

## GLOBAL CUSTOMER SATISFACTION AND ITS COMPONENTS IN LOCAL SPORTS SERVICES. A DISCRIMINANT ANALYSIS

### *La satisfacción global del cliente y sus componentes en servicios deportivos municipales: Un análisis discriminante*

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**ABSTRACT:** Customer satisfaction is the basis of any organization. This study aims to examine in-depth the level of satisfaction of local sports service customers through an assessment of their perceptions. We analyse the relationship between the global satisfaction of customers with the perception of global quality of these local sports services, using a discriminant analysis. Cleanliness and instructor/coach attention are the variables with the highest discriminatory power. Organizations should have one key element constantly in mind: knowing how to evaluate the opinion of the customers of the sport service.

**KEY WORDS:** Customer satisfaction, local sports services, sport management, discriminant analysis.

**RESUMEN:** *La satisfacción del cliente es la base para cualquier organización. Este estudio examina en profundidad el nivel de satisfacción de los usuarios de servicios deportivos municipales a través de una evaluación de sus percepciones. Se analiza la relación entre la satisfacción global de clientes con la percepción de la calidad global de los servicios deportivos locales, mediante un análisis discriminante. La limpieza y la atención del instructor/entrenador son las variables con mayor poder de discriminación de la satisfacción. Si bien, las organizaciones deben conocer siempre un elemento clave: saber cómo valorar la opinión de los usuarios respecto del servicio deportivo.*

**PALABRAS CLAVE:** Satisfacción del consumidor, servicios municipales de deporte, gestión del deporte, análisis discriminante.

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## **1. Introduction**

Taking part in physical activity and sport is a common, widespread habit among the population. The reasons for its increase in popularity and demand in a municipal environment are constantly changing. Our evolving “socio-sport” environment has resulted in sport management becoming an increasingly complex process. There is growing competition within this field, and more emphasis is being placed on providing high-quality sport and recreation services.

Furthermore, client satisfaction is the basis of any organization. Different authors have given great importance to the treatment of the quality of services and satisfaction with those services (Johnson and Gustavson, 2000; Kim and Kim, 1995; Nuviala et al., 2010; Oliver, 1999), the fact that satisfaction is related to the quality of the service provided (Brady and Roberston, 2001; Edvardsson, 2005; Giese and Cote, 1999; Murray and Howat, 2002), and they have expressed their desire to continue advancing in this field to enrich their knowledge. Many organizations are finding it hard to meet the demands of a better-educated public in a rapidly changing social environment (Chen et al., 2005a).

Satisfaction has been described as a retrospective evaluation of an activity (Westbrook and Oliver, 1991) or a psychological state resulting from an experience (Oliver, 1999). The most common way of presenting customer satisfaction is to make a comparison between a customer’s expectations and his/her perception of the service received (Shonk and Chelladurai, 2008). Thus satisfaction, in terms of the degree of agreement, may be positive, negative, or neutral (White and Yu, 2005).

Satisfaction and quality have sometimes been presented as two very closely related concepts (Chelladurai and Chang, 2000; Kang and James, 2004). Calabuig et al. (2010) also views satisfaction as a product of quality management.

Analysis of this literature has shown that the satisfaction perceived by the customers based on the quality of the service is a necessary condition to obtain their loyalty (Alexandris et al., 2002; 2004; Homburg et al., 2005; Murray and Howat, 2002; Oliver, 1999). Both variables have a strong influence in the future behavior intentions of clients who use a sports service. This has given rise to numerous studies that analyze the relation of the quality of the service perceived by the customer, satisfaction with the service, and the intention of behavior (Johnson and Gustavson, 2000; Oliver, 1999).

