

The Relationship among service quality, customer satisfaction, and customer loyalty: An empirical investigation of sports and physical activity sector

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Abstract

This study examined the hierarchical relationship among service quality, customer satisfaction and customer loyalty for sports and physical activity sector. Considering the service characteristics and heterogeneous nature of sports services, it is conceptualized that customer satisfaction will play a mediating role between service quality and customer loyalty. Using previously developed and tested instruments in the literature, the relationship among these constructs were empirically tested using primary data collected (n=172) from current customers of a large sports and physical activity center, which specializes service offerings in the area of water sports and exercises. Consequently, it was revealed that customer satisfaction played a partially mediating role in the relationship between service quality and customer loyalty.

Keywords: Service quality, customer satisfaction, customer loyalty, sports and physical activity sector

INTRODUCTION

During the past two decades, studies in the literature argued that a strong emphasis on service quality and customer satisfaction result in better corporate performance and competitiveness (Robinson, 2006; Simsek, 2016). To understand how customer expectations are met, organizations have focused on identifying and measuring service quality and customer satisfaction levels in their units (Dabholkar, Shepher, and Thorpe, 2000). Therefore, examination of service quality and customer satisfaction constructs and their role on organizational performance have attracted significant attention of practitioners and as well as researchers (Cevik, Simsek, and Yilmaz, 2017).

During the same time period, we have witnessed a remarkable growth trend in demand for sports and physical activity centers around the world as well as in Turkey (Ekmekçi, Ekmekçi ve İrmış, 2013). For instance, there are over 29000 such centers in the USA serving more than 40 million members (IHRSA, 2006). Similarly, there are more than 33000 of these centers with more than 36 million members in Europe. These numbers represent an average of 14.2% growth over the previous year in the USA and a 5.5% growth in Europe. According to 2002 data, the number of health and fitness centers in Turkey reached to 2000 (Sekendiz, Kocak, and Korkusuz, 2009). The global fitness and health club industry generated more than 80 billion U.S. dollars in revenue in 2015 (<https://www.statista.com>, Retrieved September 13, 2018). Therefore, these sports service providers need to adopt customer-oriented approach in order to be able succeed in this highly competitive global marketplace. Marketing literature suggest that customer-oriented firms should focus all their efforts to satisfy the needs of their customers and differentiate themselves from the rest of the competition. The literature shows that the service quality is an important factor that leads to customer satisfaction. From this perspective, understanding

the service quality of sport and physical activity services is a vital task for managers. As mentioned earlier, they are facing strong global competition and these organizations in the sports and physical activity services sector must meet the high levels of service quality expectations of their customers (Macintosh and Doherty, 2007). Accordingly, understanding the customer loyalty has gained significant attention along with service quality and customer satisfaction concepts. Customer loyalty means less resources spent to recruit new customers and more profitable results due to the higher lifetime value of each customer. Customer loyalty has been studied frequently in the marketing literature and has become a vital terminology for customer oriented organizations. Accordingly, research has focused on understanding the relationship among service quality, customer satisfaction, and customer loyalty particularly in the highly competitive service industries (Wantara, 2015).

We support the views that service quality and customer satisfaction are important antecedent of customer loyalty (Bernhardt, Donthu, and Kennett, 2000; Boulding, Kalra, Staelin, and Zeithaml, 1993; Cronin, Brady, and Hult, 2000). Understanding the existing strengths in the levels of these variables and the relationships among them provides opportunities for the sports and physical activity center marketers to achieve better competitive positions and organizational outcomes (Howat, Crilley, and McGrath, 2008). A review of the sports and physical activity services literature shows that a number of studies have concentrated in understanding the relationships between service quality, customer satisfaction and customer loyalty. However, these studies are limited to specific fields such as spectator sports (Kuenzel and Yassim, 2007) and other limited-scope sports services (Alexandris, Zahariadis, Tsorbatzoudis, and Grouios, 2004; Howat, Murray, and Crilley, 1999; Shonk and Chelladurai, 2008). Furthermore, considering the heterogeneous nature of these services (Taylor, Sharland, Cronin, and Bullard, 1993), differences in the results with respect to the relationship among these variables are expected. Therefore, we assert that it is imperative for further studies investigating the relationships among these variables in the field of sports and physical activity services sector. Such studies should prove to be valuable with respect to providing further evidence about the hierarchical relationship among these variables and will have significant managerial implications in the practice (Howat et al., 2008). To the best out our knowledge, no studies have investigated the relationship among service quality, customer satisfaction, and customer loyalty for a multi-purpose sports center in an emerging market. Therefore, the purpose of this study is to examine the relationship among service quality, customer satisfaction, and customer loyalty on participation-based sports and physical activity center. More specifically, we investigate the mediating effect of customer satisfaction and customer loyalty. We expect that the service quality loyalty relationship will improve when the relationship is mediated by customer satisfaction.

