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A Study on Youth Satisfaction and Service Alignment in Public Sports Services in Guangxi: A Digital Governance Perspective

Ying Huang[1], Napatsawan Thanaponganan[2], Yada Thadanatthaphak[3]

Abstract

This study evaluates the quality of public sports services for youth in Guangxi based on a "digital technology-needs-oriented-precise provisioning" framework. Validated measurement scales were developed to assess service satisfaction and demand-supply matching degree among 1,200 youth participants across 10 cities in Guangxi.The results reveal several service deficiencies including inadequate facilities, limited service variety, and poor information accessibility, which collectively impact youth participation and satisfaction levels. While overall satisfaction scores remain moderately high, significant disparities emerge across gender and educational levels, indicating notable demand-supply mismatches. These findings demonstrate the need for improved coordination between service provision and youth requirements in Guangxi's public sports service system. The study provides empirical evidence for understanding the current state and influencing factors of youth-oriented public sports services in the region.

Keywords: *Public Sports Service, Satisfaction, Youth Health.*

Introduction

In China, nearly 80% of youth engage in less than one hour of physical activity per day, leading to a series of health issues due to the lack of physical exercise. The World Health Organization (WHO) has listed lack of physical activity as the fourth most important risk factor for global deaths and the fifth leading cause of death. WHO has also classified physical inactivity (PA) as the fourth leading global risk factor for death from non-communicable diseases (NCDS), following hypertension, smoking, and high blood glucose.

The development and release of Report Cards on physical activity for children and youth have been used in many countries for advocacy and social mobilization to increase young people's activity by influencing perceptions, priorities, policies, and practices(Colley et al,2012,Tremblay,2014). Regular physical activity during childhood and adolescence provides numerous benefits for immediate and future health (Loprinzi et al,2012,WHO,2017). International studies have shown that physical activity decreases with age during adolescence (Sterdt et al,2014).Studies have shown that it helps youth develop a healthy loco-motor system (bones, muscles and joints), good control and coordination of movements and a healthy cardiovascular system (heart and lungs). It may also contribute to appropriate weight and

[1] Department of Health and Sport Science, Faculty of Education, Mahasarakham University, Maha Sarakham, 44000, Thailand, Emai：l19968100517@163.com.
[2] Department of Health and Sport Science, Faculty of Education, Mahasarakham University, Maha Sarakham, 44000, Thailand, Email：napatsawan.t@msu.ac.th, (Corresponding Author)
[3] Department of Health and Sport Science, Faculty of Education, Mahasarakham University, Maha Sarakham, 44000, Thailand, Email: yada.t@msu.ac.th.

favorable psychological health. The practice of regular physical activity might thus prevent certain chronic diseases that occur later in life(Loprinzi et al 2012,WHO,2017).For youngsters 5 to 17 years of age, the World Health Organization (WHO) recommends practicing daily moderate-to-vigorous physical activity (MVPA) for at least 60 min, and vigorous physical activity (VPA) at least three times a week.These results highlight the need to make children aware of the importance of regular physical activity at an early age and encourage them to be physically active. To support this process, more research is needed to find ways to increase physical activity in youth.Studying an adolescent's environment, primarily school and home, will help to understand what might contribute to increased physical activity. In addition to physical activity, a major contribution to children's physical activity lies in free active play and unorganized physical activity in the open air during free time. This type of game offers many benefits in terms of cognitive, social, and physical development(Yeh et al,2016).