Studies of customers' quality expectations and satisfaction refer to all types of services and aspects, sports (Afthinos et al., 2005; Alexandris et al., 2004; Alexandris and Palialia, 1999; Bodet, 2006; Kim and Kim, 1998; Lentell, 2000), as well as other fields (Chen et al., 2005a; 2005b; Jiang and Wang, 2006; Johnson and Gustavson, 2000; Lee et al., 2005). Martínez-Tur et al. (2001) analyzed the relationships between sports facilities management and customer satisfaction, in terms of whether the facilities were public or private. Other authors have either studied the behavior of users and their satisfaction with regard to sports facilities management (Rodríguez and Barriopedro, 2003) or the variables that influence and predict satisfaction in the use of sports facilities (Hightower et al., 2002).

However, satisfaction has a closer link with pure experience (in that it needs to experience the sporting activity). There is a strong relationship between a person's satisfaction and his/her affective and emotional state (Schoefer and Enew, 2005). The perception of quality usually has a stronger relationship with cognitive aspects, as judgment of the service is made in a more all-inclusive manner (Babin and Griffin, 1998; Spreng and Mackoy, 1996). When the different types of quality coincide (that designed or offered by the sports service and that expected by the clients) (Chelladurai and Chang, 2000; Kang and James, 2004), different levels of satisfaction are achieved, where the ideal state of satisfaction results from integrating all the quality types.

Jiang and Wang (2006) maintain that service quality is something that should be constantly and attentively monitored, because quality is not just an idea: it is a specific way of doing things, an empirical objective of excellence, an objective that we only know has been met if we monitor it properly. The conceptualization of service quality has shifted from a classic conception in an objective sense, as if it were about the quality of a product meeting standards set by the organization, to a conception of a subjective nature, concentrating on meeting the needs of the customers. Service quality is itself determined by efficiency in the management of available resources. Client satisfaction must clearly be the principal objective of an organization that strives to attract and keep satisfied customers (Johnson and Gustavson, 2000).

Several authors (Johnson and Gustavson, 2000; Oliver, 1999) maintain that satisfaction is understood as the client's judgment concerning the excellence or the superiority of a service based on the coincidence that the client finds when comparing what he/she thinks of a service with what is expected to receive. According to this theory, the level of satisfaction related to the quality of a sport service will not be known until the user stops using the service and then compares it with the expectations that he/she previously had.

In Spain, Regional Departments, along with the National Government, are responsible for the management and supervision of sport, particularly competitive sports, and the building of sport facilities. The Local Government (local sports services) is responsible for drawing up and carrying out all sport programming and services that take place in the sport facilities. These local entities, upon assuming their responsibilities, are in charge of inculcating sports at the local level. Their intention is to promote sports and guarantee its access in the best possible conditions to all the people who wish to participate regardless of gender, physical training conditions or socioeconomic level. For politicians and government officials, the management of sports organizations is a major challenge (Burillo et al., 2011).

In this context, we encounter a problem due to the fact that the increase in sports participation has evolved and new demands arise continuously. Traditionally, towns with better intentions than just management criteria have tried to promote sports by implementing, on many occasions, imitation or intuition strategies to develop their growth (Gallardo et al., 2008). Sports services have been managed for clients without counting on them, by organizations that do not listen, without interaction or a trustworthy knowledge of their demands (Chelladurai and Chang, 2000; Howat et al., 2002). This may have been caused by what Mullin et al. (2000) termed as short-sightedness in the supply of sports that can make the effectiveness of its management difficult.

Managers in the public sector are under constant pressure to improve performance within their organizations (Chen et al., 2005a; 2005b). Local managers have assumed this role as the institutional body closest to the citizens (Gallardo et al., 2008). They are expected to satisfy various stakeholders; to increase efficiency, effectiveness, and quality of services; to meet organizational goals; and to establish a culture of continuous improvement, change, and distinct service orientation (Chen et al., 2005a).