Conceptual Framework

Service quality and customer satisfaction

Although there are different definitions of services and service quality, Lovelock (2000, p.3) defines a service as “the process or performance rather than a thing”. Service quality, on the other hand, is defined as the degree of firm’s ability to meet customer expectations and needs (Asubonteng, McCleary, and Swan, 1996). Grönroos (1984) noted two 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 (1982) define three quality dimensions: *physical quality*, which involves the physical aspect of a service (facilities or equipment); *corporate quality*, which involve image and profile; and *interactive quality*, which involves the interaction between contact personnel and customers and interaction between customers (Parasuraman, Zeithaml, and Berry, 1985, p.43). The basic argument here is that service quality occurs as a result of the interaction between service components

producing the service and customers. Rust and Oliver (1994) offer three quality dimensions: the service product (i.e., technical quality), service delivery (i.e., functional quality), and service environment. Brady and Cronin (2001) also use three quality dimensions: interaction quality, physical environment quality, and outcome quality.

Service quality has been frequently studied in the services marketing literature during the past two-decades or more. Most of these studies have used some form of SERVQUAL instrument and adopted the gap model during this time period (Parasuraman, Zeithaml, and Berry, 1985, 1988). Parasuraman *et al.* (1985; 1988) has identified ten dimensions and then reduced these to five dimensions (tangibles, reliability, responsiveness, assurance, and empathy) to represent service quality construct. The gap model and the SERVQUAL instrument are based on the disconfirmation paradigm. According to the disconfirmation paradigm, if the customer's expectation and service quality fully matches, then the expectation and perceived performance is confirmed. If the expectation is different from the quality received, then there may be a negative or positive disconfirmation (Bitner, 1990; Bolton and Drew, 1991; Parasuraman, Zeithaml, and Berry, 1994) occurs. Negative disconfirmation is the situation where quality is lower and positive conformation occurs when higher quality is received.

Despite their widespread adoption, both the gap model and SERVQUAL instrument have been subjected to serious criticisms. These criticisms ranged from lack of generalizable dimensions of SERVQUAL to incompatibility with different sector environments (Babakus and Boller, 1992; Buttle, 1996; Carman, 1990; Saravanan and Rao, 2007). Perhaps the most serious criticism came from Cronin and Taylor (1992; 1994). They mainly argued that there was not enough empirical and theoretical evidence to support the "expectations" measurement in the instrument suggesting the use of a modified measurement instrument, SERVPERF which is mainly a "performance-based" model of service quality. SERVPERF used all five dimensions of SERVQUAL but only based on the perception of customers. Despite these criticisms, SERVQUAL has the choice of service quality measurement for most researchers. SERVQUAL has also been used in the area of sports services but a number of researchers argued that it has been inadequate in representing the core service attributes of sports and physical activity services (Lam, Zhang, and Jensen, 2005; Yildiz, 2012; Yildiz and Kara, 2012). Accordingly, a number of researchers have either modified SERVQUAL or totally developed new service quality instruments for the field of sport and physical activity services.

