Importance-Performance Analysis applied to a Specialized Center for Tennis Sport Technification (SCTST)

Análisis Importancia-Valoración aplicado a un Centro Especializado de Tecnificación Deportiva en Tenis (CETDT)

Alejandro Lara-Bocanegra[1], M. Rocío Bohórquez[2], Jerónimo García-Fernández[1]

[1] Facultad Ciencias de la Educación. Departamento Educación Física y Deporte, Universidad de Sevilla. Grupo de Investigación en Gestión e Innovación en Servicios Deportivos, Ocio y Recreación (GISDOR), España

[2] Facultad Ciencias de la Educación. Departamento Psicología Social, Universidad de Sevilla. Grupo de Investigación en Gestión e Innovación en Servicios Deportivos, Ocio y Recreación (GISDOR), España

Correspondence: Jerónimo García-Fernández, jeronimo@us.es

Abstract

The aim of this study was to evaluate the characteristics of the services of a Specialised Centre for Tennis Sport Technification (SCTST) through an Importance-Performance Analysis (IPA) carried out by its internal and external customers. However, although there are studies related to sports centres in Spain, there is none that focuses on SCTST, and that can also investigate the perceptions of their different customers and present an analysis segmented by customer characteristics. A total of 128 clients of the SCTST participated in the study, 102 being men and the remaining 26 women, with an average age of 43.81 (*SD* = 13.60). As a measurement instrument, the online questionnaire was applied, with questions on customer characteristics (sociodemographics) and a behavioural measure, consisting of 29 items. As a result of the data obtained, IPA analysis was performed mainly according to sex and type of relationship of the clients with the SCTST, taking into account the discrepancies between the mean scores obtained in valuation and importance. The main findings indicate that all attributes can be improved, but special emphasis should be placed on the rates and state of conservation of the SCTST sports facilities.

Keywords: IPA, sport centre, customers, satisfaction, tennis.

Resumen

El objetivo de este estudio fue evaluar las características de los servicios de un Centro Especializado de Tecnificación Deportiva en Tenis (CETDT) a través de un análisis Importancia-Valoración (IPA) realizado por los clientes internos y externos del mismo. Aun existiendo trabajos vinculados a los centros deportivos en España, no existe ninguno que se centre en los CETDT, y que, además, indague en las percepciones de sus diferentes clientes y presente un análisis segmentado por características de éstos. En el estudio participaron 128 clientes del CETDT, siendo 102 hombres y 26 restante mujeres, con una edad media de 43.81 años (*DT* = 13.60). Como instrumento de medida se aplicó un cuestionario online, con preguntas sobre características de los clientes (sociodemográficos) y una medida de comportamiento, compuesta por 29 ítems. A raíz de los datos obtenidos, se realizó el análisis IPA atendiendo principalmente al sexo y al tipo de relación de los clientes con el CETDT, teniendo en cuenta las discrepancias entre las puntuaciones medias obtenidas en valoración e importancia. Los principales hallazgos indican que todos los atributos pueden ser mejorados, pero se debe poner un especial énfasis en las tarifas y el estado de conservación de los espacios deportivos del CETDT.

Palabras clave: IPA, centro deportivo, clientes, satisfacción, tenis.

1. Introduction

According to the survey on sporting habits in Spain 2020 of the Ministry of Education, Science and Sport (MESS, 2021), despite the fact that the impact of COVID-19 has been decisive in the evolution of the indicators of sporting practice in Spain, this has increased with an annual rate of practice of 59.6%. This figure represents an increase of 6.1 percentage points compared to 2015. The increase in sport practice has meant a greater daily and weekly frequency, with rises of 7.6 and 8.6 percentage points respectively, and has been generalised in the different groups and higher in those groups that presented lower participation rates (MESS, 2021). On the other hand, this sport is practised outdoors 47.1% of the time, indoors 23.1% of the time and 29.8% of the time in both environments. 36.3% of the population that practises sport said that they tend to do it at home, a percentage that is practically double that observed in 2015, 17.2% at an educational centre, 3% at the workplace and 3.1% took advantage of their journeys to work or school (MESS, 2021). Finally, 45.3% of those who practise sport use specific facilities for this purpose, a figure that represents a notable decrease, 13.5 percentage points compared to the previous edition of the survey (MESS, 2021).

As stated by the MESS (2021), the practice of tennis has suffered a drastic drop compared to the previous survey in 2015, where 14% of people played tennis compared to 7.2% today. If we analyse the data in terms of gender, we can see that 4.8% of women did so in 2020 compared to 9.1% in 2015, while 9.2% of men played in 2020 compared to 18.1% in 2015. These data only serve to highlight the need to analyse the perceptions and satisfaction of these practitioners in order to provide the managers of these sports facilities with the tools they need to increase the number of practitioners of this sport. In this sense, evaluations are needed in sports organisations to determine user perceptions, which can be linked to quality and satisfaction (García-Fernández et al., 2014). Likewise, there is currently no work that focuses on the analysis of the perceptions of the different tennis clients of a Specialised Centre for Tennis Sport Technification (SCTST). Therefore, the aim of this study was to evaluate the characteristics of the services of a SCTST through an Importance-Perception Analysis (IPA) carried out by internal and external customers.

Based on the above, the paper is structured in five sections. The introduction will be developed in the first section. The second section contains the theoretical foundation that will address the theoretical framework and the current situation from which this research emanates. The third section presents the methodology used in developing the participants and the data collection and analysis procedure. The fourth section shows the results of the research by comparing the findings of the two groups analysed. The fifth section has the discussion, while the sixth section sets out the conclusions reached as a result of this research.

2. Theorical framework

2.1. Specialised Centre for Tennis Sport Technification (SCTST)

As Rial et al. (2013) explain, it was after the awarding of the Barcelona 1992 Olympic Games that structures and comprehensive programmes began to be created in Spain aimed at optimising the recruitment and preparation of future athletes. In this way, the necessary resources and conditions were provided, making it necessary to build centres with the best facilities, services and technical resources in order to guarantee sporting success (CSD, 2014). In order to attend to both the high level and the preparation and detection of future sports promises, the High Performance Centres (HPC) and the Sports Technification Centres (STC) have been built. The HPCs consist of state or autonomous community sports facilities whose objective is to improve the performance of high-level athletes, while the STCs are autonomous community, local or sports federation facilities that focus on sports improvement (CSD, 2014). Finally, and as a complement to the previous facilities, there are the Specialised Centres for High Performance (SCHP) and the Specialised Centres for Sports Technification (SCST), which are responsible for hosting sports or sports modalities that, due to their particularities, cannot be catered for in the HPCs or in the STCs. Both SCHPs and SCSTs are owned by the state, autonomous communities, and local or sports federations, and they differ in that SCHPs are focused on high-level athletes, while SCSTs are linked to sports improvement (Rial et al., 2013).

According to the CSD (2014), the SCSTs are developed for a specific sport modality and deal with the improvement of athletes. Their activity is mainly carried out at the regional level, with 32 centres currently in operation for different sport modalities in Spain (e.g., winter sports, tennis, table tennis, sailing, etc.) (CSD, 2014; 2019). At most, and given that the SCSTs may be owned by the state, autonomous communities or sports federations, some of these centres share public facilities that can be used by other users on an amateur or competitive basis. For this reason, and because one of the main objectives of sports federations is the promotion of sport, it is interesting to focus the research on this type of centres (SCST) to analyse their operation and management through the perceptions of their internal (employees - workers) and external (users - consumers) customers.

2.2. Importance-Performance Analysis (IPA)

Importance-performance analysis (Martilla & James, 1977) - hereinafter IPA - allows for the detection of the elements that are being managed correctly, as well as those that need greater attention from the organisation. This analysis focuses on the importance given by users or consumers to the different elements of the service or product, as well as the evaluation they give them after use (Zamorano-Solís & García-Fernández, 2018). Through this analysis, a graphic representation of the results is generated in four quadrants (Martilla & James, 1977), each quadrant showing a strategy to follow in its treatment (Figure 1). The graph created follows the following form: upper left quadrant ("focus here"), upper right quadrant ("keep up the good work"), lower left quadrant ("low priority") and lower right quadrant ("possible overkill"). As stated by Ábalo et al. (2006), the average importance and rating scores obtained for each attribute will define its position in the graph. In this way, managers will be able to focus on the highest priority attributes and optimise their organisation's resources in order to increase the level of satisfaction of their users or consumers (Ábalo et al., 2006).
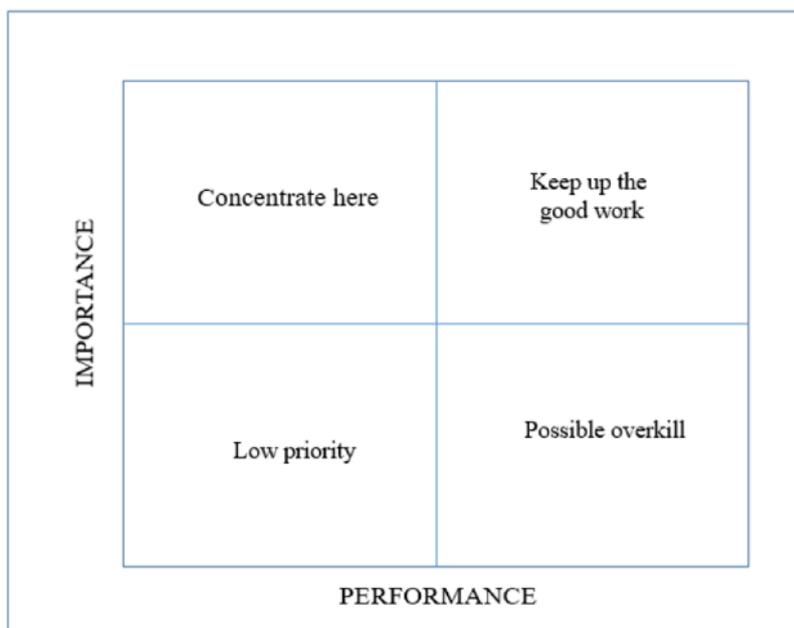
Figure 1. Importance-Performance Analysis Representation (Martilla & James, 1977)

