



THE EFFECT OF SERVICE QUALITY ON ATHLETE SATISFACTION: AN EMPIRICAL RESULTS FROM SPORTS FACILITIES OF PUBLIC ORGANIZATIONS

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Abstract:

This study was carried out to examine the effect of service quality on the satisfaction of athletes. quantitative research patterns the simple random method was used in the study, the sample size consisted of 769 athletes trained in the Provincial Directorates of Youth and Sports and Municipalities in Antalya, Isparta, and Burdur. The Q-Sport-14 scale and customer satisfaction scale were used as data collection tools. Exploratory factor analysis was performed for validity to the scales and the internal consistency coefficient was calculated for reliability. The data were analyzed to measure impact by hierarchical regression, ANCOVA, and structural equation modeling. Athletes got ($\bar{x}=61.64$) points from the service quality scale. They got ($\bar{x}=13.19$) points from the satisfaction scale. As a result of the analyzes based on averages, it was observed that the effect of service quality on customer satisfaction is significant and the satisfaction level of athletes and their perceptions of service quality was high.

JEL: L80; L83

Keywords: service quality, athlete satisfaction, sport organizations

1. Introduction

In terms of contributing to the solution of health problems that will arise based on lack of movement, organizations that provide sports and physical activities have important effects on people (Yıldız, Duyan and Günel, 2018). Due to the protective effect of sports

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on the mental and physical health of people, sports and physical activity services are accepted as an important sub-activity field of the service sector today (Devecioğlu, 2005). Today's intensely competitive environment forces organizations to develop customer-centered strategies. While successful organizations continue to exist in the competition, unsuccessful ones are withdrawn from the market. Therefore, service quality and customer satisfaction are among the important issues to be considered by organizations that want to be successful (Yıldız and Tüfekçi, 2010). Because service quality and customer satisfaction are also important for the sports service sector (Pool et al., 2016).

Parasuraman, Berry, and Zeithaml (1988) defined service quality as the degree and direction of the difference between customers' perceptions and expectations. Customer satisfaction has been defined as a cognitive or affective response that occurs based on experience gained through the use of single or long-term service (Hu, Kandampully and Juwaheer, 2009). The feeling that a customer feels as a result of meeting his needs is expressed as customer satisfaction. Meeting or exceeding customer expectations through service quality features provides overall satisfaction with the service (Javadein, Khanlari and Estiri, 2008). As with all service enterprises, one of the most important conditions for sports organizations to ensure customer satisfaction and to exceed customer expectations is to increase their service quality. Therefore, sports organizations have the same responsibility to increase customer service quality and to ensure customer satisfaction (Yüzgenç and Özgül, 2014). In this context, success in service arises according to the level of emotional satisfaction regarding the service received by the customer (İmamoğlu, 1998). In summary, employee labor and performance are essential products and the customer experience with the product consumed is an important output.

On the other hand, in the recreational sports industry, the level of interaction among sports consumers is relatively high and customers influence each other in terms of perceived service quality (Ko and Pastore, 2004). The most effective advertisement for the product and the enterprises is the transfer of customers' experiences through word-of-mouth communication. Effective advertising attracts more customers to organizations, more customers bring more profits (Yıldız et al., 2018). As in other service enterprises, the products of sports organizations are also intangibles, therefore, they cause significant differences in the quality perception of the customers and hence cannot benefit from tangible concepts (Baş, Çelik and Solak, 2017; Nuviola et al., 2012; Voon et al., 2014). The quality demands of the customers have increased the quality awareness of the service enterprises. The emergence of the need to measure service quality led to the development of measurement tools (Rodrigues et al., 2011). The scales that systematically reveal the variables that measure service quality are SERVQUAL and SERFERF. The first scale developed for the measurement of service quality is SERVQUAL. This scale reveals the quality level according to the difference between customer expectation and perception. Later, a scale called SERVPERF was developed and this scale focused only on customer perception. Since SERVPERF assumes that the expectation is already in the mind of the customer, it focuses only on performance and finds it unnecessary to measure the expectation (Carrillat, Jaramillo and Mulki, 2007). Based on the works of Grönroos (1982)

