



## Research on the Strategy of the Relationship Between Quality of Life and Leisure Sports—Taking College Students in Putian as an Example

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### Abstract

**Background and Aim:** The study focuses on promoting leisure sports among Putian University students to enhance their physical and mental health and improve their quality of life. The strategy seeks to develop a sustainable model by enhancing facilities, leveraging local resources, and integrating sports activities into students' routines.

**Research method:** This study uses a Research and Development (R&D) approach, combining both qualitative and quantitative methods. Questionnaires provide quantitative data, while interviews and expert discussions yield qualitative insights. The research starts by identifying policies and conducting a survey on college students' quality of life in Putian, followed by a SWOT analysis of leisure sports. Expert interviews refine strategies, which are later tested in seminars. The target group consists of 25,000 full-time undergraduate students at Putian University, with a sample of 379 undergraduates and several experts involved in interviews and discussions. Data is analyzed using descriptive statistics and content analysis.

**Result:** After expert discussion, Strengths (S): High student participation, strong social support, and government initiatives. Weaknesses (W): Limited facilities, lack of long-term planning, and low engagement in organized sports. Opportunities (O), Expansion through media, government support, and integrating sports with local culture. Threats (T), Economic constraints, limited resources, and challenges in sustaining engagement. SO Strategies: Innovate sports activities, enrich campus sports culture, and use media to increase impact. ST Strategies: Improve facilities and collaborate with the government to expand programs. WO Strategies: Adjust the curriculum to allow more leisure time, reform sports courses, and guide student participation. WT Strategies: Strengthen competitions, address economic challenges, and expand fitness facility access.

**Conclusion:** Through a questionnaire survey, expert interview, expert discussion, and focus group interview, this paper puts forward the leisure sports strategy to improve the quality of life of college students at Putian University, and provides a good direction for improving the quality of life of college students at Putian University.

**Keywords:** Strategy; Leisure Sports; Quality of Life; College Students

### Introduction

The future youth is the foundation of national strength, with college students being pivotal to national development. We must prioritize their leisure sports and fitness, especially during their critical age of 18-24. This period is marked by autonomy and is a golden opportunity to shape a healthy lifestyle. However, poor lifestyle choices can negatively impact their quality of life. The benefits of leisure sports on physical, physiological, and psychological health are widely recognized. Lack of physical activity is a leading cause of death and reduces life expectancy by 20-30% (Ammar, 2023). Physical activity is crucial in preventing diseases like cardiovascular issues, diabetes, and obesity. Leisure sports are essential for lifelong health, contributing to individual and national strength. Despite their high cultural quality, college students lack scientific guidance on healthy lifestyles. Physical exercise, recognized for enhancing fitness and health, should be integrated into daily life to improve life quality. College students, especially in Putian City, need scientific guidance and structured leisure sports to ensure all-around development. A questionnaire survey in Putian City can provide insights into students' leisure activities and quality of life, offering vital policy recommendations to improve their well-being.

### Objectives

1. To study the current situation of college students' leisure sports in Putian City.
2. To develop a leisure sports strategy for college students in Putian City.



3. To evaluate the feasibility of the existing leisure sports development of college students in Putian City, a new strategy is proposed.

## Literature Reviews

### Research on Quality of Life

Research on quality of life began in the U.S. in the 1930s and expanded in the 1950s and 1960s, with significant attention from the medical field in the 1970s. Countries like Germany, Switzerland, and Japan also contributed. The World Health Organization defined "health" in 1946 as involving physical, psychological, and social well-being. Social sciences began addressing quality of life in the 1960s, but it remains a broad concept influenced by personal, cultural, and societal factors (Bowling, 1995). Scholars including compared research from different countries. Galbraith is often credited as the originator of the quality of life concept. Early research by Ogburn and others in the U.S. developed the field into two streams: social indicators and quality of life studies. Campbell et al (1976) conducted significant national surveys on life satisfaction. Ajzen (1985) and Fair studied the impact of factors like age and employment status on quality of life.

In China, much research has focused on college students. Chen (2001) highlighted the complexity of defining quality of life, while Liu (2001) used the SF-36 survey from the WHO to study aspects like physical health and social functioning. Lu (1998) and Huang (2005) proposed frameworks to evaluate the quality of work and life in China, examining factors such as work environment, income, and relationships. Scholars like Zhou and Rao (2001) expanded the scope of quality-of-life research to include social and natural environments. Hu and Chen (2012) emphasized the global history of the concept, tracing it back to Ogburn's 1933 study. Overall, the concept of quality of life has been studied from both objective and subjective perspectives, with scholars integrating multiple dimensions in their definitions.