One of the major limitations of this analysis lies in the uncertainty in the placement of the defining axes of the quadrants, which will affect the interpretation of the results and will depend on the judgement of the researcher (Ábalo et al., 2006; Martilla & James, 1977). In order to address this limitation, Sethna (1982) proposed to take into account the resulting discrepancies between the scores obtained in valuation and importance, which would provide more information in this regard. The greater the difference between the importance and rating of an attribute (in favour of importance), the greater the customer dissatisfaction with that attribute and, therefore, the greater the need for corrective action (Sethna, 1982). This fact leads the classical IPA analysis (Martilla & James, 1977) to a new version that addresses and attempts to overcome the limitations presented. Thus, Bacon (2003) indicates that diagonal models, which divide the IPA space into two triangular halves, are the ones that best predict the priorities expressed directly by users. Therefore, Ábalo et al. (2006) suggest combining the information provided by the quadrants (Martilla & James, 1977) with the information of the actual discrepancies that exist between valuation and importance (Figure 2). In this way, those attributes above the diagonal will be those on which service management efforts will have to be concentrated, since they are causing dissatisfaction among users, while the lower triangular area will be subdivided into the three remaining areas formed from the prolongation of the axes at the bottom of the graph, which will be plotted on the average of the scores obtained for each dimension (Ábalo et al., 2006). This graph responds to the limitations of the classic IPA (Martilla & James, 2006) and is one of the most widely used by the scientific community (León-Quismondo et al., 2020a).
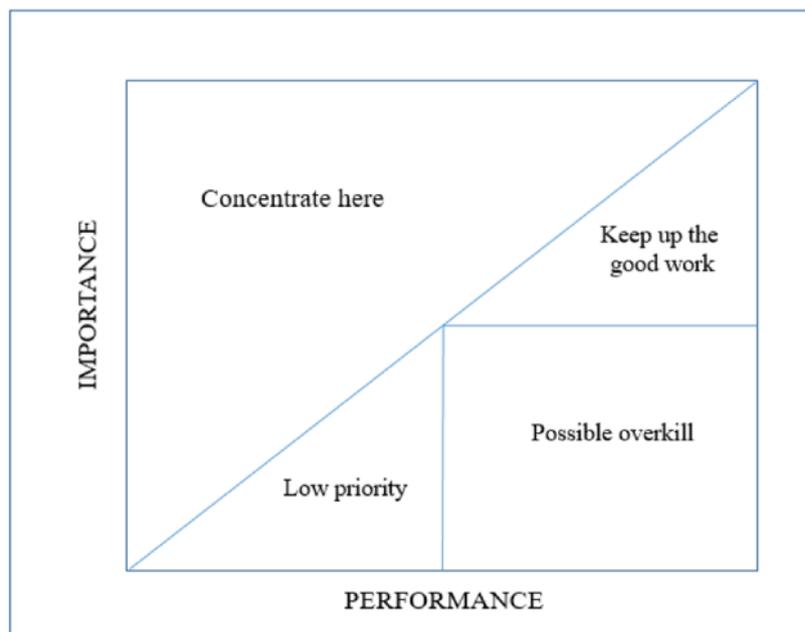
Importance-Performance Analysis applied to a Specialized Center for Tennis Sport Technification (SCTST)

Cultura, Ciencia y Deporte │ **AÑO 2022** │ **VOL. 17** │ **NUM. 52** │ **España** │ **PÁG. 37 A 52** │ **ISSN 1696-5043**

Figure 2. **Importance-Performance Analysis Representation (Ábalo et al., 2006)**

The use of this type of analysis has been developed in a wide variety of contexts such as healthcare, banking, or leisure-tourism (Ábalo et al., 2006; Ferreira & Veloso, 2011; Joseph et al., 2005; Skok et al., 2001). Furthermore, several studies have used this analysis to detect the variables that influence the perception of sports consumers (Arias-Ramos et al., 2016; deSouza & Chard, 2021; Martínez-Caro et al., 2014; Parra-Camacho et al., 2020; Rial et al., 2008; Wohlfart et al., 2021). In this sense, in the sports sector this type of analysis is widely used for the analysis of sports centres, focusing mainly on fitness centres (Alonso et al., 2013; García-Fernández et al., 2018; León-Quismondo et al., 2019; León-Quismondo et al., 2020a, 2020b; Yildiz, 2011; Zamorano-Solís & García-Fernández, 2018; Zheng et al., 2021). However, although there are numerous studies linked to public and private sports centres in Spain, there are none that focus on CEDTs, and that, moreover, can investigate the perceptions of their different customers and present an analysis segmented by their characteristics.

For this reason, León-Quismondo et al. (2020a) pointed out the need to investigate sports centres other than fitness centres through the IPA, and to include in them different types of customers (employees and users). Therefore, the aim of this study was to evaluate the characteristics of the services of a SCTST through an Importance-Performance Analysis (IPA) carried out by the internal and external customers of a SCTST.

3. Methodology

3.1. Context of the study

In order to know a little more about the characteristics of the SCTST in which the research was carried out, it has 17 tennis courts (9 clay courts and 8 synthetic resin courts), 2 paddle courts, a gymnasium, and physiotherapy services, a cafeteria and a residence for sportsmen and women.) In addition, top-level competitions have been held at these facilities (e.g., the Davis Cup and Federation Cup national team qualifiers, ITF World Tennis Tour events and RPT Young Promises Circuit events, among others).

3.2. Participants

A total of 128 clients (internal and external) of the SCTST participated in the study, 79.7% being men (n = 102) and the remaining 20.3% women (n = 26), with an average age of 43.81 years (SD = 13.60). Regarding the main users of the facility (Table 1), 60.2% of respondents answered in the first person (n = 77), while 39.8% answered on behalf of another person (child or dependent relative) (n = 51). In terms of socio-economic status (Table 1), the majority of participants reported a medium socio-economic status (n = 111; 86.7%), while 1.6% reported a low socio-economic status (n = 2; 1.6%). Regarding the frequency of SCTST use (Table 1), slightly more than half of the subjects (60.9%) attend the SCTST 2-3 times/week, while 25% attend the SCTST 3 or more times per week (n = 32). Only 14.1% attend less than 1 or 1 time per week (n = 18). All specific data can be seen in Table 1.

Table 1. Data linked to the type of relationship with the SCTST, main user of the facility, socio-economic level and frequency of use

	Frequency	Percentage	Cumulative percentage
Relationship with SCTST.			
Facility subscriber (court reservation)	40	31.3	31.3
Tennis/paddle tennis school customer	59	46.1	77.3
High Performance group player	3	2.3	79.7
Centre worker	4	3.1	82.8
Facility subscriber and school client	15	11.7	94.5
Others	7	5.5	100.0
Total	128	100.0	
Main user of the facility.			
Myself	77	60.2	60.2
My child	39	30.5	90.6
Dependent family member	1	.8	91.4
Me + My child	11	8.6	100.0
Total	128	100.0	
Socio-economic level			
Low	2	1.6	1.6
Medium	111	86.7	88.3
High	9	7.0	95.3
Don't know	6	4.7	100.0
Total	128	100.0	
Frequency of use of SCTST.			
Less than 1 or 1 time/week	18	14.1	14.1
2-3 times/week	78	60.9	75.0
3-4 times/week	26	20.3	95.3
5 or more times/week	6	4.7	100.0
Total	128	100.0	

3.3. Instruments

An online questionnaire (Google Forms) was used for data collection, divided into two main sections:

- Socio-demographic data questionnaire. In order to know the characteristics of the participants, a socio-demographic data questionnaire was designed ad hoc, including questions about gender, age, who is the main user of the sport services, type of relationship with the SCTST, service used, educational and socio-economic level, employment status, frequency of use of the SCTST and if another sport centre was used.
- Valuation and importance of sport services. To analyse the importance and valuation of the different aspects related to the sports service offered by the SCTST, an adaptation of the León-Quismondo et al. (2020a) questionnaire was used, adapting three items to the characteristics of the SCTST, since the León-Quismondo et al. (2020a) questionnaire is focused on fitness centres. The questionnaire was originally composed of 29 items, divided into 3 dimensions: Relationship with the user (e.g., Price of the fee and registration adequate to your expectations); spaces and equipment (e.g., Sports spaces in good state of conservation); and offer of services (e.g., Varied and extensive offer of activities). Thus, participants evaluated the 29 items for both rating and importance. The questions of importance (preceded by the heading "How important is...?") and valuation (preceded by the heading "What value do you give...?") were separated into different sections, to avoid confusion in the answers, using a five-point Likert-type scale for the answers, from "not important" to "very important" for importance, and from "totally negative" (1) to "totally positive" for valuation (5). The Cronbach's alpha of the scale with the sample of this work was 0.96.

3.4. Procedure

After establishing the basis for the research, the manager of the SCTST facility was contacted and presented with the research and its benefits for his work. Once approval was obtained and the online form was created for completion, the SCTST facility manager sent a mass e-mail to the entire customer database, both internal and external, with an explanation of the research and the link to the questionnaire. Data collection took place between 01 December 2020 and 10 April 2021, with a first mailing on 1 December and reminder mailings on 1 February, 1 March and 1 April. The availability of the link to the online form was closed on 10 April 2021.

