

# Quality of Sports Facilities Services and Student Satisfaction During Covid-19 Pandemic

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## Abstract

The purpose of this study is to evaluate the service quality of sports facilities at Universiti Kebangsaan Malaysia (UKM) during the Covid-19 pandemic. The respondents were 83 students from the Faculty of Education, UKM, who were enrolled in the Bachelor of Sports and Recreation Education programme. The respondents ranged in age from one to four years. This is a quantitative study that employs survey and purposive sampling methods. The instrument for assessing service quality was adapted from previous research and used in this study. Four items related to operational services, three items related to food and beverage services, three items related to programme and event services, three items related to safety services, and three additional items related to consumption services comprised the questionnaire items for this study. The study hypotheses were tested using descriptive and inferential statistical analysis. The dependent T-test results were used to address research questions about the quality of sports services and student satisfaction during the Covid-19 pandemic. The findings indicate that there are significant differences between genders in terms of sports facility services and student satisfaction across four dimensions, namely operational services, food and beverage services, security services, and consumption services. While another aspect of programme and event services revealed no statistically significant gender differences in student satisfaction or service quality. According to the findings of this study, despite the Covid-19 pandemic period, the quality of sports facilities services in UKM remains high.

**Keywords:** Sports Facility Quality, Satisfaction, Covid-19 Pandemic

## Introduction

Participating in sports activities can help students develop generic skills that can be used to promote themselves in the workplace (Rozali & Puteh, 2014). However, the Covid-19 pandemic has altered the educational landscape by prohibiting students from attending university and, consequently, from using the university's athletic facilities. In sports, the services of sports facilities have been disrupted in terms of providing consumers with high-quality services (Difiori et al., 2021). This is also due to the implementation of new norms such as social distancing, the wearing of masks, the use of hand sanitizers, and the constant monitoring of the temperature before entering the premises (Rashid et al., 2020). Provision

of adequate and appropriate sports facilities has a significant impact on participation in sports within any sports organization or association (Ngeti et al., 2018). As a result, public sports facility services must prioritize service quality and customer satisfaction (Günel & Duyan, 2020). Customer satisfaction, both short and long term, will be determined by the quality of service provided during this pandemic. Additionally, Günel and Duyan (2020) stated that three factors that contribute to customer satisfaction are the installation of appropriate equipment, operator staff, and programs conducted at sports facilities. Thus, in order to ensure that the service quality of sports facilities is maintained during the Covid-19 pandemic, it is critical to examine and evaluate all aspects of the facilities' operations in order to improve services in accordance with the pandemic's new guidelines.

Recent studies have discovered that the Covid-19 pandemic has prompted consumers to visit sports facilities such as fitness centers, futsal courts, and badminton courts in order to minimize their risk of infection in public areas (Norashikin et al., 2021). Nonetheless, Lee (2017) asserts that the service quality of facilities and instructors will have an effect on customer loyalty. Thus, it is critical to develop academic programs that will help trainees working in such institutions improve their knowledge and skills through in-service training (Günel & Duyan, 2020). Additionally, it is past time for sports facility services to strive to improve service quality in order to maintain optimal customer satisfaction. Consumers do not hesitate to utilize pandemic-related services (Castillo-Rodriguez et al., 2019). Management and staff must continually strive to improve their knowledge and skills in order to meet the government's service demand and adhere to Standard Operating Procedures (SOP).

Additionally, planned programs and expanded facilities will encourage more students to participate actively in physical activities, which is expected to improve academic performance and character development (Chear et al., 2018). Nonetheless, in response to the pandemic situation, fitness centers have limited the total number of users permitted to enter the facility, resulting in fewer users visiting the facility (Norashikin et al., 2021). According to Günel and Duyan (2020), a focus on sports service objectives should be considered because as customers' age and level of education increase, their perceptions of service quality increase as well. Such issues must be addressed by the sports service providing its services. The center's marketing efforts should be more innovative in attracting users' attention, particularly students, to the facilities available. As a result, this study's writing will focus on the service quality of athletic facilities and the level of student satisfaction during the Covid-19 pandemic.

