

## Assessment of quality, satisfaction, and perceived value of a public sports service by team sport users

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### Abstract

**Objective:** The aim of this study was to determine users/athletes' assessment of sports services quality, satisfaction, and perceived value in a municipal sports installation, analyzing if these vary according to gender, age, and sports modality.

**Material and Methods:** A total of 254 users/athletes from a municipal sports service installation in Navojoa, Mexico participated in this study; 60.6% were men, and 39.4% were women with a mean age of 21.42 years ( $SD = 6.87$ ). The Sports Organization Services Perception Scale (EPOD2) was used. This questionnaire consists of perceived quality (20 items), satisfaction (4 items), and value (one item). An independent sample t-test and one-way ANOVA were used to determine if a statistical difference existed between the evaluated mean values.

**Results:** The results show that users/athletes give high scores to certain factors, especially activities and trainer performance, while aspects related to communication and installations received low scores. On the other hand, no significant differences were found regarding gender and sports type, while age range resulted in a significant difference in communication. Finally, the factors had a positive and significant correlation.

**Conclusion:** The general evaluation by users/athletes was positive, showing needs only in specific aspects. This evaluation can help organization administrators establish management strategies to improve sports services. On the other hand, the differences between users/athletes regarding their characteristics can provide data that can help determine the needs of each group. This information will generate support services of greater interest.

**Keywords:** Management, Quality, Sports installations, Public service.

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### I. Introduction

The demands of the sports sector and the changes suffered have motivated sports facilities and any other entity that provides products and/or services to evaluate the inherent qualities, circumstances, and conditions that a service or product must have to meet users' needs. Under this new approach, users have become the main actors of the service<sup>1,2</sup>. Therefore, providing quality service is fundamental to achieve user satisfaction<sup>3,4</sup>, since now they are more demanding, and maintaining permanence is one of the most important achievements for any company<sup>5,6</sup>. In this sense, the study of service quality based on the users' experiences is an important element in improving an organization's competitiveness and permanence<sup>7</sup>.

It is thus important to detect the attributes that users value more in a service because this provides the administrators of any organization with more information to improve the development of sports activities and services that are of greater interest to the users<sup>8</sup>. Research related to the improvement of user needs considering quality, satisfaction, and perceived value is an area that has provided a large amount of literature from different fields and different perspectives in recent years<sup>9,10,11,12,13</sup>.

In this sense, any organization interested in improving its services and increasing its quality should always try to control and verify the users' perceptions. They should also try to identify the reasons for deficiencies or complaints, and of course, they should take the necessary measures to improve and increase users' perception regarding the service<sup>14,15</sup>. This situation leads to establishing differentiation strategies based on improving the service to achieve greater user satisfaction<sup>16</sup>. These strategies contribute to developing evaluative models for these services that help better understand the key factors of satisfaction<sup>17</sup>. In concordance with the above, the aim of this study was to determine users/athletes' assessment of the quality, satisfaction, and perceived value of sports services in a municipal sports installation, analyzing if these vary according to gender, age, and sports type.

## II. Material And Methods

**Study design:** A quantitative, nonexperimental, cross-sectional, comparative, correlational cohort study was performed to analyze the quality, satisfaction, and perceived value of the sports service.

**Sample:** Participants attending a municipal sports installation in the city of Navojoa, Mexico, where they practice sports activities, were randomly and voluntarily selected. The sample consisted of a total of 254 users/athletes (men = 60.6%; women = 39.4%) with a mean age of 21.42 years ( $SD = 6.87$ ); 27.2% had a university education, 29.5% had a preparatory education, 20.1% postgraduate education, 19.7% technical education, and only 3.5% had primary and secondary education. Regarding sport modality, 26.8% of the participants practiced soccer, 18.1% basketball, 17.7% softball, 13.4% baseball, 12.2% volleyball, and 11.8% touch football.