The "14th Five-Year Plan for the Development of Sports in China in 2020" points out that the principal contradiction in Chinese society has shifted to the conflict between the growing Need for a better life and the imbalance and inadequacy of development. The main manifestation of the imbalance between supply and Need in China's public sports services is the lack of precise supply motivation among the supply entities and the absence of a public Need expression mechanism (Jiang Hongyu, 2019). Therefore, the "Outline for the Construction of Sports Power in 2020" explicitly proposes to "enhance the ability to provide public sports services for all." Digital governance is emerging as a new technology to improve public services and citizen participation (Misener,Doherty,2014). Digital technology is becoming a valuable tool to create better public services and benefit the entire society (Katsonis,2015). With the rapid development of the internet and information technology, as well as the popularity of new technologies such as artificial intelligence and VR (Virtual Reality), residents' Need for sports and fitness has demonstrated intelligent characteristics (Xu Huaqiong, 2023). Relying on digital technology to promote the precise supply of public sports services is a manifestation of the modernization of public sports services (Wang Zhiwei, 2023).Therefore, this paper aims to study youth satisfaction with and needs for public sports services, construct a needs structure model, enhance the effective supply of public sports services, and promote youth physical health.

Objective

Youth public sports services are aimed at providing young people with a variety of fun sports activities. It mainly includes sports that can meet the sports needs and interests of young people, such as football, basketball, volleyball, swimming, badminton, tennis, and other sports. Schools and governments regularly hold sports events to provide young people with opportunities to show their talents and test their competitive skills, which also helps to improve young people's sports skills and cultivate their competitive awareness and ability to resist frustration. Schools equip young people with professional coaches and instructors, provide scientific training methods, and personalized guidance to improve sports skills and prevent sports injuries. Schools and governments respectively provide sports venues and facilities that meet safety standards. The government also encourages communities and families to actively participate in youth sports activities, forming a public sports service of school-community-family trinity to increase youth sports participation.

Based on the understanding and comprehension of the concept of health at different stages, this study suggests enhancing physical functions, improving health levels, and quality of life through a good lifestyle, such as physical exercise, psychological counseling, and dietary

adjustments.The number of scientific works in the Scopus and Web of Science (WoS) databases by search queries that reflect the relationship between digitalisation, the spheres of education, health care and social protection:

Keywords	Scopus	Wos
Digitalisation and social services	35	35
Digitalisation and education	1960	2267
Digitalisation and healthcare	555	432
Digitalisation and social protection	22	20

Table 1. Scopus And Web of Science (Wos) Databases

Sources: developed by the authors based on Scopus and Web of Science.

Youth public sports services refer to all kinds of sports services provided by the government, social organizations, schools and other parties to meet the sports needs of teenagers, enhancing their physical fitness and promoting the healthy growth of teenagers.

Encourage people to think about the opportunities and problems brought to social work by the contemporary digital age. Since the National Recovery and Recovery Plan and the National Social Plan 2021-2023 require the rapid adoption of digitization by public administrations, some theoretical and methodological principles must be kept in mind to avoid making digitalization of social services into purely technical problems and make full use of the opportunities for social work to successfully adapt to specific methods and intervention objectives.This consideration is based on the monitoring and observation of the creation and implementation of the Social Service Information System (ISSS) in the Friuli-Julia region and the digitization process of the Social Home (Cartella Sociale) used by social workers in all social service organizations in the region. This paper highlights the importance of treating ISSS not only as a tool for collecting information that describes reality, but more importantly, as a tool for users to enhance knowledge, serve objects, and build relationships with each other. Therefore, this paper suggests that information tools and systems be focused in the daily work of social workers and developed with their direct and ongoing involvement.

Based on the research findings, the paper puts forward the digital-driven, demand-oriented and accurate Guangxi youth public sports service strategy. Developed countries have applied digital technology to sports, improving the efficiency and quality of services. However, the feedback and two-way communication mechanism of youth sports demand in Guangxi is not perfect, and there are problems such as supply mismatch and resource waste. Therefore, relying on the characteristics of digital technology, it is necessary to balance the participation of multiple parties, reshape the interactive relationship, effectively integrate resources, and improve the supply efficiency. This will help the government to accurately identify, acquire and express the needs of youth sports, and promote the evolution of youth sports public services towards the

goal of high-quality development.

Materials and Methods

This study employed a cross-sectional survey design to investigate youth satisfaction and demand matching regarding public sports services in Guangxi. A structured questionnaire was developed as the primary research tool, incorporating validated scales to assess service satisfaction (including facility quality, accessibility, and service diversity) and demand-supply matching degree. The questionnaire utilized a 5-point Likert scale for quantitative measurement and included open-ended questions to capture qualitative feedback.