### **Literature Review**

The Covid-19 pandemic has raised concerns about the quality of sports facility services, which is inextricably linked to student satisfaction. This situation is evident in the limitations on physical activity and movement available to university students today. Uluöz (2020) explained that the decrease in students' physical activity due to the inability to implement practical subjects, resulting in limited daily movement, has resulted in students gaining weight. Uluöz (2020) added that this situation is concerning because a small number of students are afflicted with mental health issues such as depression that predate the pandemic. Students who are active in sports are suddenly forced to drastically reduce their physical activity or participation in sports. Provision of sports and recreational facilities will alleviate some of the stress experienced by students as a result of their participation in such activities (Yusof et al., 2018).

Nawang et al (2021) discovered a significant decline in physical activity participation prior to and during Covid-19 transmission. Additionally, the International Health, Racquet, and Sportsclub Association (IHRSA) (2020) discovered that over 70 million Americans exercise regularly at fitness centers and facilities. However, during the pandemic outbreak, the closure of gyms and other physical activity facilities had an effect on physical activity behaviour. This situation has resulted in decreased consumer satisfaction with the quality of sports services during the Covid-19 pandemic, particularly among students. In the context of university-based sports services, if students are satisfied with the services provided by a sports management organization, this can create a favorable impression of the organization because it successfully understands and meets the needs of students (Abdul Rahman et al., 2021). Thus, students will have no hesitation about obtaining or accessing the services offered repetitively by sports organizations and will feel at ease, happy, and enthusiastic about training.

Additionally, the quality of sports facility services must be evaluated and continuously improved in light of changing circumstances. According to Adiele and Morgan (2018), sports facility managers should periodically evaluate the quality of their facilities to ensure customer safety and satisfaction. On the other hand, Abidin et al (2019) stated that public universities must pay attention to facility availability, specifically the number of sufficient facilities and the quality of the facilities themselves, which must meet either international standards or be accessible to people with disabilities. In universities, sports services are not limited to implementing sports competitions or programs; rather, sports services must manage and plan activities effectively in a variety of areas, one of which is the provision of sports facilities (Yusof et al., 2018). If students are satisfied with the services provided by a sports management organization, this creates a favorable impression of the organization because it has successfully identified and provided the services required and desired by students (Abdul Rahman et al. al., 2021). The development and provision of appropriate infrastructure or sports facilities is also viewed as beneficial to individuals, society, and the country's economy (Ibrahim et al., 2020).

In light of the current state of the Covid-19 pandemic, a study of the service quality of sports facilities and student satisfaction should be conducted to ensure that existing sports facilities remain relevant during the Covid-19 pandemic's era.

### **Research Objectives**

- i. Identify the service quality of sports facilities during the Covid-19 pandemic.
- ii. Identify differences in student satisfaction between male and female students on the quality of sports services during the Covid-19 pandemic.

### **Research Objectives**

- i. Are there any differences in the quality of services of gender sports facilities?
- ii. Are there any differences in the quality of operating services based on gender?
- iii. Are there any differences in the quality of food and beverage services based on gender?
- iv. Are there any differences in the quality of program and event services based on gender?
- v. Are there any differences in the quality of security services based on gender?
- vi. Are there any differences in the quality of consumption services based on gender?

### **Hypothesis Null**

- Ho1: There are no differences in the quality of sports facilities services for gender sports.  
Ho2: There are no differences in the quality of sports facilities operations based on gender.  
Ho3: There are no differences in the quality of food and beverage services based on gender.  
Ho4: There are no differences in the quality of programs and events services based on gender.  
Ho5: There are no differences in the quality of safety services based on gender.  
Ho6: There are no differences in the quality of use services based on gender.

