed safety principles, effectiveness principles and comprehensiveness principles: Through personalised health management, employee participation and satisfaction are increased, out-of-pocket expenses are reduced, and physical fitness is improved. Furthermore, the introduction of a health management system in the preparatory stage: through personalised health management, it improves employees' willingness to participate and satisfaction, reduces the burden of out-of-pocket expenses, and improves their physical condition. It also includes the organisation of end-of-programme health education training: It improves employees' willingness to participate and satisfaction, reduces the burden of out-of-pocket expenses, and improves their physical condition through personalised health management. It is also consistent with the research results of the thesis by Zhu & Lan (2017) (The Influence of Physical Fitness Leisure Constraints and Leisure Participation of Urban Residents: An Empirical Analysis of Fuzhou—Zhiqiang Zhu), which shows that personalised health management can significantly improve employees' enthusiasm to participate and their physical health.

The content of WO4 is to collect employee feedback, improve satisfaction,

optimise management processes, increase activity participation and effectiveness, reduce out-of-pocket costs, and optimise venue utilisation. Through recreational and sports activities that employees enjoy and encouragement from colleagues, management efficiency and employee participation can be improved. Using this strategy, I have designed a plan to collect employee feedback, improve satisfaction, optimise management processes, increase activity participation and effectiveness, reduce out-of-pocket costs, and optimise venue utilisation. Moreover, the plan in the preparatory stage to find the right venue and equipment: Collect staff feedback, improve satisfaction, optimise management processes, increase activity participation and effectiveness, reduce out-of-pocket costs, and optimise venue utilisation. This is in line with the thesis by Liu (2017) (Characterisation of Leisure Sports in the Context of a Well-off Society—Gui Wen LIU) which states that flexible management and feedback mechanisms can effectively increase staff participation, reduce costs, and optimise the use of venues.

The WT2 strategy is that researchers have designed programmes that provide in-house training or online guidance to compensate for the lack of equipment and guidance, improve safety and optimise space utilisation. This is consistent with the research results presented in the article “Device-measured physical activity, sedentary behaviour and cardiometabolic health and fitness across occupational groups: A systematic review and meta-analysis” by Prince et al (Prince et al., 2019), which shows that device measurement and guidance can help employees better understand their physical condition and increase their participation in leisure sports activities.

The strategic content of the WT3 is to reduce out-of-pocket expenses through corporate or external sponsorship, ensure sufficient funding, reduce the risk of sports injuries, and reduce the burden of out-of-pocket expenses. External sponsorship or internal resources can be used to improve programme effectiveness and the safety of the employees. In the design of the programme, I used the strategy of reducing out-of-pocket expenses through corporate or external sponsorship to ensure sufficient funding, reduce the risk of sports injuries, and reduce the burden of out-of-pocket expenses. I also designed sponsorship in the preparatory stage: Reducing out-of-pocket expenses through corporate or external sponsorship to ensure sufficient funding and reduce the risk of sports injuries and the burden of out-of-pocket expenses. This can be supported by external sponsorship or internal resources to reduce employees' out-of-pocket expenses and ensure sufficient funding to support the smooth implementation of the programme. In addition, protective equipment and related support are provided to reduce the risk of sports injuries to employees and ensure their safety. This is also consistent with the research results presented in the study by Ren (2019) (The Influence of Employee-organization Relationship on Employee Loyalty in Private Small and Medium-sized Enterprises—From the Perspective of Psychological Contract—Yan Yan Ren), which show that external resources and sponsorship can effectively reduce the burden on both companies and employees, and improve the effectiveness and safety of the project.

The strategy for the WT4 is to improve the efficiency of activity organisation,

design activities suitable for different physical conditions, encourage employees to challenge themselves, and optimise the use of venues. Management efficiency and employee participation are improved through mass recreational sports and peer encouragement. Using this strategy, I designed activity rules: Optimise management processes and improve the efficiency of activity organisation; design activities suitable for different physical conditions to encourage employees to challenge themselves; and optimise the utilisation of venues. I also designed activities suitable for different physical conditions in the preparation stage: Optimise management processes and improve the efficiency of activity organisation; design activities suitable for different physical conditions to encourage employees to challenge themselves; and optimise the utilisation of venues. This can optimise the management process mechanism to improve the efficiency of event organisation and ensure that each event caters to the needs of employees with different physical conditions. The plan also encourages employees to challenge themselves, while improving management efficiency and employee participation through mass recreational sports and peer-to-peer incentives. This is consistent with the research results proposed by Wang (2002) (Sports Physiology – Wang Ruiyuan). A scientific and quantitative regular exercise plan is formulated based on the individual's physical condition, that is, based on the test data of the physical exerciser. The type, intensity, time and frequency of suitable exercises are formulated in the form of a prescription based on the physical condition, physical fitness and exercise purpose of the physical exerciser, so that the physical exerciser can systematically implement the periodic exercise guidance plan.

The strategies developed in this study aim to increase employee participation in leisure sports, improve physical fitness, and foster a supportive culture in small and medium-sized enterprises (SMEs) through a multifaceted approach. Strategies such as SO1, which uses free incentives and a sense of accomplishment to motivate participation, and SO2, which leverages technical support and popular sports to improve physical health, highlight the importance of creating enjoyable and accessible activities. SO4 and ST2 emphasize the role of company support and policy in promoting engagement, optimizing projects, and ensuring safety through professional guidance and equipment. Additionally, strategies like WO1 and WO4 focus on reducing financial barriers, enhancing satisfaction, and gathering feedback to refine management processes and improve facility use, while ST3 and WT3 address funding needs by suggesting corporate or external sponsorship to lower costs for employees and ensure smooth program operation.

Together, these strategies align with findings from studies such as those by Yu (2020) and Ren (2019), which emphasize the value of personal accomplishment, supportive environments, and the positive impact of tailored leisure sports programs. The strategies further incorporate principles from Total Quality Management (TQM), Total Productive Maintenance (TPM), and Lean methodologies, aiming to decrease absenteeism by improving employee health. By implementing flexible policies, offering technical support, and creating opportunities for feedback, the company can develop a sustainable, inclusive framework that encourages both physical and mental well-being, leading to enhanced employee satisfaction and increased workplace

productivity.

### **5.3 Suggestion**

#### **5.3.1 Suggestions on the application of the results of this study .**

Multi-channel financing to improve infrastructure: Encourage the establishment of alumni associations, hometown associations, school-enterprise cooperation, etc., raise special funds, improve the sports facilities of SMEs, set up health testing centres, improve the physical fitness of SME employees.

Employee participation and motivation: Pay attention to using health test feedback to implement incentives to encourage employees to exercise. Special intervention measures should be taken for employees with weaker physical fitness to ensure improved follow-up services.

Cooperation, responsibility and the rule of law: A reasonable division of volunteer tasks, enhanced interdepartmental collaboration, a system of accountability and rewards, improved laws and regulations relating to employee physical fitness checks, and the establishment of an internal corporate monitoring mechanism will ensure a favorable environment for physical training and testing.

Promotion and education: A comprehensive publicity campaign on physical fitness standards and testing will be carried out using the internet and artificial intelligence platforms. These efforts will help to correct employees' attitudes towards physical fitness and lay a solid foundation for the success of training and testing programmes.

#### **5.3.2 Suggestions for further research in the future**

In the future, the sample size can be expanded to study the physical fitness and leisure sports participation of employees in small and medium-sized enterprises, enriching the research on the physical fitness and leisure sports participation of employees in small and medium-sized enterprises.

Follow-up studies can introduce blank control groups to test the differences in physical fitness test scores between employees who participate in different experimental projects and those who do not.

In the future, research can be done targeting large enterprises.





## REFERENCES

- Bakhit, G., & Alamin, M. (2016). The role of financial management in the decision-making of business. *J. Bus. Manag*, 18(6), 111-116.
- Barranco-Ruiz, Y., & Villa-González, E. (2020). Health-related physical fitness benefits in sedentary women employees after an exercise intervention with Zumba Fitness®. *International Journal of Environmental Research and Public Health*, 17(8), 2632.
- Bonilla, D. A., Sánchez-Rojas, I. A., Mendoza-Romero, D., Moreno, Y., Kočí, J., Gómez-Miranda, L. M., . . . Kreider, R. B. (2022). Profiling physical fitness of physical education majors using unsupervised machine learning. *International Journal of Environmental Research and Public Health*, 20(1), 146.
- Bowo, L., Prilana, R., & Furusho, M. (2020). A modified HEART-4M method with TOPSIS for analyzing indonesia collision accidents. *TransNav: International Journal on Marine Navigation and Safety of Sea Transportation*, 14(3), 751-759.
- Bureau of Statistics, F. (2022). *Fuzhou Statistical Yearbook*.: Fuzhou Statistical Yearbook.
- Callaghan, D. F. (2020). *The Impact of Dynamic Stretching on Student Flexibility and Aerobic Capacity*. University of St. Francis,
- Chen, W., Zhan, B., & Liu, Y. (2023). SWOT analysis and development countermeasures research on youth leisure sports in Xinyang city. *Xinyang College of Agriculture and Forestry*, 182-184.
- Chong, Q. (2020). *A Research about the Effect of Total Rewards on Task Performance in Small and Medium-sized Cultural and Creative Enterprises*. (Master's Master's Theses). University of International Business and Economics,
- Courneya, K. S., Vardy, J., Gill, S., Jonker, D., O'Brien, P., Friedenreich, C. M., . . . Crawford, J. J. (2014). Update on the colon health and life-long exercise change trial: a phase III study of the impact of an exercise program on disease-free survival in colon cancer survivors. *Current colorectal cancer reports*, 10, 321-328.
- Dobson, M. J. (2021). *Instructional and Non-Instructional Staff Perceptions on At-Risk Males in a Structured After-School Sport and Recreational Program: A Qualitative Case Study*. Northcentral University,
- Duan, Y. (2023). *The Establishment of Physical Quality Evaluation Standard of Xi'an Campus Football U13 Male Football Players*. (Master's degree thesis ). Xi'an Physical Education University,
- Flanagan, E. W., & Perry, A. C. (2018). Perception of physical fitness and exercise self-efficacy and its contribution to the relationship between body dissatisfaction and physical fitness in female minority children. *International Journal of Environmental Research and Public Health*, 15(6), 1187.
- Fredrick III, R. N., & Silverman, S. (2020). Relationship between urban middle school physical education teachers' attitudes toward fitness testing and student performance on fitness tests. *Measurement in physical education and exercise science*, 24(4), 273-281.
- General Administration of Sport. (2016). *Mountain outdoor sports industry development plan*.
- General Administration of Sport. (2018). *Guidance on vigorously developing sports tourism*.
- General Administration of Sport of China. (2021). *China 14th Five-Year Plan for Sports Development*.
- General Administration of Sport of China. (2022). *2022 Shanghai National Fitness Development Report*.
- Goossens, R. H., & Murata, A. (2019). *Advances in Social and Occupational Ergonomics: Proceedings of the AHFE 2019 International Conference on Social*