### Relevant Research on Leisure Sports Activities

The World Health Organization (WHO) highlighted the importance of sports in promoting health in 1994. Researchers like Yazicioglu et al. (2012) found that college students with active sports lifestyles had higher life satisfaction and better quality of life than those without. Zhang (2003) analyzed sports participation among college students, providing suggestions to enhance their sports lifestyles. Tao and Dai (2009) discovered a link between good sports habits and better health among university students, while Li and Ge (2011) found that sports lifestyle investments positively impact quality of life. Wu et al. (2009) further emphasized that sports play a significant role in improving quality of life.

This study will use Yao's (2002) quality-of-life scale and Wu's (2009) questionnaire, focusing on psychological, environmental, physical health, and social relationship categories.

## Conceptual Framework

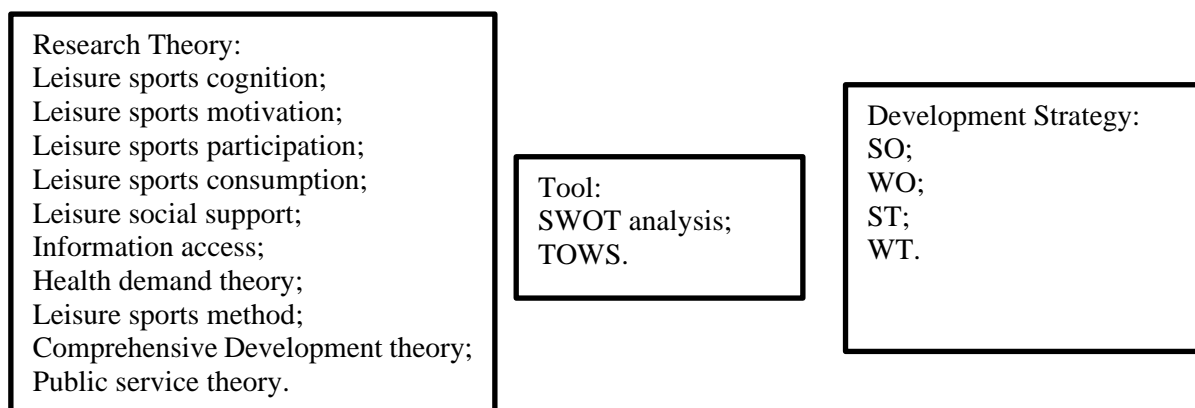


Figure 1 Research Framework



## Methodology

### Research Methodology

This study utilizes the R&D approach, combining both qualitative and quantitative methods. Questionnaires are used for quantitative analysis, while qualitative insights are gathered through interviews and expert discussions. Quantitative analysis through descriptive statistical analysis and qualitative analysis through content analysis. R1: The research begins by identifying relevant policy documents and strategic concepts through online searches, followed by a survey to evaluate the quality of life of college students in Putian City, highlighting existing issues. D1: A SWOT analysis is then conducted to understand the strengths and challenges of leisure sports in Putian City. Expert interviews are used to refine strategies aimed at improving student life quality. R2: The proposed strategies are tested and assessed through expert seminars. D2: Final recommendations for development are made based on these evaluations.

### Target group

Putian University has full-time undergraduate students, a total of 25,000 people.

### Sample

According to the Krejci & Morgan (1970) scale, 379 full-time undergraduates from four grades (2023, 2022, 2021, and 2020) on the new campus of Putian University were selected as the survey subjects. The sample size for expert interviews was 5 people, the sample size for expert discussions was 9 people, and the sample size for focus group interviews was 15 people.