3.5. Data analysis

A quantitative and descriptive method was used for data collection in response to the population served by the SCTST. After this, the database was downloaded and the data was cleaned and coded in order to subsequently transfer it to the SPSS 25.0 software (IBM Corp., Armonk, NY, USA). For each of the variables, the mean and standard deviation were obtained, both in the valuation and importance boxes. A ranking was also included according to the mean values obtained in terms of valuation and importance, ordered from the highest to the lowest scores, so that those items with the highest scores will be placed in the top positions of the ranking. In addition, the discrepancy between the importance and the rating provided by the study subjects was calculated between the two data. A general IPA analysis was carried out with all the data provided, as well as a segmentation and analysis by gender and the type of relationship of the clients with the SCTST.

4. Results

4.1. Overall IPA results

The overall descriptive analyses obtained for both importance and valuation show positive values and good scores for each of the aspects analysed (Table 2). With regard to the valuation of the different items, the most

important item is IT11 (M = 4.71; SD = 0.54), while in valuation the most important item is IT5 (M = 4.43; SD = 0.70). However, after calculating the discrepancy (D) of the rating means minus the importance means, it can be observed that most of the items have negative values, which means that the importance scores are higher than the rating scores in most cases, except for IT1, IT10, IT17, IT21, IT27, IT28 and IT29, which obtained positive discrepancy scores. The items with the highest negative discrepancies, and which should therefore be the focus of the manager's attention, are IT2 (-0.54) and IT11 (-0.63). It is also important to emphasise that negative scores indicate that there is greater customer dissatisfaction (internal/external) in the aspects evaluated, and that those whose discrepancy is closer to 0 will be the strongest, as they have the lowest discrepancy (Sethna, 1982).

Table 2. Overall IPA results ordered from greatest to least discrepancy

ITEMS		Importance			Performance			D
		MI	SD	R	MP	SD	R	
IT11	Sports facilities in a good state of repair.	4.71	0.54	1	4.08	1.10	13	-0.63
IT2	Fees and registration fees that meet your expectations.	4.38	0.60	10	3.84	0.99	19	-0.54
IT15	Fluid information between the facility and users.	4.43	0.72	8	3.95	1.03	15	-0.48
IT12	Clean and hygienic sports facilities.	4.66	0.59	2	4.27	0.75	5	-0.38
IT19	Quality of showers (water pressure, volume and temperature).	4.18	0.88	17	3.80	1.06	21	-0.38
IT13	Adequate ventilation/temperature.	4.51	0.70	6	4.14	0.86	10	-0.37
IT18	Clean and spacious changing rooms.	4.37	0.82	11	4.02	0.96	14	-0.35
IT8	Ratio of students per coach.	4.24	0.95	15	3.93	0.86	16	-0.31
IT14	Perceived safety in terms of Covid measures.	4.48	0.83	7	4.21	0.89	8	-0.27
IT16	Use of social networks.	3.48	1.00	26	3.25	1.03	28	-0.23
IT3	Sports centre open at the times and on the days you want.	4.52	0.68	5	4.30	0.79	4	-0.22
IT4	Attentive and friendly treatment.	4.63	0.58	3	4.41	0.68	2	-0.21
IT24	Easy to use court management/reservation tool.	4.33	0.75	13	4.14	0.84	11	-0.19
IT5	Adequate attention from staff.	4.60	0.59	4	4.43	0.70	1	-0.17
IT7	Professionalism of the monitors.	4.41	0.94	9	4.25	0.83	7	-0.16
IT6	The instructor makes you achieve your results.	4.27	0.94	14	4.13	0.83	12	-0.14
IT20	Spacious and secure lockers.	3.83	0.92	21	3.70	1.00	23	-0.13
IT22	Varied and extensive range of activities on offer.	4.00	0.86	19	3.87	0.98	18	-0.13
IT23	Quality personal training/private classes.	4.03	0.88	18	3.90	0.93	17	-0.13
IT9	Gifts to reward regular customers.	3.36	1.15	27	3.27	1.01	27	-0.09
IT26	Cafeteria/Restaurant.	3.77	0.79	24	3.70	0.92	24	-0.06
IT25	Medical office/physiotherapy.	3.78	0.95	22	3.73	0.93	22	-0.05
IT10	Spacious sports areas.	4.34	0.73	12	4.36	0.62	3	0.02
IT28	Matches the user profile of the Sports Centre.	3.78	0.88	23	3.81	0.79	20	0.03
IT29	The Sports Centre as a social meeting point.	3.65	0.93	25	3.69	0.90	25	0.04
IT17	Car park.	4.21	0.83	16	4.27	0.83	6	0.05
IT27	Wifi.	2.99	1.03	29	3.05	0.96	29	0.05
IT21	Hairdryers in the changing rooms.	3.20	1.03	28	3.27	0.95	26	0.08
IT1	Proximity: less than 15 minutes to the Sports Centre.	3.84	1.15	20	4.16	0.90	9	0.32
	TOTAL	4.10			3.93			-0.17

Note: *MI*: Average importance; *MP*: Average performance; *SD*: Standard Deviation; *R*: Ranking; *D*: Discrepancy.

Following the data obtained in terms of the mean ratings and the importance of the different items and according to the discrepancies between them, Figure 3 shows the graphical representation of the items. As can be seen, the data are arranged in four zones ("Concentrate here", "Low priority", "Possible waste of resources" and "Keep up the good work") and more or less separated from the diagonal (discrepancy line). Accordingly, it can be seen how managers should pay maximum attention to all items in the upper half of the triangle, and more specifically to those that are further apart from the discrepancy line (e.g., IT2, IT11 and IT15). At the same time, work on IT10 and IT17 should be continued.
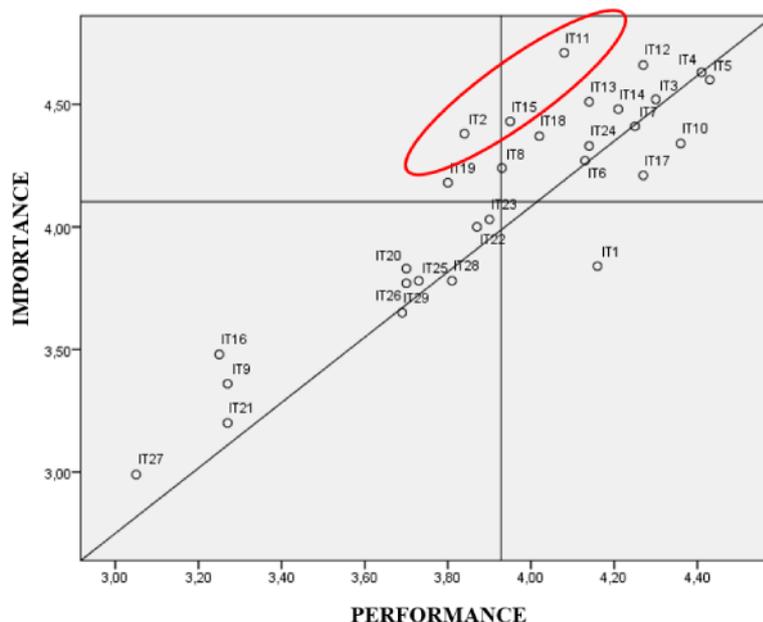
Cultura, Ciencia y Deporte | **AÑO 2022** | **VOL. 17** | **NUM. 52** | **España** | **PÁG. 37 A 52** | **ISSN 1696-5043**

Importance-Performance Analysis applied to a Specialized Center for Tennis Sport Technification (SCTST)

Figure 3. **Representation of overall IPA results**

4.2. IPA results according to sex

The results obtained according to the sex of the participants are presented below (Table 3). For men, the item with the highest score in importance is IT11 (M = 4.76; SD = 0.49) and in assessment IT5 (M = 4.50; SD = 0.62), with a greater negative discrepancy in 11 (-0.73), 15 (-0.51) and 2 (-0.49). In the case of women, IT10 (M = 4.35; SD = 0.66) is the highest rated and IT4 the highest rated in importance (M = 4.65; SD = 0.66), with the highest negative discrepancy in IT2 (-0.73) and IT8 (-0.58). Although there are no major coincidences between the two sexes, a common nexus can be seen in IT2, which is among those with the highest negative discrepancy in both sexes.

Importance-Performance Analysis applied to a Specialized Center for Tennis Sport Technification (SCTST)

Cultura, Ciencia y Deporte | **AÑO 2022** | **VOL. 17** | **NUM. 52** | **España** | **PÁG. 37 A 52** | **ISSN 1696-5043**

