DISTINGUISHING PRIOR SERVICE ATTRIBUTES FOR CUSTOMER SATISFACTION BY DUAL IMPORTANCE MAPPING

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Abstract

Today, healthy living has become a philosophy of living for many people in the world. As a result, numbers of the people who attend to the fitness centres dramatically increased. Another result was the increasing numbers of fitness centres and the growing competition amongst them. For being successful in this competition, service quality and customer satisfaction are seen as a must both by the academicians and the practitioners. However, decision of the prior service attributes which have to be favoured financially for increasing customer satisfaction, is also a crucial mission for the company managers. Herein, some statistical methods are offered by the academicians (regression analysis, importance-performance analysis, dual importance mapping e.t.c.) who aim to offer proper managerial solutions. Dual Importance Mapping of Vavra, is one of these methods which argues implicitly derived and explicitly stated importance differ to each other. In this study, service dimensions of a fitness centre in Antalya, Turkey have been evaluated by using Dual Importance Mapping.

Keywords: customer satisfaction, attributes, fitness centre, dual importance mapping

Introduction

Nowadays, while the sport, recreation and leisure activities began increasingly more important for the developed and developing country citizens, there can be a little argument that the studies about the sport and leisure industry is fruitful area for research (Berrett, Burton & Slack 1993). Particularly, fitness centres is one of the most popular area of research as they own both tangible attributes (products) and intangible characteristics (services) in common.

While the general concern for the managers in the fitness centres is how the customers interprets the worth of their service (Macintosh & Doherty 2007), academicians focus on identifying the service attributes and their influences on overall customer satisfaction. Because, in the marketing literature, service quality has been recognized as one of the major elements that have influence on customer satisfaction. Customer satisfaction has positive influence on customer retention and long-term profitability of the companies (Lam, Zhang & Jensen 2005). Moreover, satisfied and loyal members may allow the fitness centres to reduce their marketing costs for gaining new members and to provide the revenue that the companies need to earn to meet their routine operational costs.

However, company managers should firstly decide which service attributes need to be improved for increasing customer satisfaciton. Some methods like regression analysis and importance-performance analysis consider the symmetric relationships between service attributes and overall customer satisfaction. On the other hand, many studies show that the relationship is asymmetric instead of symmetric.

Thus, the objective of the present study is to examine the priority of the fitness centre service attributes in point of improvement, by identifying their asymmetric relationships with satisfaction. The study uses the Dual Importance Mapping method (Vavra 1997) for distinguishing and for investigating the importance of the various service attributes on overall customer satisfaction in the fitness centres.

Literature Review

In the fields of sport, recreation and leisure management, academicians aim to conceptualize and measure the construct of service quality (Tsitskari, Tsiotras & Tsiotras 2006) so that can relate to service quality dimensions with customer satisfaction and understand their impact on customer satisfaction. With this purpose, they generated service quality measurement scales and identified the dimensional structure of the service attributes such as Howat *et al.*'s (1996) "Centre for Environmental and Recreation Management (CERM) Customer Service Quality" (CERM-CSQ); Chelladurai, Scott and Haywood-Farmer's (1987) "Scale of Attributes of Fitness Services" (SAFS); McDonald, Sutton and Milne's (1995) "Service Quality in Professional Team Sports" (TEAMQUAL); Kim and Kim's (1995) "Quality Excellence of Sport Centres" (QUESC) which was also tested by Papadimitriou and Karteroliotis (2000); Lam, Zhang and Jensen's (2005) "the Service Quality Assessment Scale" (SQAS); Chang and Chelladurai's (2003) "the Scale of Quality in Fitness Services" (SQFS); some adoptations of the Parasuraman, Zeithaml and Berry's (1988) SERVQUAL into this research area by Costa *et al.* (2004); MacKay and Crompton (1990); Wright, Duray, and Goodale (1992) and other studies like Crompton, MacKay and Fesenmaier's (1991).

Researchers who claim that service attributes have asymmetric influences on overall customer satisfaction (e.g. Kano *et al.* 1984; Mittal, Ross & Baldasare 1998; Matzler & Renzl 2007), categorize to the attributes according to their variant influences. Beginning with Kano method, several methods such as the Critical Incident Technique (CIT), Dual Importance Mapping (the Importance Grid) (Vavra 1997), and the Penalty-Reward-Contrast Analysis (PRCA) are proposed by the academicians for classifying the product or service attributes according to their asymmetric influence on overall customer satisfaction.

Amongst those methods, Dual Importance Mapping is an advanced version of Importance-Performance Analysis which has two measures; (1) "explicit (stated) importance" and (2) "implicit (derived) importance" which shows to the strength of correlation between service attributes' (perceived) performance and overall customer satisfaction (Venkitaraman & Jaworski 1993; Vavra 1997; Oliver 1997). Depending on the analysis results, attributes are positioned on the map by their explicit importance mean values on x axes, and by their implicit importance values on y axes. The four attribute categories are; (1) excitement factors (low explicit importance/ high implicit importance), (2) performance factors (important)(high explicit importance/ high implicit importance), (3) performance factors (unimportant)(low explicit importance/ low implicit importance),and (4) basic factors (high explicit importance/ low implicit importance).