### **Methodology**

This study employs a study design. This design was used to collect data on the service quality of sports facilities and student satisfaction at UKM during the Covid-19 pandemic. The respondents in this study were chosen using a purposeful sampling technique. Respondents for this study are students enrolled in the Bachelor of Sports and Recreation programs at the University of Malaysia's Faculty of Education. They are made up of students in grades one through four. In this study, questionnaires were used. The questionnaire used in this study was adapted from Eun and Lee's (2013) study on the service quality of public sports facilities. The service quality questionnaire included four items related to operational services, three items related to food and beverage services, three items related to programs and event services, three items related to safety services, and three additional items related to consumption services. The researchers used Likert scale scores ranging from 1 to 5, with 1 indicating strong disagreement, 2 indicating disagreement, 3 indicating uncertainty, and 4 indicating agreement (strongly agree).

For data analysis, descriptive statistics were used. The data were analysed using the mean to address research questions about the quality of sports services and student satisfaction during the Covid-19 pandemic. The Statistical Package for the Social Sciences (SPSS) statistical software will be used to describe the data set in terms of frequency, percentage, and mean. The study's service quality components included four items related to operational services, three items related to food and beverage services, three items related to programme and event services, three items related to safety services, and three additional items related to consumption services. The researchers used Likert scale scores ranging from 1 to 5, with 1 indicating strong disagreement, 2 indicating disagreement, 3 indicating uncertainty, and 4 indicating agreement (strongly agree). For analytical purposes, the T-Test inferential analysis was used. To address the research questions, the results were analysed using a measured significance level of 0.05.

### **Findings**

Table 1 showed an interpretation scale used to assess service quality is determined by the source of the mean score evaluation.

Table 1

*Mean Scale Interpretation*

Mean Scale Interpretation	
Mean	Interpretation
1.00-2.33	Low
2.34-3.67	Medium
3.68-5.00	High

Sources: Konting (1990)

Based on Table 2, students' demographics were analysed based on education level, gender, age and marital status:

Table 2

*Demographic*

Demographics					
Demographics	Factors	f	Percentage	Mean	SP
Education Level	Bachelors Degree	83	100	1.00	0.000
Gender	Male	44	53		
	Female	39	47	1.47	0.502
Age	20 years and below	9	10.8		
	21 to 30 years	74	89.2	1.89	0.313
Status	Married	1	1.2		
	Single	82	98.8	1.99	0.110

The study sampled 83 students from year one to year four of the Faculty of Education, UKM, who were pursuing a degree in Sports and Recreation and were between the ages of 20 and 30. According to their marital status, 82 of them are single. The mean interpretation demonstrates that all means are low. Table 3 reported the Comparison of Mean for Operating Services:

Table 3

*Comparison of Mean for Operating Services*

Comparison of Mean			
Items	Mean	SP	Interpretation
Good facial expressions and staff service	4.16	0.653	High
The staff is kind	4.13	0.620	High
The existing facilities are very easy to use	4.06	0.722	High
The facilities are well maintained and in good condition	4.02	0.780	High

Table 3 shows a comparison of the mean of Operating Services. The facial expressions and staff service were the highest mean (Mean=4.16, SP=0.653) followed by the staff is kind (Mean 4.13, SP=0.620). Next, the existing facilities are very easy to use (Mean=4.06, SP=0.722) while the lowest mean among the three items was the facilities are well maintained and in good condition (Mean=4.02, SP=0.780). All items were interpreted at a high level. Table 4 reported the Comparison of Mean for Food and Beverage Services:

Table 4

*Comparison of Mean for Operating Services*

<b>Comparison of Mean</b>			
<b>Items</b>	<b>Mean</b>	<b>SP</b>	<b>Interpretation</b>
Clean food and beverage service facilities	3.98	0.765	High
Food and beverage prices are reasonable	3.83	0.746	High
Various types of food and beverages	3.78	0.856	High

