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**Original article** 

# Approach to the perceived quality of a university sports service. A case study

Aproximación a la calidad percibida de un servicio deportivo universitario. Un estudio de caso

Uma abordagem da qualidade percebida de um serviço esportivo universitário.

Um estudo de caso



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#### **ABSTRACT**

The young and adult population of Chile presents high levels of physical inactivity and sedentary lifestyle, which coincides with the age ranges of university students. In this sense, there is little scientific evidence that has studied the quality of sports services provided by higher education institutions, both at the Latin American and Chilean levels. Therefore, this study aimed to evaluate the quality of the service of the Sports and Recreation Unit of the Universidad Católica de la Santísima Concepción de Chile, through the perception expressed by students who attend sports and physical activity workshops. The SERVPERF questionnaire was applied, which measures five dimensions: tangible elements, reliability, response capacity, security and empathy, according to the degree of user satisfaction. The research had a quantitative and descriptive approach. The sample consisted of 70 participants (55 women and 15 men). In general, the results showed a good perception and evaluation of all the dimensions of the questionnaire. The security dimension was the best valued and the tangible elements dimension was the one that showed the lowest evaluation.

Keywords: Quality, questionnaire, perception, sports services, university.

#### **RESUMEN**

La población joven y adulta de Chile presenta altos niveles de inactividad física y sedentarismo, lo que coincide con los rangos etarios de los estudiantes universitarios. En este sentido, es escasa la evidencia científica que ha estudiado la calidad de los servicios deportivos que entregan las instituciones de educación superior, tanto a nivel latinoamericano, como chileno. Por lo tanto, este estudio tuvo como objetivo evaluar la calidad del servicio de la Unidad de Deportes y Recreación de la Universidad Católica de la Santísima Concepción de Chile, mediante la percepción que manifiestan los estudiantes que asisten a los talleres deportivos y de actividad física. Se aplicó el cuestionario SERVPERF







que mide cinco dimensiones: elementos tangibles, fiabilidad, capacidad de respuesta, seguridad y empatía, según el grado de satisfacción de los usuarios. La investigación tuvo un enfoque cuantitativo y de tipo descriptivo. La muestra fue de 70 participantes (55 mujeres y 15 hombres). En general, los resultados mostraron una buena percepción y evaluación de todas las dimensiones del cuestionario. La dimensión seguridad fue la mejor valorada y la dimensión Elementos tangibles fue la que mostró una más baja evaluación.

Palabras clave: Calidad, cuestionario, percepción, servicios deportivos, universidad.

#### **RESUMO**

A população jovem e adulta do Chile apresenta altos níveis de inatividade física e estilos de vida sedentários, o que coincide com as faixas etárias dos estudantes universitários. Nesse sentido, há poucas evidências científicas que tenham estudado a qualidade dos serviços esportivos prestados pelas instituições de ensino superior, tanto na América Latina quanto no Chile. Portanto, o objetivo deste estudo foi avaliar a qualidade do serviço prestado pela Unidade de Esportes e Recreação da Universidad Católica de la Santísima Concepción, no Chile, por meio da percepção dos alunos que participam das oficinas de esportes e atividades físicas. Foi aplicado o questionário SERVPERF, que mede cinco dimensões: elementos tangíveis, confiabilidade, capacidade de resposta, segurança e empatia, de acordo com o grau de satisfação do usuário. A pesquisa teve uma abordagem quantitativa e descritiva. A amostra foi composta por 70 participantes (55 mulheres e 15 homens). Em geral, os resultados mostraram uma boa percepção e avaliação de todas as dimensões do questionário. A dimensão Segurança foi a mais bem avaliada e a dimensão Elementos tangíveis apresentou a avaliação mais baixa.

Palavras-chave: Qualidade, questionário, percepção, serviços esportivos, universidade.







# **INTRODUCTION**

The Chilean higher education system is made up of three types of institutions: Universities, Professional Institutes and Technical Training Centers, public and private, which differ by the type of training they provide (professional and technical training) and by degrees. academics they award.

In this context, students who are studying at higher education institutions can simultaneously access a series of complementary services that are offered by these organizations, which objectives are framed in the improvement of health, physical condition and the quality of life, in addition to being an alternative for the occupation of leisure time, including a vehicle for establishing social relationships. (Almorza and Prada, 2019). In other words, they aim to promote the comprehensive development of the student body in search of a better quality of life and their harmonious integration into student life during the course of their university stage.