Although service quality and customer satisfaction concepts are considered to be closely related to each other, the direction of relationship between these two concepts is not very clear. Oliver (1997) defines satisfaction as the psychological condition resulting from matched customer expectations with the previous consumptions experiences. In other words, "it is a judgment that the product or the service itself is providing a pleasurable level of consumption-related fulfillment, including levels of under or over fulfillment (Oliver, 1997, p.13)." Parasuraman *et al.* (1988), Bitner (1990), Bolton and Drew (1991) and Boulding *et al.* (1993) reported that service quality and satisfaction as two separate constructs. A review of the literature shows that there are three different views on the causal relationship between service quality and customer satisfaction. First, view argues that the service quality is the antecedent of satisfaction (Anderson, Fornell, and Lehmann, 1994; Brady, Cronin, and Brand, 2002, Cronin and Taylor, 1992; Fornell, Johnson, Anderson, Cha, and Bryant, 1996; Parasuraman *et al.*, 1994) while the second view argues that the satisfaction comes before service quality (Bitner, 1990, Bitner and Hubbert, 1994). Finally, the third view argues that the direction between the service quality and satisfaction does not stay the same all the time and could change in different contexts (Dabholkar, 1995). In summary, although there is no consensus regarding the direction of the causality between service quality and customer satisfaction, most researchers agrees that service quality should precede customer satisfaction.

Customer loyalty

Researchers deliberate whether satisfied customers with the quality of services will be loyal to the service provider. While some researchers strongly argue for this relationship, others caution that the satisfaction-loyalty relationship is complex because the factors that affect customer satisfaction differ from what affects loyalty (Reichheld, 2001). Caruana (2002) argued that customer satisfaction played a mediating role between service quality and loyalty. Szymanski and Henard (2001), in their meta-analysis presented studies showing positive and statistically significant correlations between satisfaction and loyalty. Customer loyalty is generally conceptualized as repeat-purchase behavior (Zeithaml, Berry, and Parasuraman, 1996). Jacoby and Chestnut (1978) offer a frequently used theoretical base, proposing that loyalty is repeat-purchase behavior based on cognitive, affective and behavioral intention. Oliver (1999) augmented this framework by emphasizing that loyalty begins with repeated experiences, reinforced cognitions, and affective responses which lead consumers to develop motivation to rebuy and engage in brand-consonant behaviors.

Researchers usually use three conceptual perspectives—behavioral, attitudinal, and combination (Bowen and Chen, 2001). Behavioral perspective relates to the repeated behavior. Attitudinal perspective is related to customers' changing positive view about company offerings. Customers become more likely to possess stronger purchase intentions and recommend the product (Zeithaml *et al.*, 1996). Combination perspective combines both repeat buying behaviors with positive customer dispositions towards company. Dick and Basu (1994), on the other hand, views loyalty as the strength of the relationship between relative attitude and patronage behavior. According to this view, customer loyalty is variable and the strength of the relationship between relative attitude and repeat purchase behavior can have different levels—no loyalty, latent loyalty, spurious loyalty, and loyalty to true. True loyalty level is very important for businesses because its impact on customers long term value and positive word-of-mouth communications (Lawrence, 1993).

The relationships between service quality, customer satisfaction and customer loyalty

Literature on the relationship between service quality and customer loyalty presents two divergent views. The first view argues that there is a direct relationship between the two constructs (Boulding *et al.*, 1993) while the second view assumes an indirect relationship between service quality and loyalty (Baker and Crompton, 2000). Although considerable number of research points to a direct effect on behavioral intentions, a larger body of literature points to an indirect effect of behavioral intentions (Cronin *et al.*, 2000). Perhaps Zeithaml *et al.* (1996) study is one of the most important studies that argued for the direct relationship between service quality and the behavioral intentions outcome of loyalty. They found that service quality was associated with behavioral intentions and higher levels of service quality would result in positive behavioral intentions and the customer would continue to buy the service from same company. Bloemer, Ruyter, and Wetzels (1999) have found a direct relationship between service quality and repeat purchase behavior. However, Zeithaml *et al.* (1996) reported no significant relationship between service quality and customer complaint behavior. Later, Cronin *et al.* (2000) study identified strong direct relationship among service quality, customer satisfaction and behavioral intentions.