Table 4 shows a comparison of the mean of Food and Beverage Services. Clean food and beverage service facilities was the highest mean (Mean=3.98, SP=0.765). Food and beverage prices are reasonable came in second (Mean= 3.83, SP=0.746). While the lowest mean was various types of food and beverages (Mean=3.78, SP=0.856). All items were interpreted at a high level. Table 5 reported the Comparison of Mean for Program and Event Services:

Table 5

*Comparison of Mean for Program and Event Services*

<b>Comparison of Mean</b>			
<b>Items</b>	<b>Mean</b>	<b>SP</b>	<b>Interpretation</b>
There are parking facilities and directions	4.11	0.812	High
All programs and events are well controlled	4.04	0.890	High
There are special programs and events available	3.93	0.880	High

Table 5 shows a comparison of the mean of Program and Event Services items. There were parking facilities and directions was the highest mean (Mean=4.11, SP=0.812). The second lowest mean was for all programs and events are well controlled (Mean =4.04, SP=0.890). The lowest mean was for there are special programs and events available (Mean=3.93, SP=0.880). All items were interpreted at a high level. Table 6 reported the Comparison of Mean for Safety Services:

Table 6

*Comparison of Mean for Safety Services*

<b>Comparison of Mean</b>			
<b>Items</b>	<b>Mean</b>	<b>SP</b>	<b>Interpretation</b>
Staff and security facilities are available	4.12	0.722	High
Information on the use of facilities is well provided	4.07	0.695	High
The maximum number of customers allowed in is displayed	4.06	0.802	High

Table 6 shows a comparison of the mean of Safety Services. for the first item, staff and security facilities are available was the highest mean (Mean=4.12, SP=0.722) followed by information on the use of facilities is well provided (Mean 4.07, SP=0.695). the lowest mean was the maximum number of customers allowed in is displayed (Mean=4.06, SP=0.802). All items were interpreted at a high level. Table 7 reported the Comparison of Mean for Use Services:

Table 7

*Comparison of Mean for Use Services*

<b>Comparison of Mean</b>			
<b>Items</b>	<b>Mean</b>	<b>SP</b>	<b>Interpretation</b>
There are opportunities to relax and unwind	4.10	0.759	High
Toilet facilities are clean and adequate	4.00	0.812	High
Equipment for rent is well provided	3.99	0.724	High

Table 7 shows a comparison of the mean of Use Service. For the item there are opportunities to relax and unwind was the highest mean (Mean=4.10, SP=0.759) followed by toilet facilities are clean and adequate (Mean 4.00, SP=0.812). The lowest mean compared to all three items was equipment for rent is well provided (Mean=3.99, SP=0.724). All items were interpreted at a high level. Table 8 reported the Mean Interpretation Scale for five aspects of Sports Facilities Services:

Table 8

*Mean Interpretation Scale for five aspects of Sports Facilities Services*

<b>Mean Interpretation</b>			
<b>Aspects</b>	<b>Mean</b>	<b>SP</b>	<b>Interpretation</b>
Operating Services	4.093	0.596	High
Safety Services	4.084	0.668	High
Use Services	4.028	0.677	High
Program and Event Services	4.024	0.741	High
Food and Beverage Services	3.864	0.675	High

Table 8 shows the mean interpretation scales for the five aspects of sports facilities services. The highest mean is Operations Services (Mean=4.093, SP=0.596). The second highest mean is Security Services (Mean=4.084, SP=0.668) then Use Services (Mean=4.028, SP=0.677). Next is the Program and Event Services aspect (Mean=4.024, SP=0.741). The Food and Beverage Service aspect is the lowest mean (Mean=3.864, SP=0.675). The findings show that students' expectations on the quality of sports services during the Covid-19 pandemic, are at a high level.

**Operating Services**

Ho1: There were no significant differences in the quality of operating services based on gender.