Table 3. IPA results according to sex

ITEMS		Male							Female						
		MP	SD	R	MI	SD	R	D	MP	SD	R	MI	SD	R	D
IT1	Proximity: less than 15 minutes to the Sports Centre.	4.21	0.78	10	3.74	1.15	24	0.47	4.00	1.22	12	4.23	1.03	14	-0.23
IT2	Price of the fee and enrolment fee that meets your expectations.	3.88	1.00	19	4.37	0.54	13	-0.49	3.65	0.94	21	4.38	0.77	9	-0.73
IT3	Sports Centre open at the times and on the days you want.	4.35	0.78	4	4.53	0.67	5	-0.18	4.08	0.81	11	4.46	0.73	7	-0.38
IT4	Attentive and friendly service.	4.44	0.67	2	4.62	0.56	4	-0.18	4.31	0.71	2	4.65	0.66	1	-0.35
IT5	Adequate attention from the staff.	4.50	0.62	1	4.63	0.54	3	-0.13	4.15	0.89	8	4.50	0.73	4	-0.35
IT6	The instructor ensures that you achieve your results.	4.13	0.84	11	4.25	0.94	14	-0.13	4.15	0.80	9	4.35	0.94	11	-0.19
IT7	Professionalism of the instructors.	4.25	0.85	7	4.39	0.93	10	-0.15	4.27	0.75	3	4.50	0.99	5	-0.23
IT8	The ratio of students per trainer.	3.92	0.82	16	4.17	0.94	17	-0.25	3.96	0.96	15	4.54	0.95	2	-0.58
IT9	Gifts to reward regular customers.	3.26	1.03	27	3.33	1.17	27	-0.07	3.27	0.93	26	3.46	1.03	26	-0.19
IT10	Spacious sports facilities.	4.36	0.61	3	4.38	0.66	12	-0.02	4.35	0.66	1	4.19	0.94	15	0.15
IT11	Sports facilities in good condition.	4.04	1.17	13	4.76	0.49	1	-0.73	4.23	0.74	5	4.50	0.68	6	-0.27
IT12	Clean and hygienic sports facilities.	4.27	0.77	6	4.69	0.56	2	-0.41	4.27	0.70	4	4.54	0.68	3	-0.27
IT13	Adequate ventilation/temperature.	4.13	0.88	12	4.52	0.62	6	-0.39	4.19	0.77	6	4.46	0.95	8	-0.27
IT14	Perceived safety in terms of Covid measures.	4.24	0.84	8	4.51	0.70	7	-0.27	4.12	1.03	10	4.35	1.18	12	-0.23
IT15	Fluid information between facility and users.	3.93	1.06	15	4.44	0.72	8	-0.51	4.00	0.90	13	4.38	0.72	10	-0.38
IT16	Use of social networks.	3.25	1.02	28	3.51	1.00	26	-0.26	3.27	1.04	27	3.35	0.98	27	-0.08
IT17	Car park.	4.28	0.77	5	4.18	0.83	16	0.11	4.19	1.02	7	4.35	0.81	13	-0.15
IT18	Clean and spacious changing rooms.	4.02	1.00	14	4.44	0.76	9	-0.42	4.00	0.82	14	4.08	0.98	16	-0.08
IT19	Quality of showers (water pressure, volume and temperature).	3.83	1.08	21	4.24	0.84	15	-0.40	3.69	0.97	20	3.96	1.00	19	-0.27
IT20	Spacious and secure lockers.	3.69	1.04	25	3.83	0.89	21	-0.15	3.77	0.83	19	3.81	1.02	20	-0.04
IT21	Hair dryers in the changing rooms.	3.27	0.97	26	3.19	1.09	28	0.09	3.27	0.84	28	3.23	0.78	29	0.04
IT22	Varied and extensive range of activities on offer.	3.84	0.97	20	4.05	0.80	18	-0.21	3.96	1.00	16	3.81	1.05	21	0.15
IT23	Quality personal training/private lessons.	3.89	0.95	18	4.04	0.84	19	-0.15	3.92	0.86	17	4.00	1.02	18	-0.08
IT24	Easy to use court management/reservation tool.	4.22	0.82	9	4.39	0.72	11	-0.18	3.85	0.85	18	4.08	0.81	17	-0.23
IT25	Medical office/physiotherapy.	3.75	0.89	22	3.82	0.89	22	-0.07	3.62	1.06	22	3.62	1.12	22	0.00
IT26	Cafeteria/Restaurant.	3.74	0.87	24	3.80	0.77	23	-0.07	3.58	1.06	23	3.62	0.86	23	-0.04
IT27	Wifi.	3.02	1.00	29	2.92	1.06	29	0.10	3.15	0.75	29	3.27	0.84	28	-0.12
IT28	You match the user profile of the Sports Centre.	3.92	0.72	17	3.85	0.84	20	0.07	3.38	0.91	25	3.50	0.95	25	-0.12
IT29	The Sports Centre as a social meeting point.	3.75	0.85	23	3.68	0.90	25	0.07	3.46	1.03	24	3.54	1.03	24	-0.08
	TOTAL	3.94			4.11			-0.17	3.87			4.06			-0.19

Note: *MI*: Average importance; *MP*: Average performance; *SD*: Standard Deviation; *R*: Ranking; *D*: Discrepancy.

Furthermore, it can be seen that there are differences according to gender (Figure 4 and Figure 5). As mentioned above, and following the indications of Ábalo et al. (2006), in the case of men (Figure 4), the most important aspects that need more attention by the management of the centre are IT2, IT11 and IT15, related to fees and enrolment, conservation of sports facilities and fluid information between the facility and users, respectively. As for women (Figure 5), IT2 and IT8, related to fees and enrolment and the ratio of students per coach, respectively, are the ones that need more attention and work. Based on the above data, it seems that both men and women coincide in the need for work and low satisfaction with IT2 (fees and enrolment), so that greater efforts should be made by the SCTST management to alleviate these difficulties.
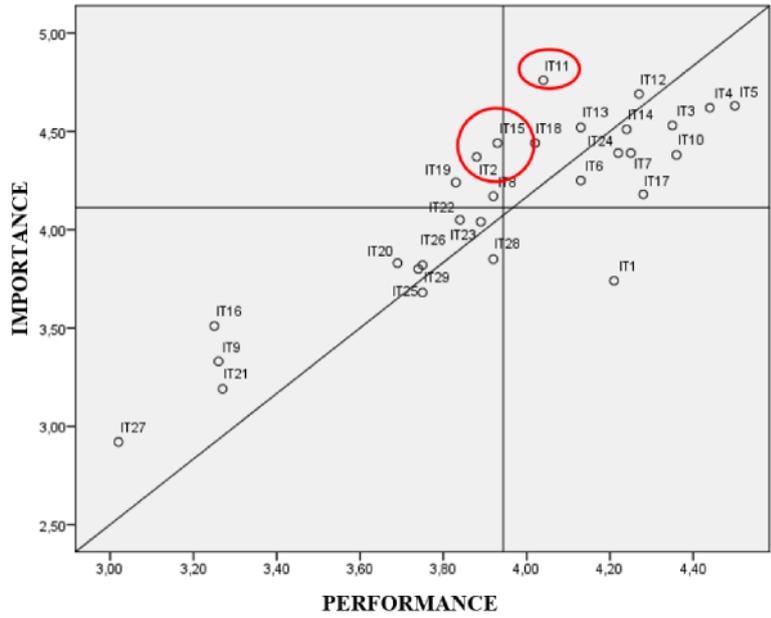
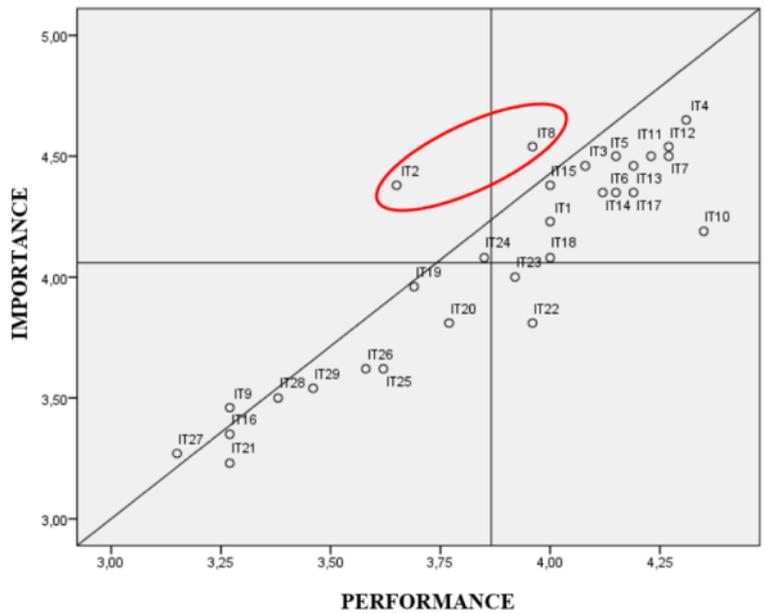**Figure 4**. Representation of male IPA results

Figure 5. Representation of female IPA results

4.3. IPA results according to the type of relationship between clients and the SCTSTS

Table 4 and Table 5 show the results obtained according to the type of customer relationship with the SCTST, showing the scores obtained in terms of importance, assessment and discrepancies.

Table 4. IPA results according to type of client relationship with the SCTST (Facility subscriber, Tennis/paddle school client and High Performance group player)