- and *Occupational Ergonomics*, July 24-28, 2019, Washington DC, USA (Vol. 970): Springer.
- Government of Fujian Province. (2017). *Fujian Province has issued the Implementation Opinions on Accelerating the Development of the Fitness and Leisure Industry*.
- Government of Fujian Province. (2021). *Fujian Province's 14th Five-Year Plan for the Development of the Sports Industry*.
- Hai, H.-L., & Tsou, M.-C. (2009). Strategic development for the department of information management of Shih Chien University Kaohsiung campus in Taiwan by a quantifiable SWOT analysis. *Journal of Information and Optimization Sciences*, 30(1), 87-107.
- Helms, M. M., & Nixon, J. (2010). Exploring SWOT analysis—where are we now? A review of academic research from the last decade. *Journal of strategy and management*, 3(3), 215-251.
- Hu, Q. (2020). *Study on the Problems of Staff Turnover in Small and Medium-sized Private Enterprises in Shaoguan City*. (Master's degree thesis ). Suzhou University,
- Hu, Y. (2009). Analysis on the Current Situation of the Development of Physical Leisure Sports in China. *Heilongjiang Science and Technology Information*(27), 1. doi:10.3969/j.issn.1673-1328.2009.27.161
- Islam, M. S., Rabbani, M. G., Fardousi, A., Sizar, M. I., & Saif-Ur-Rahman, K. (2021). Effect of leisure-time physical activity in controlling hypertension: a systematic review and meta-analysis protocol. *BMJ open*, 11(12), e056270.
- Kim, Y.-J., Cho, J.-H., & Park, Y.-J. (2020). Leisure sports participants' engagement in preventive health behaviors and their experience of constraints on performing leisure activities during the COVID-19 pandemic. *Frontiers in Psychology*, 11, 589708.
- Krejcie, R. (1970). Determining sample size for research activities. *Educational Psychol Meas.*
- Lee, B.-S., Shin, S.-Y., & Han, Y.-O. (2021). Comparison of male adolescents' physical fitness using physical activity promotion system and circuit exercise program. *International Journal of Environmental Research and Public Health*, 18(14), 7519.
- Leong, F. T., & Leach, M. M. (2007). Internationalising counseling psychology in the United States: A SWOT analysis. *Applied Psychology*, 56(1), 165-181.
- Liljas, B. (1998). The demand for health with uncertainty and insurance. *Journal of Health economics*, 17(2), 153-170.
- Liu, G. W. (2017). Characterisation of Leisure Sports in the Context of a Well-off Society. *Yangtze River Series*(36), 1.
- Lounsbury, D. W., & Mitchell, S. G. (2009). Introduction to special issue on social ecological approaches to community health research and action. *American journal of community psychology*, 44, 213-220.
- Lu, F., Liu, X., & Wen, X. (2006). Classification study of Leisure Sports. *Journal of Wuhan Institute of Physical Education*, 40(12), 59-61.
- Ma, J. (2016). *Discussion on Employee Incentive Mechanism and Related Measures in Small and Medium-sized Enterprises--Taking XM Company as an Example*. (Master's degree thesis ). Capital University of Economics and Business,
- Ma, S. (2021). Employee Ownership and Innovation Output in Small and Medium-sized Enterprises. *Journal of Technical Economics & Management* 4(2), 55-58.
- Magnavita, N. (2018). Medical surveillance, continuous health promotion and a participatory intervention in a small company. *International Journal of Environmental Research and Public Health*, 15(4), 662.
- Marin-Farrona, M., Wipfli, B., Thosar, S. S., Colino, E., Garcia-Unanue, J., Gallardo, L., . . . López-Fernández, J. (2023). Effectiveness of worksite wellness programs based on physical activity to improve workers' health and productivity: a systematic review. *Systematic Reviews*, 12(1), 87.

- Marques, C. S., Ferreira, J. J., Marques, C. P., & Leal, C. (2024). Understanding university-industry collaboration: a social exchange perspective on the entrepreneurial university. *The Journal of Technology Transfer*, 1-20.
- Maslow, A. H. (2003). *Maslow's humanistic philosophy: Maslow's humanistic philosophy*.
- Mayer Jr, K. C. (2012). *An empirical analysis of factors that affect student non-attendance at Mississippi State volleyball*: Mississippi State University.
- Mei, Q., Zhang, C., Lin, W., & Liu, S. (2017). Relationship among safety culture, safety climate and staffs' safety behavior-an empirical analysis of SMEs in high-risk industry. *J. Syst. Manag*, 26, 277-286.
- Mikkelsen, U., Couppé, C., Karlsen, A., Grosset, J., Schjerling, P., Mackey, A., . . . Kjær, M. (2013). Life-long endurance exercise in humans: circulating levels of inflammatory markers and leg muscle size. *Mechanisms of ageing and development*, 134(11-12), 531-540.
- Miller, C. M. (2019). *A Quasi-Experimental Quantitative Study on the Impact of Heart Rate Monitors on Physical Activity and Physical Fitness in Ninth-Grade Physical Education Classes*. Northcentral University,
- Min, J., & Jin, H. (2010). Analysis on essence, types and characteristics of leisure sports. *Modern Applied Science*, 4(7), 99.
- Mugwedi, N. P. (2020). *A framework for managing sport and recreation facilities as social anchors in rural community context of Vhembe District in Limpopo of South Africa*: University of Johannesburg (South Africa).
- Mujtaba, B. G., & Cavico, F. J. (2013). Corporate wellness programs: implementation challenges in the modern American workplace. *International journal of health policy and management*, 1(3), 193.
- Niu, C. (2024). *A Survey and Optimization Study on the Current Situation of Physical Health Testing for College Students in Jinan City*. (Master's degree thesis). Shandong Normal University, CNKI.
- Nyarku, K., & Agyapong, G. (2011). Rediscovering SWOT analysis: The extended version. *Academic Leadership: The Online Journal*, 9(2), 28.
- Obazee, A. (2019). *Exploring Financial Management Practices of Small and Medium-Sized Enterprises in Nigeria*. Walden University,
- Office of the State Council. (2016). *the Guiding Opinions on Accelerating the Development of the Fitness and Leisure Industry*.
- Okano, G., Miyake, H., & Mori, M. (2003). Leisure time physical activity as a determinant of self-perceived health and fitness in middle-aged male employees. *Journal of occupational health*, 45(5), 286-292.
- Päivärinne, V., Kautiainen, H., Heinonen, A., & Kiviranta, I. (2019). Relationships of leisure-time physical activity and work ability between different occupational physical demands in adult working men. *International archives of occupational and environmental health*, 92, 739-746.
- Peters, Y. (2019). *Exploring Leadership Skills for the Sustainability of Small and Medium-Sized Enterprises*. Walden University,
- Prince, S. A., Elliott, C. G., Scott, K., Visintini, S., & Reed, J. L. (2019). Device-measured physical activity, sedentary behaviour and cardiometabolic health and fitness across occupational groups: a systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 16, 1-15.
- Ren, Y. Y. (2019). *The Influence of Employee-organization Relationship on Employee Loyalty in Private Small and Medium-sized Enterprises—From the Perspective of Psychological Contract*. (Master's degree thesis). Northeast Normal University,
- Rodríguez-Bravo, A. E., De-Juanas, Á., & García-Castilla, F. J. (2020). Effect of physical-sports leisure activities on young people's psychological wellbeing. *Frontiers in Psychology*, 11, 543951.
- Rose, D. J., & Fisher, K. L. (2018). The Role of Government Policy in Promoting



- Physical Activity. *The Palgrave Handbook of Ageing and Physical Activity Promotion*, 607-626.
- Saethow, P., Kanjanawanawan, S., & Tongkaw, A. (2020). Management strategy (4M) of the ancient Chinese Chak-ngeaw community market by first-order confirmatory factor analysis. *Dusit Thani college journal*, 14(3), 295-309.
- Shang, H. W. (2016). Research on Influencing Factors and Countermeasures of College Students' Recreational Sports. *Qingdao Huanghai College*, 94-95. doi:10.16730/j.cnki.61-1019/g8.2016.09.049
- Shi, X. (2019). *Research on Employee Motivation Problems of Small and Medium-sized Enterprises in the Land Service Industry--Taking Shandong YH Company as an Example*. (Master's degree thesis). Shandong Normal University,
- Sizhi Li , Kai Yao, & Wang, J. (2020). The Path of Mutual Construction of Psychological Ownership between Small and Medium Enterprises and Employees. *business economy*, 7(09), 88-94.
- Song, Z., & Baicker, K. (2019). Effect of a workplace wellness program on employee health and economic outcomes: a randomized clinical trial. *Jama*, 321(15), 1491-1501.
- Sports Bureau of China. (2017). *Notice on promoting the construction of characteristic towns for sports and leisure*.
- Sports Bureau of Fujian Province. (2019). *Fujian Province: Several measures to promote the high-quality development of the sports industry*.
- State Council China. (2012). *on supporting the healthy development of small and micro-enterprises*.
- State Council China. (2018). *Law of the People's Republic of China on the Promotion of Small and Medium-sized Enterprises*.
- State Council of China. (2014a). *Opinions of the State Council on Accelerating the Development of the Sports Industry and Promoting Sports Consumption*.
- State Council of China. (2014b). *Several Opinions of the State Council on Accelerating the Development of the Sports Industry and Promoting Sports Consumption*.
- State Council of China. (2016a). The Central Committee of the Communist Party of China and the State Council have issued the 'Healthy China 2030' plan outline. *Bulletin of the State Council of the People's Republic of China*(32), 5-20.
- State Council of China. (2016b). *Guiding Opinions of the General Office of the State Council on Accelerating the Development of the Fitness and Leisure Industry*.
- State Council of China. (2016c). *Healthy China 2030*.
- State Council of China. (2016d). *national fitness program (2016 ~ 2020) notice*.
- State Council of China. (2021a). *National Fitness Plan (2021-2025)*.
- State Council of China. (2021b). *Outline for building a strong sports nation*.
- Valianto, B. (2019). *Effectiveness of physical fitness model with game approach in improving physical fitness of students at gajah mada elementary school in medan*. Paper presented at the Journal of Physics: Conference Series.
- Wade, L. A. (2020). *Exploring Strategies Small Business Owners Use to Improve Employee Retention*. Colorado Technical University,
- Wagstaff, A. (1986). The demand for health: theory and applications. *Journal of epidemiology and community health*, 40(1), 1.
- Walters, M. L. (2019). *An Analysis of the Relationship of Performance on Health-Related Fitness Standards and Academic Achievement for Eighth Grade Campuses*. Tarleton State University,
- Wang, R. (2002). *Exercise Physiology In: Beijing People's Sports Publishing House*.
- Wang, X., & Wang, A. (2024). The current situation and prospects of recreational sports in Chinese universities. *health and beauty*(2), 117-119.
- Watt, H. (2015). *Life and health: a value in itself for human beings?* Paper presented at the HEC forum.
- Wei, G. (2017). *Research on the Present Situation and Improving Countermeasure of College*