Consequently, the objective of this research is to evaluate the quality of the service of the Sports and Recreation Unit of the Universidad Católica de la Santísima Concepción de Chile (UCSC), through the perception expressed by students who attend sports and physical activity workshops, through the application of the SERVPERF questionnaire (Cronin and Taylor, 1994).

This objective is based on the scarce evidence recorded in Chile and Latin America that does not allow to determine how university students value the sports services provided by their institutions. This becomes more relevant in the context of low adherence and desertion to the practice of physical activity and sports in higher education students.

Currently, the Chilean population presents high levels of sedentary lifestyle and physical inactivity in the age ranges of university students. This is demonstrated by the results obtained by the Ministry of Sports (MINDEP, 2018) in the National Survey of Physical Activity and Sports Habits in the Chilean population aged 18 or over, which presented, among other results, 81.3 % of the population as physically inactive. Some authors such as Pérez *et al.* (2014) point out that despite the progressive importance that physical activity







has acquired in contemporary societies, there is also a growing development of sedentary behaviors. For this reason, the general population should increase physical activity practice times and also decrease sitting time.

Based on the above, the importance of regular physical activity should be recognized, this in accordance with the Guidelines on Physical Activity and Sedentary Habits promoted by the World Health Organization (WHO, 2020). From a psychological point of view, Herbert *et al.* (2020) reports the positive impact generated by the practice of physical exercise on the level of stress, anxiety and depression in university students. Therefore, physical activity can be considered as a protective element to reduce the probability of personality disorders, academic or work stress, social anxiety, lack of social skills, among others.

Other authors such as Lara *et al.* (2015) affirm that academic, cultural and sports activities, relationships with professors and classmates, student satisfaction with their studies and with the quality of teaching and the different services offered by the university constitute the space in which an important part of the life of young university students is developed and that, therefore, requires to be studied.

To achieve the objective of this research, a review of the international literature was first carried out, which evidenced that the instruments most used in measuring the perceived quality of sports services in different places have followed the guidelines of the SERVQUAL models (Parasuraman *et al.*, 1988) and SERVPERF (Cronin and Taylor, 1994).

In particular, in the university field, in the last two decades, studies have been carried out that have inquired about the perceived quality of the various services provided by these institutions, for example, the study carried out in Mexico by Mejías *et al.* (2006) about the quality of services in higher education in that country that used an adaptation of the SERVQUAL questionnaire.

Also, Cardona *et al.* (2018) used the SERVQUAL, in a study that assessed the satisfaction of university students about recreational and sports services in Colombia. In this area, the study carried out by Corbí *et al.* (2019) in the sports services of the University of Burgos in







Spain, where they applied the Goal Content for exercise Questionnaire (GCEQ) and concluded that the least valued aspect was the compatibility of schedules.

In the Chilean context, Herrera *et al.* (2017) evaluated the quality of the sports services of the Department of Sports and Recreation of the Pontificia Universidad Católica de Valparaíso (PUCV) with the use of the SERVPERF questionnaire (Cronin and Taylor, 1994) which main results reflected that the Security dimension is the most which has a higher value.

The review of the literature made it possible to determine that there is a certain consensus (Ramírez *et al.*, 2017) that, in order to assess the quality of sports services, it was pertinent to consider the SERVPERF (Service Performance) instrument by Cronin and Taylor (1994) as a basis, which was adapted from the SERVQUAL (Service of Quality) model by Parasuraman *et al.* (1988).

# Conceptual approaches

For this research, service is considered to be that human activity which main objective is to provide a service to others, with or without an element or material. This means that the service itself is intangible, while the use of elements, articles or instruments (tangible) is allowed in the service provision process (Syaiful and Crafty, 2022).

The services, due to their diversity, can have many characteristics depending on the nature of the provision; however, the literature frequently highlights some over others. In this way, the sports services that are evaluated in this study are directly associated with the category of services related to sports, art and entertainment, in accordance with the proposal of Grande (2005).

In this sense, Chelladurai (1992) classified two categories: participation services and services for viewers. The first focuses on the practitioner or athlete. Meanwhile, the second category is related to the spectator, that is, who attends and enjoys certain sporting events. In the case of this research, the evaluation of the service considers the former, that is, the practitioners.







On the other hand, the quality of the service is understood as the capacity of a service provider to efficiently satisfy the client or user, which allows it to improve the performance of the company or institution. In this area (of services), quality is an important element for the success of companies, according to its positive relationship with benefits and customeruser satisfaction.