Other studies have argued for the presence of an indirect relationship between service quality and loyalty (Cronin and Taylor, 1992). Customer satisfaction is considered to serve as a bridge between service quality and customer loyalty and, therefore, it has an indirect effect on loyalty (Olsen, 2002). Caruana (2002) and Dabholkar *et al.* (2000) studies provided strong support to this view mainly showing that the effects of service quality influence on behavioral intentions are present only through the customer satisfaction path. Similarly, Brady *et al.* (2002) and Lenka, Suar, and Mohapatra (2009) studies

confirmed those finding and showed that service quality influences customer satisfaction and then customer satisfaction influences repeat buying behavior.

There are a number of different attempts have been made in the sport and physical activity services literature to examine the service quality, customer satisfaction and behavioral intentions relationship. These studies mostly differ in terms of the context of sport and physical activity services selected for the research conducted. Studies conducted to examine the role of service quality on public sports and leisure centers (Howat *et al.*, 1999), on public aquatic centers (Howat *et al.*, 2008), on event sport Shonk and Chelladurai (2008) have all reported fully mediated role of service quality on customers intention to return. Examining the health club customers, Alexandris *et al.* (2004) reported that service quality affected customer satisfaction, customer satisfaction affected word-of-mouth communications and psychological commitment. Investigating the cricket spectators, Kuenzel and Yassim (2007) reported that satisfaction directly influenced joy and behavioral outcomes (word-of-mouth and revisit) and Koo, Andrew and Kim (2008) reported that satisfaction directly influenced service quality judgments and behavioral intentions of women’s college basketball fans. On the other hand, Brady, Voorhees, Cronin, and Bourdeau (2006) found customer satisfaction had strong mediation role between valence and behavioral intentions of sports fans. Finally, more recently Yoshida and James (2010) reported a positive relationship between service quality and customer satisfaction and behavioral intentions of baseball and football spectators.

Table 1 shows a summary of studies that investigated the relationship among service quality, customer satisfaction, and loyalty in the spectator and participation sports. Further empirical studies investigating these relationships in different sports organizations should prove to be beneficial in terms of improving our understanding of the complex relationships among these variable in the sports and physical activity service industry. Such efforts should significantly contribute to the participation-based sports and physical activity services literature.

Table 1. The linking quality, satisfaction, and loyalty to various service encounter outcomes in the sport literature

Source	Relevant Constructs	Link(s) to Outcomes	Empirically Tested?	Context
Barshan, Elahi, and Aghaei (2017)	SQ, SAT, LOY	SAT	Yes	Participation
Howat, Crilley, and McGrath (2008)	SQ, SAT, LOY	SAT	Yes	Participation
Koo, Andrew, and Kim (2008)	SQ, SAT, BI	SAT	Yes	Spectator
Shonk and Chelladurai (2008)	SQ, SAT, IR	SAT	No	Spectator & Participation
Kuenzel and Yassim (2007)	SQ, SAT, LOY	SAT	Yes	Spectator
Brady et al. (2006)	V, SAT, BI	SAT	Yes	Spectator
Alexandris et al. (2004)	SQ, SAT, LOY	SAT	Yes	Participation
Howat, Murray, and Crilley (1999)	SQ, SAT, BI	SAT	Yes	Participation

SQ=Service Quality, SAT=Satisfaction, LOY=Loyalty, BI=Behavioral Intentions, IR=Intent to Return,V=Valence

Research model and hypothesis

Based on the literature support provided above and using the model presented in Dabholkar *et al.* (2000) study, we use the conceptual model presented in Figure 1 to test the hypothesized relationships in this study.

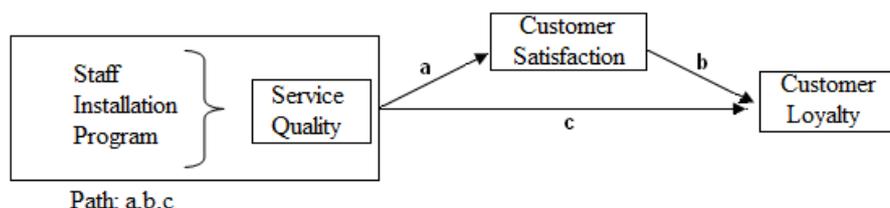


Figure 1. Conceptual model used in the study

Adopted for the sports and physical activity centers, this model presents the direct and indirect relationships among three constructs discussed, namely service quality, customer satisfaction and loyalty. According to this conceptual model, we hypothesize a direct relationship between service quality → customer satisfaction and a direct relationship between customer satisfaction → loyalty. Therefore, we argue that the relationship between service quality and loyalty is mediated through the customer service path. It is argued that higher levels of service quality will lead to increases in customer satisfaction levels which in return lead to customer loyalty.