and Bitner (1992), Rust and Oliver (1994) formed the basis of the three-component model. This model focuses on the relationship between service quality, service value, and customer satisfaction (Polyakova and Mirza, 2015). Grönroos (1983) suggested that customers' perceptions of service quality can be divided into two dimensions: technical quality and functional quality. Technical quality focuses on the quality assessment of the basic service the customer receives from the seller. When this dimension is analyzed in the context of sports, it includes the quality of the sports competition that the sports consumer watches at the event. Functional quality includes the evaluation of the service delivery consisting of the arena, stadium, parking, announcers, cheerleader, staff working during sports events, and other auxiliary services (Kelley and Turley, 2001). All these models are based on the SERVQUAL model, despite the many criticisms (Theodorakis and Alexandris, 2008; Yildiz, 2009).

When the studies in the field of sports services are analyzed, it is seen that a lot of work has been done in the context of private sports organizations (Açak and Karataş, 2016; Baş et al., 2017; Özkan, 2013; Öztürk, 2014; Yerlisu Lapa and Baştaç, 2012; Yıldız, Onağ and Onağ, 2013; Yıldız and Tüfekçi, 2010; Yıldız, 2008), and public sports organizations (Barsbuga, 2013; Ergin et al., 2011; Saraç, 2018; Yüzgenç and Özgül, 2014), and public and private service sports organizations (Afthinos et al., 2001; Akgül, Sarol, and Gürbüz, 2009; Buğdaycı, 2018; Memiş and Ekenci, 2007; Nuviola et al., 2012; Üzüm et al., 2016). When the literature is examined, it is seen that the studies on public sports services are limited. Therefore, the aim of this study is to determine the relationship between the service quality perceptions and satisfaction levels of the customers who receive the public sports service.

2. Material and Methods

In this quantitative study, which aims to investigate the effect of service quality on customer satisfaction in sports facilities, a simple random sampling model was used (Gürbüz and Şahin, 2018). The study universe is public sports facilities located in Antalya, Isparta, and Burdur provinces, in Turkey. The questionnaire forms were applied to athletes who received sports services by obtaining the necessary permissions from public institution managers. First, 900 questionnaires were distributed to the athletes by the researchers, and then the number of returned forms was 813. In the examination conducted, 87 forms that were filled in incomplete or incorrectly were not evaluated. As a result, 769 scale forms were included in the study and analyzed.

As the data collection tool, the Qsport-14 scale developed by (Yildiz and Kara, 2012) was used to measure service quality, and the satisfaction scale developed by Cronin, Brady, and Hult (2000) was used to measure customer satisfaction. Qsport-14 scale consists of 14 items and 3 sub-dimensions: installations (5 items), staff (5 items), and programme (4 items). Customer satisfaction is one-dimensional and consists of 3 items. The scales are rated as 5-point Likert type (1 = Disagree, 5 = Agree). Statistically descriptive analysis (frequency and percentage), and internal consistency reliability

analyses were performed. In this research, the percentage and frequency of the participants were calculated by analyzing the demographic characteristics of the participants. In order to determine the validity of the scales, exploratory factor analysis was done, and factor loads of the items were determined. Hierarchical regression was used to determine the impact of service quality on satisfaction, and ANCOVA was used to determine the effect of demographic variables on service quality. Structural equation modeling was used to determine the effect of service quality sub-dimensions on staff, installations, and programme on satisfaction separately. According to the perception of the participants, the service quality scale has a score between 14 and 140, and a satisfaction scale between 3 and 15. In addition, as a result of the normality test, it was shown that the data were normally distributed. Therefore, parametric analyzes were applied to the data.