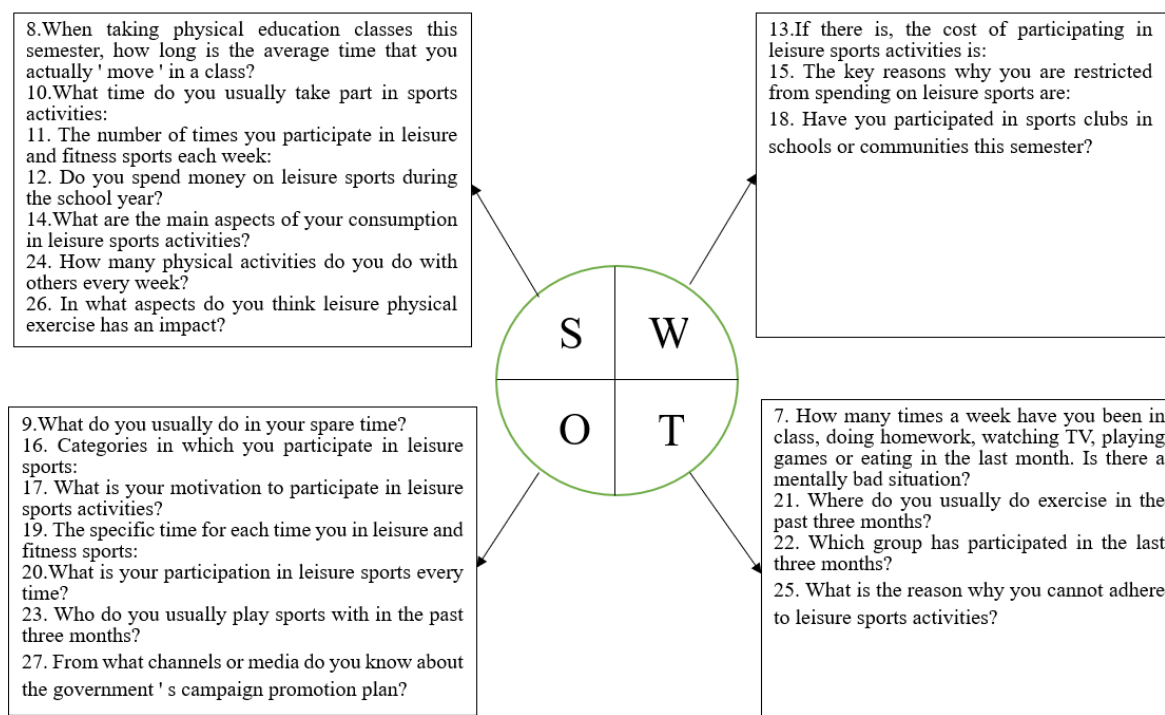
### Data Analysis

Quantitative analysis through descriptive statistical analysis and qualitative analysis through content analysis.

## Results

The leisure sports development questionnaire consists of three parts. The first part: the sixth question is the basic information of the survey object; the second part: questions 7-question 27 is the frequency analysis of the questionnaire, and the third part: questions 28 to 44 is the five-level scale of the questionnaire. Here, only question 7-44 is analyzed.

### *Part 1: Leisure Sports Frequency Analysis Result*



**Figure 2** SWOT Analysis of Leisure Sports Participation

Classify according to the meaning set by the topic: questions 8,10,11,12,14,24,26, categorizing these questions under advantage development (S). Questions 13,15,18 categorizing them under disadvantaged development (W). Questions 9,16,17,19,20,23,27 categorizing them under disadvantaged development (O). Questions 7,21,22,25 categorizing them under disadvantaged development (T).

### *Part 2: Leisure Sports Development Result*

From the perspective of the data obtained, the average satisfaction of the 40th, 32nd, 35th, 36th, 42nd, 29th, 38th, 34th, 28th, 37th, 44th, and 41st questions is greater than 2.5, and these questions are divided into advantage development (S/O); the average satisfaction of questions 30, 31, 33, 43 and 39 is less than 2.5. This paper divides these questions into disadvantage development (W/T).

Summary: S/O (Situations/Opportunities), Physical Activity: Covers topics like movement time in PE classes (Q8), weekly participation in sports (Q11), and group physical activities (Q24). Support: Focuses on the support received from teachers, parents, classmates, and friends for participating in sports (Q35-37). Health and Consumption: Includes health assessments (Q28), medical conditions (Q32), and spending on leisure sports (Q12, Q14). Leisure and Motivation: Explores leisure sports categories (Q16), motivation for participation (Q17), and typical leisure activities (Q9). W/T (Weaknesses/Threats), Costs, and Restrictions: Discusses spending on leisure sports (Q13), reasons for financial restrictions (Q15), and barriers to maintaining leisure sports activities (Q25). Health and Well-being: Assesses mental and physical well-being, including sleep quality (Q31), energy in class (Q30), and overall health issues (Q7). Lack of Support and Facilities: Evaluates school and government support for sports promotion (Q34, Q39, Q43), and sufficiency of urban sports facilities (Q41).