Methodology

In this study, Lam, Zhang and Jensen's (2005) "the Service Quality Assessment Scale" (SQAS) is employed for finding out the dimensional structure of a fitness centre in Antalya, Turkey, as Gürbüz, Koçak and Lam (2005) confirmed to sub-dimensional structure of this scale in Turkish sample in a previous study.

SQAS scale has originally forty items grouped under six dimensions which are namely: (1) "Staff", (2) "Program", (3) "Locker Room", (4) "Physical Facility", (5) "Workout Facility" and (6) "Child Care". However, "Child Care" dimension had to be deleted in this study; because majority of the participants stated that they do not use or know the "Child Care" services (Appendix 1).
A structured questionnaire which consists of three sections was used for data collection, which are: (1) demographic information of the participants, (2) importance and performance measurement of the fitness centre attributes by SQAS scale (by using a 5 point Likert type; 1 "very low", 5 "very high"), (3) requests and suggestions of the participants from the fitness centre by an open-ended question. Totally 165 valid data was obtained from the participants in the period of August-September, 2011.

Results

Sample Characteristics

The sample characteristics are shown in Table 1. The findings show that number of the female participants is more (56 %) than male. Members are mostly at the age group of 30-50 years (59.9 %), and the majority of the participants are employees (37.5 %).

Table 1. Sample Characteristics (N = 165)

Demographics		Percent (%)
Gender	Male	44.2
	Female	55.8
Age	30 and below	35.2
	Between 30-50	59.9
	51 and above	4.9
Occupation	Retired	5.5
	Employee	37.5
	Company owner	15.3
	Housewife	11.0
	Other	30.7
Marital status	Married	50.6
	Single	49.4

Factor Analysis

At the first step of the analyses, exploratory factor analysis with varimax rotation was used to confirm the factor structure of scale and to obtain dimensions by using Dual Importance Mapping. Five factors (Table 2), with eigenvalues greater than 1, explain 61.79 % of the total variance. Factor loadings below than recommended value of .50 were eliminated from the analysis (Hair *et al.* 1998). Cronbach's reliability coefficients are above than .70 which shows that the internal consistency of the dimensions is high (Hair *et al*. 1998).

Table 2. Dimensions of the Fitness Club Services

Dimensions	Items	Factor loadings	Variance explained(%)	Cronbach alpha
Staff	Patience	.632	15.76	.793
	Communication with members	.704		
	Responsiveness to complaints	.723		
	Courtesy	.732		
	Provision of individualized attention by instructors	.702		
	Provision of consistency of service	.606		
Program	Variety of programs	.759	11.31	.764
	Availability of programs at appropriate level	.815		
	Convenience of program time/schedule	.774		
Locker Room	Overall maintenance	.757	12.40	.783
	Shower cleanliness	.824		
	Accessibility	.696		
	Safety	.679		
Physical Facility	Availability of parking	.794	10.61	.704
	Accessibility to building	.637		

	Parking lot safety	.828		
Workout Facility	Modern-looking equipment	.664	11.68	.731
	Adequacy of signs and directions	.637		
	Variety of equipment	.784		
	Availability of workout facility/equipment	.746		

Dual Importance Mapping

Implicit importance was obtained by calculating the correlation of each item with participant's overall satisfaction ("I am satisfied with my decision of being a member") which was later employed for generating the Dual Importance Mapping. Following, means values of each item were employed for finding implicit importance of the dimensions. Explicit importances of the dimensions were calculated by using item means of perceived importance values of the participants. By employing all these values, implicit importance was positioned on the vertical axis (y), and explicit importance was positoned on the horizontal axis (x). Later, grand means of the explicit and implicit importance were calculated for all dimensions (Table 3). Finally, grand means were used to divide the matrix into four separate areas.

Table 3. The Mean Values of (Perceived) Performance and Stated Importance, and their Correlations with Overall Customer Satisfaction (Derived Importance)

	(Perceived) Performance	**Explicit (Stated) Importance**	**Implicit (Derived) Importance***
Staff	4.60	4.67	0.327
Program	4.45	4.56	0.232
Locker Room	4.49	4.71	0.261
Physical Facility	4.27	4.49	0.196
Workout Facility	4.52	4.68	0.307
Grand Mean	4.46	4.62	0.264

*Correlations with; "I am satisfied with my decision of being a member"

Dual Importance Mapping results (Figure 1) demonstrated that three constructs of the fitness centre are important performance factors which are "staff", "workout facility" and "locker room". Those are the fitness centre attributes both identified highly important by the self-evaluations of the customers (explicit importance) and their implicit (derived) importance which shows the correlations of the (perceived) performance and overall customer satisfaction are high. Therefore, company managers should not ignore the importance of these attributes and keep their performance and quality at a high level. Two constructs, on the other hand, positioned on the unimportant performance factors area. This fitness centre attributes relatively less important than others in the eye of customers and their influence on overall customer satisfaction is low. Any construct positioned on the excitement and basic factors areas.

