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Full Length Research Paper

An importance-performance analysis of fitness center service quality: Empirical results from fitness centers in Turkey

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This study proposes the SQS-FC (Service Quality Scale for Fitness Centers) scale for fitness centers and examines its effectiveness using importance-performance analysis (IPA). Fitness center service quality attributes are developed using a sample of Turkish fitness center consumers and personal interviews. Data for the study is obtained from the customers of a private commercial fitness center (n = 246). The results revealed four factors for the SQS-FC scale including personnel, physical environment, supporting services, and program. The results of this study show the applicability of IPA in evaluating service quality for fitness centers. Findings indicate that the most important factors for fitness center customers are programs, personnel and physical environment. Furthermore, results show that there is a perceived quality deficit in physical environment while quality surplus in supporting services dimension.

Key words: Service quality, measurement and evaluation, fitness centers, importance-performance analysis.

INTRODUCTION

Limited motion life-style that today's consumers face due to mechanization and automation, (Lalic et al., 2006) has led significant consumer interest in fitness center (FC) offerings as a way to compensate the lost physical activities. Accordingly, the health and fitness activity industry is rapidly growing around the globe (Afthinos et al., 2005; Macintosh and Doherty, 2007). In recent years there have been continuous increases in the number of participants of the FCs in the US (Beyers, 2008). Similar trends may be observed in many other countries, including Turkey, where FCs has been rapidly proliferating. Recent economic successes and increases in the national income of Turkish consumers along with the effective marketing efforts of sports and physical activity services might also be contributing to this trend (Yildiz, 2009).

Sports service providers have placed greater emphasis on service quality and efficiency as a result of increased customer expectations of service quality and competition (Howat et al., 1996). In this context, organizational success naturally depends on the ability of fitness service providers to properly define and meet the needs of the target audience, and to identify what they perceive as service quality (Papadimitriou and Karteliotis, 2000). High service quality leads to competitive advantage (Fitzsimmons and Fitzsimmons, 1994), and therefore, in order to survive (Kuei, 1998) and flourish, FCs should recognize that they have to offer high-quality service (Dabholkar et al., 2000). The link between service quality and organizational success in highly competitive Industries has been confirmed in the literature (Parasuraman, Zeithaml, and Berry, 1985). Higher service quality means higher customer satisfaction, loyalty, and positive word-of-mouth communication leading to better organizational performance (Howat et al., 1996).

In general, fitness services could be defined as "the overall intangible activities based on physical activities that create value for individuals by offering them physical, psychological, social and economic benefits" (Yildiz, 2009). FCs offers these services in settings where various motion-based programs are followed with and without equipment. Therefore, services offered by FCs require a great deal of contact with the customers. Users

of fitness services spend more time in the place of service production and usually share the same environment with other clients (Chang and Chelladurai, 2003). As in the other pure services, a unique characteristic of fitness services is that customers participate in their production process (Chelladurai, 1992). Competition forces FCs to place more emphasis on service quality to differentiate themselves from the others (Chang and Chelladurai, 2003).

This study aims to examine the service quality in FCs in Turkey. This study proposes a modified version of service quality measurement scale specifically designed for the FCs and presents the results of empirical examination regarding its dimensionality and applicability.

LITERATURE REVIEW

Services and service quality

Service is defined as an activity or benefit which is offered from one party to another and does not result in the ownership of anything (Kotler and Armstrong, 2003) and as economic activities that creates a value and benefits for clients on special occasions and places (Lovelock, 2000). Zeithaml and Bitner (1996) describe service in terms of behavior, process, and performance. According to these definitions, services are intangible and may be produced by people and/or machines. Services is known to have four characteristics: intangibility, inseparability, variability and perishability (Parasuraman et al., 1985). With these characteristics, service quality is regarded as an ambiguous and complex concept to be understood, applied, and controlled as it does not contain many tangible qualities (Harvey, 1998). There is no accepted consensus regarding a single definition of service quality (Jensen and Markland, 1996); however, the most common definition is the degree to which the service meets customer expectations and needs (Asubonteng et al., 1996; Dotchin and Oakland, 1994; Lewis and Mitchell, 1990; Wisniewski, 1996).

There have been many attempts to gain insights into service quality. Grönroos (1984) notes two significant dimensions that affect the total quality of a service, which are technical quality and functional quality. In the framework of these dimensions, the quality of a service provided is measured as a result of an evaluation process, in which consumer expectation and perception is compared. Lehtinen and Lehtinen (1991) define three quality dimensions: physical quality, which involves the physical aspect of a service (facilities or equipment); corporate quality, which involves image and profile; and interactive quality, which involves the interaction between contact personnel and customers and interaction between customers (Parasuraman et al., 1985). Here, a basic argument is that service quality is a product of the interaction between service components producing the service and customers. Rust and Oliver (1994) offer three quality dimensions: the service product (which is technical quality), service delivery (which is functional quality), and service environment. Brady and Cronin (2001) also use three quality dimensions: interaction quality, physical environment quality, and outcome quality.