In a global context, local sports services using available resources are in charge of developing sports activities that will be used by the clients through the relations of interchange in the social and sporting process. For the benefit of sports activities or services to take place within quality parameters, the starting point must be an observation of the demand. For example, satisfaction surveys help provide data on clients' opinions. These will enable the collection of data to design and define a local sports service, with the aim of offering it with the best possible quality using the contributions of clients with respect to innovations on the management of the service. It is a way to anticipate needs. Everything that is measured is susceptible to improvement.

A sports organization needs to develop indicators that will enable the evaluation of the most important aspects of sports services at a municipal level. Analyzing the degree of satisfaction of the customers will help the organization to detect potential shortfalls and adapt its services to existing demand. This will help identify the factors that, from the customers' perspective, will make the implementation of quality management systems more effective.

## **Objectives**

This study aims to examine in-depth the level of satisfaction of local sports service customers through an assessment of their perceptions. To this end, we employ the concept of global satisfaction, which will enable us to determine whether the concept of satisfaction can be analyzed in global terms (as a single magnitude) or if it needs to be broken down (in other words, a particular study of its various components). We also analyze the relationship between the various aspects that affect, or potentially affect, the global satisfaction of customers (expressed in 10 initial variables), with the perception of global quality of these local sports services. Finally, as a complementary detail, we study whether the sociodemographic variables of the population affect customer satisfaction, and if so, to what extent.

## **2. Methods**

A survey was conducted regarding the perception of satisfaction with municipal sports services in the region of Castilla-La Mancha (Spain), with data from a total of 4,231 customers in 21 different municipalities, with varying quality management systems (either their own or with ISO or EFQM certifications).

Based on Alexandris et al. (2004), Fornell et al. (1996), Howat and Murray (2002), and Kim and Kim (1995), the survey was drawn up using 10 variables, connected with global customer satisfaction:

1. State of conservation
2. Dressing rooms
3. Cleanliness of the facilities
4. Number of sports facilities
5. Staff attention
6. Instructor/coach attention
7. Instructor/coach training

8. Opening hours

9. Flexibility of attendance times

10. Quality of service

In the second part of the survey, another variable was employed:

- Global quality provided by the local sports service

Pursuant to various authors, we used a Likert-type scale, from “1” (extremely dissatisfied) to “7” (extremely satisfied). The range of options for the respondent was sufficiently broad.

### **2.1. Statistical Analysis**

The information provided by the variables related to satisfaction was summarized in an instrumental variable. The objective of this new variable was, for the purposes of the analysis, to reveal global customer satisfaction. This variable was obtained from the arithmetical sum of the scores in each of the 10 previous items that comprised the global customer satisfaction index. Thus, the least satisfied customer would give 10 points, and the most satisfied, 70 points.

We then used a multivariate statistical method, the discriminant analysis, which is used widely in other studies of a similar nature (Li and Lin, 2006; Taylor and Wright, 2006). The discriminant analysis procedure consists of reducing the original dependent variables to new canonical variables. These canonical variables are the result of a linear combination of the original variables, expressed by the “discriminant function,” to provide better discrimination between groups.

As far as the grouping variable is concerned, it must have a limited number of categories, which are generally codified as whole numbers. Another requirement for its application is that the cases should be independent of each other. The canonical variables should also have a multivariate normal distribution, and the intragroup variance-covariance matrices should be equal in all groups. These conditions were complied with prior to analysis.

As far as group membership is concerned, it should be exclusive and exhaustive. In other words, none of the cases studied may belong to more than one group, but they must all belong to a particular group. As with the data, the elements of the sample met this condition. Thus, two groups of individuals were established for the purposes of grouping. First, there were those with a very high level of satisfaction (i.e., highly satisfied). That means those who gave high marks to practically all the components referring to their satisfaction. At the other end of

the scale were individuals who were dissatisfied with the service; in other words, those who gave low marks to practically all the satisfaction items.