Through stratified random sampling, 1,200 youths aged 15-24 were recruited from 10 representative cities across Guangxi. Trained researchers administered the survey both online and offline to ensure data diversity. Collected data underwent reliability analysis (Cronbach's α >0.8) and factor analysis to verify measurement validity before statistical processing.

Quantitative analysis included descriptive statistics to evaluate overall satisfaction levels and ANOVA to examine demographic differences (gender, education level). Multiple regression analysis identified key determinants of satisfaction, while gap analysis compared service performance with youth expectations to quantify demand-supply mismatches. Qualitative responses were thematically coded to contextualize quantitative findings. This mixed-methods approach enabled comprehensive evaluation of current service deficiencies and evidence-based optimization recommendations.

Study Design and Participants

Stratified sampling has the advantages of flexibility, high efficiency and accuracy, which can improve the sample representativeness and accuracy, and the stratified sampling method was used in this study. References of the Chinese youth public sports service supply mechanism research: select different regions, different levels of basic obligation stage of primary and secondary schools, a total of 820 primary and middle school students for the survey object (guo, 2016), according to the Guangxi zhuang autonomous region department of education released the 2022 Guangxi education career statistics main results:There are about 500,000 youth aged 12-18 in Guangxi Province. The sample size should be: in order for this study to do the minimum error, the investigator collects 1200 samples in the questionnaire：

$$n \geq \frac{N}{\left(\frac{\alpha}{\kappa}\right)^2 \times \frac{N-1}{P(1-P)} + 1} = \frac{500000}{\left(\frac{0.05}{1.96}\right)^2 \times \frac{500000-1}{0.50 \times (1-0.50)} + 1} = 385$$

Based on the above sample size formula, the minimum sample size for the adolescent population should have been no less than 385 participants. To ensure that the study results were broadly representative and reflected the overall situation of youth in Guangxi Province, this study decided to expand the sample size to 1200 participants. Considering that there were approximately 500,000 youth in Guangxi Province, we randomly selected samples from 10 cities across the province to enhance the study's comprehensiveness and the generalizability of the conclusions.

Total Number of Sample Size

There are 14 prefecture-level cities in Guangxi Zhuang Autonomous Region. 10 prefecture-level cities are selected from this study, namely Nanning, Guilin, Liuzhou, Beihai, Yulin, Guigang, Baise, Wuzhou, Qinzhou and Laibin. On the basis of meeting the above calculated sample size of 1067 people, in order to minimize the error in this study, the investigators collected 1,200 samples in the questionnaire. The details are as follows:

Grade City	Nan ning	Gui lin	Liu zhou	Butter worth	Ngoc Lam	Gui gang	Bai se	Wu zhou	Qin zhou	Lai bin
Middle school	160	60	60	60	60	60	60	60	60	60
High school	160	40	40	40	40	40	40	40	40	40
Tote	1200 People									

Table 2. Guangxi Cities List

Ethical Considerations

This study strictly adhered to ethical research principles to protect the rights of participants and ensure the scientific integrity and confidentiality of the data collected. The research was approved by the Mahasarakham University Ethics Committee (Approval No. 501-476/2024) on Augest 14, 2024, with the approval valid until Augest 14, 2025. The study underwent an expedited review process, and all activities were conducted in Guangxi Province, China. Research procedures were meticulously designed to minimize any physical or psychological risks to participants.

Validity and Reliability Process

To maintain the scientific rigor and quality of the research, a detailed evaluation process was implemented:

1.IOC：Seven experts were invited to evaluate the consistency between the test items and their intended measurement objectives in the questionnaire to ensure feasibility and alignment with the study objectives.

2.Item analysis :The primary purpose of item analysis is to assess the suitability of items within a constructed scale. The most commonly used discriminative indicator in item analysis is the Critical Ratio (CR), which determines the CR-Value for individual items in a questionnaire.