It should also be noted that the concept of quality differs, if it is analyzed in the service sector or in the production of merchandise or products, due to the inherent characteristics of services such as intangibility, inseparability, heterogeneity and expiration (Ramya *et al.*, 2019).

In a complementary way, Rodríguez-Marrero (2013) based on the approaches of Gronroos, indicates that there are two types of service quality: first, the technical quality that is associated with the question, what is received? and it is the technical result of the service production process, and secondly, the functional quality that is related to the question: how is the service received? and it focuses its attention on the development of the service.

Based on the above, the measurement and evaluation of the perceived quality of a service allow to understand the satisfaction that a user or client obtains from it. This is how Zeithaml (1988) refers to perceived quality as the consumer's judgment of the excellence and superiority of a service or product. Furthermore, Parasuraman *et al.* (1988) point out three characteristic points about perceived quality:

- a) is different from objective quality.
- b) assumes a higher level of abstraction than any of the product-specific attributes, is multidimensional and measurable.
- c) it is valued within the framework of a comparison, regarding the excellence or relative superiority of the goods or services that the consumer sees as substitutes.







The objective of this study was to evaluate the quality of the service of the Sports and Recreation Unit of the Universidad Católica de la Santísima Concepción de Chile, through the perception expressed by students who attend sports and physical activity workshops.

#### **MATERIALS AND METHODS**

# Focus, scope and design

The research had a quantitative approach since the variables were analyzed and expressed on a numerical scale ordered in defined distributions and ranges. The scope was descriptive. The design was non-experimental, since the phenomenon (sports services) was observed as it was generated, without manipulation of variables. The study was cross-sectional, since the data collection was carried out in a single moment and in a single time.

# **Technique**

Through face-to-face group interviews, a structured questionnaire was applied to the users (students) of the sports services offered by the Sports and Recreation Unit of the Universidad Católica de la Santísima Concepción de Chile (San Andrés Campus). The sports services considered for this research were the Sports Workshops, understood as part of the complementary offer of services provided by the university. These are group spaces, formal and of voluntary affiliation for the student body, which purposes are recreational and through them, it is sought that students acquire healthy lifestyle habits based on sports or physical activity.

#### Instrument

In order to measure the quality of the sport service, the questionnaire and the multidimensional SERVQUAL were used as a basis, which measures the service quality by applying a quantitative method. However, for the development of the questionnaire used specifically for this study, a modified version of SERVQUAL, called SERVPERF, was used.







The instrument was subjected to content validation and semantically analyzed for its application in various contexts, in order to reduce inappropriate idiomatic interpretations (Ortiz-Gutiérrez and Cruz-Avelar, 2018) through the judgment of five experts, all researchers and academics, with more than five years of experience in research and with publications indexed in Scopus and WoS in the line of sports management and sports sociology. The survey items were validated by the Delphi method, with three rounds of corrections until approval was obtained, which concluded with the development of a pilot. From an ethical point of view, the survey had the informed consent of the participants.

The dimensions of the SERVPERF instrument are five: tangible elements, Reliability, Responsiveness, Security and Empathy. Based on the objective of this research, the structure and composition of the statements were taken to the reality of the institution in which the sports service was evaluated, through 22 items in accordance with the literature analyzed, which were valued through a Likert-type scale (Table 1).

Table 1. - Dimensions, codes and items of SERVPERF

	ET1. The physical facilities of the Sports and Recreation Unit (UCSC) are visually attractive.				
	ET2. The printed materials used by the Sports and Recreation Unit (UCSC) (brochures, leaflets, etc.) are visually attractive.				
Tangible elements	ET3. The formal virtual means of communication (Facebook, Twitter, Email, etc.) used by the Sports and Recreation Unit (UCSC) are visually attractive.				
	ET4. The staff of the Sports and Recreation Unit (UCSC) has an adequate personal presentation.				
	F5. When the personnel of the Sports and Recreation Unit (UCSC) commit to do something in a certain time, they comply with it.				
	F6. When you have a problem, the staff at the Sports and Recreation Unit (UCSC) show interest in helping you.				
Reliability	F7. The staff at the Sports and Recreation Unit (UCSC) gives you good service the first time.				
	F8. The personnel of the Sports and Recreation Unit (UCSC) conclude the service in the corresponding time.				
	F9. The personnel of the Sports Unit (UCSC) keep their records up-to-date and free of errors (attendance lists, activity records, minutes, etc.)				
Answer's capacity	CR10. The staff of the Sports and Recreation Unit (UCSC) notifies you when the activity/service (workshop) will be completed.				