Using discriminant analysis, we obtained what is known as the discriminant function. The discriminant function is obtained from a sample of cases (here, users) whose group membership is known, and finding the linear combination of the original variables that maximize the separation between groups, which in turn is equivalent to minimizing the variability within each group. The discriminant function follows the criterion of obtaining the maximum variability between groups with regard to the intragroup variance. It aims to maximize its variance with regard to the intragroup variance. The aim of this procedure is to obtain well-defined groups. These groups would be widely separated (high variance between groups) but extremely homogeneous in their composition (little variance within the groups). This objective fits well with the aim of this study, as it is useful to divide all the individuals of the sample into two groups with regard to their satisfaction.

The discriminant function was then applied to the values observed in the variables of each individual, giving us what are known as the “discriminant scores” for each particular individual. Thus, the discriminant score was considered to be the joint assessment of the customer’s global satisfaction.

A variable was obtained, which in global or joint terms takes in satisfaction. The study then went on to relate this with another variable taken from the survey: the quality provided by the municipal sports service.

Finally, an analysis of satisfaction in terms of certain sociodemographic components (such as sex or age) or customer profile (sports activity, timetable, or type of customer) was conducted. This analysis was conducted using nonparametric statistical techniques, common in this type of study (Barton et al., 2008; Simon et al., 2008). Specifically, for cases involving two independent samples, the Mann-Whitney U test was used; and for cases with a greater number of samples, the Kruskal-Wallis H test was employed.

### **3. Results**

The discriminant analysis gave satisfactory results. Thus, as shown in Table 1, 100% of the original cases and 100% of the cases validated by cross validation are classified correctly. These results showed that discriminant analysis is a good technique for predicting membership of some of the groups worked with (e.g., extremely satisfied or dissatisfied customer groups).

Table 1. Discriminant analysis results

		Predicted Group Membership			
		Discrim	Less	More	Total
<b>Original</b>	<b>Count</b>	Less	62	0	62
		More	0	101	101
		Non group cases	755	2807	3562
	<b>%</b>	Less	100,0	,0	100,0
		More	,0	100,0	100,0
Non group cases		21,2	78,8	100,0	
<b>Cross-validated <sup>a</sup></b>	<b>Count</b>	Less	62	0	62
		More	0	101	101
		Less	100,0	,0	100,0
	<b>%</b>	More	,0	100,0	100,0

a. Cross validation is done only for those cases in the analysis. In cross validation, in each case is classified by the functions derived from all cases other than that case.

From the discriminant function, we went on to consider the appropriateness of the variables in customer satisfaction. With regard to the 10 variables in the survey, the results show that, in terms of explanatory power, they can be summarized as follows (see Table 2).

Table 2. Variables included in the discriminant analysis

Step		Tolerance	F to exit	Wilks' Lambda
<b>1</b>	<b>Number of sports facilities</b>	1,000	3198,613	
<b>2</b>	<b>Number of sports facilities</b>	,990	293,257	,079
	<b>Cleanliness</b>	,990	110,563	,047
<b>3</b>	<b>Number of sports facilities</b>	,990	171,567	,047
	<b>Cleanliness</b>	,990	78,926	,034
	<b>Flexibility of attendance</b>	1,000	36,277	,028
<b>4</b>	<b>Number of sports facilities</b>	,974	88,734	,029
	<b>Cleanliness</b>	,990	57,260	,026
	<b>Flexibility of attendance</b>	,925	49,685	,025
	<b>Instructor/coach attention</b>	,911	30,477	,022
<b>5</b>	<b>Number of sports facilities</b>	,947	56,315	,023
	<b>Cleanliness</b>	,952	34,277	,021
	<b>Flexibility of attendance</b>	,888	29,317	,020
	<b>Instructor/coach attention</b>	,911	26,313	,020
	<b>Quality of service</b>	,903	15,339	,019
<b>6</b>	<b>Number of sports facilities</b>	,835	23,702	,018
	<b>Cleanliness</b>	,891	42,878	,020
	<b>Flexibility of attendance</b>	,865	18,950	,018
	<b>Instructor/coach attention</b>	,908	26,304	,018
	<b>Quality of service</b>	,902	14,575	,017
	<b>Staff attention</b>	,789	13,785	,017



It was found that the other 4 variables provided nonsignificant information with regard to satisfaction. In other words, they did not add to the information provided by the other 6 variables. They may be said to be redundant variables (Table 3).