**Instrument:** The Sports Organization Services Perception Scale (EPOD2) <sup>18</sup> was used to evaluate the sports service. This questionnaire consists of 25 items: perceived quality, 20 items, satisfaction, 4 items, and value, one item. An example of a question is: "I'm happy with the way the trainer treats me".

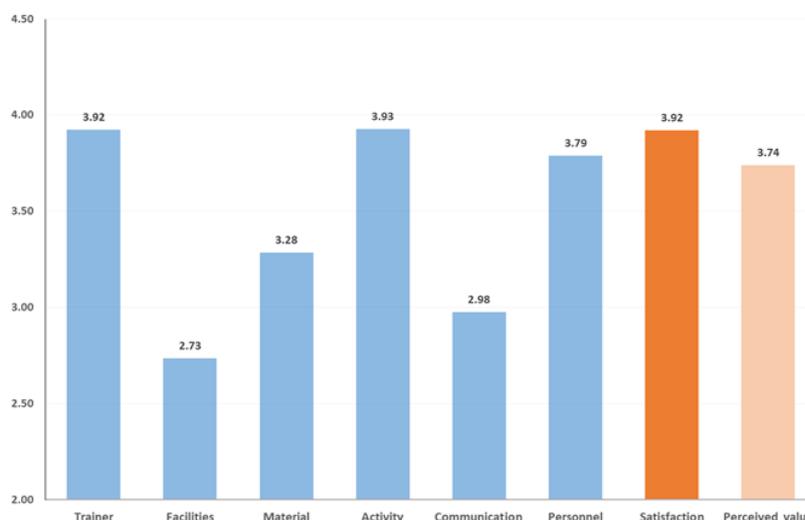
**Procedure:** Authorization from the administrator of the Municipal Sports Institute was requested before data collection. The researchers introduced themselves to the users/athletes, informed consent was obtained, the study objective was commented, and the questionnaire and its completion were described. After that, it was explained that the data collected would be used responsibly, ensuring the anonymity and confidentiality of the information. The questionnaire was self-administered.

**Statistical analysis:** All analyses were performed using the statistical package SPSS v24.0. A descriptive analysis of each factor was applied with the mean and standard deviation as an overall assessment. Data distribution was analyzed with the Kolmogorov-Smirnov test. Parametric inferential tests were performed to statistically verify the differences in means of the evaluations using the *t*-test for independent samples and one-factor ANOVA. The Tukey post hoc test was applied to confirm the assumption of homogeneity.

## III. Result

In Figure 1, the descriptive results regarding the global evaluation indicate that users/athletes gave higher scores to the perceived quality factors, especially activities ( $M = 3.93$ ,  $SD = .84$ ) and trainer performance ( $M = 3.92$ ,  $SD = 1.03$ ). The least valued factors were communication ( $M = 2.98$ ,  $SD = 1.25$ ) and facilities ( $M = 2.73$ ,  $SD = 1.41$ ). User satisfaction was also good ( $M = 3.92$ ,  $SD = .97$ ) and perceived value also had positive results ( $M = 3.74$ ,  $SD = 1.24$ ).

**Figure 1.** Global quality, satisfaction, and perceived value scores.



When comparing the factors quality, satisfaction, and perceived value with regard to gender, no significant differences were found ( $p > 0.05$ ); however, it is important to mention that men gave slightly higher scores in most factors, as shown in Table 1.

**Table 1.** Quality, satisfaction, and perceived value in relation to gender.

Factors	Man	Woman	t	Sig
	(Mean ± SD)	(Mean ± SD)		
1. Trainer	3.83 ± 1.01	4.07 ± 1.05	-1.855	.065
2. Facilities	2.84 ± 1.41	2.57 ± 1.42	1.500	.135
3. Material	3.32 ± 1.24	3.22 ± 1.18	0.651	.516
4. Activity	3.97 ± 0.79	3.87 ± 0.92	0.943	.347
5. Communication	2.95 ± 1.24	3.02 ± 1.29	-0.323	.747
6. Personnel	3.80 ± 1.21	3.78 ± 1.18	0.133	.895
7. Satisfaction	3.96 ± 1.02	3.95 ± 0.90	0.346	.730
8. Perceived value	3.68 ± 1.32	3.84 ± 1.08	-1.037	.301

After grouping the different user/athlete ages into six groups as shown in Table 2, significant differences ( $p < .001$ ) were found only with the communication factor, with users/athletes 25 to 27 years of age ( $3.55 \pm 0.92$ ) registering a higher score compared to users/athletes >28 years ( $2.31 \pm 1.29$ ).