### *Part 3: Quality of Life Result*

In the quality-of-life survey, average satisfaction scores from 20 multiple-choice questions across four categories—physiological, psychological, social relationships, and environmental—were analyzed. In the physiological category, questions 3 and 4 scored below 2.5 and were identified as disadvantages, while questions 1, 2, and 5 scored above 2.5, marking them as advantages. In the psychological category,



questions 6, 8, 9, and 10 had average scores above 2.5, categorizing them as advantages, whereas question 7, with a score below 2.5, was seen as a disadvantage. In the social relationships category, questions 11, 12, 13, and 14 scored above 2.5, categorizing them as opportunities, while question 15, with a score below 2.5, was identified as a threat. Lastly, in the environmental category, questions 16, 17, 18, and 20 scored above 2.5, making them opportunities, while question 19, with a score below 2.5, was considered a threat. Based on the survey results, it is concluded that questions 9, 6, 8, 10, 5, 1, and 2 are advantageous development (S); questions 3, 7, and 4 are inferior development (W); Title 12, Title 13, Title 14, Title 16, Title 20, Title 11, Title 17, Title 18 is Opportunity Development (O); questions 15 and 19 are about threat development (T).

*Part 4: Build Putian City College Students ' Leisure Sports Development TOWS Matrix*

**Table 1** Putian College Students TOWS Matrix Summary

Internal Environment	External Environment	
	SO Combination	ST Combination
	Enthusiasm for participation: S12, O38, O41; Personalized and diversified needs : S8, S10, O16, O17, O20, S26, S28, S32; Leisure sports, entertainment, and sociability: S24, S40; Increase the number of activities: S11, O23, O34; Cultivate leisure sports talents: O19, O29; Expand the impact of leisure sports development: O9, O27, S42, O44; Increase of sports population : S1, S2, S5, O11; Sports common sense dissemination : S8 , S9 , O13 , O18; Satisfaction with family relationships and the environment : O14, ,16, ,17, ,20, S35, S36; Social activities and competitions: S6, S10, O12.	Improvement of social sports facilities: S7, T21; Open and increase school leisure sports facilities: T19; Government organization and promotion platform : S12, S14, S26, S42; Government, schools to increase hardware and software investment: S35, S36, S37; Develop leisure sports research route and location: T22, T39, S11, S24, S40; Leisure sports activities with local Putian characteristics: T43 , S8 , S10 , S28 , S32; Strengthen contact with parents, and timely guidance: T15, S6, S9, S10; Utilize available spaces for physical exercise: S1, S2, S5, S8; Venue and time-independent activities: S21, S25, T19.
	WO Combination	WT Combination
	Adjust the curriculum structure, increase leisure time: W30, W31, O19, O23, O34 , O38; Increase leisure sports guidance and consulting services: W18, O9, O27, O29; Reform leisure sports courses based on student preferences: W33, O16, O17, O20, O41; Guide students to spend on leisure sports: W13, W15, O44; Change the teaching mode to explore a suitable approach for the professional way: W3, O18; Reduce classes and increase rest time: W4, O20;	Enrich inter-university competitions for exchange and improvement: W18, T25; Increase paid services to address students' financial challenges: W15; Schools to increase sports volunteer positions, to solve the economic difficulties of students: W13; Hold leisure sports events combined with tourism: W7, W30, W31, W33; Increase time for leisure sports activities: T25; Parents and teachers care about students' psychological state: W4, T15; To carry out a targeted psychological symposium: W3; Establish psychological salon: W7; Open school fitness facility venues: T19.





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Establish psychological support and address  
student emotions: W7, O11, O12,  
O13, O14, O16, O17.

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Summary: After expert discussion, three SO strategies are finally determined: SO2: Innovate the types and activities of leisure sports activities to meet the personalized and diversified needs of students; SO5: cultivate leisure sports talents, embody sports value and form culture; SO6: With the help of network media, expand the impact of leisure sports development. There are four ST strategies: ST1: leisure sports facilities are constantly improved to provide students with a good exercise environment; ST3: government organization and coordination, expand the promotion platform and expand the leisure sports base project; ST4: the government, schools to increase hardware and software investment; ST5: the government, schools, colleges, and universities to develop leisure sports research route and location. There are three WO strategies: WO1: adjust the curriculum structure and increase leisure time; WO5: change the teaching mode, to explore suitable for all professionals; WO7: timely dredge students' emotions and establish a psychological support group. There are two WT strategies: WT1: enrich the competition between colleges and colleges, promote mutual communication, and make up for differences; WT3: The school increases the position of sports volunteers to solve the economic difficulties of students. The above strategy is the final strategy.