Table 3. Variables not included in the discriminant analysis

Step		Tolerance	Min Tolerance	F to Enter	Wilks' Lambda
6	<b>State of conservation</b>	,764	,756	,094	,016
	<b>Dressing rooms</b>	,803	,783	,530	,016
	<b>Instructor/coach training</b>	,419	,419	,007	,016
	<b>Opening hours</b>	,572	,553	,591	,016

With these results, a hierarchical order of the variables was set up, according to the 6 variables that provided most information (Table 4). With regard to global customer satisfaction, taking into account standardized coefficients, the variables with the greatest discriminatory power were the cleanliness of the facilities (coefficient value: 0.499) and instructor/coach attention (0.415). The variable quality of service had the least discriminatory power, although it was still significant (coefficient value: 0.313).

Table 4. Canonical Discriminant Function Coefficients

	Function 1
<b>Cleanliness</b>	,499
<b>Number of sports facilities</b>	,404
<b>Staff attention</b>	,326
<b>Instructor/coach attention</b>	,405
<b>Flexibility of attendance times</b>	,360
<b>Quality of service</b>	,313

As a consequence of the function discriminating the values of each of the variables for the individuals of the sample, the discriminant score of each individual was obtained. As explained earlier, this value may be considered a measure of the global customer satisfaction regarding local sports services.

We then analyzed the relationship between this global customer satisfaction indicator and the users' perception of global quality provided by the municipal sports service (a variable also included in the survey). Figure 1 includes a boxed diagram showing this relationship graphically.

As shown in Figure 1, both variables are related. This shows a positive upward tendency as far as satisfaction is concerned. In fact, when the assessment of the

global quality of the municipal service rises, so does the level of customer satisfaction.