Most studies on service quality carried out in the last two decades have been based on the SERVQUAL model. Parasuraman et al. (1985) developed this model to measure service quality from a broader perspective. Parasuraman et al. (1985) initially focused on ten dimensions of service quality and later reduced the number of these dimensions to five: tangibles, reliability, responsiveness, assurance, and empathy. Parasuraman et al. (1988) underlined the differences between customer and corporate perceptions with regard to the service quality provided in the framework of these dimensions and examining these differences, they argued that service quality (SQ = P-E) can be determined by measuring the differences between what a customer perceives that s/he received (P) and what a s/he expects (E). If $P > E$, service quality is high, and $P < E$ is evaluated as indicating low service quality. Despite its wide use (Lam, 1997) and popularity (Hussey, 1999; Zhao et al., 2002), the SERVQUAL model has also been a target of serious criticisms (Babakus and Boller, 1992; Brown et al., 1993; Buttle, 1996; Carman, 1990; Cronin and Taylor, 1992; Teas, 1993). One of the most significant of these criticisms claims that five dimensions of SERVQUAL are inadequate for generalization (Carman, 1990) and thus, it fails to properly represent some service industries (Babakus and Boller, 1992; Buttle, 1996; Saravanan and Rao, 2007).

The most striking of these criticisms came from Cronin and Taylor (1992, 1994). They argued that the gap theory used in SERVQUAL lacks empirical quality and has not been supported by strong theoretical evidence and that measuring “expectations” is inappropriate. Accordingly, Cronin and Taylor developed a “performance-based” service quality instrument called SERVPERF. Based on the five dimensions of SERVQUAL, SERVPERF only measures customer perceptions. Discussions on SERVQUAL vs. SERVPERF later continued by more evidence offered by the two groups of researchers to support their own approaches (Cronin and Taylor, 1994; Parasuraman et al., 1994). As it only measures customer perceptions, SERVPERF has received support from various researchers as a practical model that is easy to implement (Babakus and Boller, 1992). Despite the differences between the two instruments, researchers have so far used both models. Nevertheless, there is no agreement on which model is more universally appropriate and thus, it is up to the researcher to choose the most appropriate model. Moreover, it could be argued that there is a general consensus on the significant contributions of these models to understanding service quality (Fisk et al., 1993).

Measurement of service quality in fitness centers

It is claimed that the attributes and specific dimensions of different services vary from one industry to another (Babakus and Boller, 1992; Teas and DeCarlo, 2004). In this respect, it could be argued that the sports and physical activities industry provide unique services that might differ from other industries (Murray and Howat, 2002). Therefore, use of a universal service quality measurement instrument such as SERVQUAL may not capture the true dimension of service quality in this field. SERVQUAL is a comprehensive scale designed to measure service quality and does not provide FCs with specific information to improve their management practices. Fitness services are mainly characterized by their programmatic offerings (Lam et al., 2005). The absence of this important aspect in the SERVQUAL encouraged a number of researchers to develop alternative measurement instruments to be used in evaluating service quality of the FCs.

The history of studies attempting to offer insight into the nature of the service quality in FCs with unique characteristics can be traced back to the last two decades. The first scale that examined the attributes of fitness services is the Scale of Attributes of Fitness Services (SAFS) developed by Chelladurai et al. (1987). The scale consists of five dimensions which are professional, consumer, peripheral, facilitating goods, and goods and services. The first four dimensions of the SAFS concern primary services offered by fitness clubs, and the last dimension, that is, goods and services, is not even directly related to fitness (Lam et al., 2005).

In another study, Kim and Kim (1995) developed a 33-item scale called Quality Excellence of Sports Centers (QUESC) based on a Korean sample to evaluate the service quality of sports centers. The exploratory factor analysis indicated eleven dimensions including employee attitude, employee reliability, programs offered, ambience, information available, personal considerations, price, privilege, ease of mind, stimulation and convenience. Among these factors, price, privilege and stimulation had only one item. The stability of a single-item factor would be questionable (Lam et al., 2005). Later, in their study on Greek FCs, Papadimitriou and Karteroliotis (2000) used the QUESC and revealed using the EFA procedures a four-dimensional structure that does not support the factor structure of the QUESC. The four dimensions included instructor quality, facility attraction and operation, program availability and delivery and other services.