H₁: Service quality will have a positive relationship with customer satisfaction in the sports and physical activity centers.

H₂: Customer satisfaction will have a positive relationship with customer loyalty in the sports and physical activity centers.

H₃: Customer satisfaction will mediate the relationship between service quality and customer loyalty in the sports and physical activity centers.

METHOD

Questionnaire

In this study, we used a fourteen-items QSport-14 scale developed by Yildiz and Kara (2012) to operationalize the service quality construct. Three-items customer satisfaction and five-items customer loyalty scales were adopted from Cronin *et al.* (2000) and Zeithaml *et al.* (1996), respectively. Scales were assessed using a Likert type scale ranging from 1=strongly disagree to 5=strongly agree. Questionnaire also included section gathering information about the demographic information of the subjects.

The sample

Simple random sampling method was used to select the subjects. Two hundred and fifty scales were distributed to the customers of four large commercial sports and physical activity centers (fitness, swimming, scuba and water sports including wind surfing, canoe and catamaran sailing) in western Turkey. Two weeks later, one hundred and ninety three completed scales were returned yielding 77.2% response rate.

Statistical analysis

Descriptive statistics were used to describe the basic features of the sample in this study. Construct validity of the scales was tested through varimax rotation – principal component factor analysis – and Cronbach's alpha coefficient test was used to check their reliability. A correlation analysis was carried out using the average values of the scale items for each instrument and the hierarchical regression analysis was used in order to verify the hypotheses.

RESULTS

Descriptive analysis

Descriptive analysis showed that 57% of the participants were male and 44% of the sample was in the 21-30 age group. A large proportion (69%) of the sample had college level education (Table 2). Sizeable groups were in the swimming (44%) and fitness (31%) programs while the rest of participants were in scuba, wind surfing, canoe and catamaran training programs. About a third of the respondents indicated that improving skills were their main motivation to utilize sports and physical activity center services while the other third emphasized health/fitness as the major reasons to join. Summary of descriptive results are provided in Table 3.

Table 2. Sample demographic characteristics

Gender	f	%	Age (years)	f	%	Education	f	%
Males	98	57	Less than 20	37	21.5	Primary	12	7
Females	74	43	21 - 30	76	44.2	Secondary	42	24.4
			31 - 40	33	19.2	College	118	68.6
			More than 41	26	15.1			

Table 3. Choice of programs, length of use, and motivation for participation

Programs	f	%	Length of service use	f	%	Motivation for participation	f	%
Fitness	54	31.4	Less than 2 months	45	26.2	Learn skills	64	37.2
Swimming	75	43.6	3 to 6 months	47	27.3	Health and fitness	63	36.6
Scuba	14	8.1	7 to 11 months	45	26.2	Body building	2	1.2
Wind surfing, canoe, catamaran sailing	29	16.9	1 to 2 years	23	13.4	Weight loss	20	11.6
			More than 3 years	12	7.0	Shape-up and toning	6	3.5
						Peace of mind	14	8.1
						Socialization	3	1.7

Factor analysis and reliability coefficients

To examine the validity of the scales used, exploratory factor analysis with varimax rotation is employed. Using Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, we assessed the appropriateness of factor analysis (Hair, Anderson, Tatham, and Black, 1995). The KMO measure is computed and the results indicate an index of 0.863 ensuring an excellent sampling adequacy and supporting the factor structures determined. Bartlett's sphericity test was used to examine that the variables are uncorrelated in the population ($\chi^2=1798.380$; $df=231$; $p=0.000$). Eigenvalues greater than 1.00 were kept in the analysis and factor scores less than 0.40 were eliminated. Results of exploratory factor analysis show the existence of five dimensions explaining 64.159 percent of the total variance. Factor loadings of the scale items are relatively large ranging from 0.430 to 0.866, which are significantly more than the minimum acceptable threshold of 0.30 (Hair *et al.*, 1995; Grandzol and Gershon, 1998) for adequately representing the construct validity.