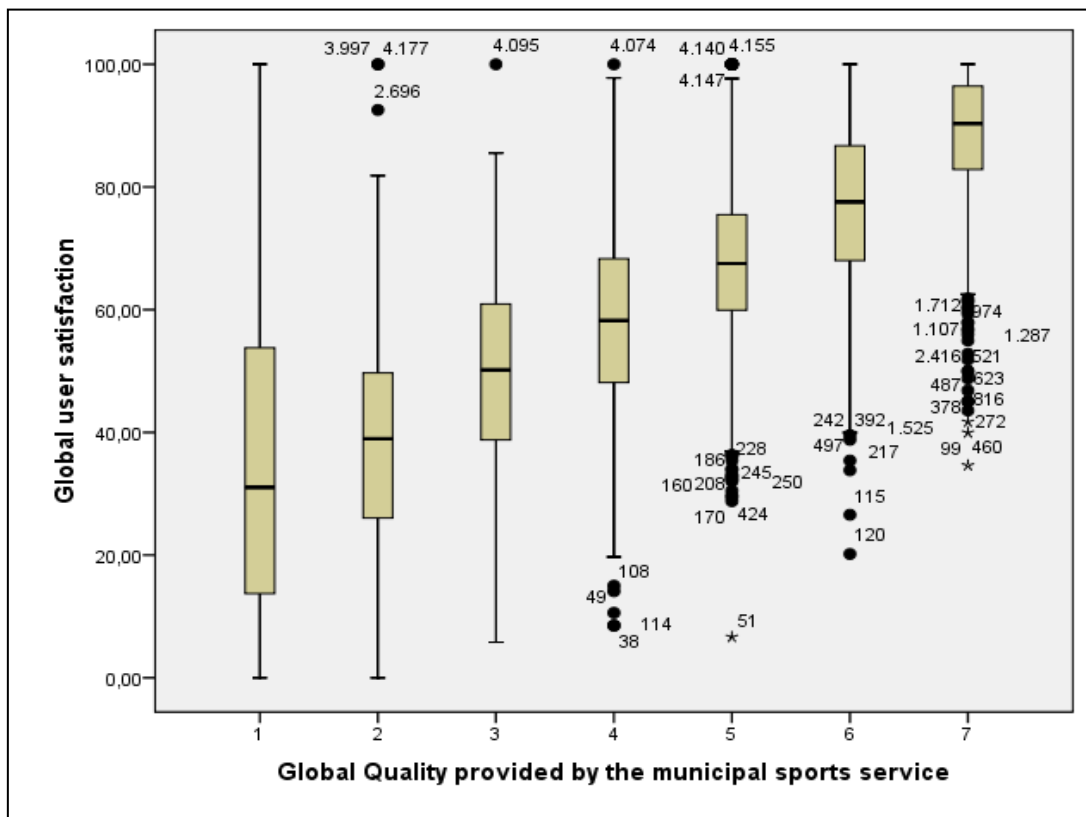


Figure 1. Relationship between satisfaction and quality provided by local sports services

Note: For a more intuitive interpretation, the value of global customer satisfaction was rescaled from “0” to “100,” so that the least value of the sample had a value of “0” and the highest “100.”

However, there were also some differences as regards the various levels of global quality perception. Specifically, there is a broad range of customer satisfaction (from low to medium-high satisfaction) for the lower levels of local sports service quality assessment (value “1”). There are even extreme cases where a high level of satisfaction is attained (100) in the “value 1” of local sports service quality. However, this situation does not occur in the highest quality level (value “7”), as in this case the satisfaction levels are very high (in most cases between 60 and 100).

Thus, despite the clear interrelationship between these two variables, the results show that these are two different parameters. This implies that the two concepts are not indistinctly manageable, or if they are, caution should be exercised. This circumstance leads us to suggest that aspects other than quality influence satisfaction – aspects such as attendance times, staff attention, or cleanliness – are equally as relevant as the quality of the sporting activity.

Thus, global customer satisfaction is not always related to the perception of the quality provided. A quality sporting activity may be considered as the activity

that meets the expectations and reasonable requirements of the customer. This does not mean, however, that users perceive quality in the sports facility management, regardless of whether they are using certified quality systems.

Finally, we conducted an analysis of customer satisfaction in terms of certain sociodemographic component, using nonparametric tests.

Table 5. Global satisfaction based on Gender, Age, Type of user and Attendance time

		N	Mean Range	Sum of Ranges
<b>Gender</b>	<b>Men</b>	1588	1646,91	2615295,00
	<b>Women</b>	1969	1885,53	3712608,00
	<b>Total</b>	3557		
<b>Age</b>	<b>&lt;34</b>	2141	1686,55	3610906,50
	<b>&gt;35</b>	1521	2035,53	3096046,50
	<b>Total</b>	3662		
<b>Type of User</b>	<b>Occasional</b>	685	1246,19	853642,50
	<b>Habitual</b>	1836	1266,52	2325338,50
	<b>Total</b>	2521		
<b>Attendance time</b>	<b>Morning</b>	774	1885,21	1459151,50
	<b>Evening</b>	2543	1590,15	4043751,50
	<b>Total</b>	3317		

The first of these analyses concentrated on checking whether there were significant differences as regards satisfaction level according to the sex of the responder. The Mann-Whitney Test shows that, in general terms, women show a higher satisfaction level than men (Table 5). The results of this component do have an influence on global customer satisfaction.

The Kruskal-Wallis test shows that the age level, like sex, influences customer satisfaction. Thus, with the exception of the youngest group (under 14 years), we see that the level of satisfaction increases with age (Table 6). Thus, the highest age group (over 55 years) is most satisfied with the municipal sports service. Young users between the ages of 15 and 24 are those who clearly have a lower level of satisfaction.