- Students' Physical Health Test in Private Higher Vocational Colleges in Shanxi Province.* (Master's degree thesis). China University of Mining and Technology, National Knowledge Infrastructure.
- Wen, J. (2009). *Government Work Report: delivered at the second session of the 11th National People's Congress on 5 March 2009*: Government Work Report: delivered at the second session of the 11th National People's Congress on 5 March 2009.
- Wilson, M. G., & Whyte, G. P. (2012). Is life-long exercise damaging to the heart? In (Vol. 46, pp. 623-624): BMJ Publishing Group Ltd and British Association of Sport and Exercise Medicine.
- Xinhua News Agency. (2020). *Recommendations of the Central Committee of the Communist Party of China on formulating the 14th Five-Year Plan for National Economic and Social Development and the long-term.*
- Yan, J., & Liu, Y. (2014). Research on the design of a scientific fitness and health promotion guidance system. *Shandong Institute of Physical Education, 36*(3), 100-103.
- Yang, Y., & Luo, Z. (2017). Analysis of Different Leadership Styles in SMEs Affecting Employees' Affective Commitment - Comparison Based on the Moderating Effects of Employees' Emotional Intelligence. *Enterprise Economy 6*, 141-146.
- Yang, Y., Zhu, C., & Tan, Y. (2019). The effect of innovation on employment in SMEs: A review based on the skill structure of employees. *Journal of Management Sciences in China, 20*(02), 92-111.
- Yu, F. (2020). *leisure sports*: Tianjin Science and Technology Press.
- Yu, Q., & Deng, C. (2021). The Impact of Square-Dancing Practice on the Physical Fitness of Elderly Women. *Chinese Journal of Gerontology 3*, 293-295.
- Yuan, Y. (2019). *Research on the Relationship among Organizational Support, Employee Loyalty and Job Performance of SMEs.* (Master's degree thesis ). Zhejiang Normal University,
- Zhao, X. (2022). *Study on the Relationship between Sports Leisure Behavior and Subjective Well-being of Coal Miners ——Based on the Investigation of Shanxi Jin Neng Group.* (Master's degree thesis ). Shanghai University of Sport,
- Zhao, Y. (2022). "A Study on the Promotion of Leisure Sports to the Development of Urban Sports in China. *Sporting Goods and Technology.*
- Zhong, C. (2022). *Research on the early warning and guidance of college students' physical health based on physical health test.* (Master's degree thesis ). Hunan University, China National Knowledge Infrastructure.
- Zhu, J. (2019). *The Study of Leisure Constraints and Leisure Participation in Sport Leisure Form the Perspective of Gender Theory ——A Moderating Effect of Sexism.* ( Master's degree thesis). Jinan University,
- Zhu, Z., & Lan, L. (2017). The Influence of Physical Fitness Leisure Constraints and Leisure Participation of Urban Residents: An Empirical Analysis of Fuzhou. *Tourism Tribune, 12*, 115-116.



## Appendix 1

### Fuzhou Questionnaire on Leisure Sports Participation Behaviour of Small and Medium-sized Enterprise Employees

Hello! We are currently conducting a social survey and need to understand your situation. Your answers are very important to us. The survey results will only be used for academic research. There is no right or wrong answer. We will keep all survey information confidential. Please mark '√' in the answer number corresponding to your situation and fill in the text in the blank space. This questionnaire consists of three parts. Please answer patiently and in order, and do not leave any blank spaces. Thank you!

Xuanmin Zhu, PhD candidate, Silpakorn University

#### 1. Basic situation

1. Your gender:

A Male B Female

2. Your age:

A Under 20 B 20-25 C 26-30 D 31-35 E 36 and over

3. Educational level:

A Junior high school and below B Junior high school/secondary school/technical school C College

D Bachelor's degree E Master's degree and above

4. Marital status:

A Unmarried B Married

5. Your occupation:

A Company Managers B Company Executives C Company Logistics Staff D Company Grassroots

Staff E Others

6. The nature of the organization in which you work is:

A State-owned and State-controlled enterprises

B Collective private enterprises

C Foreign invested enterprises

D Individuals and private persons

7. The industry in which you work is:

A Manufacturing B Wholesale C Construction D Accommodation & Food E

Other \_\_\_\_\_

8. Your current monthly income is approximately:

A Less than \$5,000 B \$5,001- \$10,000 C More than \$10,001

9. Your current accommodation:

A Unit dormitory B Renting (single or sharing with others) C Renting (sharing with the whole

family) D. With the help of relatives or friends E Buying your own house

## 2. Basic information on participation in leisure sports activities

1. What leisure sports do you usually enjoy?

A Running B Basketball C Soccer D Badminton E Table tennis F Swimming G Yoga H. Gym

activities I Square dancing J Others

2. How often do you play leisure sports each week?

A 1 time B 2 times C 3 times D 3 or more times

3. How long do you spend on each leisure activity?

A Less than 30 minutes B 30-45 minutes C 60 minutes D More than 60 minutes

4. Where do you usually go for leisure sports?

A Gymnasiums B Company-prepared spaces C Outdoor parks D Indoor specialized venues E

Other \_\_\_\_\_

5. What is the intensity of leisure sports that you are comfortable with?

A Very mild (50-60% of maximum heart rate) B Mild (60-70% of maximum heart rate) C Moderate

intensity (70-80% of maximum heart rate)

D High intensity (80-90% of maximum heart rate) E Maximum (90-100% of maximum heart rate)

6. What type of leisure sports activities do you enjoy?

A Individual sports B Dual sports C Team sports

7. What is your weekly budget for leisure sports in the range of yuan?

A 0 yuan B Within 50 yuan C 50-100 yuan D Over 100 yuan

**3. According to your degree of approval 5. Strongly agree 4. Somewhat agree 3. Somewhat disagree 2. Strongly disagree 1. Please tick the number below that best describes your level of approval.√**

<b>Physical fitness and Sports and Leisure Participation Behavior</b>	
<b>Physical fitness</b>	
1. You feel that your current physical condition is better	5 4 3 2 1
2. You are willing to participate in leisure sports activities	5 4 3 2 1
3. You are satisfied with your company's policy on leisure sports activities.	5 4 3 2 1
4. You feel better about leisure sports activities	5 4 3 2 1
5. You are able to accept injuries resulting from participation in leisure sports activities.	5 4 3 2 1
6. You are willing to arrange the budget for participation in leisure sports activities to improve physical fitness	5 4 3 2 1
7. you find participation in leisure sports a challenge to your physical development	5 4 3 2 1
8. You feel that participation in leisure sports activities provides a new channel for you to improve your physical fitness	5 4 3 2 1
<b>Sports and Leisure Participation Behavior</b>	

9. you would arrange a budget for participation in leisure sports activities	5 4 3 2 1
10. You need to have a professional to guide you in your leisure sports activities	5 4 3 2 1
11. You need to have professional equipment to assist your leisure sports activities	5 4 3 2 1
12. You would like the company to arrange specialized venues to assist you in participating in leisure sports .	5 4 3 2 1
13. You are willing to participate in the current popular leisure sports activities in the society	5 4 3 2 1
14. you are willing to participate in leisure sports activities	5 4 3 2 1
15. Are you willing to encourage your colleagues to participate in leisure sports activities together?	5 4 3 2 1
16. You are willing to provide technical support for your colleagues to participate in leisure sports activities in the company	5 4 3 2 1
17 You are willing to overcome obstacles to participate in leisure sports	5 4 3 2 1
18 You are willing to participate in leisure sports activities at your own expense	5 4 3 2 1
19. Are you willing to respond to the company's policy on leisure sports activities?	5 4 3 2 1

20. You are willing to participate in free leisure sports activities offered by the company	5 4 3 2 1
21 You are satisfied with your personal leisure sports activities	5 4 3 2 1
22. You would be moved to a happy mood by participating in leisure sports activities	5 4 3 2 1
23. you get a sense of accomplishment from completing a leisure sports activity	5 4 3 2 1
24. You are willing to purchase sports equipment at your own expense to supplement your participation in leisure sports activities	5 4 3 2 1
25. You would advise the company on the development of leisure sports activities	5 4 3 2 1
26. You will provide comments on the company's unreasonable policy on leisure sports activities.	5 4 3 2 1
27. You will assist the company in seeking financial support from outside the community	5 4 3 2 1
28. Are you willing to volunteer to help the company organize leisure sports activities?	5 4 3 2 1
29. You are willing to publicize the company's policy on leisure sports activities to your colleagues	5 4 3 2 1
<b>Thank you very much for your support after completing the questionnaire!</b>	



## Appendix 2

### Interview questions for management

1. Has your company set up a special association or department to manage and organize employees' leisure and sports-related activities?
2. Does your company provide appropriate venues and technical support for places for employees' leisure and sports activities and knowledge of leisure and sports health care?
3. On holidays or traditional festivals, does your company finance the organization of corresponding leisure and sports activities?
4. What do you think are the limitations of leisure and sports activities in companies?
5. What do you think is the current status of the development of recreational sports in your organization?
6. What do you think are the systems or characteristics of recreational sports participation in your organization?
7. How much do you think your organization budgets annually for leisure and sports activities?
8. Do you think that your company organizes regular lectures or trainings to promote employees understanding of leisure and sports knowledge?
9. Do you think your company regularly organizes leisure and sports activities to increase the motivation of employees to participate in leisure and sports?
10. Does your company have a system of leisure and sports activities that takes into account local leisure and sports-related policies?

## Appendix 3

### Invitation to the experts



No. 8612/372

Faculty of Education, Silpakorn University  
Sanamchandra Palace Campus,  
Nakhon Pathom 73000, Thailand

January 21, 2024

Title: Invitation to be an inspector of research tool quality

Dear Professor Hongmei Zhou,

Mr.Xuanmin ZHU is a graduate student ID 640630069 at Silpakorn University and is studying for Doctor of Philosophy Program in Recreation Tourism and Sport Management at Faculty of Education, Silpakorn University. Currently, he is conducting her Independent study entitled: Development Strategy of Leisure Sports to Improve Physical Fitness for Employees of the Small and Medium Enterprise in Fuzhou City. In this regard, Faculty of Education, Silpakorn University would like to invite you to inspect the quality of research tools for the student.

Your kind assistance and academic contribution is much appreciated.

Yours sincerely,

A handwritten signature in blue ink that reads 'Siriwan. Y'.

Asst. Prof. Dr.Siriwan Vanichwatanavorachai  
Deputy Dean for Academic Affairs

Faculty of Education, Silpakorn University  
Nakhon Pathom, Office Tel. 034-255-095

No. 8612/373



Faculty of Education, Silpakorn University  
Sanamchandra Palace Campus,  
Nakhon Pathom 73000, Thailand

January 24, 2024

Title: Invitation to be an inspector of research tool quality

Dear Associate Professor Chenhao Zheng,

Mr.Xuanmin ZHU is a graduate student ID 640630069 at Silpakorn University and is studying for Doctor of Philosophy Program in Recreation Tourism and Sport Management at Faculty of Education, Silpakorn University. Currently, he is conducting her Independent study entitled: Development Strategy of Leisure Sports to Improve Physical Fitness for Employees of the Small and Medium Enterprise in Fuzhou City. In this regard, Faculty of Education, Silpakorn University would like to invite you to inspect the quality of research tools for the student.

Your kind assistance and academic contribution is much appreciated.

Yours sincerely,

A handwritten signature in blue ink that reads 'Siriwan V.'.