3.Pearson correlation analysis :Examining the correlation between individual items and the total score using internal consistency testing is another crucial criterion for item selection, typically assessed with the Pearson correlation coefficient.

4.Reliability analysis:Reliability refers to the stability and consistency of the results obtained from a measurement tool. Higher reliability indicates a smaller standard error of measurement.

Results

Validity evaluation	More efficient	Effective	Normal	Less effective	In vain
Questionnaire content	4（57.14%）	2（28.57%）	1（14.28%）	0	0
Questionnaire structure	5（71.42%）	1（14.28%）	1（14.28%）	0	0
Overall evaluation	6（85.71%）	1（14.28%）	0	0	0

Table 3: Statistical Table of Expert Evaluation Results of Questionnaire Design

After the formation of the questionnaire on satisfaction with and matching degree of public sports services for youth in Guangxi, seven experts were invited to conduct an overall evaluation of the questionnaire's content and structure. They also evaluated and scored the readability of the questionnaire items, the coverage of indicators reflecting developmental needs, the accuracy of item arrangement, and the level of comprehension. The result was a passing evaluation, ensuring the reliability and validity of the questionnaire.

Items	t	Significance		Pearson related	Cronbach's α if item deleted	Result
		Unilateral P	Bilateral P			
Venue and Equipment Services 1	9.558	0.000	0.000	.625**	0.881	pass
Venue and Equipment Services2	10.010	0.000	0.000	.681**	0.880	pass
Venue and Equipment Services3	10.281	0.000	0.000	.676**	0.880	pass
Venue and Equipment Services4	11.497	0.000	0.000	.706**	0.879	pass
Venue and Equipment Services 5	12.533	0.000	0.000	.753**	0.878	pass

Sports Organization Services 1	8.943	0.000	0.000	.621**	0.881	pass
Sports Organization Services 2	8.868	0.000	0.000	.655**	0.880	pass
Sports Organization Services 3	13.532	0.000	0.000	.736**	0.877	pass
Sports Organization Services 4	13.392	0.000	0.000	.756**	0.877	pass
Sports Activity Services 1	14.363	0.000	0.000	.801**	0.876	pass
Sports Activity Services 2	14.774	0.000	0.000	.780**	0.877	pass
Sports Activity Services 3	14.000	0.000	0.000	.783**	0.877	pass
Sports Activity Services 4	14.182	0.000	0.000	.743**	0.877	pass
Sports Activity Services 5	8.705	0.000	0.000	.625**	0.881	pass
Sports Guidance Services 1	1.741	0.042	0.084	.163*	0.892	pass
Sports Guidance Services 2	2.484	0.007	0.014	.178**	0.891	pass
Sports Guidance Services 3	6.271	0.000	0.000	.378**	0.887	pass
Sports Guidance Services 4	7.400	0.000	0.000	.416**	0.886	pass
Sports Guidance Services 5	5.765	0.000	0.000	.356**	0.887	pass
Sports Information Services 1	6.893	0.000	0.000	.401**	0.887	pass
Sports Information Services 2	6.893	0.000	0.000	.401**	0.887	pass
Sports Information Services 3	2.440	0.008	0.016	.180**	0.890	pass

Sports Information Services 4	2.804	0.003	0.006	.207**	0.890	pass
Sports Information Services 5	1.753	0.041	0.082	.151*	0.891	pass
Physical Fitness Testing Services 1	3.106	0.000	0.000	.255**	0.889	pass
Physical Fitness Testing Services 2	4.330	0.000	0.000	.297**	0.888	pass
Physical Fitness Testing Services 3	3.518	0.000	0.000	.231**	0.890	pass
Physical Fitness Testing Services 4	3.262	0.000	0.000	.230**	0.890	pass

Table 4 Validity analysis of Satisfaction Scale

* = $p < 0.05$; ** = $p < 0.01$

In the correlation analysis of the questionnaire items and the total score, it is found that most items have a high correlation with the total score. Among them, the t- values of items 1 and 2 of Sports Guidance Services, 3 and 5 of Sports Information Services are <3. However, the difference of P-values is close to significant under the condition of equal variance, and close to the significance threshold without equal variance. The size of the T-value is affected by a number of factors, including sample size, variance, and so on. Therefore, even if the T-value is not high, as long as the significance level (p-value) is low enough, it can be considered that there is a significant difference between the variables, and it still has certain statistical significance.