After expert discussion, the summary is as follows: SO Strategies: Innovate leisure sports activities to meet diverse student needs, cultivate talents, and expand the impact through media. WO Strategies: Adjust the curriculum and teaching methods to increase leisure time and support students emotionally through dedicated programs. ST Strategies: Improve sports facilities and increase government and school coordination to promote sports development and research. WT Strategies: Enhance inter-college sports competitions and volunteer programs to address student financial and social challenges.

#### *Part 5: Feasibility of the strategy*

The interviews highlighted the benefits of sports activities, such as improving health, relieving stress, and enhancing social skills, but also identified challenges like limited resources and low participation. Key recommendations include diversifying sports programs, improving facilities, increasing government support, and integrating psychological assistance and flexible teaching methods.

## **Discussion**

The study highlights that college students' participation in leisure sports is influenced by intrinsic motivation, social norms, and perceived control, aligning with Li Jincheng's findings (Li, 1999; Hagger & Chatzisarantis, 2014). A key barrier to forming exercise habits is the lack of sociability, as many students feel they have no one to exercise with or feel embarrassed, compounded by modern technology that reduces opportunities for physical activity.

Exercise motivation is primarily driven by the desire to improve physical fitness and enhance interpersonal relationships. The interaction between individuals and their environment during sports activities contributes to enjoyable experiences, stress relief, and habit formation. Theories like self-efficacy and competence need to support the idea that fostering awareness, interest, and self-discipline in exercise is crucial for developing exercise habits. Active participation, goal satisfaction, and the joy derived from physical activity are key factors in sustaining regular sports participation (Hu & Yu, 2019).

The study revealed low student participation in leisure sports, with a preference for spectator activities over active involvement. Key influences on exercise habits include the quality of physical education, teacher competence, and access to sports facilities, particularly in urban schools. Improving these resources, along with addressing social and economic factors, is essential for promoting lifelong physical activity.

The study found that while most students spend money on leisure sports, the amounts are relatively low, with common purchases being sports clothing and footwear. Research shows that parents' views on

physical exercise play a key role in shaping students' sports behavior. Additionally, family income significantly influences adolescents' participation in paid sports activities (Dong, 2010). The impact of grandparents raising children on youth sports habits is an emerging issue in China, though the broader influence of family communication on exercise habits may be less significant.

The study emphasizes that access to fitness information and government promotion of public sports values, along with large-scale sports events, can influence adolescents' exercise habits. Research shows that urban environmental factors, such as walkability, play a significant role in promoting physical activity and reducing disparities in gender and BMI (Althoff et al., 2017). A Stanford study further highlighted that walkable cities increase physical activity, particularly among women, across various demographics, suggesting the importance of urban design in shaping exercise habits.

The results highlight the significant influence of social networks on exercise habit formation, as evidenced by a study from MIT (Aral et al., 2017). This study also found that young people now access a wider range of information channels, especially through computers and smartphones. Consequently, incorporating social media communication into interventions may be more effective in promoting and fostering exercise habits.

## Recommendation

### *Recommendation for this study*

1. Diversified development: This is a very appropriate strategy because college students have a variety of interests and needs. By introducing different types of activities to meet their needs and promote comprehensive development.
2. Demand research: Before formulating any strategy, it is very important to carry out demand research. This helps to ensure the pertinence and effectiveness of the strategy, avoiding waste of resources and ineffective efforts.
3. Perfect facilities: Sports facilities are the basis for leisure sports activities. Improving and maintaining these facilities can provide students with a safe and comfortable sports environment and improve their enthusiasm and satisfaction in participating in sports activities.
4. The integration of local characteristics: the development of leisure sports in combination with local characteristics can not only increase the attractiveness and interest of activities but also inherit and carry forward local culture. This is also beneficial to improve the cultural literacy and identity of college students.
5. Sustainable development: It is important to consider sustainability when developing strategies.