	Facility subscriber (reservation of courts)							Tennis/paddle tennis school customer							High Performance group player						
	MP	SD	R	MI	SD	R	D	MP	SD	R	MI	SD	R	D	MP	SD	R	MI	SD	R	D
IT1	4.05	0.84	11	3.58	1.16	25	0.48	4.19	0.95	8	3.88	1.15	20	0.31	4.33	0.47	1	2.67	1.25	29	1.67
IT2	4.05	1.05	12	4.45	0.50	10	-0.40	3.71	0.99	21	4.27	0.66	14	-0.56	4.00	0.82	5	5.00	0.00	1	-1.00
IT3	4.35	0.82	3	4.58	0.77	4	-0.23	4.19	0.79	9	4.41	0.61	6	-0.22	4.00	0.00	6	3.33	0.94	20	0.67
IT4	4.38	0.76	2	4.53	0.63	8	-0.15	4.42	0.64	3	4.66	0.57	2	-0.24	3.67	0.47	14	4.33	0.94	9	-0.67
IT5	4.40	0.70	1	4.55	0.63	6	-0.15	4.44	0.74	2	4.58	0.62	5	-0.14	3.67	0.47	15	4.67	0.47	5	-1.00
IT6	3.73	0.77	20	3.70	1.10	23	0.02	4.37	0.73	4	4.61	0.58	4	-0.24	4.00	0.82	7	4.00	0.82	13	0.00
IT7	3.75	0.86	19	3.85	1.15	19	-0.10	4.53	0.65	1	4.69	0.59	1	-0.17	4.33	0.94	2	5.00	0.00	1	-0.67
IT8	3.60	0.70	25	3.63	1.07	24	-0.02	4.10	0.91	13	4.54	0.67	7	-0.44	4.33	0.47	3	5.00	0.00	3	-0.67
IT9	3.35	1.04	26	3.45	1.26	27	-0.10	3.15	0.97	28	3.31	1.11	27	-0.15	2.67	0.47	29	3.33	1.25	21	-0.67
IT10	4.33	0.61	4	4.38	0.86	13	-0.05	4.37	0.61	5	4.29	0.71	13	0.08	3.33	0.47	20	4.67	0.47	6	-1.33
IT11	3.98	1.35	17	4.78	0.57	1	-0.80	4.19	0.93	10	4.64	0.58	3	-0.46	4.00	0.82	8	5.00	0.00	4	-1.00
IT12	4.28	0.89	7	4.78	0.47	2	-0.50	4.31	0.70	6	4.58	0.62	6	-0.27	4.00	0.00	9	4.33	0.47	10	-0.33
IT13	4.15	1.01	8	4.55	0.84	7	-0.40	4.15	0.82	11	4.42	0.64	9	-0.27	4.00	0.00	10	4.67	0.47	7	-0.67
IT14	4.15	0.99	9	4.40	0.94	12	-0.25	4.29	0.86	7	4.53	0.77	8	-0.24	3.67	0.47	16	3.67	0.94	16	0.00
IT15	4.10	1.04	10	4.58	0.83	5	-0.48	3.81	1.07	19	4.36	0.73	11	-0.54	4.00	0.00	11	4.33	0.47	11	-0.33
IT16	3.28	1.10	27	3.58	1.07	26	-0.30	3.24	1.05	27	3.49	0.87	26	-0.25	3.00	0.00	26	3.33	1.25	22	-0.33
IT17	4.33	0.82	5	4.38	0.76	14	-0.05	4.14	0.87	12	4.05	0.81	18	0.08	3.67	0.94	17	4.00	0.82	14	-0.33
IT18	4.05	1.24	13	4.48	0.95	9	-0.43	4.03	0.76	14	4.36	0.73	12	-0.32	3.67	0.47	18	4.67	0.47	8	-1.00
IT19	4.00	1.28	16	4.45	1.02	11	-0.45	3.83	0.87	18	4.17	0.69	15	-0.34	3.00	0.82	27	4.33	0.47	12	-1.33
IT20	3.70	1.27	23	4.00	1.02	17	-0.30	3.71	0.82	22	3.83	0.83	21	-0.12	4.00	0.82	12	3.33	0.47	23	0.67
IT21	3.05	1.14	28	3.30	1.23	28	-0.25	3.41	0.81	26	3.17	0.94	28	0.24	3.00	0.00	28	3.00	0.82	26	0.00
IT22	3.68	1.13	24	4.08	0.96	15	-0.40	3.93	0.92	15	3.97	0.82	19	-0.03	3.33	0.47	21	3.67	0.47	17	-0.33
IT23	3.73	0.92	21	3.73	0.92	22	0.00	3.90	1.00	17	4.10	0.86	16	-0.20	4.00	0.82	13	3.67	0.94	18	0.33
IT24	4.33	0.72	6	4.60	0.54	3	-0.27	3.92	0.93	16	4.08	0.83	17	-0.17	3.33	0.47	22	3.33	0.47	24	0.00
IT25	3.73	1.05	22	4.08	0.88	16	-0.35	3.81	0.89	20	3.71	0.90	22	0.10	3.33	0.47	23	3.00	0.82	27	0.33
IT26	3.85	1.04	18	3.95	0.84	18	-0.10	3.58	0.89	25	3.68	0.83	24	-0.10	4.33	0.47	4	4.00	0.00	15	0.33
IT27	2.98	1.11	29	3.20	1.00	29	-0.23	3.08	0.91	29	3.00	0.97	29	0.08	3.33	0.47	24	3.00	0.00	28	0.33
IT28	4.03	0.61	14	3.80	0.93	20	0.23	3.71	0.84	23	3.69	0.93	23	0.02	3.67	0.47	19	3.67	0.47	19	0.00
IT29	4.03	0.65	15	3.80	0.98	21	0.23	3.64	0.90	24	3.61	0.92	25	0.03	3.33	0.47	25	3.33	0.47	25	0.00
TOTAL	3.91			4.11			-0.20	3.94			4.09			-0.16	3.69			3.94			-0.25

Note: *MI*: Average importance; *MP*: Average performance; *SD*: Standard Deviation; *R*: Ranking; *D*: Discrepancy.

Table 5. IPA results according to type of client relationship with the SCTST (Centre worker, Facility subscriber + School client and Others)

	Centre worker							Facility subscriber + School client							Others						
	MP	SD	R	MI	SD	R	D	MP	SD	R	MI	SD	R	D	MP	SD	R	MI	SD	R	D
IT1	3.75	1.30	25	4.25	0.83	13	-0.50	4.53	0.62	6	4.20	0.98	19	0.33	4.00	0.93	11	4.43	0.73	8	-0.43
IT2	4.00	0.71	19	4.00	0.71	19	0.00	3.87	0.81	17	4.47	0.50	13	-0.60	3.43	1.05	19	4.57	0.49	4	-1.14
IT3	4.25	0.83	7	4.75	0.43	1	-0.50	4.73	0.44	2	4.87	0.34	2	-0.13	4.14	0.99	9	4.71	0.45	1	-0.57
IT4	4.50	0.50	1	4.75	0.43	2	-0.25	4.67	0.47	3	4.80	0.40	5	-0.13	4.29	0.70	4	4.57	0.49	5	-0.29
IT5	4.50	0.50	2	4.50	0.50	5	0.00	4.67	0.47	4	4.87	0.34	3	-0.20	4.29	0.70	5	4.57	0.49	6	-0.29
IT6	4.25	0.83	8	4.50	0.50	6	-0.25	4.53	0.81	7	4.67	0.47	10	-0.13	3.57	0.73	15	3.86	1.46	15	-0.29
IT7	4.25	0.83	9	4.75	0.43	3	-0.50	4.80	0.40	1	4.93	0.25	1	-0.13	3.57	0.73	16	3.71	1.39	17	-0.14
IT8	4.25	0.83	10	4.50	0.50	7	-0.25	4.20	0.83	12	4.80	0.40	6	-0.60	3.43	0.49	20	3.57	1.29	20	-0.14
IT9	4.25	0.83	11	3.25	0.43	27	1.00	3.53	0.96	23	3.27	1.18	26	0.27	2.86	0.99	28	3.57	0.90	21	-0.71
IT10	4.50	0.50	3	4.00	0.71	20	0.50	4.53	0.62	8	4.60	0.49	12	-0.07	4.43	0.49	2	4.14	0.35	13	0.29
IT11	4.25	0.83	12	4.50	0.50	8	-0.25	3.73	1.18	21	4.80	0.40	7	-1.07	4.43	0.49	3	4.71	0.45	2	-0.29
IT12	4.50	0.50	4	4.00	1.22	21	0.50	4.13	0.81	15	4.87	0.34	4	-0.73	4.29	0.45	6	4.71	0.45	3	-0.43
IT13	4.25	0.83	13	4.50	0.50	9	-0.25	4.27	0.68	11	4.80	0.54	8	-0.53	3.71	0.70	13	4.29	0.70	10	-0.57
IT14	4.25	0.83	14	4.75	0.43	4	-0.50	4.20	0.75	13	4.73	0.44	9	-0.53	4.14	0.83	10	4.14	0.99	14	0.00
IT15	4.00	1.22	20	4.50	0.50	10	-0.50	3.87	0.96	18	4.40	0.49	15	-0.53	4.29	0.70	7	4.29	0.45	11	0.00
IT16	3.75	1.30	26	4.00	0.71	22	-0.25	3.07	0.93	28	3.13	1.15	27	-0.07	3.43	0.49	21	3.29	1.03	25	0.14
IT17	4.50	0.50	5	4.25	0.43	14	0.25	4.53	0.72	9	4.33	1.07	16	0.20	4.57	0.49	1	4.43	0.73	9	0.14
IT18	4.25	0.83	15	4.50	0.50	11	-0.25	4.13	0.88	16	4.33	0.70	17	-0.20	3.43	0.90	22	3.71	1.03	18	-0.29
IT19	4.00	0.71	21	4.00	0.71	23	0.00	3.47	1.09	24	3.80	0.91	21	-0.33	3.43	0.90	23	3.57	1.05	22	-0.14
IT20	4.25	0.83	16	4.25	0.43	15	0.00	3.67	0.87	22	3.53	0.96	24	0.13	3.29	0.88	25	3.43	0.90	23	-0.14
IT21	3.50	1.12	28	3.25	0.83	28	0.25	3.40	0.95	25	3.07	1.06	28	0.33	3.14	0.64	27	3.14	0.64	27	0.00
IT22	4.00	1.00	22	4.50	0.50	12	-0.50	4.20	0.75	14	3.93	1.00	20	0.27	3.86	0.83	12	3.86	0.35	16	0.00
IT23	4.25	0.83	17	4.25	0.43	16	0.00	4.33	0.60	10	4.47	0.62	14	-0.13	3.71	0.70	14	4.29	0.88	12	-0.57
IT24	4.25	0.83	18	4.25	0.43	17	0.00	4.60	0.49	5	4.67	0.60	11	-0.07	4.29	0.70	8	4.57	0.49	7	-0.29
IT25	4.50	0.50	6	4.00	0.71	24	0.50	3.33	0.87	26	3.40	1.20	25	-0.07	3.57	0.49	17	3.71	0.70	19	-0.14
IT26	3.50	1.12	29	3.75	0.83	25	-0.25	3.80	0.65	19	3.80	0.40	22	0.00	3.57	0.73	18	3.29	0.70	26	0.29
IT27	3.75	0.83	27	3.00	1.41	29	0.75	2.73	0.77	29	2.33	1.07	29	0.40	3.29	0.70	26	3.14	0.99	28	0.14
IT28	4.00	1.22	23	3.50	0.50	26	0.50	3.80	0.75	20	4.33	0.47	18	-0.53	3.43	0.90	24	3.43	0.73	24	0.00
IT29	4.00	1.22	24	4.25	0.83	18	-0.25	3.33	0.94	27	3.67	0.70	23	-0.33	2.86	0.99	29	2.86	0.83	29	0.00
TOTAL	4.15			4.18			-0.03	4.02			4.20			-0.18	3.75			3.95			-0.20

Note: *MI*: Average importance; *MP*: Average performance; *SD*: Standard Deviation; *R*: Ranking; *D*: Discrepancy.