3. Results and Discussion

Table 1: Demographic Characteristics of Participants

Variables		f	%	\bar{x}	sd
Gender	Male	309	40.2	1.60	0.49
	Female	460	59.8		
Age	20-24	225	29.3	2.08	0.81
	25-29	257	33.4		
	30-34	287	37.3		
Marital Status	Married	634	82.4	1.18	0.38
	Single	135	17.6		
Education	Primary	89	11.6	2.46	0.79
	Secondary	293	38.1		
	Undergraduate	332	43.2		
	Graduate	55	7.2		
Income (monthly, TL)	2000 and less	181	23.5	2.47	1.20
	2000-3000	255	33.2		
	3001-4000	187	24.3		
	4001-5000	83	10.8		
	5001 and over	63	8.2		
Participating Time	2 months and less	147	19.1	2.79	1.27
	3-6 months	183	23.8		
	6 months-1 year	208	27		
	1-2 years	144	18.7		
	2 years and over	87	11.3		
Sport Branches	Artistic Gymnastics	164	21.3	6.87	5.36
	Fitness	185	24.1		
	Pilates	16	2.1		
	Fencing	22	2.9		
	Judo	42	5.5		
	Volleyball	76	9.9		
	Basketball	54	7		
	Wrestling	74	9.6		
	Taekwondo	116	15.1		
	Ping-Pong	20	2.6		

The majority of the participants (59.8%) are female athletes. The average age of the participants is 2.08 ± 0.81 ; 82.4% of them are married, 43.2% are undergraduate graduates, 33.2% have a monthly income between 2000-3000 TL. Most of the participants are active athletes between 3-6 months (23%). The majority of them (24%) are engaged in fitness sports (Table 1).

Table 2: Validity and Reliability Analysis Results of Q-Sport-14

Items	Factor Loading	Variance Explained	Reliability
Staff-3	0.751		
Staff-2	0.724		
Staff-4	0.707	19.943	0.769
Staff-1	0.657		
Staff-5	0.648		
Installations-8	0.766		
Installations-9	0.750		
Installations-7	0.748	19.213	0.777
Installations-10	0.667		
Installations-6	0.604		
Programme-12	0.795		
Programme-11	0.774	14.904	0.617
Programme-13	0.724		
Programme-14	0.715		
Cumulative % of Variance Explained		54.060	0.811
KMO			0.853
Bartlett's Sphericity Chi-Square			3011.168
Standard Deviation			91
P			0.000

Table 2 shows that the factor loads of the Q-Sport-14 scale ranged between 0.715 and 0.868. The factor loads of the satisfaction scale ranged from 0.844 to 0.895. The factor loads of both scales are high. The internal consistency coefficient of the Q-Sport-14 is 0.811, and the internal consistency coefficient of the satisfaction scale is 0.839. These values show that the reliability of both scales is high.

Table 3: Descriptive Analysis of Service Quality and Satisfaction Levels of Participants

Service Quality	N	\bar{x}	sd
Staff-1	769	4.57	0.56
Staff-2	769	4.75	0.46
Staff-3	769	4.70	0.49
Staff-4	769	4.48	0.67
Staff-5	769	4.56	0.56
Installations-6	769	4.46	0.61
Installations-7	769	4.39	0.71
Installations-8	769	4.05	0.83
Installations-9	769	4.15	0.81
Installations-10	769	4.07	0.88
Programme-11	769	4.48	0.59
Programme-12	769	4.47	0.62

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Programme-13	769	4.46	0.62
Programme-14	769	4.05	1.02
Total	769	61.64	5.20
Satisfaction			
Satisfaction-1	769	4.35	0.68
Satisfaction-2	769	4.41	0.64
Satisfaction-3	769	4.43	0.65
Total	769	13.19	1.71

Table 3 shows that customers' perceptions of service quality (\bar{x} =61.63) and satisfaction levels (\bar{x} =13.19) are high.