Chang and Chelladurai (2003) carried out another study on FC services. The Scale of Quality in Fitness Services (SQFS) developed by the authors on the basis of a system perspective consists of nine dimensions, which included interpersonal interactions, task interactions, programs, service climate, management commitment to service quality, physical environments, other clients, service failures/recovery and perceived service quality. The weakness of the SQFS was that, while using fitness specialists and managers, it did not consider FC members as the recipients of the service in identifying attributes. Another scale recently designed to evaluate the service quality of FCs is the Service Quality Assessment Scale (SQAS) developed by Lam et al. (20-05). The SQAS consists of 31 items and six dimensions including personnel, program, locker room, physical facility, workout facility, and child care. The study results demonstrated that the SQAS can be employed to assess the service quality of FCs. However, the authors noted that the model they introduced was at its infancy, recommending other researchers to revise the SQAS using different samples.

The afore-mentioned research largely focuses on scale development. On the other hand, the research conducted to evaluate the quality of fitness services is rather limited. In their study, Afthinos et al. (2005) only identified the expectations of FC customers. From another perspective, although the dimensions and attributes of the given models and scales have similar aspects, in part they seem to vary across countries and societies. These studies have shown that the growing number of participants of FCs, a rapidly growing industry around the world, led researchers to identify the determinants of service quality (Yildiz, 2009). However, it is noted that such attempts are inadequate and more research is needed in this field (Lagrosen and Lagrosen, 2007). Despite the rapid growth of FCs in Turkey, no attempts have been made to develop a psychometric-based measuring instrument for perceived service quality. This study contributes significantly by developing a service quality instrument and testing it to identify the perceived service quality of fitness center customers in emerging Turkish market. Furthermore, this study differs from other studies because it employs IPA technique to assess service quality.

Importance-performance analysis

The importance-performance analysis (IPA) introduced by Martilla and James (1977) has so far been applied in various service industries. This method of analysis is considered both as a good analytical tool in service quality evaluations and as an appropriate management tool (Rial et al., 2008). The logic of the IPA is based on revealing the current state of service attributes and identifying which attribute is more effective than others. In other words, the focus is on defining the strong service attributes and those that need improvement. Examining the difference between “performance” and “importance”, IPA is a simple and useful technique (Abalo et al., 2007). “Performance” refers to the customer perceptions about how a service is delivered by an enterprise, whereas “importance” is a manifestation of the relative value

assigned by customers to a service. Similar to the P-E difference used in the SERVQUAL, IPA also involves the subtraction of "performance" scores from "importance" scores (P-I), and thereby, it provides information about whether a delivered service is approved by customers. Such information could be both at item and dimension levels. The obtained information is highly valuable in developing the necessary strategies for enterprises. The differences obtained as a result of analysis are transferred to a 2 × 2 matrix, which facilitates evaluating the strengths and weaknesses of the service quality delivered. As seen in Figure 1, service factors are plotted on the matrix by employing the mean "importance" and "performance" scale scores. Importance scores are plotted on the vertical Y-axis, while performance scores are plotted on the horizontal X-axis. The matrix is also useful in decision-making since it has four quadrants, each of which demonstrate a particular strategy which include concentrate here, keep up the good work, low priority and possible overkill. These strategies help policy-makers in their decisions about service exchange. Thus, scarce resources can be employed more effectively and efficiently by channelizing performance toward the service attributes requiring improvement.

RESEARCH QUESTIONS

Market potential of fitness industry will continue to improve in Turkey as consumers become more and more interested in utilizing their services. There are several research questions that are formulated in this study to provide valuable insight into the service quality of FCs. As mentioned earlier, to the best of our knowledge, there are no studies in the literature that examined the service quality perceptions of Turkish consumers who use FC services. Hence, our first question concerns with understanding different attributes of service quality perceptions.

RQ 1. What are the attributes of services delivered by FCs?

The second research question aims to examine the dimensionality of the service quality construct that incorporates those identifies attributes.

RQ 2. What are the main factors of service quality for FCs?

Designed to measure service delivery, the IPA method (Martilla and James, 1977) is regarded as a highly useful and easy-to-use management tool for service sectors (Lovelock et al., 1998). Although it has been supported by research on sports centers (Rial et al., 2008) and other industries (Angell et al., 2008; O'Neill and Palmer, 2004; Wright and O'Neill, 2002), the IPA method should be applied to and tested in the context of FCs. Therefore, the third research question deals with the applicability of the IPA in evaluating service quality for FCs.