	CR11. The staff of the Sports and Recreation Unit (UCSC) offers you a punctual service.				
	CR12. The staff of the Sports and Recreation Unit (UCSC) is ready to help you.				
	CR13. The Sports and Recreation Unit (UCSC) staff is available to answer your questions.				
	S14. The staff of the Sports and Recreation Unit (UCSC) gives you confidence.				
Security	S15. The staff of the Sports and Recreation Unit (UCSC) generates security in the procedures/managements that you carry out.				
	S16. The staff at the Sports and Recreation Unit (UCSC) are kind to you.				
	S17. The Sports and Recreation Unit (UCSC) staff is trained to appropriately respond to your questions and concerns.				
	E18. The workshops of the Sports and Recreation Unit (UCSC) have adequate working hours.				
Empathy	E19. The staff of the Sports and Recreation Unit (UCSC) provides personalized attention.				
	E20. The Sports and Recreation Unit (UCSC) has a sufficient number of personnel to offer you personalized attention.				
	E21. The staff of the Sports and Recreation Unit (UCSC) cares about your (you) interests (sports workshops, types of physical and recreational activities, etc. ).				
	E22. The Sports and Recreation Unit (UCSC) understands your specific needs (physical activity, sport, recreation).				

The items of the instrument were evaluated through levels that ranged between one and seven progressively, option number one was the one that reflected the greatest disagreement (Totally disagree), up to option number seven for those who were very satisfied with what was declared in the statement (Totally agree), option number four was taken as an intermediate value (Neither agree nor disagree).

#### Population

They were all the users of the seven physical activity and sports workshops administered by the Sports and Recreation Unit of the Catholic University of the Santísima Concepción, according to the places available for the participation of each workshop, which added a total of 195 places for the seven workshops. The study subjects met the requirement of being regular (enrolled) undergraduate or postgraduate students (women or men) and belonging to the San Andrés Campus. In addition, they presented a minimum regular attendance, in order to be considered as valid informants, this implied registering attendance continuously or regularly, for at least three months prior to the application of the instrument.







# Sample

The study contemplated a non-probability and convenience sample, with a total of 70 users (35.9 %). Of the total number of participants surveyed, 78.6 % were women (55) and 21.4 % (15) men. In the sample there were students from 18 to 30 years old, for an average of 22.4 years (n = 70).

#### Procedure

The field work was carried out between November 7 and December 5 of the year 2018. The questionnaires were applied at the end of the workshop, with a time of between 10 and 20 minutes granted by the teacher responsible for the activity. Once the students agreed to participate in the study, they had to authorize the use of their data and information and complete the informed consent, where the confidentiality, voluntary participation and anonymous use of the information was written. After that, they answered the questionnaire. The disciplines of the sports workshops were Cross training, Spinning, Entertaining dance, Mountain biking, GAP (training), Functional training and Stretching.

# Analysis of data

It was developed through descriptive statistical analysis. First, a matrix was designed where the personal data of the users were entered and then, the answers were incorporated according to the 22 statements. In the matrix, one more option was contemplated, called does not apply/does not respond. The software used to analyze the data was Microsoft Excel ©p and the IBM SPSS 25.0 ©p statistical package. To present the results, it was determined to carry out a frequency analysis using percentages for each statement, expressed in Table 2.







# **RESULTS AND DISCUSSION**

Table 2 presents the results according to the five dimensions and 22 items of the questionnaire. Below the table, the descriptive analysis for each dimension are found (Table 2).