Table 4: Hierarchical Regression Analysis Results

Independent variables	Model 1			Model 2		
	Beta	t	p	Beta	t	p
Gender	-0.009	-0.259	0.796	-0.024	-0.849	0.396
Age	-0.159	-4.259	0.000	-0.076	-2.585	0.010
Marital Status	0.052	1.439	0.151	0.036	1.28	0.201
Education	0.067	1.745	0.081	-0.025	-0.828	0.408
Income	-0.004	-0.095	0.924	0.028	0.913	0.361
Participating Time	0.083	2.306	0.021	0.081	2.85	0.004
Sport Branches	0.57	1.594	0.111	0.140	0.482	0.630
Service Quality				0.620**	21.738	0.000
F		5.094			65.721	
R ²		0.045			0.364	
Adjusted R ²		0.036			0.409	

Dependent variable: Satisfaction, **P<0.01; Standardized beta value was used.

Table 5: ANCOVA Analysis Results

Source	Type III Sum of Squares	df	Mean Square	F	p	Partial Eta Squared
Corrected Model	1828,958 ^a	11	166.269	6.658	0.000	0.088
Intercept	1469685.356	1	1469685.36	58849.32	0.000	0.987
Age	96.861	2	48.431	1.939	0.145	0.005
Education	266.642	3	88.881	3.559	0.014*	0.014
Age * Education	710.495	6	118.416	4.742	0.000**	0.036
Error	18905.091	757	24.974			
Total	2942152	769				
Corrected Total	20734.049	768				

^a R Squared = .088 (Adjusted R Squared = .075)

Table 4 above shows that age variable, which is one of the demographic variables, has a significant and negative effect on customer satisfaction, while the duration of participation in sports has a significant and positive effect. In addition, service quality has a significant positive and high impact on athlete's satisfaction. The service quality variable explains 40% of the customer satisfaction variable.

Table 5 shows that age variable does not have a significant effect on service quality alone ($p > 0.05$; $p = 0.145$). In addition, it was observed that the educational status alone had a significant effect on service quality ($p < 0.05$; $p = 0.014$), and the age and educational status variables of the athletes had a significant effect ($p < 0.00$; $p = 0.001$). On the other hand, it was observed that the variables of age and education level had a 36% impact on service quality. Age and education status variables explain 75% of service quality ($R^2 = 0.75$).

Table 6: Averages of Variables

Age	Education	\bar{x}	sd	N
20-24	Primary	62.88	3.63	16
	Secondary	62.32	4.84	72
	Undergraduate	63.58	4.45	125
	Graduate	60.42	5.90	12
25-29	Primary	58.00	5.21	20
	Secondary	62.01	4.72	100
	Undergraduate	61.13	5.48	120
	Graduate	62.71	5.01	17
30-34	Primary	59.26	5.36	53
	Secondary	60.82	5.20	121
	Undergraduate	60.45	5.32	87
	Graduate	65.81	3.70	26
Total	Primary	59.63	5.26	89
	Secondary	61.59	4.98	293
	Undergraduate	61.87	5.23	332
	Graduate	63.67	5.07	55

Table 6 shows that as a result of ANCOVA analysis considering the averages between the groups, it can be said that as the ages and educational status of the athletes increase, their satisfaction levels increase.