Asst. Prof. Dr.Siriwan Vanichwatanavorachai  
Deputy Dean for Academic Affairs

Faculty of Education, Silpakorn University  
Nakhon Pathom, Office Tel. 034-255-095

No. 8612/341



Faculty of Education, Silpakorn University  
Sanamchandra Palace Campus,  
Nakhon Pathom 73000, Thailand

January 24, 2024

Title: Invitation to be an inspector of research tool quality

Dear Professor Qingjian Liu,

Mr. Xuanmin ZHU is a graduate student ID 640630069 at Silpakorn University and is studying for Doctor of Philosophy Program in Recreation Tourism and Sport Management at Faculty of Education, Silpakorn University. Currently, he is conducting her Independent study entitled: Development Strategy of Leisure Sports to Improve Physical Fitness for Employees of the Small and Medium Enterprise in Fuzhou City. In this regard, Faculty of Education, Silpakorn University would like to invite you to inspect the quality of research tools for the student.

Your kind assistance and academic contribution is much appreciated.

Yours sincerely,

× *Siriwan Y*

Asst. Prof. Dr. Siriwan Vanichwatanavorachai  
Deputy Dean for Academic Affairs

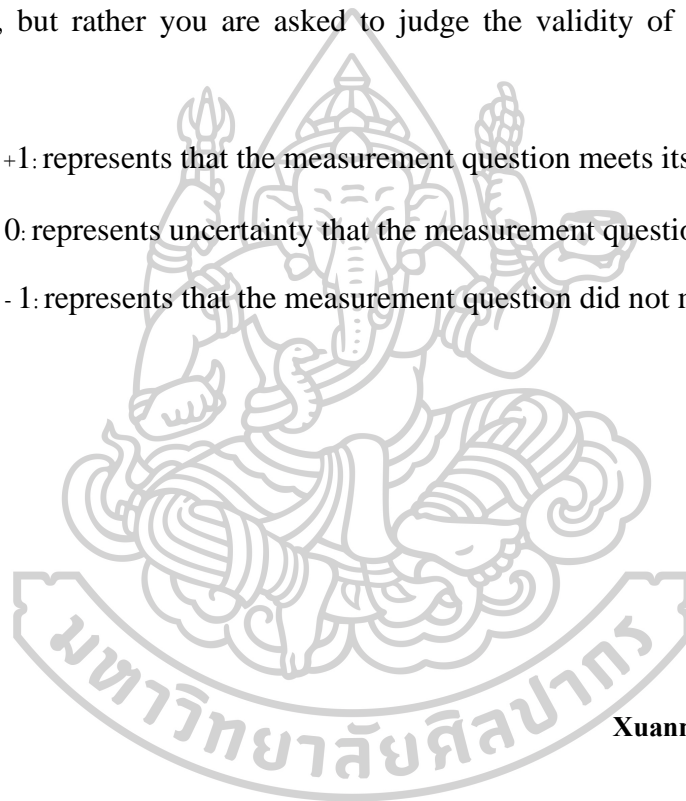
Faculty of Education, Silpakorn University  
Nakhon Pathom, Office Tel. 034-255-095

Development Strategy of Leisure Sports to Improve Physical Fitness for  
Employees of the Small and Medium Enterprise in Fuzhou City  
(IOC Expert Assessment Form)

Dear Experts!

The purpose of this questionnaire is to assess the validity of this questionnaire, note that you are not required to answer the following questions, but rather you are asked to judge the validity of each question. Where.

- +1: represents that the measurement question meets its objectives
- 0: represents uncertainty that the measurement question met its objectives
- 1: represents that the measurement question did not meet its objectives



**Xuanmin Zhu**



<b>Basic situation</b>	<b>+1</b>	<b>0</b>	<b>-1</b>
1.Your gender			
2.Your age			
3.Educational level			
4.Marital status			
5.Your occupation			
6.The nature of the organization in which you work is			
7.The industry in which you work is			
8.Your current monthly income is approximately			
9.Your current accommodation			
<b>Basic information on participation in leisure sports activities</b>	<b>+</b>	<b>0</b>	<b>-1</b>
1.What leisure sports do you usually enjoy			
2.How often do you play leisure sports each week			
3.How long do you spend on each leisure activity			
4.Where do you usually go for leisure sports			
5.What is the intensity of leisure sports that you are comfortable with			
6.What type of leisure sports activities do you enjoy			
7.What is your weekly budget for leisure sports in the range of yuan			

<b>Physical fitness</b>	<b>+1</b>	<b>0</b>	<b>-1</b>
1.You feel that your current physical condition is better			
2.You are willing to participate in leisure sports activities			
3.You are satisfied with your company's policy on leisure sports activities.			
4.You feel better about leisure sports activities			
5.You are able to accept injuries resulting from participation in leisure sports activities.			
6.You are willing to arrange the budget for participation in leisure sports activities to improve physical fitness			
7.You find participation in leisure sports a challenge to your physical development			
8.You feel that participation in leisure sports activities provides a new channel for you to improve your physical fitness			
<b>Leisure Sports Participation Behavior</b>	<b>+1</b>	<b>0</b>	<b>-1</b>
9. You would arrange a budget for participation in leisure sports activities			
10. You need to have a professional to guide you in your leisure sports activities			
11. You need to have professional equipment to assist your leisure sports activities			
12. You would like the company to arrange specialized venues to assist you in participating in leisure sports .			
13. You are willing to participate in the current popular leisure sports activities in the society			
14. you are willing to participate in leisure sports activities			
15.Are you willing to encourage your colleagues to participate in leisure sports activities together?			

16. You are willing to provide technical support for your colleagues to participate in leisure sports activities in the company			
17. You are willing to overcome obstacles to participate in leisure sports			
18. You are willing to participate in leisure sports activities at your own expense			
19. Are you willing to respond to the company's policy on leisure sports activities?			
20. You are willing to participate in free leisure sports activities offered by the company			
21. You are satisfied with your personal leisure sports activities			
22. You would be moved to a happy mood by participating in leisure sports activities			
23. you get a sense of accomplishment from completing a leisure sports activity			
24. You are willing to purchase sports equipment at your own expense to supplement your participation in leisure sports activities			
25. You would advise the company on the development of leisure sports activities			
26. You will provide comments on the company's unreasonable policy on leisure sports activities.			
27. You will assist the company in seeking financial support from outside the community			
28. Are you willing to volunteer to help the company organize leisure sports activities?			
29. You are willing to publicize the company's policy on leisure sports activities to your colleagues			

## Appendix 5

**Expert IOC scoring table**

Topic 1	Chenhao Zheng	Qingjian Liu	Hongmei Zhou	IOC
1.	+1	+1	+1	+1
2.	+1	+1	+1	+1
3.	+1	+1	+1	+1
4.	+1	+1	+1	+1
5.	+1	+1	+1	+1
6.	+1	+1	+1	+1
7.	+1	0	+1	0.666667
8.	+1	+1	+1	+1
9.	0	+1	+1	0.666667
Topic 2	Chenhao Zheng	Qingjian Liu	Hongmei Zhou	IOC
1.	+1	+1	+1	+1
2.	+1	+1	+1	+1
3.	+1	+1	+1	+1
4.	+1	+1	+1	+1
5.	+1	+1	+1	+1
6.	+1	0	+1	0.666667
7.	+1	+1	+1	+1
Topic 3	Chenhao Zheng	Qingjian Liu	Hongmei Zhou	IOC
1.	+1	+1	+1	+1
2.	+1	+1	+1	+1
3.	+1	+1	+1	+1

4.	+1	+1	+1	+1
5.	+1	+1	+1	+1
6.	+1	+1	+1	+1
7.	+1	+1	+1	+1
8.	+1	+1	+1	+1
Topic·4	Chenhao Zheng	Qingjian Liu	Hongmei Zhou	IOC
9.	+1	+1	+1	+1
10.	+1	+1	+1	+1
11.	+1	+1	+1	+1
12.	+1	+1	+1	+1
13.	+1	+1	+1	+1
14.	+1	+1	+1	+1
15.	+1	+1	+1	+1
16.	+1	0	+1	0.666667
17.	+1	+1	+1	+1
18.	+1	+1	+1	+1
19.	+1	+1	+1	+1
20.	+1	+1	+1	+1
21.	+1	+1	+1	+1
22.	+1	+1	+1	+1
23.	+1	+1	+1	+1
24.	+1	+1	+1	+1
25.	+1	+1	+1	+1
26.	+1	+1	+1	+1
27.	+1	+1	+1	+1
28.	+1	+1	+1	+1
29.	+1	+1	+1	+1



Interview content				
topic	Chenhao Zheng	Qingjian Liu	Hongmei Zhou	IOC
1.	+1	+1	+1	+1
2.	+1	+1	+1	+1
3.	+1	+1	+1	+1
4.	+1	+1	+1	+1
5.	+1	+1	+1	+1
6.	+1	+1	+1	+1
7.	+1	+1	+1	+1
8.	+1	+1	+1	+1
9.	+1	+1	+1	+1
10.	+1	+1	+1	+1



## Appendix 6

### TWOS Matrix Analysis Details

#### SO Strategy

S1 + O1: By offering free programs, stimulate employees' willingness to participate and increase their engagement.

S1 + O2: Providing free programs helps employees maintain a pleasant mood during participation, thereby increasing their enthusiasm.

S1 + O3: Utilize the free programs to encourage employees to actively provide opinions and feedback to improve the content and format of the programs.

S1 + O4: By offering free activities, ensure that employees feel good during participation, enhancing their overall experience.

S1 + O5: Use company promotional policies to publicize free programs and attract more employees to participate.

S1 + O6: Providing free programs enhances employees' willingness to participate, further promoting the smooth progress of activities.

S1 + O7: By offering free programs, improve employees' satisfaction with the program, ensuring their active participation.

S1 + O8: Through free programs, collect employees' feedback and opinions to continuously optimize program content.

S1 + O9: Combine current popular recreational sports activities with free programs to attract employees to participate actively.

S1 + O10: Provide free programs and use encouragement and support among colleagues to increase employees' participation enthusiasm.

S2 + O1: Through channels that enhance physical fitness, stimulate employees' willingness to participate and increase their engagement.

S2 + O2: Utilize fitness enhancement programs to help employees maintain a pleasant mood during participation and enhance the

attractiveness of activities.

S2 + O3: Provide fitness enhancement activities and encourage employees to give opinions and feedback to improve the effectiveness of activities.

S2 + O4: Through fitness enhancement programs, ensure that employees feel good during participation, increasing their enthusiasm.

S2 + O5: Use company promotional policies to promote fitness enhancement programs and attract more employees to participate.

S2 + O6: Providing fitness enhancement channels enhances employees' willingness to participate and promotes the smooth progress of activities.

S2 + O7: By using fitness enhancement programs, improve employees' satisfaction and ensure their active participation.

S2 + O8: Through fitness enhancement activities, collect employees' feedback and opinions to continuously optimize activity content.

S2 + O9: Combine current popular recreational sports activities with fitness enhancement programs to attract employees to participate actively.

S2 + O10: Provide fitness enhancement programs and use encouragement and support among colleagues to increase employees' participation enthusiasm.

S3 + O1: By leveraging company policies, stimulate employees' willingness to participate and increase their engagement.

S3 + O2: Use company policies to help employees maintain a pleasant mood during participation and enhance the attractiveness of activities.

S3 + O3: Use company policies to encourage employees to provide opinions and feedback to improve program content and format.

S3 + O4: Through company policies, ensure that employees feel good during participation, enhancing their overall experience.

S3 + O5: Use company promotional policies to publicize programs supported by company policies and attract more employees to participate.