RQ 3. Is the IPA effective in measuring the service quality in FCs?

After identifying the fundamental service factors obtained from the FC customers' evaluations using the IPA model, the final research question deals with a particular example of this model with regard to the service delivery in a private FC in Turkey. This research component is intended to offer service providers an example of how to apply and evaluate the IPA process when evaluating the service quality in their own firms.

RQ 4. What is the quality level of the service delivered to the customers in a selected FC in Turkey?

METHODOLOGY

The study uses a two-stage methodology including qualitative convergent in-depth interviews and a quantitative scale application. Table 1 summarizes how the two stages of the study were carried out, with particular emphasis on the research questions, the method adopted and the type of analysis employed at each stage.

Qualitative convergent in-depth interviews were employed to identify which service attributes the FC customers assumed important when evaluating service expectations and experiences. Defined as a cyclical series of in-depth interviews, convergent interviewing is a method believed to be highly useful in the first stage of a research in which there is so little information about the subject (Carson et al., 2001). Here, the ultimate purpose is to identify the important qualities for the sample of participants. The method is usually starts by a comprehensive open-ended question and after few interviews; the interviewer includes his/her findings in the interview plan by refining his/her questions. Using this method, the first step was to take a quota sample of 18 customers selected from three commercial FCs.

The subjects were selected based on their gender, age and purpose of visit. The researcher first asked the participants an introductory question by drawing upon Carson et al.'s (2001) principles of holding convergent interviews: "could you please state the most important service attributes that you would like FCs to deliver?" The responses obtained from successive interviews were structured and the information about resulting themes was also included in the interview plan. Following fourteen interviews, a point of satisfaction was reached at which no more data were obtained, and then the interviews were terminated.

The service attributes most frequently mentioned by the participants in the process were identified and gathered in a pool. 25 service attributes were obtained as a result of qualitative convergent in-depth interviews and these attributes formed the basis of subsequent quantitative study. The questionnaire was divided into three sections, the first two of which employed a five-point Likert-type scale. In the first section, the participants were asked to state the importance of each service attribute (1 = "Unimportant" and 5 = "Very important"). The second section attempted to determine the performance of FCs as perceived by the customers (1 = "Strongly disagree" and 5 = "Strongly agree"), while the third section obtained demographic information about the participants. Two methods were used in the pre-testing phase of the scale. Firstly, the scale was examined by three field experts, and the obtained feedback was used to revise certain items. Secondly, in order to determine

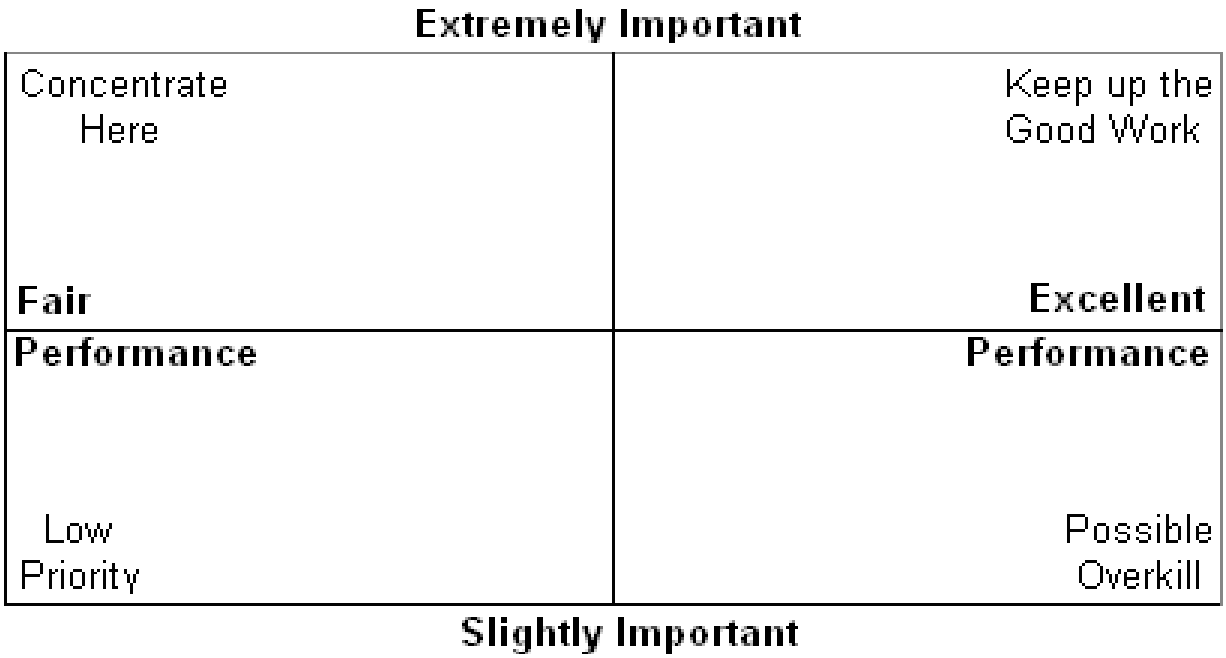

Figure 1. Importance-performance matrix (Source: Martilla and James, 1977).