Table 9

*Operating Services*

<b>Demographics</b>	<b>Factors</b>	<b>N</b>	<b>Mean</b>	<b>SP</b>	<b>df</b>	<b>t</b>	<b>Significant</b>
Gender	Male	44	4.227	0.562	81	2.227	0.025
	Female	39	3.942	0.603			

Based on Table 9, it is found that there are significant differences in Operating Services for male students (M=3.942, SP=0.562) and female students (M=3.942, SP=0.603);  $T(81) = 2.227$ ,  $P = 0.025$  that is, the value of  $P < 0.05$ . Therefore, the null hypothesis was rejected i.e. there were significant differences in Operating Services and student satisfaction during the Covid-

19 pandemic based on gender. This shows that the mean of male students is higher than female.

### Food and Beverage Services

Ho2: There were no significant differences in the quality of food and beverage services based on gender.

Table 10  
*Food and Beverage Services*

Demographics	Factors	N	Mean	SP	df	t	Significant
Gender	Male	44	4.000	0.690	81	1.993	0.046
	Female	39	3.710	0.631			

Based on Table 10, it is found that there are significant differences in Food and Beverage Services for male students (M=4.000, SP=0.690) and female students (M=3.710, SP=0.631); T (81) =1.993, P=0.046 that is, the value of  $P < 0.05$ . Therefore, the null hypothesis was rejected i.e. there were significant differences in Food and Beverage Services and student satisfaction during the Covid-19 pandemic based on gender. This shows that the mean of male students is higher than female.

### Program and Event Services

Ho3: There are no significant differences in the quality of program and event services based on gender.

Table 11  
*Program and Event Services*

Demographics	Factors	N	Mean	SP	df	t	Significant
Gender	Male	44	4.174	0.599	81	1.995	0.059
	Female	39	3.855	0.851			

Based on Table 11, it is found that there are no significant differences in Program and Event Services for male students (M=4.174, SP=0.599) and female students (M=3.855, SP=0.851); T (81) =1.995, P=0.059 that is, the value of  $P > 0.05$  Thus the null hypothesis was accepted i.e. there was no significant difference on Program and Event Services and student satisfaction during the Covid-19 pandemic based on gender. This shows that the mean of male students is higher than female.

### Safety Services

Ho4: There is no significant difference in the quality of safety services based on gender.

Table 12  
*Program and Event Services*

Demographics	Factors	N	Mean	SP	df	t	Significant
Gender	Male	44	4.310	0.586	81	3.492	0.002
	Female	39	3.829	0.670			



Based on Table 12, it is found that there are significant differences in Safety Services for male students ( $M=4.310$ ,  $SP=0.586$ ) and female students ( $M=3.829$ ,  $SP=0.670$ );  $T(81) = 3.492$ ,  $P=0.002$  that is, the value of  $P < 0.05$ . Therefore, the null hypothesis was rejected i.e. there were significant differences in Food and Safety Services and student satisfaction during the Covid-19 pandemic based on gender. This shows that the mean of male students is higher than female.

### Use Services

Ho5: There is no significant difference in the quality of Use Services based on gender.

Table 13

#### *Use Services*

Demographics	Factors	N	Mean	SP	df	t	Significant
Gender	Male	44	4.235	0.560	81	3.106	0.002
	Female	39	3.795	0.728			

Based on Table 13, it is found that there are significant differences in Use Services for male students ( $M=4.235$ ,  $SP=0.560$ ) and female students ( $M=3.795$ ,  $SP=0.728$ );  $T(81) = 3.106$ ,  $P=0.002$  that is, the value of  $P < 0.05$ . Therefore, the null hypothesis was rejected i.e. there were significant differences in Use Services and student satisfaction during the Covid-19 pandemic based on gender. This shows that the mean of male students is higher than female.

### Quality of Sports Facilities Services

Ho6: There is no significant difference in the quality of sports facilities services based on gender.

Table 14

#### *Quality of Sports Facilities Services*

Demographics	Factors	N	Mean	SP	df	t	Significant
Gender	Male	44	4.192	0.498	81	3.070	0.004
	Female	39	3.833	0.566			

Based on Table 14, it is found that there are significant differences in Quality of Sports Facilities Services for male students ( $M=4.192$ ,  $SP=0.498$ ) and female students ( $M=3.833$ ,  $SP=0.566$ )  $T(81) = 3.070$ ,  $P=0.004$  that is, the value  $P < 0.05$ . Therefore, the null hypothesis was rejected i.e. there were significant differences in Quality of Sports Facilities Services and student satisfaction during the Covid-19 pandemic based on gender. This shows that the mean of male students is higher than female.