S3 + O6: By leveraging company policies, enhance employees' willingness to participate and further promote the smooth progress of activities.

S3 + O7: Utilize company policies to improve employees' satisfaction with the program, ensuring their active participation.

S3 + O8: Through company policies, collect employees' feedback and opinions to continuously optimize program content.

S3 + O9: Combine current

popular recreational sports activities with company policy support to attract employees to participate actively.

S3 + O10: Provide programs supported by company policies and use encouragement and support among colleagues to increase employees' participation enthusiasm.

S4 + O1: Through technical support, stimulate employees' willingness to participate and increase their engagement.

S4 + O2: Utilize technical support to help employees maintain a pleasant mood during participation and enhance the attractiveness of activities.

S4 + O3: Provide technical support and encourage employees to give opinions and feedback to improve program content and format.

S4 + O4: Through technical support, ensure that employees feel good during participation, enhancing their overall experience.

S4 + O5: Use company promotional policies to publicize programs with technical support and attract more employees to participate.

S4 + O6: By leveraging technical support, enhance employees' willingness to participate and further promote the smooth progress of activities.

S4 + O7: Utilize technical support to improve employees' satisfaction with the program, ensuring their active participation.

S4 + O8: Through technical support, collect employees' feedback and opinions to continuously optimize program content.

S4 + O9: Combine current popular recreational sports activities with technical support to attract employees to participate actively.

S4 + O10: Provide programs with technical support and use encouragement and support among colleagues to increase employees' participation enthusiasm.

S5 + O1: By using the sense of accomplishment to stimulate

employees' willingness to participate and increase their engagement.

S5 + O2: Utilize the sense of accomplishment to help employees maintain a pleasant mood during participation and enhance the attractiveness of activities.

S5 + O3: Provide a sense of accomplishment and encourage

employees to give opinions and feedback to improve program content and format.

S5 + O4: Through the sense of accomplishment, ensure that employees feel good during participation, enhancing their overall experience.

S5 + O5: Use company promotional policies to publicize programs that offer a sense of accomplishment and attract more employees to participate.

S5 + O6: By leveraging the sense of accomplishment, enhance

employees' willingness to participate and further promote the smooth progress of activities.

S5 + O7: Utilize the sense of accomplishment to improve employees' satisfaction with the program, ensuring their active participation.

S5 + O8: Through the sense of accomplishment, collect employees'

feedback and opinions to continuously optimize program content.

S5 + O9: Combine current popular recreational sports activities with programs that offer a sense of accomplishment to attract employees to participate actively.

S5 + O10: Provide programs that offer a sense of accomplishment and

use encouragement and support among colleagues to increase employees' participation enthusiasm.

S6 + O1: Through voluntary help in organizing company activities,

stimulate employees' willingness to participate and increase their engagement.

S6 + O2: Utilize voluntary help in organizing company activities to help employees maintain a pleasant mood during participation and enhance the attractiveness of activities.

S6 + O3: Use voluntary help in organizing company activities to

encourage employees to provide opinions and feedback to improve program content and format.



S6 + O4: Through voluntary help in organizing company activities, ensure that employees feel good during participation, enhancing their overall experience.

S6 + O5: Use company promotional policies to publicize programs that involve voluntary help in organizing company activities and attract more employees to participate.

S6 + O6: By leveraging voluntary help in organizing company activities, enhance employees' willingness to participate and further promote the smooth progress of activities.

S6 + O7: Utilize voluntary help in organizing company activities to improve employees' satisfaction with the program, ensuring their active participation.

S6 + O8: Through voluntary help in organizing company activities, collect employees' feedback and opinions to continuously optimize program content.

S6 + O9: Combine current popular recreational sports activities with programs that involve voluntary help in organizing company activities to attract employees to participate actively.

S6 + O10: Provide programs that involve voluntary help in organizing company activities and use encouragement and support among colleagues to increase employees' participation enthusiasm.

S7 + O1: Through seeking financial support, stimulate employees' willingness to participate and increase their engagement.

S7 + O2: Utilize financial support to help employees maintain a pleasant mood during participation and enhance the attractiveness of activities.

S7 + O3: Use financial support to encourage employees to provide opinions and feedback to improve program content and format.

S7 + O4: Through financial support, ensure that employees feel good during participation, enhancing their overall experience.

S7 + O5: Use company promotional policies to publicize programs with financial support and attract more employees to participate.

S7 + O6: By leveraging financial support, enhance employees' willingness to participate and further promote the smooth progress of activities.

S7 + O7: Utilize financial support to improve employees' satisfaction with the program, ensuring their active participation.

S7 + O8: Through financial support, collect employees' feedback and opinions to continuously optimize program content.

S7 + O9: Combine current popular recreational sports activities with financial support to attract employees to participate actively.

S7 + O10: Provide programs with financial support and use encouragement and support among colleagues to increase employees' participation enthusiasm.

S8 + O1: Through the company's series of policy supports, stimulate employees' willingness to participate and increase their engagement.

S8 + O2: Utilize the company's series of policy supports to help employees maintain a pleasant mood during participation and enhance the attractiveness of activities.

S8 + O3: Use the company's series of policy supports to encourage employees to provide opinions and feedback to improve program content and format.

S8 + O4: Through the company's series of policy supports, ensure that employees feel good during participation, enhancing their overall experience.

S8 + O5: Use company promotional policies to publicize programs supported by the company's series of policies and attract more employees to participate.

S8 + O6: By leveraging the company's series of policy supports, enhance employees' willingness to participate and further promote the smooth progress of activities.

S8 + O7: Utilize the company's series of policy supports to improve employees' satisfaction with the program, ensuring their active participation.

S8 + O8: Through the company's series of policy supports, collect employees' feedback and opinions to continuously optimize program content.

S8 + O9: Combine current popular recreational sports activities with the company's series of policy supports to attract employees to participate actively.

S8 + O10: Provide programs supported by the company's series of policies and use encouragement and support among colleagues to increase employees' participation enthusiasm.

### WO Strategy

W1 + O1: Enhance employees' willingness to participate, reducing their burden of out-of-pocket purchases.

W1 + O2: Increase the attractiveness of activities, allowing employees to enjoy them without worrying about out-of-pocket purchases.

W1 + O3: Collect employees' feedback and opinions to find ways to reduce the burden of out-of-pocket purchases.

W1 + O4: Provide activities that make employees feel good, thereby easing the pressure of out-of-pocket purchases.

W1 + O5: Use promotional policies to increase company support for activities, reducing the need for employees to make out-of-pocket purchases.

W1 + O6: Stimulate employees' willingness to participate, encouraging more people to join voluntarily, reducing the pressure of out-of-pocket purchases.

W1 + O7: Improve employee satisfaction to alleviate their concerns about out-of-pocket purchases.

W1 + O8: Use feedback mechanisms to find ways to lower out-of-pocket costs.

W1 + O9: Utilize popular recreational sports activities to offer more free activity options, reducing the need for out-of-pocket purchases.

W1 + O10: Leverage encouragement and support among colleagues to reduce the burden of out-of-pocket purchases for employees.

W2 + O1: Enhance employees' willingness to participate, improving the rationality and effectiveness of the budget.

W2 + O2: Provide a pleasant activity atmosphere, making employees more willing to support budget increases.

W2 + O3: Collect employee feedback to optimize the budget and improve the cost-effectiveness of activities.

W2 + O4: Provide activities that make employees feel good, making it easier to gain budget support.

W2 + O5: Use promotional policies to seek more budget support and improve the

quality of activities.

W2 + O6: Stimulate employees' willingness to participate, seeking more budget support.

W2 + O7: Improve employee satisfaction to increase the rationality and support for the budget.

W2 + O8: Use feedback mechanisms to optimize budget allocation and improve the cost-effectiveness of activities.

W2 + O9: Combine popular recreational sports activities to improve the effective use of the budget.

W2 + O10: Use encouragement and support among colleagues to seek more budget support.

W3 + O1: Enhance employees' willingness to participate, improving the effectiveness of budget expenditures.

W3 + O2: Provide a pleasant activity atmosphere, making employees more willing to support budget expenditures.

W3 + O3: Collect employee feedback to optimize budget expenditures and improve the cost-effectiveness of activities.

W3 + O4: Provide activities that make employees feel good, making it easier to gain budget expenditure support.

W3 + O5: Use promotional policies to seek more budget expenditure support and improve the quality of activities.

W3 + O6: Stimulate employees willingness to participate, seeking more budget expenditure support.

W3 + O7: Improve employee satisfaction to increase the rationality and support for budget expenditures.

W3 + O8: Use feedback mechanisms to optimize budget expenditures and improve the cost-effectiveness of activities.

W3 + O9: Combine popular recreational sports activities to improve the effective use of budget expenditures.

W3 + O10: Use encouragement and support among colleagues to seek more budget expenditure support.

W4 + O1: Enhance employees' willingness to participate, reducing their burden of out-of-pocket expenses.

W4 + O2: Provide a pleasant activity atmosphere, allowing employees to enjoy them without worrying about out-of-pocket expenses.

W4 + O3: Collect employees' feedback and opinions to find ways to reduce the burden of out-of-pocket expenses.

W4 + O4: Provide activities that make employees feel good, thereby easing the pressure of out-of-pocket expenses.

W4 + O5: Use promotional policies to increase company support for activities, reducing the need for employees to make out-of-pocket expenses.

W4 + O6: Stimulate employees' willingness to participate, encouraging more people to join voluntarily, reducing the pressure of out-of-pocket expenses.

W4 + O7: Improve employee satisfaction to alleviate their concerns about out-of-pocket expenses.

W4 + O8: Use feedback mechanisms to find ways to lower out-of-pocket costs.

W4 + O9: Utilize popular recreational sports activities to offer more free activity options, reducing the need for out-of-pocket expenses.

W4 + O10: Leverage encouragement and support among colleagues to reduce the burden of out-of-pocket expenses for employees.

W5 + O1: Enhance employees' willingness to participate, helping them overcome their physical limitations.

W5 + O2: Provide a pleasant activity atmosphere, allowing employees to improve their physical condition with a positive mindset.

W5 + O3: Collect employees' feedback and opinions to find ways to help them improve their physical condition.

W5 + O4: Provide activities that make employees feel good, helping them improve their physical condition.



W5 + O5: Use promotional policies to promote activities that help employees improve their physical condition.

W5 + O6: Stimulate employees' willingness to participate, helping them overcome physical limitations.

W5 + O7: Improve employee satisfaction to motivate them to actively participate in activities that improve their physical condition.

W5 + O8: Use feedback mechanisms to optimize activity content and help employees improve their physical condition.

W5 + O9: Combine popular recreational sports activities to help employees improve their physical condition.

W5 + O10: Use encouragement and support among colleagues to help employees overcome physical limitations.

W6 + O1: Enhance employees' willingness to participate, addressing the issue of insufficient venue coverage.

W6 + O2: Provide a pleasant activity atmosphere, making employees more willing to participate and optimize venue utilization.

W6 + O3: Collect employees' feedback and opinions to find ways to improve venue coverage.

W6 + O4: Provide activities that make employees feel good, thereby improving the utilization of venues.

W6 + O5: Use promotional policies to increase venue coverage and improve the accessibility of activities.

W6 + O6: Stimulate employees' willingness to participate, promoting the development and utilization of more venues.