Looking at Figure 6, facility subscribers who usually book tennis courts show that IT11 (sports facilities in a good state of repair) is the one with the highest negative discrepancy and the only one that should be the focus of management's attention. This may be due to the specific type of sports facilities that the centre has (e.g., clay courts), which need very specific attention and maintenance. The rest of the items do not present an urgent or priority attention, although the items in the lower left triangle should not be neglected (e.g., IT22 and IT25, offer of varied activities and medical/physiotherapy office, respectively).
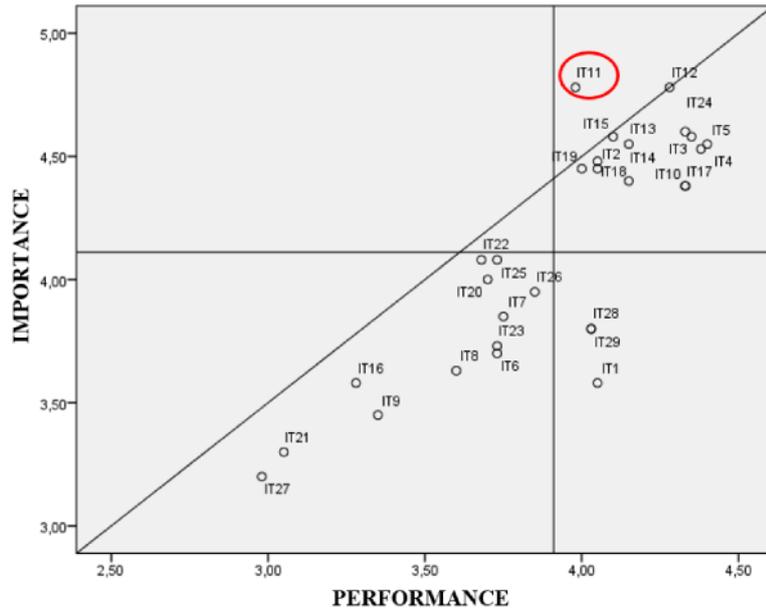
Figure 6. Representation of IPA results "Facility subscribers (court reservation)"

For tennis/paddle tennis school clients (Figure 7), the attributes that require the most review and work by the SCTST are those related to adequate fees and enrolment, student/coach ratio, well-maintained sports facilities and smooth information between the facility and users (IT2, IT8, IT11 and IT15, respectively). IT10, which is linked to spacious sports facilities, is a noteworthy aspect.

On the other hand, High Performance players show scattered and variable values (Figure 8), which may be due to the sample size (n = 3). Even so, the values that show the greatest negative discrepancies and that require greater attention from the SCTST management are IT2 (price of the fee and registration fee adequate to expectations), IT5 (adequate attention from staff), IT10 (spacious sports facilities), IT11 (sports facilities in a good state of repair), IT18 (clean and spacious changing rooms) and IT19 (quality of showers: pressure, volume and temperature of water). The item with the highest score in terms of importance is IT2, one of the items with the worst values in terms of discrepancy, and in terms of value is IT1 (proximity: less than 15 minutes' walk to the sports centre).
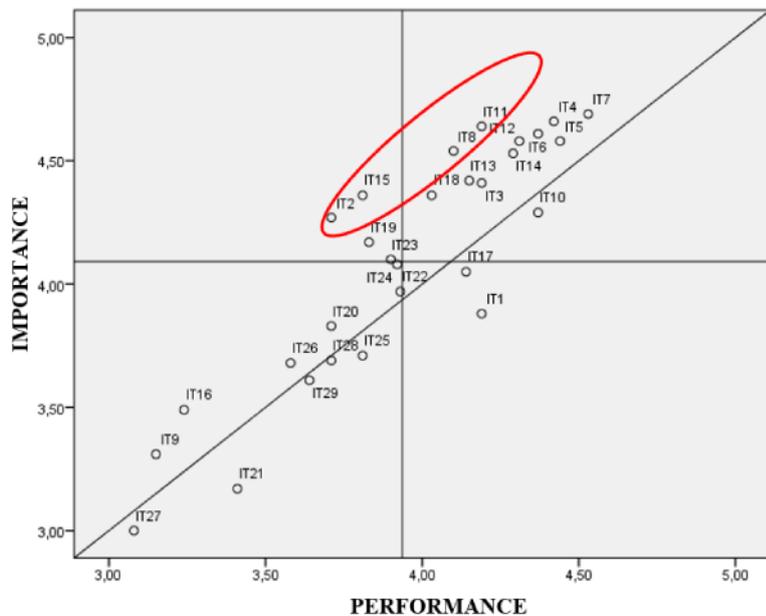
Figure 7. Representation of IPA results "Tennis/paddle tennis school customer"
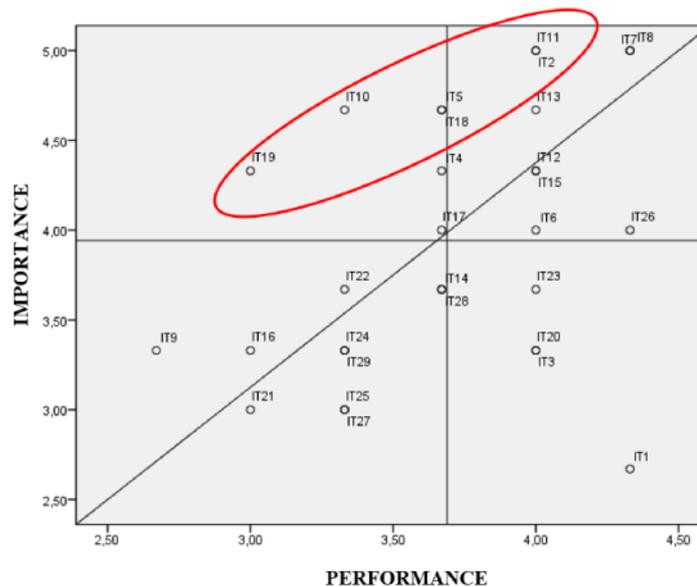
Figure 8. Representation of IPA results "High Performance Group Players"

The centre's workers (n = 4) graphically present scattered and variable values, as do the High Performance players, which may be due to the sample size (Figure 9). It can be seen that the items that show the highest negative discrepancy and should therefore be taken into account by the SCTST management are: IT1 (proximity: less than 15 minutes' transfer to the Sports Centre), IT3 (sports centre open at the times and days they wish), IT7 (professionalism of coaches), IT14 (perceived safety in terms of measures against Covid-19), IT15 (fluid information between facility and users), IT16 (use of social networks), IT22 (varied and extensive range of activities) and IT26 (cafeteria/restaurant). It should also be noted that this group detected a possible waste of resources in IT9 (gifts to reward loyalty), IT10 (large sports areas) and IT25 (medical/physiotherapy office).
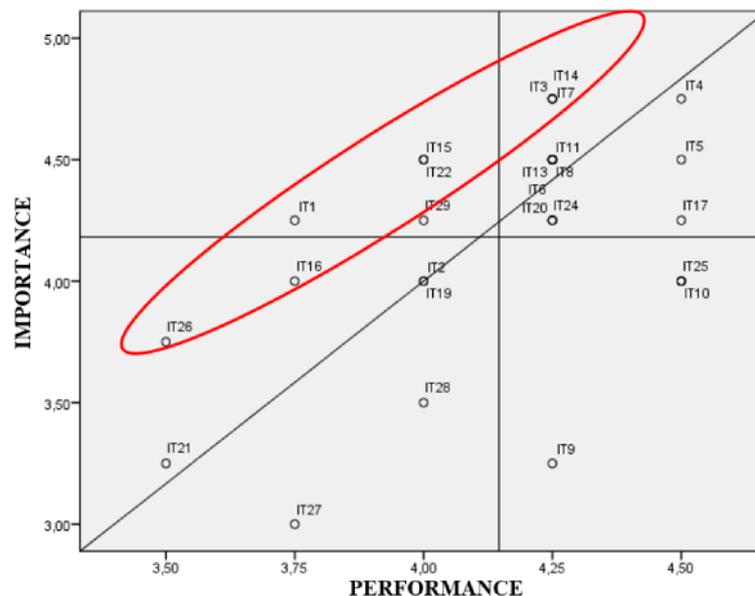
Figure 9. Representation of IPA results "Centre workers"