For a closer scrutiny of the differences in terms of age, we divided the sample into just two age groups: younger (up to 34) and older (35 and over). The results reaffirm the tendency shown earlier, as the older customers are significantly more satisfied than the younger group (Table 5).

As far as customer profile is concerned, those whose principal activity is “cycling” have a greater level of satisfaction, while those opting for “futsal” and

“aerobics/rhythmic gymnastics” are least satisfied. Nevertheless, in general terms, the differences are not very noticeable (Table 6).

Table 6. Global satisfaction based on the Age (II) and Main Activity

	N	Mean Range	
<b>Age (II)</b>	<14	778	1807,41
	15-24	675	1513,25
	25-34	688	1719,91
	35-44	629	1913,66
	45-54	330	1912,73
	>55	562	2244,04
	<b>Total</b>	3662	
<b>Main Activity</b>	<b>Football</b>	337	1471,60
	<b>In-door football</b>	232	1284,14
	<b>Skating</b>	304	1644,43
	<b>Basketball</b>	65	1516,18
	<b>Handball</b>	165	1407,59
	<b>Badminton</b>	665	1732,45
	<b>Cycling</b>	737	1891,24
	<b>Swimming</b>	336	1431,67
	<b>Athletics</b>	31	1561,45
	<b>Volleyball</b>	119	1322,11
	<b>Tennis/Paddle</b>	127	1499,67
	<b>Judo/Karate</b>	29	1460,29
	<b>Fitness</b>	44	1590,25
	<b>Aerobics</b>	21	1285,98
<b>Others</b>	16	1535,13	
<b>Total</b>	3228		

Furthermore, we see that being a “habitual user” or an “occasional user” has no influence as regards global customer satisfaction level. The test gives similar results for both groups (Table 5). However, the attendance time chosen is a factor that does have an influence, as morning users are notably more satisfied than evening users (Table 5).

#### 4. Discussion

It is crucial that the most important aspects of satisfaction or dissatisfaction among sports services users be identified. This enables the sports organization to plan the services it provides and exercise effective quality control. The characteristics of these services – their intangibility, the fact that they are produced and consumed at the same time, that the beneficiary has to take part in the service, and that they are fleeting and cannot be stored (except in the customer’s memory) – mean that a comparison of the customers’ perceptions has to be made alongside the activities currently being offer.

In this study, we pursue the line of recent studies (Alexandris et al., 2004; Bodet, 2006; Kim and Kim, 1995; Lentell, 2000; Nuviala et al., 2010; Schoefer and Enew, 2005; Shonk and Chelladurai, 2008), which show the need to broaden the predominant focus in the satisfaction-shaping process based on analyzing comportment after the use of the service. This is accomplished by considering the mediating effects between customers and providers.

After a theoretical review, it has been accepted that the best way of discovering what aspects are most closely linked to global customer satisfaction is discrimination in well-defined groups (in this case, two aspects: high satisfaction and low satisfaction).

Although global customer satisfaction is influenced by a multitude of factors, the analysis has assessed certain variables over others, which are worth highlighting here. "Cleanliness of facilities" and "instructor/coach attention" are the variables with the highest discriminatory power in global customer satisfaction. Sports managers should be aware of these aspects in their organizations, as continuous daily maintenance of the facilities is sometimes disregarded. The same can be said about the trainer-trainee personal relationship, with managers often concentrating on other aspects that are not so discriminatory. Some authors (Alexandris and Stodolska, 2004; Vassiliadis et al., 2006) maintain that the satisfaction of the customers in the services and activities offered by the sport organization strongly influences the sport practice.

The results lead us to deduce that it is not necessary to ask about all 10 variables in the survey; the 6 with discriminatory power are sufficient: "Cleanliness," "Instructor/coach attention," "Number of sports facilities," "Flexibility of attendance," "Staff attention," and "Quality of sports activity." This does not mean that the 4 excluded variables are not important for customers, or that they should be neglected by the municipal sports service; for statistical purposes, however, the information they provide for global customer satisfaction is already given by the other 6 variables.