### *Future research recommendations*

1. It is anticipated that future research will focus more on the impact of urban environmental construction on the formation of exercise habits.
2. The phenomenon of grandparents raising the next generation is a social issue currently present in youth education in China, which warrants further research.

## References

- Ajzen, I. (1985). *From Intentions to Actions: A Theory of Planned Behavior [M]// In Action Control: From Cognition to Behavior*. Springer, 11-39.
- Althoff, T., Sosič, R., Hicks, J. L., King, A. C., Delp, S. L., & Leskovec, J. (2017). Large-Scale Physical Activity Data Reveal Worldwide Activity Inequality. *Nature*, 547(7663), 336-339.
- Ammar, A., Trabelsi, K. (2023). Global Disease Burden Attributed to Low Physical Activity in 204 Countries and Territories from 1990 to 2019: Insights from the Global Burden of Disease 2019 Study. *Biology of Sport*, 40(3), 835-855.
- Aral, S., & Nicolaides, C. (2017). Exercise Contagion in a Global Social Network. *Nature Communications*, 8, 14753.
- Bowling, A. (1995). The Concept of Quality of Life about Health. *Medicina Nei Secoli*, 7(3), 633-45.



- Campbell, A., Convers, P. E., & Rodgers, W. L. (1976). The Quality of American Life: Perception, Evaluations and Satisfaction. *Science*, 194, 52-54.
- Chen, M. (2001). *Research on the Impact of the Quality of Work and Life on the Impact of the Organization's Commitment—Take Customs Staff As an Example*. National University of Pollution.
- Dong, H. (2010). The Impact of Family Social Capital on Adolescents' Awareness and Behavior of Physical Exercise and Reflections. *Journal of Shenyang Sport University*, 29(2), 33-37.
- Hagger, M. S., & Chatzisarantis, N. L. D. (2014). An Integrated Behavior Change Model for Physical Activity. *Exercise and Sport Sciences Reviews*, 42(2), 62-9.
- Hu, P., & Yu, F. (2019). Research on the Influencing Factors of Physical Exercise Among Middle School Students—A Multi-Level Model Based on CEPS (2014-2015) Data. *Journal of Sports Science*, 39(1), 76-84.
- Hu, R., & Chen, Y. (2012). Statistical Analysis of Rural Residents' Life Satisfaction--Taking Jiangsu as an Example. *China Rural Economy*, 12, 80-91.
- Huang, S. (2005). *Related Research on Professional Women's Sports and Leisure Participation in Independent Management and Quality of Life*. National Sports University.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Li, J. (1999). Comparative Study on Predicting Physical Exercise Behavior Using the Theory of Reasoned Action, Planned Behavior, and Social Cognitive Theory. *Journal of Tianjin Institute of Physical Education*, 14 (2), 35-37.
- Li, X., & Ge, Y. (2011). Investigation on Sports Life Style and Quality of Life of College Students. *Modern Preventive Medicine*, 3, 3953-3954.
- Liu, X.E. (2001). How to Improve the Quality of Life of the Elderly. *General Nursing*, 18(3), 217-222.
- Lu, Y. (1998). Overview of the Quality of Life in Taiwan. *China Public Health Magazine*, 17(6), 442-457.
- Tao, Y., & Dai, C. (2009). A Study of Physical Lifestyle and Physical Fitness of College Students. *Journal of Wuhan University of Technology*, 3, 190-192.
- Wu, Y., Liu, Z., & Li, H. (2009). Correlative Study of College Student's Quality of Life with the Factors of Exercise in China. *China Sport Science and Technology* 5, 88-91.
- Yao, K. (2002). Taiwan Version of the World Health Organization Life Quality Questionnaire Development and Application. *Taiwan Medicine*, 6(2), 193-200.
- Yazicioglu, K., Yavuz, F., Goktepe, A.S., Tan, A.K. (2012). Influence of adapted sports on quality of life and life satisfaction in sport participants and non-sport participants with physical disabilities. *Disabil Health J.* 5(4):249-53. doi: 10.1016/j.dhjo.2012.05.003.
- Zhang, L. (2003). Investigation and Analysis of Sports Mode for College Students. *Shandong Sports Science & Technology*, 3, 42-44.
- Zhou, C., & Rao, Q. (2001). Research on Quality of Life Measurement Methods. *Quantitative and Technical Economic Studies*, 4, 74-77.