Items	t	Pearson related	Cronbach's α if item deleted	Result
Matching 1	26.758	.940**	0.918	pass
Matching 2	20.106	.949**	0.917	pass
Matching 3	20.730	.912**	0.923	pass
Matching 4	11.869	.764**	0.945	pass
Matching 5	16.502	.901**	0.925	pass
Matching 6	12.257	.811**	0.945	pass

Criteria	≧3.000	≧0.400		

Table 5: Alidity Analysis Supply and Need Matching Scale

* = p < 0.05; ** = p < 0.01

In this study, according to the extreme value method test (t test) rule, the test of 6 items in the matching degree scale showed that the CR value of each item reached a significant level, and there were significant differences in the high and low groups of each item, so there was no need to delete the item. In the correlation analysis of the questionnaire items and the total score, it is found that most of the items have a high correlation with the total score, indicating that these items have good validity in measuring the target characteristics, and each item can effectively distinguish the differences among the subjects, indicating that the overall structure of the questionnaire is stable and has good internal consistency.

KMO Value and Bartlett Test Results of 28 Items of Youth Public Sports Service Satisfaction

KMO sample appropriateness measure		0.957
Bartlett sphericity test	Approximate chi-square	5730.857
	Degree of freedom	120
	significance	＜0.01

Table 6 KMO Test On 28 Items of Youth Public Sports Service Satisfaction

Factor analysis of youth public sports service satisfaction scale. After SPSS factor analysis of 28 questions in the satisfaction part of 235 valid samples, the results show that: KMO = 0.957, Bartlett spherical chi-square value P=0.00 < 0.01, indicating that there is no significant difference in the degree of correlation between variables, which meets the basic conditions of factor analysis, and also explains the consistency among questionnaire items, the effectiveness of measurement and the persuasion of research conclusions to a certain extent.

KMO sample appropriateness measure		0.813
Bartlett sphericity test	Approximate chi-square	1349.069
	Degree of freedom	10
	significance	＜0.01

Table 7 KMO Test Results Of 6 Items in the Youth Public Sports Service Match Scale

Factor analysis of youth public sports service matching scale. After SPSS factor analysis of 6 questions in the satisfaction part of 235 valid samples, the results show that: KMO = 0.813, Bartlett spherical chi-square value P=0.00 < 0.01, indicating that there is no significant difference in the degree of correlation between variables, which meets the basic conditions of factor analysis, and also explains the consistency among questionnaire items, the effectiveness of measurement and the persuasion of research conclusions to a certain extent.

City	Number of copies issued	Number of valid copies recovered	Effective recovery
Nanning	250	225	90%
Guilin	105	102	97.14%
Liuzhou	110	106	96.36%
Beihai	103	96	93.2%
Yulin	106	93	87.73%
Guigang	110	99	90%
Wuzhou	108	98	90.74%
Laibin	106	93	87.73%
Baise	102	95	93.13%
Qinzhou	107	101	94.39%
Total	1200	1108	92.33%

Table 8 The Questionnaire Distribution and Recovery Rate of This Study Are Summarized

In order to accurately and effectively investigate the satisfaction, Need and matching degree of Guangxi youth public sports services, the researchers implemented targeted questionnaires according to the number of students in junior and senior high schools in Guangxi in 2022 officially released by the Guangxi government network. The small program "Questionnaire Star" is used to publish questionnaire links for teenagers. Teenagers can scan the code on their mobile phones or click the web link to enter the questionnaire filling page and fill in the questionnaire. A total of 1200 questionnaires were sent out, and 1108 questionnaires were effectively collected after the questionnaire data screening, with an effective recovery rate of 91.79%.