Table 1. Research methodology.

Stage	Method	Data collection method	Analysis procedure
Stage 1	Qualitative	Convergent interviewing n = 28	Content analysis (RQ 1)
Stage 2	Quantitative	Survey n = 246	Factor analysis (RQ 2)

IPA (P – I and IP matrix) (RQ3, RQ4)

whether item formulations were appropriate, the scale was administered to a smaller sample of FC customers, as a result of which certain minor amendments were made.After the scale was deemed to be ready for data collection, 400 questionnaires were distributed in March 2010 to the customers of a private FC engaged in commercial activity for over 10 years. A total of 260 questionnaires were returned (61.5%), and among these, 246 were usable. A descriptive analysis of the data indicated that 154 of the participants (62.6%) were male, 32 (13%) were at the age of 20 years and younger, 101 (41.1%) were in the age group of 21 to 30 years, 65 (26.4%) in the age group of 31 to 40 years, 34 (13.8%) in the age group of 41 to 50 years, and 14 (5.7%) were 50 years or older. Almost half of the participants (46.7%) had college degrees and as far as the reasons for visiting the FC, 110 (44.7%) stated being healthy-fit, 11 (4.5%) stated being stronger, 40 (16.3%) mentioned weight control, 3 (1.2%) mentioned social networking, 24 (9.8%) stated looking pretty and slim, 56 (22.8%) stated body-building, and 2 (0.8%) stated relaxing as the main reasons.

FINDINGS

Qualitative stage

25 service attributes stated by the participants as important were obtained as a result of the qualitative convergent in-depth interviews. The service attributes on which the participants agreed mainly focused on physical qualities, personnel characteristics and fitness program qualities. The most commonly highlighted attributes included “personnel’s knowledge and skills”, “locker room and showers” and “rich program content”.

Quantitative stage

This stage aimed to make the target data set smaller, and thus more explicable. For the soundness of subsequent analyses, it was first required to determine whether common method variance was available. Harman’s single-factor test is one of the statistical methods used for this purpose. This method involves loading all variables into an exploratory factor analysis and examining the unrotated factor solution to determine the number of factors that are necessary to account for the variance in the variables. In this test, common method variance is available under two conditions: a single factor obtained from factor analysis, and in case multiple factors are obtained,

one of the factors accounting for a greater part of the variance. If the single factor test analysis did not meet the aforementioned conditions, the obtained scale does not involve the problem of "common method variance" (Podsakoff et al., 2003). Subsequently, principal component factor analysis was administered with Varimax rotation for the importance scores in the scale. Extraction was initially set to identify the factors with eigenvalues of and above 1.0. Absolute values were suppressed to 0.4. At the end of the analysis, factor loadings of all items were higher than 0.4 (between 0.606 and 0.924), and the items were grouped under four factors. These four factors accounted for 68.6% of the variance. As seen in Table 2, seven items loaded on the first factor, eight loaded on the second factor, five on the third factor, and another five on the fourth factor. The first factor concerned service providers, while the second factor was about physical characteristics. The third factor was related to additional services along with the core service, and the fourth factor concerned the programs offered. Considering item characteristics, the factors may be labeled as personnel, physical environment, supporting services and program, respectively. On the other hand, the internal consistency (reliability) obtained for each factor using Cronbach's alpha coefficient ranged between 0.875 and 0.950, indi-cating that the scale is "highly reliable". Furthermore, the Kaiser-Meyer-Olkin (KMO) value was 0.861, signifying "a very good" level. All these values conformed to the standards suggested by Hair et al. (1995). Consequently, the scale as an appropriate measuring instrument was named the SQS-FC (Service Quality Scale for Fitness Centres).

IPA

After performing a factor analysis for the basic service attributes of the FC, the next stage continued with measuring service quality in a private FC. This procedure involved the use of IPA. First of all, mean importance and performance scores were computed for each of the four service factors and constituent service attributes. Next, mean performance scores were subtracted from mean importance scores (P-I). The resulting difference indicates whether there is a deficit or surplus between customers' perceptions towards the service they receive, and the importance attributed to the service. Furthermore, a paired-samples t-test was performed to see if there is any significant difference between the mean importance and performance scores for each item and the four factors. This information is given in Table 3.