W6 + O7: Improve employee satisfaction to optimize venue coverage and increase the attractiveness of activities.

W6 + O8: Use feedback mechanisms to find effective ways to improve venue coverage and enhance the quality of activities.

W6 + O9: Combine popular recreational sports activities to optimize venue coverage and improve activity participation.

W6 + O10: Use encouragement and support among colleagues to promote venue coverage improvements and enhance activity accessibility.

#### ST Strategy

S1 + T1: Provide free projects to help employees overcome participation barriers and increase their involvement.

S1 + T2: Offer free projects to motivate employees to challenge themselves, enhancing their participation enthusiasm.

S1 + T3: Use the advantage of free provision to compensate for limited professional equipment, allowing more employees to participate.

S1 + T4: Provide free projects to compensate for limited professional guidance, ensuring active participation from employees.

S1 + T5: Offer free projects to help employees reduce sports injuries, improving their safety and participation.

S2 + T1: Use physical fitness improvement channels to help employees overcome participation barriers and boost their confidence.

S2 + T2: Provide physical fitness

S2 + T3: Utilize physical fitness improvement projects to compensate for limited professional equipment, offering more choices for employees.

S2 + T4: Provide physical fitness improvement activities to compensate for limited professional guidance, ensuring the effectiveness of the activities.

S2 + T5: Offer physical fitness improvement projects to help employees reduce sports injuries, improving their safety.

S3 + T1: Use company policy support to help employees overcome participation barriers and increase their involvement.

S3 + T2: Utilize company policies to motivate employees to challenge themselves, enhancing their participation enthusiasm.

S3 + T3: Leverage company policy support to compensate for limited professional equipment, allowing more employees to participate. of activities.

S3 + T5: Utilize company policies to help employees reduce sports injuries, improving their safety and participation.

S4 + T1: Use technical support to help employees overcome participation barriers and boost their confidence.

S4 + T2: Utilize technical support to motivate employees to challenge themselves and improve their technical skills.

S4 + T3: Provide technical support to compensate for limited professional equipment, offering more choices for employees.

S4 + T4: Use technical support to compensate for limited professional guidance, ensuring the effectiveness of the activities.

S4 + T5: Utilize technical support to help employees reduce sports injuries, improving their safety.

S5 + T1: Use a sense of accomplishment to help employees overcome participation barriers and enhancement programs and use encouragement and support among colleagues to increase employees' participation enthusiasm.

S5 + T2: Utilize a sense of accomplishment to motivate employees to challenge themselves and increase their enthusiasm.

S5 + T3: Provide a sense of accomplishment to compensate for limited professional equipment, giving employees more motivation.

S5 + T4: Use a sense of accomplishment to compensate for limited professional guidance, ensuring active participation from employees.

S5 + T5: Utilize a sense of accomplishment to help employees reduce sports injuries, improving their safety and participation.

S6 + T1: Use voluntary assistance from the company to help employees overcome participation barriers and boost their confidence.

S6 + T2: Utilize voluntary assistance from the company to motivate employees to challenge themselves and increase their enthusiasm.

S6 + T3: Leverage voluntary assistance from the company to compensate for limited professional

S6 + T4: Use voluntary assistance from the company to compensate for limited professional guidance, ensuring the effectiveness of the activities.

S6 + T5: Utilize voluntary assistance from the company to help employees reduce sports injuries, improving their safety.

S7 + T1: Seek financial support to help employees overcome participation barriers and increase their involvement.

S7 + T2: Utilize financial support to motivate employees to challenge themselves and increase their enthusiasm.

S7 + T3: Leverage financial support to compensate for limited professional equipment, allowing more employees to participate.

S7 + T4: Use financial support to compensate for limited professional guidance, ensuring active participation from employees.

S7 + T5: Utilize financial support to help employees reduce sports injuries, improving their safety and participation.

S8 + T1: Use company policy support to help employees overcome participation barriers and boost their confidence.

S8 + T2: Utilize company policy support to motivate employees to challenge themselves and increase their enthusiasm.

S8 + T3: Provide company policy support to compensate for limited professional equipment, offering more choices for employees.

S8 + T4: Use company policy support to compensate for limited professional guidance, ensuring the effectiveness of the activities.

S8 + T5: Utilize company policy support to help employees reduce sports injuries, improving their safety and participation.

WT strategy

W1 + T1: Reduce the burden of self-purchase for employees by seeking external sponsorship or using internal resources, helping them overcome participation barriers.

W1 + T2: Offer more free or low-cost activity options to reduce self-purchase pressure and motivate employees to challenge themselves.

W1 + T3: Optimize resource allocation and use existing resources to reduce the need for self-purchases, compensating for limited professional equipment.

W1 + T4: Provide online training or internal guidance to reduce the need for self-purchases, compensating for limited professional guidance.

W1 + T5: Offer safety equipment or related training to reduce self-purchase pressure and lower the risk of sports injuries.

W2 + T1: Develop a more reasonable budget plan and increase funding to help employees overcome participation barriers.

W2 + T2: Increase the budget to improve activity quality and diversity, motivating employees to challenge themselves.

W2 + T3: Use the increased budget to purchase more professional equipment, addressing equipment shortages.

W2 + T4: Raise the budget to hire professional instructors, addressing the lack of guidance.

W2 + T5: Increase the budget to encouragement and support among colleagues to reduce the burden of out-of-pocket purchases for employees.

W3 + T1: Optimize budget expenditure to ensure effective use of funds, helping employees overcome participation barriers.

W3 + T2: Improve the efficiency of budget expenditure to increase activity diversity and attractiveness, motivating employees to challenge themselves.

W3 + T3: Use optimized budget expenditure to purchase more professional equipment, addressing equipment shortages.

W3 + T4: Raise budget expenditure to hire professional instructors, addressing the lack of guidance.

W3 + T5: Optimize budget expenditure to purchase safety equipment and provide safety training, reducing the risk of sports injuries.

W4 + T1: Offer more company-funded or externally sponsored activities to reduce employees' self-expenses, helping them overcome participation barriers. allocation and improve the cost-effectiveness of activities.

W4 + T3: Utilize existing resources and sponsorships to reduce employees' self-expenses, addressing equipment shortages.

W4 + T4: Provide internal



training or online guidance to reduce employees' self-expenses, addressing the lack of guidance.

W4 + T5: Offer safety equipment or related training to reduce employees' self-expenses and lower the risk of sports injuries.

W5 + T1: Provide personalized health management plans to help employees improve their physical condition and overcome participation barriers.

W5 + T2: Design activities suitable for different physical conditions to motivate employees to challenge themselves and increase participation.

W5 + T3: Offer equipment and tools suitable for different physical conditions to address equipment willingness to participate, seeking more budget expenditure support.

W5 + T4: Provide personalized guidance and support to address the lack of professional guidance.

W5 + T5: Offer safety protection and personalized health management to reduce the risk of sports injuries and ensure employee safety.

W6 + T1: Optimize site utilization to improve the coverage of existing sites, helping employees overcome participation barriers.

W6 + T2: Increase site resources to enhance activity diversity and attractiveness, motivating employees to challenge themselves.

W6 + T3: Optimize site allocation and utilization to address equipment shortages.

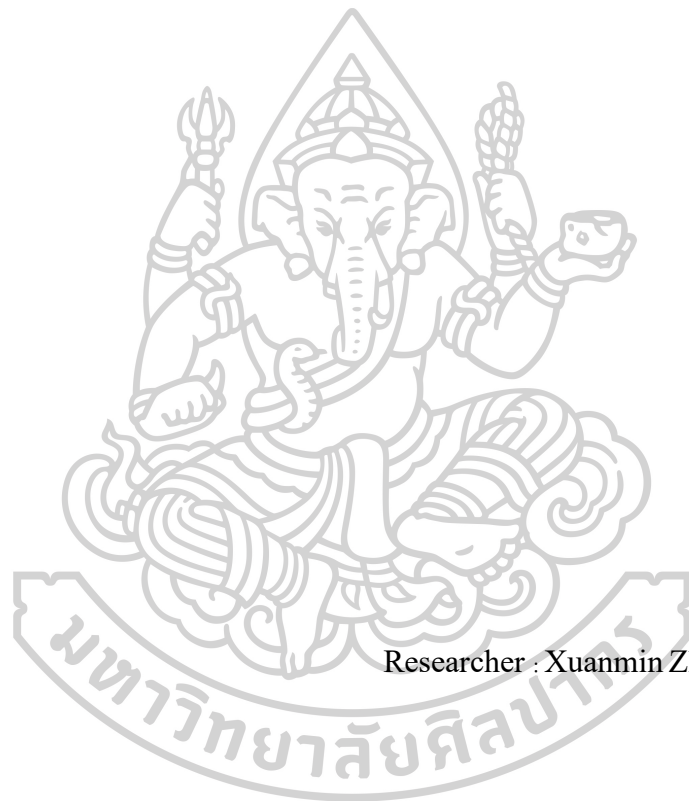
W6 + T4: Provide mobile guidance or online guidance to address the lack of professional guidance.

W6 + T5: Offer safety facilities and training, optimize site coverage, and reduce the risk of sports injuries.

## **Appendix 7** **designed experimental plan**

Leisure sports activity guide

Improve the physical quality of small and medium-sized  
enterprise employees



Researcher : Xuanmin Zhu

Principles on promoting the physical quality of employees in small and medium-sized enterprises through leisure sports activities

This user guide is a document detailing the promotion of the physical fitness of employees in small and medium-sized enterprises through leisure sports activities, aiming to improve the physical fitness of employees in small and medium-sized enterprises. The purpose is to enable employees of small and medium-sized enterprises participating in leisure sports activities to improve their physical fitness. The guide consists of three main components, namely :

### **1. Principles and objectives :**

#### **1.1 Principle :**

**Safety principle :** Ensure that the exercise program will not cause harm to participants during the implementation process. By fully understanding the participants ' personal medical history, sports history, sports injury history, conducting pre-exercise health screening, assessing physical activity levels and sports risks, proposing personalized precautions, and clarifying pre-exercise warm-up and post-exercise stretching programs to prevent sports injuries and delayed muscle soreness. **Effectiveness principle :** The goal of the exercise program is to help participants achieve health goals. Through a tailored periodic personalized exercise program, the exercise program including appropriate exercise intensity, single exercise time and weekly exercise frequency is formulated according to the overall physical level of the participants (cardiopulmonary endurance, strength quality, etc. ), so that the body can adapt well to the external exercise load.

**Comprehensive principle :** The exercise program should follow the principle of comprehensive physical and mental health, and pay attention to maintaining the balance of human physiology and psychology in the formulation and implementation, so as to achieve the purpose of ' comprehensive physical and mental health '.

The leisure sports activity mode is designed based on the principle of improving physical fitness, including theoretical basis, sports goal, sports time, sports place, sports content, sports intensity, sports pounds /times, sports preparation, precautions and other elements.

#### **1.2 Objectives :**

The formulation of sports programs provides a scientific basis for the improvement of the physical quality of employees in small and medium-sized enterprises. The purpose is to improve the physical quality of employees in small and medium-sized enterprises while ensuring sports safety. It is a plan to guide the employees of small and medium-sized enterprises to carry out purposeful, planned and scientific sports training. It aims to provide scientific and personalized exercise guidance for employees of small and medium-sized enterprises to achieve the purpose of promoting physical health.