In the SCTST there is also another type of customer that brings together two figures: facility subscriber (court rental) and tennis/paddle school student (Figure 10). In this case, the items that show the greatest discrepancy are IT2 (fee and registration fees adapted to expectations), IT11 (sports facilities in a good state of repair) and IT12 (clean and hygienic sports facilities). It should also be noted that this is the group that presents almost all the items in the "concentrate here" space, so they seem to be the most demanding of the sample groups analysed so far.
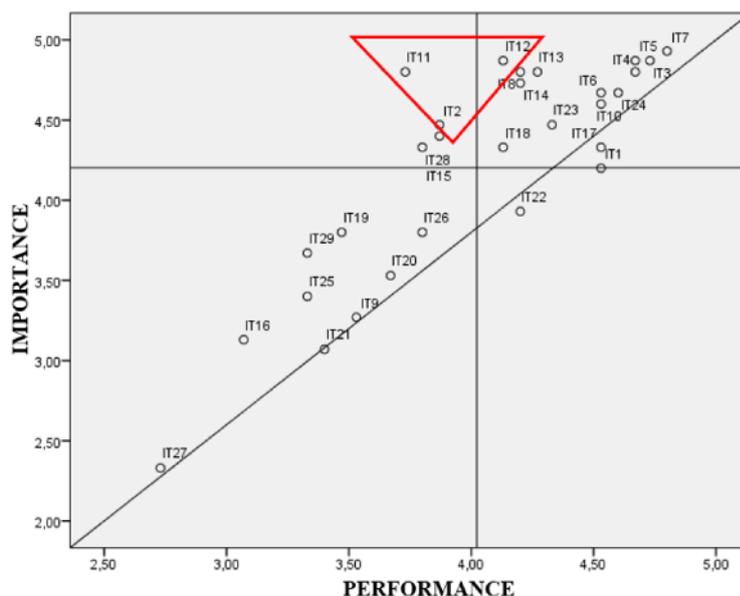
Figure 10. Representation of IPA results "Subscriber installation and school customer"

Finally, the other group, made up of users/clients of the facility who make use of services not directly linked to sports practice (e.g., catering service, physiotherapy service not linked to sport, etc.) identifies IT2 (price of the fee and registration appropriate to expectations) and IT9

(gifts to reward regular customers) with a greater negative discrepancy. The highest rated item in terms of value is IT17 (parking) and in importance (sports centre open at the times and on the days that you want) (Figure 11).
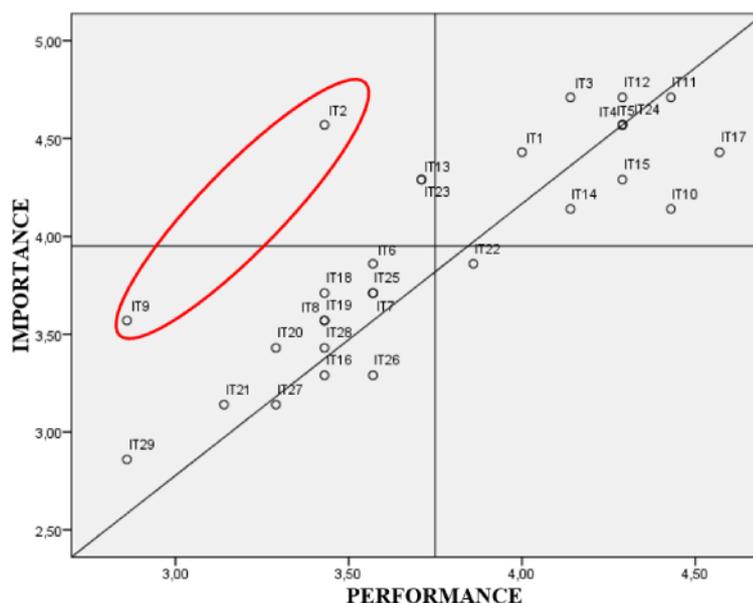
Figure 11. Representation of IPA results "Others"

5. Discussion

The objective of this study was to assess the characteristics of the services of an SCTST through an Importance-Performance Analysis (IPA) carried out by its internal and external customers.

The opinion of users/customers in service provision is crucial, as they are the ones who judge quality based on their expectations (León-Quismondo et al., 2020a). In line with Zamorano-Solís and García-Fernández (2018),

IPA analysis is a simple and very useful tool that allows information to be obtained in a simple figure. Based on this fact and taking into account that this type of analysis is being widely used in the sports field (Alonso et al., 2013; Arias-Ramos et al., 2016; deSouza & Chard, 2021; León-Quismondo et al., 2019; León-Quismondo et al., 2020a, 2020b; Martínez-Caro et al., 2014; Parra-Camacho et al., 2020; Rial et al., 2008; Serrano-Gómez et al., 2014; Tarrant & Smith, 2002; Wohlfart et al., 2021; Yildiz, 2011; Zamorano-Solís & García-Fernández, 2018; Zheng et al., 2021), this paper focuses on a type of sports facility not

previously investigated in the literature, SCTSTs. In addition, a segmentation of its customers is addressed, as each type of customer has a different perception and valuation depending on their needs.

Considering the general data and understanding that this work is based on a type of sports facility different to that investigated in the literature, the mean importance (4.10) and valuation (3.93) scores are below the results reported in other studies in the sports sector (Arias-Ramos et al., 2016; Zamorano-Solís & García-Fernández, 2018), although the mean valuation is above that reported by León-Quismondo et al. (2020a) in fitness centres. However, a characteristic and common aspect in all these studies is that all or almost all of the study attributes present negative discrepancies. In this sense, León-Quismondo et al. (2020a) indicate that the items with the greatest negative discrepancies are those related to spacious sports facilities, clean and spacious changing rooms, sports facilities in good condition, machines and equipment in good condition, attentive and friendly treatment, proximity less than 15 minutes and centre open at the times and on the days they wish. This fact is not in accordance with what was found in this study, as there are three main aspects that stand out above the rest, such as the price of the fee and registration fees, which are in line with expectations, the sports facilities in a good state of conservation, and the fluid information between the facility and the users. In relation to these three attributes, the management of the sports centre should put all its emphasis on improving the perception of its customers and, therefore, their satisfaction. The most positive aspects, where the good work should be maintained, are the spacious sports facilities and the car park.

In addition, for SCTST customers, the attentive and friendly treatment and adequate staff attention were the highest rated attributes, while in fitness centres (León-Quismondo et al., 2020a), the highest rated attributes were proximity (less than 15 minutes' drive to the sports centre) and that the sports centre was open at the times and on the days that they wanted it to be open. This may be due to the fact that SCTST clients come from different areas of the locality and that the staff's attention is of high quality, so its value is high, but not its importance.

In terms of gender, both sexes coincide in the items with the highest ratings, with the best ratings for men being adequate staff attention and attentive and friendly treatment, and for women being the large sports areas and attentive and friendly treatment. In this sense, the attentive and friendly treatment by the staff is very well valued by both sexes and, moreover, according to their discrepancy, it is in the area that recommends maintaining good work. These findings are in contrast to those described by León-Quismondo et al. (2020a), who indicate that user friendliness is among the aspects that need to be improved and require greater attention. However, as far as discrepancies are concerned, men show the greatest discrepancies in the items related to the price of fees and enrolment, sports facilities in a good state of conservation and fluid information between the facility and users, compared to the price of fees and enrolment and the student/trainer ratio reported by women. It can be seen that there is a common aspect between the sexes, the price of the fee and registration fees being in line with expectations, which contrasts with that reported by Zamorano-Solís and García-Fernández (2018), who indicate that the greatest coincidences in terms of discrepancies are more linked to the efficiency of the monitors and the changing rooms. Like León-Quismondo et al. (2020a), women attach greater importance to attentive and friendly treatment, while men attach greater importance to sports facilities being in a good state of repair. Thus, the perception

of the different factors according to the sex of the subject is not as great a barrier to be taken into account, but it does shed some light on the most urgent needs to be addressed by the SCTST, as well as the elements in which it must maintain its good work.

With regard to the type of existing client relationship with the SCTST, it is important to note that depending on the type of client, different needs and perceptions will be present and in accordance with each other. Thus, it can be seen that most of them present negative values in discrepancy, which coincides with the demand shown by clients in other studies (Zamorano-Solís & García-Fernández, 2018). Thus, there is a large majority of items with a higher negative discrepancy depending on the type of customer: subscribers to the facility (sports spaces in a good state of conservation), school clients (price of the fee and enrolment, student/coach ratio, sports spaces in a good state of conservation and fluid information between facility and users), high performance players (price of the fee and enrolment, adequate attention from the staff, spacious sports spaces in a good state of conservation, clean and spacious changing rooms and, quality of the showers), centre workers (proximity less than 15 minutes, centre open at the times and on the days desired, professionalism of the monitors, perceived safety in terms of Covid-19 measures, fluid information between the facility and users, use of social networks, varied and extensive range of activities and cafeteria/restaurant), subscribers to the facility and customers of the school (price of the fee and enrolment, sports facilities in a good state of repair and clean and hygienic), and finally, others (price of the fee and enrolment and gifts to reward regular customers).

Practical implications

For this reason, and in order to facilitate the management of the SCTST, it would be necessary to look for common points on which to work, and in this sense the items related to the price of the fee and registration adapted to expectations and the sports facilities in a good state of conservation stand out. It is these aspects that the SCTST management could work on in search of solutions that could lead to a change in the evaluations obtained and, therefore, result in the satisfaction of its clients.

After analysing all the data and following the above, it is necessary to pay very close and priority attention to the prices and state of conservation of the sports facilities, as they have shown the greatest deficits in the eyes of SCTST customers. For this reason, and in order to propose solutions and improvements, we advocate a thorough analysis of the market in terms of prices and try to adapt to the needs of the client, not only in terms of tariffs, but also trying to improve everything related to the service provided. At the same time, it would be positive to look for sponsorship agreements that would allow for the remodelling of certain sports areas (e.g., gymnasium) and allow for better maintenance of the facilities, specifically the clay courts. It is believed that, if the SCTST management addresses this last aspect, it will improve the perception of customers in relation to the rates.

6. Conclusions

As a result of all the data and information obtained and presented in this analysis, the SCTST can carry out actions that allow it to work on the weak points detected, offering a better service to its clients. As we have seen, all the attributes can be improved, but two of them require urgent attention from the SCTST management: tariffs and the state of conservation of the sports facilities. Thus, the findings indicate that there are different aspects on which concrete

strategies should be implemented in order to correct them and increase internal and external customer satisfaction.