A significant t-test result and a positive P-I difference indicates a quality surplus, meaning that FC customers' expectations are exceeded. On the other hand, a significant t-test result and a negative P-I difference points out to a quality deficit. As revealed by the results of the analysis, there is a quality deficit in the "physical environment" with a difference of –0.5 ($p < 0.001$), whereas there is a quality surplus in the "supporting services" factor with a difference of +0.24, indicating that customer expectations are highly exceeded ($p < 0.01$). On the other hand, no significant difference was found in the factors of "personnel" and "program" ($p>0.05$). The factor with least importance assigned by customers is "supporting services" ($I = 3.65$), while the "program" factor has the highest importance ($I = 4.52$). Similar to other studies employing the IPA method (Angell et al., 2008; O'Neill and Palmer, 2004; Rial et al., 2008), this study also divided the matrix into four quadrants, and used the mean importance value (4.29) on the Y-axis and the mean performance value (4.20) on the X axis. When we transfer the four service factors obtained in the study into the IP matrix, it is clear that the FC has to take some strategic decisions (Figure 2). The matrix shows that the factors "personnel" and "program" fall into the quadrant of "keep up the good work". Yet, this does not necessarily mean that the service provider does not need to make any efforts with regard to these factors.

On the contrary, the achieved success standard should be maintained. The negative items in these factors should be considered for minor improvements. The "physical environment" factor is in the quadrant of "concentrate here", which points out to the need for urgent improvement of the FC's physical qualities. The remaining factor, "supporting services", is in the "low priority" quadrant. When compared to others, this factor is much less important, and highly exceeds the expectations in its performance. As is seen in the matrix, allocation of additional resources to the "physical environment" factor will be significant for service quality. In this case, the FC customers' perceptions of service quality are likely to improve.

Conclusion

This study revealed 25 service attributes offered in FCs using qualitative method and developed the SQS-FC scale with four service quality dimensions, which are personnel, physical environment, supporting services and program, using quantitative analysis. Furthermore, despite the fact that this scale has similarity to other studies examining the service attributes for FCs (Chang and Chelladurai, 2003; Lam et al., 2005), the items of "personnel's ethical behavior" and "customer consultation by specialists (doctors, nutritionists)" that were exclusively introduced by this study and which was absent in other scales. This is an important contribution to the literature examining the important service attributes that FCs should possess. All of the four factors of the SQS-FC are argued to be important service quality determinants that should be used in identifying customer perceptions of service quality in FC context.

Most services require a mutual relationship between

Table 2. Results of factor analysis and reliability coefficients.

Scale items	Personnel	Physical environment	Supporting services	Program
16. Personnel's ethical and kind behavior	0.882			
17. Personnel's responsiveness to suggestions and complaints	0.856			
15. Personnel's presentable and neat appearance	0.843			
14. Personnel's knowledge and skills	0.840			
19. Providing members with feedback about their development	0.825			
18 .Privacy of membership information	0.817			
20. Good motivation for members	0.687			
7. Membership fee		0.792		
4.Temperature and illumination		0.758		
8. Security		0.741		
6. Accessibility of facility		0.735		
5. Locker room and showers		0.722		
3. Cleanliness and airiness		0.692		
2. Modern and diversified equipment		0.689		
1. Professional looking facility		0.607		
24. Consultation by specialists (doctors, nutritionists)			0.924	
23. Approriate background music			0.921	
25. Child care			0.917	
21. Food and drink services			0.911	
22. First aid for ailment			0.873	
12. Timely announcements				0.870
11. Appropriate timing of programs				0.858
10. Rich program content				0.789
13. Number of participant groups in the program				0.774
9. Program diversity				0.763
Percentage of variance explained	20.041	17.542	16.792	14.263
Cumulative % of variance explained	20.041	37.582	54.375	68.637
Cronbach alpha	0.875	0.931	0.950	0.898

the service provider and customers (Zeithaml et al., 1985). Such relationship is made possible through the personnel or staff factor. This also applies to the services offered by the FCs. Services are divided into two groups, which are services pertaining to people's bodies (tangible

Table 3. Importance-performance analysis scores.