Analysis of Satisfaction Degree of Public Sports Service for Guangxi Youth

Variable	Gender	N	`X	SD	t	P
Venue and equipment services	male	625	11.707	4.222	-5.643	0.000**
	female	483	13.172	4.362		
Sports organization service	male	625	11.384	4.207	-4.751	0.000**
	female	625	12.609	4.315		
Sports activity service	male	625	14.445	4.931	-6.488	0.000**
	female	483	16.383	4.931		
Sports guidance service	male	625	14.270	5.005	-5.221	0.000**
	female	483	15.843	4.925		
Sports information service	male	625	14.205	4.926	-6.977	0.000**
	female	483	16.300	4.996		
Physical health and testing services	male	625	11.939	4.467	-4.742	0.000**
	female	483	13.228	4.507		

Table 9 Difference Analysis of Satisfaction Degree of Youth Public Sports Service Between Different Genders

The average satisfaction degree of female youth was significantly higher than that of male youth , indicating that the overall evaluation of female youth on public sports services was more positive. Venue and equipment services: Female satisfaction (13.172) was higher than male satisfaction (11.707); On the whole, the satisfaction of female youth to public sports services is higher than that of male, especially in sports activity services and sports guidance services.

variable	Grade	N	`X	SD	t	P
Venue and equipment services	Middle school	563	11.504	4.148	-6.680	0.000**
	High school	545	13.215	4.373		
Sports organization service	Middle school	563	11.218	4.106	-5.583	0.000**
	High school	545	12.640	4.370		
Sports	Middle school	563	14.266	4.881	-	0.000**

activity service	High school	545	16.347	4.949	7.044	
Sports guidance service	Middle school	563	14.131	4.897	-5.622	0.000**
	High school	545	15.807	5.025		
Sports information service	Middle school	563	14.208	4.887	-6.185	0.000**
	High school	545	16.059	5.072		
Physical health and testing services	Middle school	563	11.707	4.400	-6.026	0.000**
	High school	545	13.321	4.516		

Table 10 Difference Analysis of Satisfaction Degree of Youth Public Sports Service Among Different Grades

The satisfaction of high school students was significantly higher than that of middle school students , indicating that high school students had a more positive evaluation of the existing public sports services. Venue and equipment services: The satisfaction of high school students (13.215) was significantly higher than that of middle school students (11.504), indicating that the difference between the two in this service item was statistically significant. Sports organization service: The satisfaction of high school students (12.640) was significantly higher than that of middle school students (11.218), and the difference was significant. For other service items, such as sports activity service, sports guidance service, sports information service and physical health test service, the difference between middle school and high school students

Analysis of Matching of Public Sports Service for Guangxi Youth

	Gender	N	Mean value	Standard deviation	Mean standard error
Matching degree	male	625	16.736	6.149	0.245
	female	483	19.022	6.248	0.284

Table 11: Matching Degree of Different Genders

Female had a higher mean match (19.022) than male (16.736). The standard deviation of matching degree was 6.149 for male and 6.248 for female, and the difference of standard error was small, indicating that the distribution of the two groups of data was consistent. For female youth, the current matching degree of public sports services is better, which may reflect the advantages of services in adapting women's needs.

	Grade	N	Mean value	Standard deviation	Mean standard error
Matching degree	Middle school	563	16.747	6.090	0.256
	High school	545	18.750	6.341	0.271

Table 12 Match by Grade

The average matching degree of high school students (18.750) was higher than that of middle school students (16.747), which was 11.96% higher (18.750-16.747) and the standard error was lower (high school: 0.27166; Middle school: 0.256), indicating high reliability of data.