Similarly, the coefficients of standardization ordering the variables chosen by the discriminant analysis enable us to establish a prioritization that might be useful. For example, if, in an extreme case, a sports manager had to concentrate on just one variable to analyze global customer satisfaction, he/she would only have to focus on "cleanliness of the facilities," because the results show that this is most important for customer satisfaction.

The customer has an entirely different perception of the global quality of municipal sports services to that of his/her own satisfaction. There are a multitude of aspects that have a decisive effect on global customer satisfaction, but not on the perception of the global quality offered by the local sports service. The figures reveal the existence of customers who are very satisfied, but with a

low perception of the global quality of the municipal sports service, and vice versa. Thus, higher customer satisfaction does not necessarily mean higher perception of the global quality of the municipal sports service.

The perception of quality is just another process in human behavior, and each subject is different. It is strongly influenced by differing expectations and personal experiences, as well as by other external factors that are very hard to isolate (personal culture, other users, material resources, facilities, and so on).

Similarly, satisfaction is associated with a transitory affective state, resulting from a prior individual and independent cognitive process, known as quality perception. This will vary to a largely due to different internal and external factors apparent in the sporting activity and is based on a customer's previous experience. We may accept, therefore, that satisfaction and quality perception are two distinct concepts, linked to two distinguishing elements: the experience and the emotional state of the user.

On the other hand, quality management in a municipal sports service is an "objective" concept, that may be measured, compared, and applied in the same way in sports organizations depending on the different quality models and systems (such as ISO 9001, EFQM, and total quality management, among others), and these do not directly lead to an increase in customer satisfaction.

If we analyze the assessments in terms of gender, we can see that women have a more positive appreciation and are more satisfied with the sports services provided. There is no factor in which men's assessment is higher than that of women. If we assess the results obtained in terms of age, we see that the segment that is most satisfied with the services provided is the age group of 55 years and above, with an average range of 2244.04. On the other hand, the age group that is most dissatisfied is the 15–24 age group, with a range of 1513.25. The young are more critical and more demanding in terms of what they expect from a sports service, while older subjects may be a little less demanding and more accommodating.

## **5. Conclusions**

The demands of the sports sector call for organizations that can easily adapt to the needs of customers and that are flexible in their internal structure as a form of management. This management must usually adopt as a basic premise the parameters of a quality system, in which commitments to customers or the optimization of processes will help to provide rapid, simple responses for a dynamic sector in constant evolution. But this "quality management" may not be seen as such by the daily users of the facilities.

Organizations should have one key element constantly in mind: knowing how to evaluate the opinion of the customers of the service. There is a need to measure

their satisfaction regarding aspects associated with the sports service. In this respect, we believe that sports managers would benefit from using discriminant analysis, as it is commonly used in other business environments, such as marketing or process management. With this methodology, sports managers can isolate and establish the components that have the most impact on customers, and will help them in their decision-making.

Our data show that there are certain redundant variables (in that they provide the same information as other variables) in the representation of global customer satisfaction. It is very hard to weigh the value of each factor, due to the subjective nature of their determination. Nevertheless, the results show that there need to be suitable facilities (clean and with sufficient number of facilities), and that the attention of staff that has direct customer contact has greater significance in the assessment of satisfaction.

The satisfaction of sports customers is affected by a multitude of factors related to the organization's sports management. However, this satisfaction should be considered to be a transitory emotional aspect, which does not necessarily depend on the quality provided by the municipal service; it greatly depends on the customer's previous experience. Certain sociodemographic aspects (including sex and age, among others) also influence global satisfaction.

In most cases, the customer judges the municipal sports service as a composite, an impression of the whole. This is why the municipal sports service should operate with the customer's global satisfaction in mind so that it can respond to the needs of all the interested parties and orient its management policies in the right direction

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