Limitations and future lines of research

With regard to the limitations of this study, they lie in the sample size and the difficulty of sample collection, as the epidemiological situation meant that it had to be carried out online and the participation of all possible users could not be ensured. Thus, the sample size could limit the impact, the power of the results provided and the generalisability of the results (Bae et al., 2014). In the same vein, the difference in the percentage of men and women could lead to a bias in the information, as well as the low participation of the centre's workers (n = 4), where there are more than 30 workers, and in the players of the High Performance group (n = 3). In this sense, the participation of the players in the High Performance group might seem low, although this group is currently made up of 10 players. However, future work should try to collect data from all players, aiming to involve their managers and/or coaches. Similarly, the use of IPA analysis also has a number of limitations as already indicated by León-Quismondo et al. (2020a), where small changes in the position on the graph can cause large modifications.

In future research, analyses other than the IPA analysis should be carried out, such as the Importance-Performance Matrix Analysis (IPMA) already carried out in other studies (García-Fernández et al., 2020), and a more focused analysis on a specific type of client, with the case of high-performance athletes being the most attractive and with the largest publication niche, since they are the reason why the SCSTs were created. In this case, there are currently 32 SCSTs in Spain (CSD, 2019) in which many athletes make intensive use of these facilities, so in order to achieve sporting excellence these athletes should have adequate facilities prepared for them.

Funding

References

Ábalo, J., Varela, J., & Rial, A. (2006). El análisis de importancia-valoración aplicado a la gestión de servicios. *Psicothema, 18*(4), 730-737.

Alonso, D., Rial, J., & Rial, A. (2013). Evaluación de la calidad percibida de los servicios deportivos en el ámbito universitario. *Revista de Psicología del Deporte, 22*(1), 143-150.

Arias-Ramos, M., Serrano-Gómez, V., & García-García, O. (2016). ¿Existen diferencias en la calidad percibida y satisfacción del usuario que asiste a un centro deportivo de titularidad privada o pública? Un estudio piloto. *Cuadernos de Psicología del Deporte, 16*(2), 99-110.

Bacon, D.R. (2003). A comparison of approaches to Importance-Performance Analysis. *International Journal of Market Research, 45*(1), 55-71. doi: 10.1177/147078530304500101.

Bae, T., Qian, S.; Miao, C., & J. Fiet (2014). The Relationship between Entrepreneurship Education and Entrepreneurial Intentions: A Meta–Analytic Review. *Entrepreneurship Theory and Practice, 38*(2),217–54. doi:10.1111/etap.12095.

Consejo Superior de Deportes (CSD) (2014). Resolución de 10 de enero de 2014, del *Consejo Superior de Deportes*, por la que se clasifican las instalaciones deportivas y los programas deportivos para el desarrollo del deporte de alto nivel y de competición, a efectos de lo previsto en la Orden ECD/2681/2012, de 12 de diciembre, por la que se aprueban las bases reguladoras para la concesión de subvenciones y ayudas por el Consejo Superior de Deportes. https://www.csd.gob.es/sites/default/files/media/files/2018-09/boe_resolucion_de_clasificacion_de_centros_2014.pdf

Consejo Superior de Deportes (CSD) (2019). *Directorio de Centros CTD-CETD.* Centros de Alto Rendimiento y Tecnificación Deportiva. Accessed 18 July 2021, de https://www.csd.gob.es/es/csd/instalaciones/centros-de-alto-rendimiento-y-tecnificacion-deportiva

deSouza, R., & Chard, C. (2021). Using value equity drivers to understand parents' perspectives of youth summer Hockey camps: an importance-performance analysis. *Leisure/Loisir*, 1-27. doi:10.1080/14927713.2021.1971556.

Ferreira, S. D., & Veloso, J. (2011). Análisis estratégico de la oferta turística portuguesa. El análisis de importancia-valoración (IPA). *Estudios y Perspectiva en Turismo, 20*(5), 997-1008.

García-Fernández, J., Bernal-García, A., Fernández-Gavira, J., & Vélez-Colón, L. (2014). Analysis of existing literature on management and marketing of the fitness centre industry. *South African Journal for Research in Sport, Physical Education and Recreation, 36*(3), 75-91.

García-Fernández, J., Fernández-Gavira, J., Alcaraz-Rodríguez, V., & Gálvez-Ruiz, P. (2018). Aplicación del análisis importancia-valoración en consumidores de centros de fitness low-cost. In *Nuevas realidades y enfoques en las organizaciones y eventos deportivos: Implicaciones para la Economía y la Gestión* (pp. 248-251). Universidad de Málaga (UMA).

García-Fernández, J., Fernández-Gavira, J., Sánchez-Oliver, A. J., Gálvez-Ruíz, P., Grimaldi-Puyana, M., & Cepeda-Carrión, G. (2020). Importance-Performance Matrix Analysis (IPMA) to Evaluate Servicescape Fitness Consumer by Gender and Age. *International Journal of Environmental Research and Public Health, 17*(18), 6562. doi: 10.3390/ijerph17186562.

Joseph, M., Allbright, D., Stone, G., Sekhon, Y., & Tinson, J. (2005). IPA of UK and US bank customer perceptions of service delivery technologies. *International Journal of Financial Services Management, 1*(1), 66-88. doi: 10.1504/IJFSM.2005.007985.

León-Quismondo, J., García-Unanue, J., & Burillo, P. (2019). Priorities in the management of fitness centers. Application of Importance-Performance Analysis. *Journal of Sports Economics & Management, 8*(3), 116-136.

León-Quismondo, J., García-Unanue, J., & Burillo, P. (2020a). Análisis de Importancia-Valoración (IPA) y Modelo Kano aplicados a centros fitness de la Comunidad de Madrid. *Cultura, Ciencia y Deporte, 15*(44), 223-234. doi:10.12800/ccd.v15i44.1464.

León-Quismondo, J., García-Unanue, J., & Burillo, P. (2020b). Service perceptions in fitness centers: IPA approach by gender and age. *International Journal of Environmental Research and Public Health, 17*(8), 2844. doi:10.3390/ijerph17082844.

Martilla, J.A., & James, J.C. (1977). Importance-Performance Analysis. *Journal of Marketing, 41*, 77-79. doi: 10.1177/002224297704100112.

Martínez-Caro, E., Martínez-Caro, E., & Díaz-Suárez, A. (2014). La calidad del servicio en los clubes de fútbol base de la región de Murcia. Una aplicación del análisis de importancia-satisfacción. *SPORT-TK, Revista*

Euroamericana de Ciencias del Deporte, 3(1-2), 33-40. doi:10.6018/221991.

Ministerio Educación, Cultura y Deporte (MECD) (2021). *Encuesta de Hábitos deportivos en España 2020*. Madrid: Secretaría General Técnica. Subdirección General de Atención al ciudadano, Documentación y Publicaciones. https://www.culturaydeporte.gob.es/servicios-al-ciudadano/estadisticas/deportes/encuesta-habitos-deportivos-en-espana.html

Parra-Camacho, D., Añó Sanz, V., Ayora Pérez, D., & González-García, R. J. (2020). Applying importance-performance analysis to residents' perceptions of large sporting events. *Sport in Society, 23*(2), 249-263. doi: 10.1080/17430437.2019.1627330.

Rial, A., Marsillas, S., Isorna, M., & Louro, A. (2013). Recomendaciones para el apoyo psicológico a jóvenes deportistas en los centros de alto rendimiento. [Tips to the psychological support of young athletes in high performance centres]. *RICYDE. Revista Internacional de Ciencias del Deporte. 9*(33), 252-268. doi:10.5232/ricyde2013.03304.

Rial, A., Rial J., Varela, J., & Real, E. (2008). An application of importance-performance analysis (IPA) to the management of sport centres. *Managing Leisure, 13*, 179-188. doi:10.1080/13606710802200878

Serrano-Gómez, V., Rial, A., Sarmento, J. P., & Carvalho, M. J. (2014). Análisis de Importancia Valoración (IPA) como herramienta de diagnóstico en la gestión de clubes de golf. *Revista Intercontinental de Gestão Desportiva, 4*(1), 86-98.

Sethna, B.N. (1982). Extensions and testing of importance-performance analysis. *Business Economics, 20*, 28-31. doi: 10.1007/978-3-319-16946-0_77

Skok, W., Kophamel, A., & Richardson, I. (2001). Diagnosing information systems success: Importance-performance maps in the health club industry. *Information & Management, 38*, 409-419. doi: 10.1016/S0378-7206(00)00076-8.

Tarrant, M. A., & Smith, E. K. (2002). The use of a modified importance-performance framework to examine visitor satisfaction with attributes of outdoor recreation settings. *Managing Leisure, 7*(2), 69-82. doi:10.1080/13606710210137246.

Wohlfart, O., Adam, S., & Hovemann, G. (2021). Aligning competence-oriented qualifications in sport management higher education with industry requirements: An importance–performance analysis. *Industry and Higher Education*. doi: 10.1177/09504222211016284.

Yildiz, S. M. (2011). An importance-performance analysis of fitness center service quality: Empirical results from fitness centers in Turkey. *African Journal of Business Management, 5*(16), 7031-7041. doi: 10.5897/AJBM11.674.

Zamorano-Solís, S., & García-Fernández, J. (2018). El análisis importancia-valoración según género y permanencia: el caso de los centros de fitness. *Materiales para la Historia del Deporte, (16)*, 24-35.

Zheng, Z., Mo, J., & Xu, Y. (2021). Research on Public Fitness Equipment Experience Based on Satisfaction. *Healthcare, 9*(5), 501. doi:10.3390/healthcare9050501.