Scale Item	P	I	P – I	Paired t-value	P
	Mean	Mean			
Personnel	4.44	4.50	-0.06	-1.224	0.222
16. Personnel's ethical and kind behavior	4.43	4.56	-0.13	-1.839	0.067
17. Personnel's responsiveness to suggestions and complaints	4.46	4.56	-0.10	-1.459	0.146
15. Personnel's presentable and neat appearance	4.55	4.53	0.02	0.340	0.734
14. Personnel's knowledge and skills	4.41	4.50	-0.09	-1.231	0.219
19. Providing members with feedback about their development	4.35	4.48	-0.13	-1.739	0.083
18. Privacy of membership information	4.50	4.45	0.05	0.676	0.499
20. Good motivation for members	4.37	4.41	-0.04	-0.535	0.593
Physical Environment	3.97	4.47	-0.5	-11.249	0.000*
7. Membership fee	4.11	4.48	-0.37	-5.716	0.000*
4. Temperature and illumination	4.04	4.56	-0.52	-8.057	0.000*
8. Security	3.80	4.55	-0.75	-9.727	0.000*
6. Accessibility of facility	4.31	4.42	-0.11	-1.762	0.079
5. Locker room and showers	3.67	4.53	-0.86	-10.169	0.000*
3. Cleanliness and airiness	3.95	4.44	-0.49	-7.381	0.000*
2. Modern and diversified equipment	4.17	4.47	-0.3	-4.935	0.000*
1. Professional looking facility	3.71	4.32	-0.61	-9.269	0.000*
Supporting Services	3.89	3.65	0.24	3.210	0.002**
24. Consultation by specialists (doctors, nutritionists)	4.08	3.69	0.39	4.020	0.000*
23. Approriate background music	3.83	3.67	0.16	1.581	0.115
25. Child care	3.78	3.68	0.1	1.145	0.253
21. Food and drink services	3.95	3.58	0.37	3.649	0.000*
22. First aid for ailment	3.82	3.61	0.21	2.473	0.014***
Program	4.49	4.52	-0.03	-0.657	0.512
12. Timely announcements	4.40	4.52	-0.12	-1.783	0.076
11. Appropriate timing of programs	4.53	4.55	-0.02	-0.344	0.731
10. Rich program content	4.61	4.50	0.11	1.801	0.073
13 .Number of participant groups in the program	4.41	4.52	-0.11	-1.580	0.115
9. Program diversity	4.50	4.52	-0.02	-0.307	0.759

*p < 0.001, ** p < 0.01, *** p < 0.05; Key: P = performance, I = importance.

actions) and minds (intangible actions) (Lovelock, 1983). The services in FCs are largely composed of tangible actions.

Therefore, they need to be directly delivered to customers by the personnel. Customer perceptions of service quality are directly influenced by the personnel's knowledge, attitude, kindness and appearance (Brady and Cronin, 2001). Four of the five dimensions in the SERVQUAL model (reliability, responsiveness, assurance and empathy) concern the way service is managed by the personnel. According to Brady and Cronin (2001), and Lehtinen and Lehtinen (1991), personnel's knowledge, attitudes and behaviors represent the interaction dimension of service quality, whereas Rust and Oliver (1994) argue that they represent the dimension of service delivery. The aspect of how service is delivered to customers by the personnel within the process is similar to Grönroos's (1984) dimension of functional quality. Physical environment refers to all intangible physical qualities that play a role in service delivery to customers. As they are visible in the customers' evaluation of service performance (Shilbury et al., 2003), physical qualities have a more objective role.

That is why the importance of physical qualities is acknowledged in many of the service quality models (Brady and Cronin, 2001; Chang and Chelladurai, 2003; Kim