**Table 2. -** SERVPERF results by dimension

		Τ	angible	Elements I	Dimensio	n		
items	DT	DB	DE	NA	AD	BA	TA	does not
	(1)	(2)	(3)	NA (4)	(5)	(6)	(7)	answer
ET1	8.6	4.3	14.3	10	20	32.8	10	.0
ET2	7.1	10	5.7	20	21.4	18.6	17.2	.0
ET3	5.7	7.1	8.6	21.4	20.1	17.1	18.6	1.4
ET4	.0	.0	1.4	5.7	12.9	22.9	55.7	1.4
	·		Relia	bility Dime	ension			
F5	2.9	2.9	4.3	5.7	10	22.8	51.4	.0
F6	2.9	.0	4.3	10	14.2	25.7	42.9	.0
F7	2.9	.0	.0	7.2	14.2	22.9	51.4	1.4
F8	1.4	.0	1.4	1.4	7.1	24.4	64.3	.0
F9	1.4	1.4	5.8	10	5.8	27.1	47.1	1.4
	·	R	Response	Capacity I	Dimensio	n		
CR10	7.1	1.4	2.9	7.1	11.5	21.4	48.6	.0
CR11	2.9	2.9	2.9	2.9	17	30.0	41.4	.0
CR12	1.4	.0	1.4	4.4	10	21.4	57.1	4.3
CR13	2.9	.0	2.9	14.1	8.6	22.9	48.6	.0
			Secu	ırity Dimeı	nsion			
S14	.0	.0	4.3	5.7	12.9	24.2	52.9	.0
S15	2.9	1.4	2.9	8.6	10	32.8	41.4	.0
S16	1.4	.0	1.4	5.7	10	21.5	58.6	1.4
S17	1.4	.0	.0	1.4	11.5	27.1	58.6	.0
			Emp	athy dime	nsion		·	
E18	1.4	2.9	8.6	15.7	10	17.1	44.3	.0
E19	1.4	2.9	1.4	8.6	15.7	30	38.6	1.4
e20	2.9	4.3	7.1	14.3	15.7	27.1	28.6	.0
E21	2.9	2.9	1.4	11.4	14.3	18.7	48.6	.0
E22	1.4	4.3	4.3	5.7	8.6	21.4	51.4	2.9

Note: TD = Strongly disagree; BD = Strongly disagree; ED = Disagree; NAND = Neither disagree nor agree; AD = Agree; BA = Fairly Agree; TA = Totally Agree.

# Dimension tangible elements

This dimension presented the results about the perception of users about tangible elements, understood as those aspects related to the physical material that can be touched and perceived by students, for example ropes, bicycles, balls, mats, gym infrastructure, dressing rooms, clothing, among others.







Regarding the attractiveness of the physical facilities (ET1), 62.8% of the users opted for a positive assessment. Regarding the attractiveness of the printed advertising pieces (ET2), the positive evaluations added up to a total of 57.2 %. The third statement about the attractiveness of the virtual communication and information media (ET3) reported the alternative neither agreeing nor disagreeing, as the one that obtained the highest percentage (21.4 %); however, 55.8 % of those surveyed continued to opt for the alternatives that positively value the statement. Regarding the adequate personal presentation of the workers (ET4), only 1.4% favored a negative option.

In general, the results of the Tangible Elements dimension allowed to place it as the one with the least positive evaluations of the five evaluated. In this line, the most valued item was the personal presentation of the officials, while the lowest valued statement corresponded to the visual attractiveness of the physical facilities. These results coincided with the research by Herrera *et al.* (2017) who presented this area as the one with the lowest evaluation of the five dimensions.

# Reliability dimension

This dimension sought to find out if the service met certain conditions, such as the completion of a workshop at an agreed time, the commitment and interest shown by the Sports and Recreation Unit towards its users and the quality of the service from the beginning of the service this.

Regarding the commitment to carry out the activities in a certain time by the staff (F5), the assessment was very positive (84.2 %) and only 10.1 % chose negative alternatives. The affirmation about the satisfaction of the users regarding the interest in helping that the staff has (F6) showed that only 7.2 % evaluated it negatively. In the statement about the delivery of a good service from the first time (F7) only 2.9 % opted for a negative option. On the end of the service at the scheduled times (F8) the alternatives that positively evaluated this item added up to a total of 95.8 %. Regarding the maintenance of user records updated and without errors (attendance lists, activity records, personal records, among others) (F9), it was evidenced that 80% of people chose positive alternatives.







In summary, the Reliability dimension reached its highest approval in the item about the completion of the service in the scheduled time; on the other hand, the statement with the least approval corresponded to the updated record and without errors of attendance by the staff. Reliability was the second best evaluated dimension, but not in the comparison with the study by Herrera *et al.* (2017), where this dimension was presented as the most valued by users.

# Dimension response capacity

This dimension presented the answers given about the perception that users have in relation to the response capacity offered by the staff, administrative officials/services and teachers were considered.

The CR10 statement that evaluated whether the Unit staff communicated when the service was completed (class-workshop) showed that 81.5% of people valued this item positively. On the punctuality of the service (CR11) the negative evaluations only added up to 8.7%. The CR12 item that evaluated the availability of help from the staff reported a total of 88.5% positive responses and only 2.8% expressed negative assessments. Finally, statement CR13 presented a very good assessment associated with the staff's willingness to answer questions (80.1% total positive responses). In addition, 14.3% stated that they neither agreed nor disagreed.