**Table 2.** Quality, satisfaction, and perceived value in relation to age.

Factors	13 to 15	16 to 18	19 to 21	22 to 24	25 to 27	>28	F	Sig
	M ± SD	M ± SD						
1. Trainer	4.08 ± 1.03	3.94 ± 1.00	3.77 ± 1.21	4.00 ± 0.71	4.05 ± 0.69	3.89 ± 1.19	.530	.753
2. Facilities	2.54 ± 1.46	2.84 ± 1.38	2.86 ± 1.48	2.67 ± 4.41	3.08 ± 1.33	2.10 ± 1.30	1.70	.134
3. Sports material	2.95 ± 1.41	3.44 ± 1.20	3.25 ± 1.29	3.08 ± 1.03	3.67 ± 0.82	3.15 ± 1.30	1.41	.218
4. Activity	3.98 ± 0.84	3.80 ± 0.90	3.84 ± 0.98	3.77 ± 0.66	4.21 ± 0.67	4.14 ± 0.57	1.42	.218
5. Communication	2.76 ± 1.34	2.98 ± 1.18	3.10 ± 1.35	3.11 ± 1.14	3.55 ± 0.92*	2.31 ± 1.29	3.07	.001
6. Personnel	3.60 ± 1.38	3.94 ± 1.13	3.81 ± 1.30	3.73 ± 1.08	4.04 ± 0.87	3.31 ± 1.30	1.48	.196
7. Satisfaction	3.81 ± 1.07	4.00 ± 0.92	3.82 ± 1.11	3.90 ± 0.71	4.25 ± 0.74	3.77 ± 1.12	1.03	.397
8. Perceived value	3.81 ± 1.33	3.69 ± 1.32	3.73 ± 1.20	3.55 ± 1.23	4.16 ± 0.75	3.70 ± 1.38	.785	.561

Regarding the assessment of quality, satisfaction, and perceived value related to sport modality, no significant difference was found ( $p > .05$ ). However, in general, it was found that touch football provided slightly higher scores in most of the factors than the rest of the modalities, as shown in Table 3.

**Table 3.** Perceived quality, satisfaction, and value in relation to sports modality.

Factors	Basketball	Baseball	Soccer	Softball	Touch football	Volleyball	F	Sig
	M ± SD	M ± SD						
1. Trainer	3.93 ± 1.09	4.05 ± 0.88	3.79 ± 1.08	3.97 ± 1.08	4.14 ± 0.69	3.80 ± 1.20	.716	.612
2. Facilities	2.80 ± 1.37	3.22 ± 1.40	2.39 ± 1.35	2.60 ± 1.39	2.78 ± 1.49	3.02 ± 1.49	2.01	.078
3. Sports material	3.03 ± 1.30	3.52 ± 1.16	3.38 ± 1.18	2.96 ± 1.25	3.24 ± 1.17	3.57 ± 1.11	1.52	.185
4. Activity	4.03 ± 0.76	3.99 ± 0.89	3.88 ± 0.89	3.72 ± 0.89	4.05 ± 0.80	3.99 ± 0.90	.924	.456
5. Communication	2.86 ± 1.37	3.06 ± 1.33	3.03 ± 1.04	2.65 ± 1.27	3.39 ± 1.28	3.01 ± 1.32	1.41	.221
6. Personnel	3.60 ± 1.29	4.06 ± 1.20	3.91 ± 1.10	3.37 ± 1.28	4.02 ± 1.04	3.89 ± 1.19	2.14	.061
7. Satisfaction	3.88 ± 1.05	4.13 ± 0.90	3.89 ± 1.02	3.62 ± 1.06	4.13 ± 0.81	4.06 ± 0.76	1.65	.147
8. Perceived value	3.78 ± 1.03	3.76 ± 1.35	3.59 ± 1.31	3.51 ± 1.46	3.93 ± 1.17	4.13 ± 0.85	1.29	.267

Pearson's coefficient correlation matrix showed a significant positive and moderate correlation between the factors that compose the instrument, as shown in Table 4.