#### **1.3 Ideas**

The 54 employees of small and medium-sized enterprises were selected as the

intervention objects. The participants had different degrees of physical quality problems. Before the implementation of the program, their physical quality indicators were tested. After the test was completed, a two-month exercise program intervention was conducted. After the intervention of the exercise program, the above indicators were tested again.

The paired sample T test in the SPSS24.0 version was used to test the data before and after the exercise program. The paired sample T test was used to test the scores of the experimental group. Analyze whether there is a significant difference, and point out the reasons, and then analyze the effect of the proposed exercise program strategy on improving the physical quality of employees in small and medium-sized enterprises.

## **2 Leisure sports activity process composition**

### **2.1 : Preparation stage**

2.1.1 Establish staff sports liaisons or propagandists in various departments of the enterprise, actively seek sponsorship, and supplement the staff's sports budget. The transmission of the whole activity information is responsible by the liaison / propagandist of each department.

2.1.2 Combined with the characteristics of SME employee challenge activities, through the establishment of goals (different age groups of employees set different goals), supervision and advocacy, encourage employees to improve their physical fitness.

2.1.3 The management takes the lead in participating in leisure sports activities to mobilize the enthusiasm of employees.

2.1.4 Construction of sports universities + enterprise model of industrial alliance, reasonable combination of university resources, for the enterprise leisure sports activities to provide professional guidance, equipment and venues.

2.1.5 Introduction of health management system. Establish a health management system, regularly monitor and evaluate the health status of employees, timely detect sub-health problems and provide corresponding solutions.

### **2.2 : Basic stage**

2.2.1 Warm-up exercise : combined with music rhythm to create a set of warm-up exercises to fully awaken the muscles of all parts of the body to prepare for activities.

2.2.2 : Based on the principle of exercise program formulation, the experimental group was intervened three times a week on Tuesday, Thursday and Saturday, taking full account of the factors such as exercise form, exercise intensity, duration, exercise frequency and precautions. The training time was arranged at 7-8 in the morning. Each training time is 60 minutes. The training content of the experimental group is set to 10 minutes of self-made warm-up exercise, 45 minutes of training (strength training aerobic training), and 5 minutes of Yoga relaxation stretching training. The specific exercise program is detailed in the steps of leisure sports activities below.

### **2.3 : Ending phase**

2.3.1 Cooling and Stretching : Combine Yoga pose and meditation to relax the muscles.

2.3.2 Discuss the company 's leisure sports related policies, collect opinions and suggestions, and optimize the relevant policies.

2.3.3 Reward health behavior. Establish a reward system to encourage employees to actively participate in healthy leisure activities, such as issuing health benefits and setting up health special awards to stimulate the enthusiasm of employees to participate.

2.3.4 Organize health education and training, strengthen employees ' awareness of sub-health status, and remind them to pay attention to prevention.





## **Leisure Sports Activity Steps**

### **Small and medium-sized enterprise staff leisure sports activities**

#### **detailed information**

The program is an exercise plan based on leisure sports, including 3 leisure sports activities, namely yoga, dumbbell exercise and aerobics, which are conducted once a week respectively, following the principle of diversity and intermittency. This arrangement covers different types of exercise, such as resistance aerobics (dumbbells) and stretching (yoga). By following this principle, you can ensure that the weekly exercise program promotes physical fitness while providing a rich, scientific exercise experience. Let the employees of small and medium-sized enterprises ultimately achieve the purpose of physical health in the scientific arrangement.

The whole steps are as follows :

**1.Before the start of the activity : explain the content of the activity and precautions ( 10 minutes )**

1.1 Activity rules

1.2 Notes

**2.At the beginning of the activity : carry out leisure sports activities ( 50 minutes )**

2.1 Warm-up activities

2.2 Guidance in activities

2.3 Provide tea and rest time

**3.After the activity : share and stretch ( 10 minutes )**

3.1 Summary of activities

3.2 Personal experience sharing

3.3 Stretching activity

3.4 Team photo

The experimental cycle of the exercise program was 2 months in total. According to the law of human muscle adaptation and cardiopulmonary adaptation, the experimental cycle was divided into 2 stages and the training volume was designed in a dynamic and increasing way, which were 1-4 weeks in the first stage and 5-8 weeks in the second stage. The training content in different stages is designed according to the above training content selection, and Tuesday is set as upper body strength training + aerobic training. Thursday is set to lower extremity strength training + aerobic training; Saturday is set to upper and lower limb strength training + aerobic training. However, the intensity of training in different stages is different, the first stage is medium and low intensity, requiring participants to use a low number of elastic bands, the maximum is not more than 20 pounds, the number of each action is arranged in 15-25 times, and the intensity of aerobic training is set to 60-70% of the maximum heart rate. In the second stage, the participants' elastic band weight was set

at 20-30 pounds, each movement number was arranged at 15-20 times, and the intensity was set at 70-80% of the maximum heart rate during aerobic training.

Time for 8 weeks. As shown below :

**weeks 1-4 of the first phase**

<b>Tuesday</b>	<b>Remark</b>
Health behavior theory	Enhance physical fitness, physical and mental coordinated development and health
Maneuvering target	Relieve physical and mental fatigue and psychological pressure, participate in activities to achieve the effect of physical fitness, maintain a good mental state to meet the challenges in the work
Exercise tim	One hour
Sports location	Gym
Exercise content	Self-made warm-up exercise + upper limb strength training + aerobic training ( fat burning exercise + Yoga stretching
Intensity of exercise	low and medium intensity
Number of exercise pounds / times	The number of elastic bands is low, and the maximum is not more than 20 pounds. The number of each action is arranged in 15-25 times. The intensity of aerobic training is set to 60-70 % maximum heart rate.
Motor preparation	Propagandists remind participants in advance of
Notice	sportswear, sneakers in advance to do a good job of each joint warm-up

<b>Thursday</b>	<b>Remark</b>
-----------------	---------------

Health behavior theory	Enhance physical fitness, physical and mental coordinated development and health
Maneuvering target	Relieve physical and mental fatigue and psychological pressure, participate in activities to achieve the effect of physical fitness, maintain a good mental state to meet the challenges in the work
Exercise tim	one hour
Sports location	gym
Exercise content	Self-made warm-up exercise + lower limb strength training + aerobic training ( dumbbell exercise ) + Yoga stretching
Intensity of exercise	low and medium intensity
Number of exercise pounds /times	The number of elastic bands is low, and the maximum is not more than 20 pounds. The number of each action is arranged in 15-25 times. The intensity of aerobic training is set to 60-70 % maximum heart rate.
Motor preparation	Propagandists remind participants in advance of sportswear, sneakers in advance to do a good job of each joint warm-up
Notice	Half an hour before exercise should not be too full fasting, half an hour after exercise should not immediately shower.

Saturday	Remark
Health behavior theory	Enhance physical fitness, physical and mental coordinated development and health
Maneuvering target	Relieve physical and mental fatigue and psychological pressure, participate in activities to achieve the effect of physical fitness, maintain a good mental state to meet the challenges in the work
Exercise time	one hour
Sports location	gym
Exercise content	Self-made warm-up exercise + upper and lower limb strength training + aerobic training (HIIT) + Yoga stretching
Intensity of exercise	low and medium intensity
Number of exercise pounds / times	The number of elastic bands is low, and the maximum is not more than 20 pounds. The number of each action is arranged in 15-25 times. The intensity of aerobic training is set to 60-70 % maximum heart rate.
Motor preparation	Propagandists remind participants in advance of sportswear, sneakers in advance to do a good job of each joint warm-up
Notice	Half an hour before exercise should not be too full / fasting, half an hour after exercise should not immediately shower.

← Week 5-8 of the second phase

Tuesday	Remark
Health behavior theory	Enhance physical fitness, physical and mental coordinated development and health
Maneuvering target	Relieve physical and mental fatigue and psychological pressure, participate in activities to achieve the effect of physical fitness, maintain a good mental state to meet the challenges in the work
Exercise tim	One hour
Sports location	Gym
Exercise content	Self-made warm-up exercise + upper limb strength training + aerobic training ( fat burning exercise + Yoga stretching
Intensity of exercise	medium intensity
Number of exercise pounds / times	The number of elastic bands is low, and the maximum is not more than 20 pounds. The number of each action is arranged in 15-25 times. The intensity of aerobic training is set to 60-70 % maximum heart rate.
Motor preparation	Propagandists remind participants in advance of
Notice	sportswear, sneakers in advance to do a good job of each joint warm-up



Thursday	Remark
Health behavior theory	Enhance physical fitness, physical and mental coordinated development and health
Maneuvering target	Relieve physical and mental fatigue and psychological pressure, participate in activities to achieve the effect of physical fitness, maintain a good mental state to meet the challenges in the work
Exercise tim	one hour
Sports location	gym
Exercise content	Self-made warm-up exercise + lower limb strength training + aerobic training ( dumbbell exercise ) + Yoga stretching
Intensity of exercise	medium intensity
Number of exercise pounds /times	The number of elastic bands is low, and the maximum is not more than 20 pounds. The number of each action is arranged in 15-25 times. The intensity of aerobic training is set to 60-70 % maximum heart rate.
Motor preparation	Propagandists remind participants in advance of sportswear, sneakers in advance to do a good job of each joint warm-up
Notice	Half an hour before exercise should not be too full fasting, half an hour after exercise should not immediately shower.

Saturday	Remark
Health behavior theory	Enhance physical fitness, physical and mental coordinated development and health
Maneuvering target	Relieve physical and mental fatigue and psychological pressure, participate in activities to achieve the effect of physical fitness, maintain a good mental state to meet the challenges in the work
Exercise time	one hour
Sports location	gym
Exercise content	Self-made warm-up exercise + upper and lower limb strength training + aerobic training (HIIT) + Yoga stretching
Intensity of exercise	low and medium intensity
Number of exercise pounds / times	The number of elastic bands is low, and the maximum is not more than 20 pounds. The number of each action is arranged in 15-25 times. The intensity of aerobic training is set to 60-70 % maximum heart rate.
Motor preparation	Propagandists remind participants in advance of sportswear, sneakers in advance to do a good job of each joint warm-up
Notice	Half an hour before exercise should not be too full / fasting, half an hour after exercise should not immediately shower.

### Role of Event Organizer

1. Through the process of research and information collection, questionnaires are distributed to employees of small and medium-sized enterprises, and the results of the questionnaires are analyzed in detail through SPSS, so as to design a series of leisure sports activities popular with employees of small and medium-sized enterprises. The goal of these activities is to promote the physical quality of small and medium-sized enterprise employees.

2. To ensure that clear research objectives are provided to all sample groups to enhance understanding of the experimental group, we explain the purpose of the study. Try to clarify the research objectives before the experiment, and promote a more thorough understanding of sample group research.

3. Explain the method of implementation and collection of data, to provide SME employee sample group.

4. Choose yoga, strength training, aerobics these three kinds of leisure sports activities from many leisure sports activities.

5. Based on the three kinds of leisure sports activities, we developed the activity plan, and followed the principle of changing the intensity and frequency of exercise at each stage to avoid the tedious leisure sports activities.

6. Enable the sample group to participate in leisure sports activities in accordance with the established plan to improve physical fitness. For 8 weeks, 3 times a week, about 1 hour each time.