This dimension, like in the research by Herrera *et al.* (2017) was the third with the best evaluation, reaching its highest evaluation in the statement that alluded to the willingness of the staff to help its users. This agreed with the results of Herrera *et al.* (2017). Meanwhile, the item with the lowest value was when it was asked if the staff adequately communicated the completion of the activity/workshop, unlike Herrera *et al.* (2017) who reported their lowest percentage of approval in the statement referring to the punctuality of the service delivered.







# Security dimension

This dimension reported the results on the security provided by the personnel in the different areas that implied the delivery of the service during the course of the activities. The item regarding the trust generated by the staff (S14) showed almost all the respondents (90 %) with a positive assessment. In this same context, the statement about security that was generated when carrying out procedures/managements in the Unit (S15), showed 84.2 % positive evaluations and only 7.2 % expressed a negative option.

The evaluation of the friendliness of the staff (S16) was good, since 90% of the users selected a positive alternative. The statement that inquired about the staff's capacity to adequately respond to questions or concerns from users (S17) was the one that reported a higher frequency of users who selected a positive option (97.2 %), within that percentage only the alternative totally agrees obtained 58.6 %. By contrast, only 1.4 % selected a negative alternative.

This dimension was the best evaluated by the users and its four statements were valued as very positive, meanwhile, in the study carried out by Herrera *et al.* (2017) was the second dimension with the best evaluation. The best valued statement corresponded to the staff's ability to respond to questions and concerns, but not in the study by Herrera *et al.* (2017), where the best evaluation corresponded to the item referring to the friendliness of the staff. On the other hand, the statement that corresponded to the safety of officials when carrying out procedures, was shown to be the statement with the least positive evaluations, as in the research by Herrera *et al.* (2017).

#### **Empathy dimension**

This dimension addressed the evaluation of the relationship between the officials of the Sports and Recreation Unit and the users. The evaluation of the item on the correct arrangement of sports workshop schedules (E18) revealed that 71.4 % opted for a favorable assessment, on the contrary, 12.9 % evaluated the schedules negatively. Regarding the delivery of a personalized service (E19), only 5.7 % were negative responses. Regarding the evaluation regarding whether the number of personnel was sufficient to offer personalized







attention (E20), 71.4 % opted for a positive alternative and 14.3 % gave an unfavorable evaluation.

The E21 statement that assessed staff concern for user interests reported more than 80% positive responses. The last statement, which dealt with the ability of staff to understand the specific needs of users (E22), reported a total of 81.4 % positive responses and only 10 % negative alternatives.

Finally, this dimension was positioned as the fourth best evaluated dimension, as in the research by Herrera *et al.* (2017). It was possible to identify that the item with the highest approval was the one regarding the degree of satisfaction that users had in terms of personalized attention, this coincided with the results of Herrera *et al.* (2017). On the other hand, the statement that received the lowest evaluation corresponded to the number of personnel that made up the Sports and Recreation Unit. This differs from the research cited, since this work reported its lowest value in the hours of the workshops.

#### CONCLUSIONS

Based on the results obtained, it was possible to point out that the quality of the services offered by the Sports and Recreation Unit of the studied university was mainly evaluated positively by its users, 50 % of positive evaluations were obtained in all the raised items. However, and based on the continuous improvement in the management and administration of the service, this Unit should have considered an analysis and intervention of the Tangible Elements dimension, since it was the one that obtained the lowest evaluation of the five dimensions, the item highlighted related to how unattractive the sports facilities are.

Regarding the limitations of the study and with the objective of evidencing elements that can be considered in future research, it is pointed out that there are few references to research on the measurement of the quality of sports services at the university level, mainly in Latin America, this limits the capacity of contrast; the stage (dates) in which the surveys were applied was a factor that affected the response rate, due to the fact that in the months







of November and December there is a high academic load for students (end of the academic year) and caused that users presented lower attendance at sports workshops.

This type of research can serve as guidance for university or higher education institutions to systematically apply studies that allow evaluating the quality of the sports services offered to their students, with the aim of continuously improving their benefits and implying a positive impact in the quality of life of the student body and in the development of their professional training.

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#### **Conflict of interests:**

The authors declare not to have any interest conflicts.

# **Authors' contribution:**

The authors have participated in the writing of the work and analysis of the documents



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