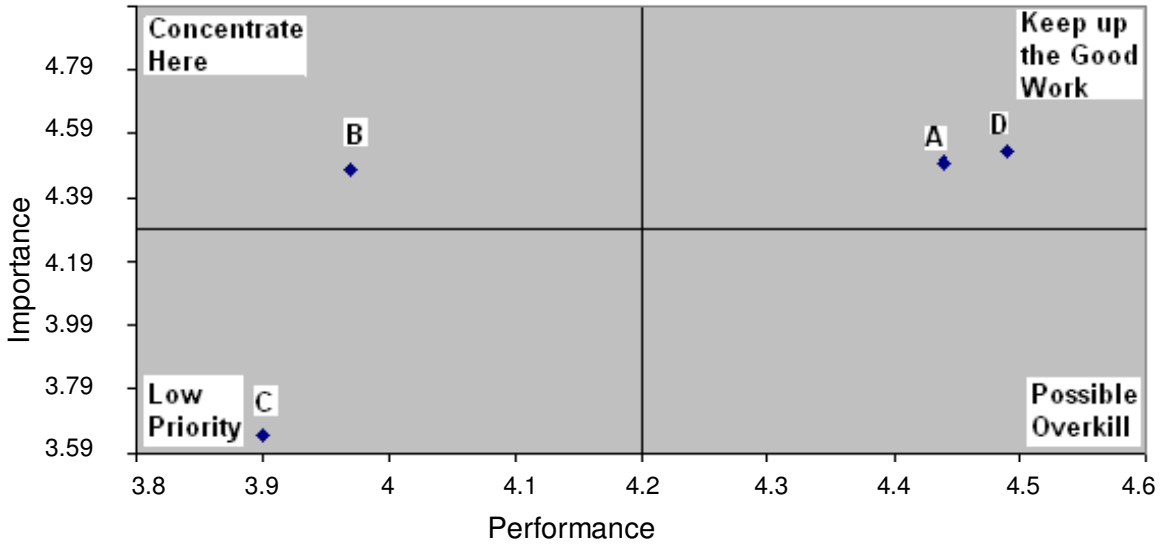

Figure 2. IP matrix of FC service factors. A – personnel; B – physical environment; C – supporting services; D – program.

and Kim, 1995; Lam et al., 2005; Papadimitriou and Karteroliotis, 2000; Parasuraman et al., 1988; Rust and Oliver, 1994). Along with the use of core service, supporting services are designed to enhance the value of a service or to differentiate the service from that of the competitors (Grönroos, 2001). Supporting services for FCs involve services such as food and drinks, first aid, expert knowledge support, background music and child care. Program is a time schedule indicating the content, parts, the order and timing of these parts for a task to be performed. A program's objective should be a realistic and this dimension is one of the most significant qualities of sport services which are based on participation with unique characteristics (Lam et al., 2005; Yildiz, 2009). That is why the program dimension should be included into the blend of sports-related marketing campaigns (Watt, 1998). Since the service quality scales generally designed for service industries in general, they lack the program dimension (Brady and Cronin, 2001; Parasuraman et al., 1988; Rust and Oliver, 1994). That is, such scales are not supported by the researchers for evaluating service quality in participation-based sports services (Lam et al., 2005). In summary, the findings of this study suggest that personnel, physical environment, and supporting services of the SQS-FC are important factors and are consistent with the service literature, while the program factor conforms with the literature on sports and physical activity services.

This study contributes to the literature of the relentless efforts to develop and test reliable service quality measurement instruments specifically designed to the service environment it is intended for. We support the views that disconfirmation-based measurements such as SERVQUAL and performance-only measurements like SERVPERF used in the service industry (Angell et al., 2008) may not be appropriate for measuring service quality in the FC environment. Furthermore, this study shows the applicability of the IPA as a measurement and evaluation method for the FCs. The IP matrix provides FCs with an opportunity to identify problem areas and focus on their strengths. According to the findings of the study, the highest performance and the highest importance factors are the "personnel" and "program" factors, which offer valuable cues about service quality. Therefore, "program" should be considered a core service of a sports-related service enterprise (Grönroos, 2001; Yildiz, 2010). "Personnel", on the other hand, is a factor that both creates the program and leads to extensive customer interaction. A possible problem in these areas may cause customer dissatisfaction regardless how well the other service factors are performed. Therefore, there is a need for continuous improvements in these factors. On the other hand, it is also clear that the physical environment factor is the only factor with quality deficit and deserves the greatest attention. FCs physical qualities are more visible and tangible. Thus, they have a more objective influence on customers. So the focus should first be on improvements through resources and efforts allocated to this factor. In this respect, the first service attribute needing improvement should be the item with the highest negative difference. The highest negative difference in this factor is the item of "locker room and showers". The importance ascribed to the "supporting services" factor is relatively very low when compared to the other factors and performance. This factor does not obviously require additional resources and efforts. As a

conclusion, the present study provides insights into a better understanding for the service quality factors of FCs on the basis of an empirical analysis using a sample of the customers of a private FCs in Turkey. It has also shown that IPA can be successfully used in FCs. Based on the findings of this research, FCs could design and develop more effective marketing strategies that focus on important aspects of FC offerings. Thus, they can increase service quality, attract more customers and increase the loyalty of their existing customers, which will help FCs to better survive in today's environment of intense competition. It is recommended that FCs periodically conduct such studies to monitor their own course of development.

Limitations and future research

The results of this study should not be generalized beyond its target population since it was carried out using a limited sample in a private FC in a single country, Turkey. More research should test whether the service attributes and factors obtained in this study are consistent in other FC environments. Furthermore, studies should investigate validity of these finding for non-profit public FCs. Studies should also investigate the service quality perceptions of internal customers of FCs. Finally, comparative studies should check if IPA is effective on other enterprises that offer different sports and physical activity services tested in this study.

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