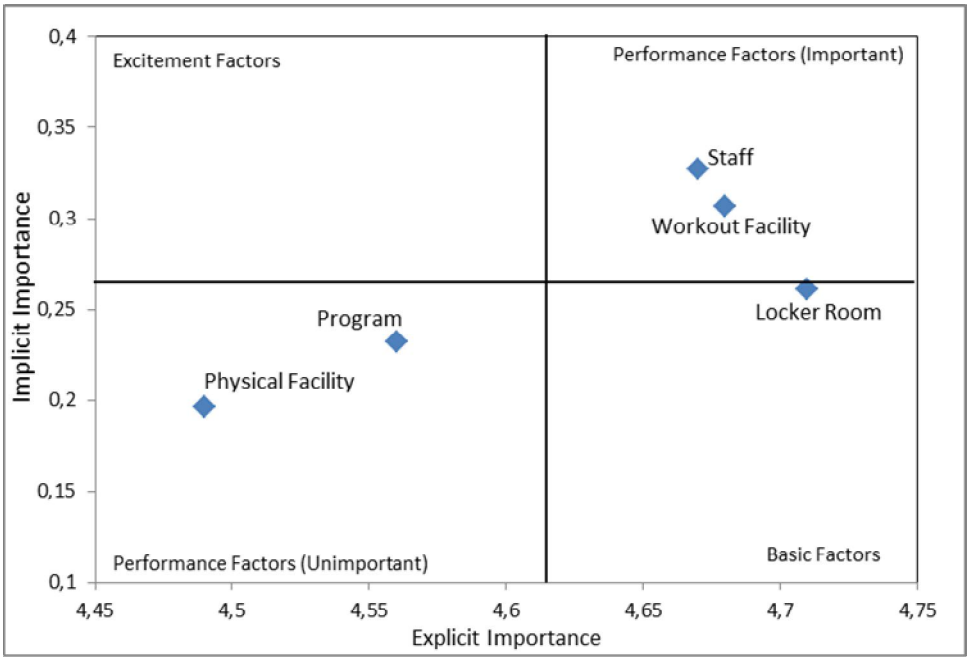

Figure 1. Dual Importance Mapping Results

Discussion and Conclusion

The aim of the present research was to examine the asymmetric influence of the fitness centre attributes on overall customer satisfaction. Dual Mapping Analysis results showed that three constructs ("staff", "workout facility","locker room") have relatively more important for the customers and their influence on overall customer satisfaction is higher. The rest two constructs are less important and their influence on overall customer satisfaction is lower than other constructs. In summary, as seen in this study too, multi-attribute based and complex analysis techniques (such as Dual Importance Mapping) might offer important findings which are guiding to the strategic decisions of the managers.

However, rather than using just one method for giving such kind of strategic decisions, comparison of the findings that are obtained by alternative methods might offer more accurate assessments. Therefore, in the future studies, alternative methods and their findings can be compared. Moreover, such studies which aim to examine to the existing product or service attributes, are generally insufficient to offer to the managers what kind of new product or service attributes might be added to the existing one at the future. That methods focus on categorization of the existing attributes and their priorities in terms of resource allocation.

Appendix 1. The Original Items and Dimensions of the SQAS Scale

Dimension
"Staff"
1. Possession of required knowledge/skills
2. Neatness and dress
3. Willingness to help
4. Patience
5. Communication with members
6. Responsiveness to complaints
7. Courtesy
8. Provision of individualized attention by instructors
9. Provision of consistency of service
"Program"
1. Variety of programs
2. Availability of programs at appropriate level
3. Convenience of program time/schedule
4. Quality/content of programs
5. Appropriateness of class size
6. Background music (if any)
7. Adequacy of space
"Locker Room"
1. Availability of lockers
2. Overall maintenance
3. Shower cleanliness
4. Accessibility
5. Safety
"Physical Facility"
1. Convenience of location
2. Hours of operation
3. Availability of parking
4. Accessibility to building
5. Parking lot safety
6. Temperature control
7. Lighting control
"Workout Facility"
1. Pleasantness of environment
2. Modern-looking equipment
3. Adequacy of signs and directions
4. Variety of equipment
5. Availability of workout facility/equipment
6. Overall maintenance
"Child Care"
1. Quality of staff
2. Cleanliness of equipment
3. Hours of operation
4. Adequacy of space
5. Safety of environment
6. Diversity of experience provided

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