An analysis of Table 4 shows that the first, second and fourth factors had five items each while third factor consisted of four and the fifth factor had three items loaded. Second, third and fourth factors are related to service quality while first factor relates to loyalty and the fifth factor is related to customer satisfaction. Reliability of the scale is assessed using Cronbach's alpha. The values of Cronbach alpha obtained for factors ranged from 0.772 and 0.869 indicating very good reliability scores and exceeding the 0.70 threshold cited in the literature.

Correlations and hierarchical regression analysis

We then used a correlation analysis to determine the strength and the direction of the relationships between variables. The aggregate scores were then used to conduct a hierarchical regression analysis to determine the relationships among constructs. To this end, we first performed regression analysis using customer satisfaction as the dependent variable and the service quality as the independent variable. We then tested if there was a direct link between service quality and loyalty by using loyalty as the dependent variable and service quality as the independent variable. We finally used both customer service and customer satisfaction as independent variables to predict loyalty while controlling for the customer satisfaction. Table 5 and 6 illustrate the results of correlation analysis and the regression analysis respectively.

Table 5 shows that there are significant ($p<0.001$) and positive correlations between the constructs used in the study. Table 6 illustrates the three different hierarchical regression results which are all significant and positive. Moreover, service quality regression coefficient $\beta=0.608$ in Model 2 has declined significantly to 0.339 in Model 3 indicating a stronger link through the customer satisfaction path. These

results provide statistically significant support for all of the hypothesized relationships among constructs. A strong emphasis need to be placed on the mediated relationship among these three constructs.

Table 4. Results of factor analysis and reliability coefficients

Scale items	M	SD	F1	F2	F3	F4	F5
18. Say positive things about this sport center to other people	4.42	.60	.805				
21. Consider this sport center your first choice to buy services	4.35	.73	.754				
20. Encourage friends and relatives to do business with this sport center	4.38	.69	.751				
19. Recommend this sport center to someone who seeks your advice	4.45	.65	.718				
22. Do more business with this sport center in the next few years	4.38	.73	.694				
8. Hygiene and cleanliness	4.21	.80		.789			
9. Equipment	4.34	.76		.719			
10. Dressing rooms, toilets and showers	4.19	.94		.685			
7. Sport areas	4.28	.76		.681			
6. Physical environment	4.29	.63		.627			
11. Program choices	4.18	.62			.866		
14. Availability of program time periods	4.22	.73			.804		
12. Program quality/content	4.23	.66			.789		
13. Size of classes (number of participant)	4.25	.64			.721		
3. Efficacy of instructors	4.45	.62				.777	
4. Personalized service	4.47	.67				.713	
2. Professionalism of instructors	4.48	.56				.666	
5. Interest showed by staff for your comeback	4.34	.75				.540	
1. Kindness and treat from the staff	4.47	.62				.430	
17. My choice to purchase this service was a wise one	4.40	.63					.768
15. I think that I did the right thing when I purchased this service	4.41	.58					.754
16. This facility is exactly what is needed for this service	4.45	.63					.752
Percentage of variance explained			33.937	12.292	7.283	5.728	4.920
Cumulative % of variance explained			33.937	46.228	53.511	59.239	64.159
Cronbach alpha			.869	.832	.813	.772	.827

Key: F1=Loyalty, F2=Installations, F3=Program, F4=Staff, F5=Satisfaction

Table 5. Correlation results among variables

Variables	M	SD	1	2	3
1. Service quality	4.31	.36	1		
2. Customer satisfaction	4.42	.53	.608 ^{**}	1	
3. Customer loyalty	4.40	.55	.531 ^{**}	.521 ^{**}	1
			.000	.000	.