**Table 4.** Correlations between the factors quality, satisfaction, and perceived value.

	Trainer	Installations	Material	Activity	Communication	Personnel	Satisfaction	Perceived value
1. Trainer	-							
2. Facilities	.228**	-						
3. Material	.417**	.550**	-					
4. Activity	.309**	.194**	.349**	-				
5. Communication	.263**	.555**	.497**	.272**	-			
6. Personnel	.517**	.345**	.508**	.252**	.418**	-		
7. Satisfaction	.527**	.312**	.498**	.349**	.353**	.749**	-	
8. Perceived value	.393**	.278**	.367**	.270**	.347**	.621**	.597**	-

Note: \*\*  $p < .01$

#### IV. Discussion

The aim of this work was to assess the opinions of users/athletes regarding the quality, satisfaction, and perceived value of sports services of a municipal sports facility.

Service quality and users' satisfaction with the service have been reported in the literature; however, these constructs should not be abandoned since the context of the center and users' characteristics can influence the different results<sup>19,20</sup>. In this sense, this research specifically evaluated the trainer, identifying him or her as the individual in charge of or conducting activity; this individual received positive opinions, results that coincide with other studies that mention that trainers are usually the individuals better assessed by users<sup>21,22,23</sup>. With regard to activities, referring to what is done in sports practice under the direction of a trainer, very good evaluations have been provided by users/athletes, coinciding with other studies<sup>15,22,23,24</sup> that report that clients positively value activities because these do not tend to be boring or monotonous. Similarly, other studies mention that both the activities and their schedules received good evaluations by the participants<sup>25,26</sup>.

On the other hand, the facilities are the spaces where sports are practiced<sup>27</sup>. This factor had low evaluations, similar to other studies that report that both the spaces and the facilities are not satisfactorily evaluated by users<sup>15,22,24</sup>. Other studies report that the facilities as a whole, and the personnel working within the facilities, are adequate<sup>21,23,26,28</sup>. Communication, specifically referring to the way suggestions and/or complaints are handled, yielded a low rating, coinciding with other studies<sup>23,25</sup> that report that users feel less satisfied with this aspect and with the permanent update of offered activities<sup>29</sup>. In contrast, in another study, aspects related to communication received positive evaluations<sup>22</sup>.

No significant differences were found when assessing the quality, satisfaction, and perceived value regarding users/athlete characteristics according to gender; however, men give slightly higher evaluations<sup>20</sup>. Nevertheless, other studies state that women provide the best ratings<sup>23,30</sup>. With regard to age, older users give the lowest ratings. This finding may be because older people are clearer about their needs, so they may be more critical when evaluating the service<sup>23,31</sup>. In the last group, regarding sport modality, no significant differences were found; however, studies that analyzed individual, collective, combat, and aquatic sports, found significant differences<sup>30,31,32</sup>.

#### V. Conclusion

In conclusion, the data obtained in this study indicate that users/athletes who practice physical-sports activity at municipal sports facilities present significant opinions regarding the service offered. In this sense, the results of this study can help establish management strategies for improving the sports service. Therefore, it is essential to have valid and reliable tools for the evaluation process for any future implication of improvement in service management aimed at strengthening the evaluated aspects. On the other hand, the study sample size was the main limitation of the study. This situation will lead to future research being carried out with larger samples, thereby improving the results.

**Conflict of interest:** The authors reported no conflict of interest.

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