### Discussion

According to the study's findings, the service quality of sports facilities remained high throughout the Covid-19 pandemic. All five aspects of facility services were interpreted with a high mean. According to these findings, respondents are extremely satisfied with the services provided. The provision of high-quality sports facility services is a result of the administration's commitment to providing the best facilities possible for students. This measure is consistent with the view expressed by Yusof et al (2018) that the provision of recreational and sports facilities will at the very least alleviate stress among students,

particularly during the Covid-19 pandemic. When students are satisfied with the facilities provided, it demonstrates to management that they understand what students want (Abdul Rahman et al., 2021). Operational services are one of the aspects that students appreciate. In comparison to the other four aspects, operational services had the highest mean. Additionally, the items relating to facial expressions, good staff treatment, and staff being kind had the highest mean values when compared to the other two. This finding is consistent with the findings of Abdul Rahman et al (2021), who discovered that students are ecstatic with the treatment they receive from sports facility staff and are eager to interact with them. A positive experience with staff will encourage users of sports facility services to return in the future (Ibrahim et al., 2020).

Apart from operational service, security service is another area that receives the highest mean and garners respondents' attention. Even during the Covid-19 pandemic, the safety of the equipment at the sports facility center was excellent. The safety of the equipment is critical and must be taken care of in order for it to be used safely. According to Adiele and Morgan (2018), facilities must be maintained on a regular basis to ensure that they are safe to use and that the safety of users is maintained. Risk management should be emphasized during university-sponsored training and competitions. This situation enhances training performance, builds athletes' confidence in managing sports at the university level, and helps prevent training-related accidents and injuries. The higher the quality of the sports services provided or offered, the greater the athlete satisfaction (Taat et al., 2021).

Additionally, student satisfaction with the quality of consumption services, programs and events, and food and beverages demonstrate student satisfaction with service quality. This condition implies that the quality of that aspect is maintained even in the event of a Covid-19 pandemic. To ensure customer loyalty, the quality of every aspect of the sports facilities service must be maintained. Customer satisfaction and loyalty will encourage the use of such facility services (Schijns et al., 2016).

### **Suggestions and Conclusions**

Each university's sports organisation must work to improve the quality of sports services it mobilises in order to ensure athletes' satisfaction and enjoyment when obtaining services from their respective universities' sports organisations (Abdul Rahman et al., 2021). Emphasis and enhancement should be placed on operational services, food and beverage services, programme and event services, security services, and consumption services. The study's findings can also serve as a guide for the university's sports center's management as a sports manager who is directly involved in planning sports management activities. This situation will indirectly assist athletic staff in being more creative and innovative in providing or providing sports services, resulting in positive outcomes for the university. The findings of this study can be used as a foundation for understanding the factors that influence a university student's involvement based on precise data and facts.

University sports center's development of athletic excellence can meet the needs of both athletes and university students. Additionally, high-quality sports facility services can have an effect on student satisfaction at the university, which is critical for developing each student's physical and mental fitness. As with previous studies, this one has some inherent limitations. Certain students have never used athletic facilities during the Covid-19 outbreak, and certain new students have never used university facilities during the pandemic. Researchers are also

restricted in their data collection efforts due to the university's closure, and the majority of students are confined to their homes and prohibited from using university facilities due to government-mandated SOPs. In conclusion, the findings of this study are expected to be used as a guide for sports facility management in order to improve sports facilities on- or off-campus and to encourage students to maintain a healthy lifestyle even in the event of a pandemic. The proposed future study could concentrate on the service quality of sports facilities and the level of satisfaction among the local community, depending on their location.

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