** Correlation is significant at the 0.001 level (2-tailed).

Table 6. Results of hierarchical regression analysis

Variables	Customer Satisfaction	Customer Loyalty	Customer Loyalty
	β	β	β
Model 1			
Service quality	.608*		
R ²	.369		
Model 2			
Service quality		.531*	
R ²		.282	
Model 2 and Model 3			
Service quality			.339*
Customer satisfaction			.315*
R ²			.344

* Significant at $p < 0.001$

CONCLUSION

Studies indicate a positive relationship among service quality, customer satisfaction, and customer loyalty in the sports and physical activity services industry (Murray and Howat, 2002; Tsuji, Bennett, and Zhang, 2007; Yoshida and James, 2010). Moreover, other studies reported that the relationship between service quality and customer loyalty depended on customer satisfaction, indicating that satisfaction played a mediating role between service quality and loyalty (Alexandris *et al.*, 2004; Brady *et al.*, 2006; Howat *et al.*, 1999; Howat *et al.*, 2008; Koo *et al.*, 2008; Kuenzel and Yassim, 2007; Motallabi and Najafzade 2015; Rahmati and Honari 2013; Shonk and Chelladurai, 2008). Our results in this study indicate that customer satisfaction played a partially mediating role in the relationship between service quality and customer loyalty. In other words, we found a direct positive relationship between service quality and customer loyalty of the sports and physical activity organizations while at the same time service quality also had a direct influence on customer satisfaction. Accordingly, service quality positively influenced customer loyalty directly and indirectly through the customer satisfaction path. The findings of this study confirm the results of other studies who found stronger indirect relationship between service quality and loyalty through the satisfaction route (Bitner, 1990; Bolton and Drew, 1991; Cronin *et al.*, 2000) while not supporting the results of other studies who identified only a direct relationships among these variables (Brady *et al.*, 2002; Dabholkar *et al.*, 2000; Olsen, 2002). In summary, our results indicate that customer satisfaction mediated the relationship between service quality and loyalty in the sports and physical activity services studied in this study. Similar results were observed in researches conducted in both the sports sector (Barshan *et al.*, 2017) and health sector. Therefore, similar results in other reseraches support our study (Meesala and Paul, 2018).

The fully mediated role of customer satisfaction of the relationship between service quality and loyalty could be explained by focusing on the role of other factors (such as price, convenience, and or availability) on customer satisfaction, which may have ultimately contributed to customer loyalty (Shonk and Chelladurai, 2008). Based on the results obtained in this study, we assert that sports and physical activity center customers value service quality but it may not be the only determinant of satisfaction. Along with quality of the service, other factors that contribute to both mental and physical experiences influence customer satisfaction and hence its impact on loyalty is enhanced.

Based on the findings of this study, sports and physical activity centers need to focus on both service quality and customer satisfaction to improve customer loyalty. Caruana (2002) stressed that customer

loyalty is the foundation of all successful service organizations and its importance has been amplified in the globalized competitive industries. Previous research indicates that loyalty contributes to the success of these companies in variety of ways one of which is the positive word-of-mouth communication. Through word-of-mouth communication, loyal customers contribute positively to communication the marketing messages of the sports and physical activity centers and rebuy their services. It is known that word-of-mouth communication is highly effective in attracting new customer and it becomes even more important when communication costs are included in the process. Repeat purchases provide consistency and stability in demand for sport and physical activity center's offerings.

Limitations and Further Studies

The results of this study should not be generalized beyond its target population since it was carried out using a limited sample in sports and physical activity sector in a single country. More research should test whether the consequence obtained in this study are consistent in other sports and physical activity environments. In summary, our study findings encourage researchers as well as the practitioners to be cautious when assuming direct relationship between service quality and customer loyalty. Given the limited research conducted in the sports and physical activity services, it is imperative the additional studies should replicate the mediation role of customer satisfaction in this field. The heterogenous nature of the sports and physical activity services further complicate the generalizability of findings. Therefore, drawing upon from the other disciplines, researchers should attempt to develop theoretical framework for the relationship among these constructs in the field of sports services and empirically test those relationships in specific sports services environments.

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