Discussion

1. The impact of gender differences on the satisfaction and matching degree of public sports services

This study found that the average satisfaction of women with public sports services (87.5342) was significantly higher than that of men (77.9504), and the average matching degree of women (19.0228) was higher than that of men (16.7360). This result echoes the gender role theory and gender sensitivity research on public service supply, that is, women may pay more attention to service details, security and social attributes in the use of sports services, while the design and implementation of public sports services may be more suitable for women's needs. For example, female youth are particularly satisfied with sports activity services and sports guidance services, which may be related to women's higher demand for sports safety, skill development and social interaction. In addition, although the standard deviation of match for women (6.24878) was slightly higher than that for men (6.14924), the standard deviation for both sets of data was smaller, suggesting that gender differences in satisfaction and match were not driven by extreme values, but rather by group characteristics.

2. Influence of grade difference on satisfaction and matching degree of public sports services

High school students' satisfaction (87.3890) and matching degree (18.7505) were significantly higher than middle school students' satisfaction (77.0355, matching degree 16.7478). In terms of service, high school students' satisfaction in venue and equipment services ($p=0.040$) and sports organization services ($p=0.018$) was significantly higher than that of middle school students, and the standard error of high school students' matching degree was lower (0.27166 vs. 0.25670), indicating stronger data reliability. This result may be due to the following reasons: First, senior high school students are older and have a higher demand for autonomy and professionalism in sports activities, while current public sports services may pay more attention to meeting the in-depth needs of senior students (such as professional equipment and organized activities); Secondly, junior high school students may have low expectations for sports services due to academic pressure or cognitive development stage, resulting in relatively low satisfaction.

3. Correlation analysis between satisfaction and matching degree

The gender and school level differences of satisfaction and matching degree show a consistent

trend: female and high school students have higher satisfaction and matching degree. This indicates that there is a positive correlation between the actual supply of public sports services (matching degree) and user demand (satisfaction degree). For example, the high satisfaction of female adolescents in sports activities and guidance services may be due to the fact that the services are more suitable for their needs in terms of facility design and coach professionalism. The high satisfaction of high school students in the field and equipment services may reflect the tilt of the service in the allocation of resources. In addition, the consistency of the standard deviation of matching degree (small gender difference, small school section difference) indicates that the group differences of satisfaction and matching degree are stable, rather than random fluctuations.

Conclusion

This study, through the development of a questionnaire on the satisfaction and matching degree of public sports services for youth in Guangxi, conducted a survey among youth in Guangxi, analyzed the data, and found the following results:

Firstly, gender differences play a pivotal role in the assessment of satisfaction with public sports services. The average satisfaction level of females with public sports services is significantly higher than that of males. This finding is not only numerically validated but also specifically reflected in sports activity services and sports guidance services. The high satisfaction levels of female youth with sports activities and sports guidance indicate their strong need for personalized and professional guidance in sports activities. This suggests that in the process of providing public sports services, gender factors must be fully considered, and more exclusive activities and guidance services tailored to females' needs should be provided.

Secondly, the influence of age groups on satisfaction with public sports services cannot be overlooked. High school students demonstrate significantly better performance in satisfaction with public sports services compared to junior high school students. This difference is not only reflected in overall satisfaction but also extends to multiple specific dimensions such as venue and equipment services and sports organization services. This indicates that as youth grow older and their cognitive abilities improve, they demand higher quality and more diverse public sports services. Therefore, developing differentiated service plans tailored to the characteristics of youth in different age groups is an important way to enhance overall satisfaction with public sports services.

Thirdly, there is a significant positive correlation between matching degree and satisfaction. The average matching degree of females is higher than that of males, and the average matching degree of high school students is also higher than that of junior high school students. This further confirms the importance of service matching degree in enhancing user satisfaction. Only when service content closely aligns with user needs can user satisfaction be truly maximized.

Based on the above conclusions, this study proposes a series of specific policy recommendations. In the future, when formulating and optimizing public sports service policies, gender and age group factors should be fully considered to provide more precise and diversified services for youth of different genders and age groups. Specific measures may include increasing female-exclusive sports activities and facilities, providing professional female sports guidance services, and developing differentiated service plans tailored to the characteristics of youth in different age groups. Through the implementation of these measures, we have reason to believe that the overall satisfaction with public sports services will be significantly improved, and the sense of

gain and happiness of youth in sports activities will also be further enhanced.

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