7. Physical fitness was tested before and after the activity, and the physical health table was used as a test tool.

8. Analyze the data of pre-test and post-test for statistical calculation.



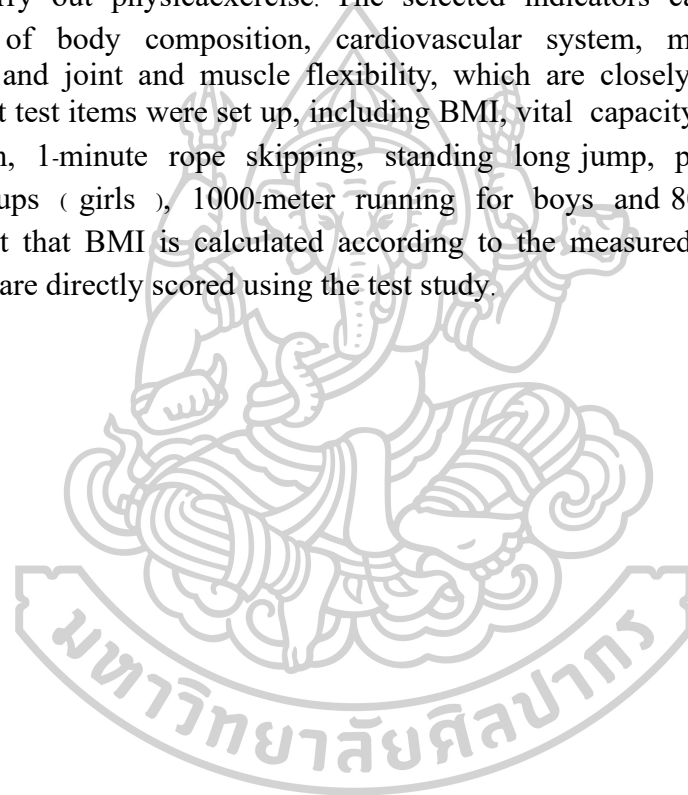
Participant role

1. Understand the purpose of the study, and then experiment.

2. In the 8-week experimental activity, according to the leisure sports activity plan, 3 times a week, each time for about 1 hour.

3. Before and after the experiment, the physical fitness of the participants was tested separately, and the physical health test tool was used.

Using the ' National Student Physical Health Standard ' to test the physical fitness of small and medium-sized enterprise employees, to understand the physical health status of small and medium-sized enterprise employees before and after the test. The national student physical health standard is an educational means to promote the healthy development of students ' physique and encourage students to actively carry out physical exercise. The selected indicators can reflect the basic conditions of body composition, cardiovascular system, muscle strength and endurance, and joint and muscle flexibility, which are closely related to physical health. Eight test items were set up, including BMI, vital capacity, 50-meter running, sit-and-reach, 1-minute rope skipping, standing long jump, pull-ups ( boys ), 1-minute sit-ups ( girls ), 1000-meter running for boys and 800-meter running for girls. Except that BMI is calculated according to the measured height and weight, other items are directly scored using the test study.



## Appendix 8

### Programme expert IOC



No. 8612/3374

Faculty of Education, Silpakorn University  
Sanamchandra Palace Campus,  
Nakhon Pathom 73000, Thailand

August 7, 2024

Title: Invitation to be an inspector of research tool quality

Dear Associate Professor Chenhao Zheng, Ph.D.

Mr. Xuanmin Zhu is a graduate student ID 640630069 at Silpakorn University and is studying for Doctor of Philosophy Program in Recreation Tourism and Sport Management at Faculty of Education, Silpakorn University. Currently, he is conducting her Independent study entitled: Development Strategy of Leisure Sports to Improve Physical Fitness for Employees of the Small and Medium Enterprise in Fuzhou City. In this regard, Faculty of Education, Silpakorn University would like to invite you to inspect the quality of research tools for the student.

Your kind assistance and academic contribution is much appreciated.

Yours sincerely,

A handwritten signature in blue ink that reads "Siriwan.V".

Assoc. Prof. Dr. Siriwan Vanichwatanavorachai  
Deputy Dean for Academic Affairs

Faculty of Education, Silpakorn University  
Nakhon Pathom, Office Tel. 034-255-095





No. 8612/9373

Faculty of Education, Silpakorn University  
Sanamchandra Palace Campus,  
Nakhon Pathom 73000, Thailand

August 7, 2024

Title: Invitation to be an inspector of research tool quality

Dear Professor Hongmei Zhou,

Mr. Xuanmin Zhu is a graduate student ID 640630069 at Silpakorn University and is studying for Doctor of Philosophy Program in Recreation Tourism and Sport Management at Faculty of Education, Silpakorn University. Currently, he is conducting her Independent study entitled: Development Strategy of Leisure Sports to Improve Physical Fitness for Employees of the Small and Medium Enterprise in Fuzhou City. In this regard, Faculty of Education, Silpakorn University would like to invite you to inspect the quality of research tools for the student.

Your kind assistance and academic contribution is much appreciated.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Siriwan.V".

Assoc. Prof. Dr. Siriwan Vanichwatanavorachai  
Deputy Dean for Academic Affairs

Faculty of Education, Silpakorn University  
Nakhon Pathom, Office Tel. 034-255-095



No. 8412/3372

Faculty of Education, Silpakorn University  
Sanamchandra Palace Campus,  
Nakhon Pathom 73000, Thailand

August 7, 2024

Title: Invitation to be an inspector of research tool quality

Dear Professor Liu Qingjian,

Mr. Xuanmin Zhu is a graduate student ID 640630069 at Silpakorn University and is studying for Doctor of Philosophy Program in Recreation Tourism and Sport Management at Faculty of Education, Silpakorn University. Currently, he is conducting her Independent study entitled: Development Strategy of Leisure Sports to Improve Physical Fitness for Employees of the Small and Medium Enterprise in Fuzhou City. In this regard, Faculty of Education, Silpakorn University would like to invite you to inspect the quality of research tools for the student.

Your kind assistance and academic contribution is much appreciated.

Yours sincerely,

A handwritten signature in blue ink that reads 'Sirivan V.'.

Assoc. Prof. Dr. Sirivan Vanichwatanavorachai  
Deputy Dean for Academic Affairs

Faculty of Education, Silpakorn University  
Nakhon Pathom, Office Tel. 034-255-095



## Appendix 9

"Leisure sports activity guide improve the physical fitness of small and medium-sized enterprise employees "

(IOC Expert Evaluation Form)

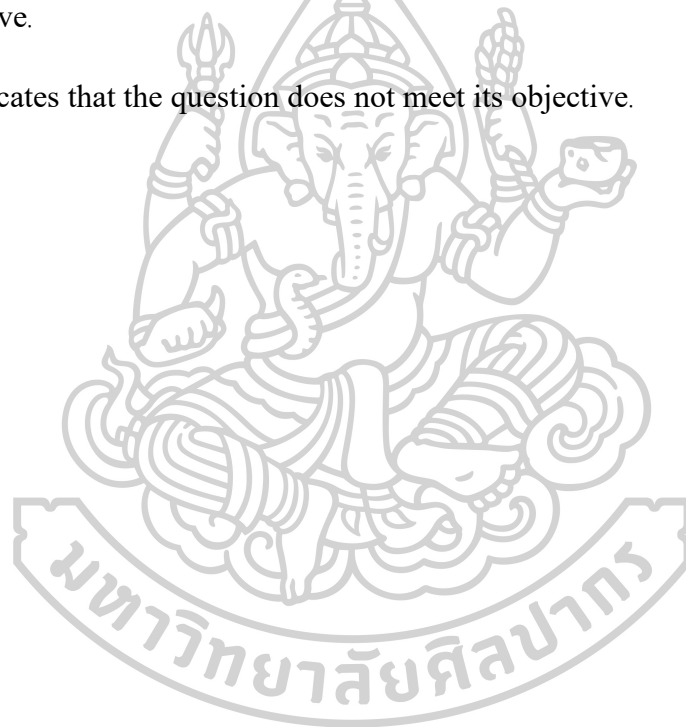
Dear Expert,

This questionnaire aims to evaluate the effectiveness of this plan. Please note that you are not required to answer the following questions but rather to assess the validity of each question. The scale is as follows:

+1: Indicates that the question effectively meets its objective. 0: Indicates uncertainty about whether the question meets its objective.

-1: Indicates that the question does not meet its objective.

Xuanmin Zhu



### Experimental plan

	1	0	1
1. The guidelines for the programme as a whole are sound and effective.			
2. The principles and objectives of the programme are sound and effective.			
3. The programme's process components are sound and effective.			
4. The steps of the programme's activities are reasonable and effective.			
5. The programme's campaign objectives are sound and effective.			
6. The content of the programme is reasonable and effective.			
7. The intensity and frequency of the programme are reasonable and effective.			
8. The duration of the programme is reasonably effective.			
9. The selection of strategies for the plan is reasonable and effective.			
10. From the strategies to create program "Leisure sports activity guide improve the physical fitness of small and medium-sized enterprise employees " is reasonable and effective.			



## Appendix 10

### Scoring table for the plan

Event Guide				
topic	Chenhao Zheng	Qingjian Liu	Hongmei Zhou	IOC
1.	+1	+1	+1	+1
2.	+1	+1	+1	+1
3.	+1	+1	+1	+1
4.	+1	+1	+1	+1
5.	+1	+1	+1	+1
6.	+1	+1	+1	+1
7.	+1	0	+1	0.66667
8.	+1	+1	+1	+1
9.	+1	+1	+1	+1
10.	+1	+1	+1	+1

## Appendix 11

Physical fitness standard 'registration card ( small and medium-sized enterprises )

Name			Gender		
Single index	Performance	Score	Grade	Total score	Total grade
Body mass index ( BMI ) ( kg / m <sup>2</sup> )					
Vital capacity ( ml )					
50m run ( s )					
Sitting forward flexion ( cm )					
Standing long jump ( cm )					
Pull-up ( male ) / 1 minute sit-ups ( female ) ( times )					
1000m run ( male ) / 800 m run ( female ) ( min . s )					
<b>Average score</b>					



## VITA

**NAME**

**INSTITUTIONS**

**ATTENDED**

**PUBLICATION**

[1] ZHU Xuanmin, Liu Qingjian. Discussion on the positioning and implementation of the objectives of street dance programme in colleges and universities based on the 'five-in-one' objective system[J]. Journal of Guangxi Normal University for Nationalities, 2021, 038(003):111-115.( first author)

[2] ZHU Xuanmin. Prevention and treatment of common sports injuries in athletic training[J]. Minerva medica, 2024. ( SCI .corresponding author)

[3] ZHU Xuanmin Review on the Development Dilemma and Strategy of Hip-Hop Dance Enter into College Physical Education Curriculum .Journal of Scientific Research & Reports 28(2): 15-22, 2022; Article no.JSRR.85389 ISSN: 2320-0227.. ( first author)

[3] ZHU Xuanmin. On the inevitability of cheerleading becoming an emerging sport in colleges and universities[J]. Dunking, 2022(14):73-75. ( first author)

[4] ZHU Xuanmin. The effect of patellofemoral joint pain on the mechanical characteristics of the patellofemoral joint during stair walking in the elderly[J]. Journal of Hebei Institute of Physical Education,2023,37(6):90-96 (second author)