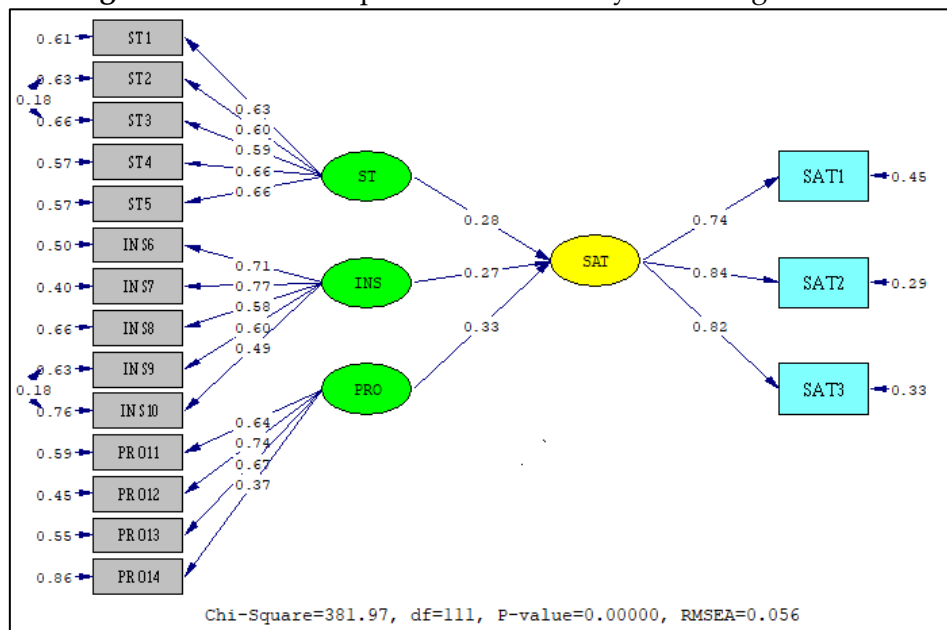
Table 7: Fit Index Values for the Structural Equation Model

Fit indices	Perfect	Acceptable	Values of the model
χ^2/sd	≤ 3	≤ 5	3.44
RMSEA	$0 < RMSEA < 0.05$	$0.05 \leq RMSEA \leq 0.10$	0.56
SRMR	$0 \leq SRMR < 0.05$	$0.05 \leq SRMR \leq 0.10$	0.053
GFI	$0.95 \leq GFI \leq 1$	$0.90 \leq GFI \leq 0.95$	0.94
AGFI	$0.90 \leq AGFI \leq 1$	$0.85 \leq AGFI \leq 0.90$	0.92
NFI	$0.95 \leq NFI \leq 1$	$0.90 \leq NFI \leq 0.95$	0.96

Source: Schumacker and Lomax, 1996; Schermelleh-Engel and Moosbrugger, 2003.

Table 7 shows that the fit index values for the structural equation model are among the acceptable fit index values for RMSEA. On the other hand, it shows that the other fit indices have excellent value (SRMR=0.053; GFI=0.94; AGFI=0.92; NFI=0.96).

Figure 1: Structural Equation Model Analysis Among Variables



ST= Staff; INS=Installations; PRO=Programme; SAT=Satisfaction

Table 8: Result of Standardized Parameter Estimates, T Values, and Hypotheses

Hypotheses	Paths	Standardized Parameter Estimates	t values	R ²	Result
H ₁	(ST)→(SAT)	0.28	5.17	0.07	Accept
H ₂	(INS)→(SAT)	0.27	6.11	0.07	Accept
H ₃	(PRO)→(SAT)	0.33	6.06	0.10	Accept

ST= Staff; INS= Installations; PRO= Programme; SAT= Satisfaction

Table 8 shows that all the hypotheses in this study are accepted.

4. Discussion of Findings

In this study, the effect of service quality on customer satisfaction was examined through the data obtained from the athletes who received training specific to different sports branches in the sports facilities of Youth and Sports Provincial Directorates and Municipalities, which are public institutions that provide sports services. Since this study is conducted on athletes with various sports branches, we argue that it will contribute to the literature in terms of being different from the researches conducted for a single sports branch in the literature.

The results of our study indicated that perception levels of service quality and satisfaction of the athletes participating in this study are high, and according to this result, the athletes are generally satisfied with the service provided in public sports facilities. The averages in our study were performed by considering the calculations made by Günel (2019) on the athletes trained in the Turkish Olympic Preparation Centers. In our study, it was determined that the Age variable, which is one of the demographic characteristics, had a significant negative effect on satisfaction, and the duration of participation in sports had a significant and positive effect. In other words, as the age of

athletes increases, their satisfaction levels decrease. Younger customers are more satisfied with the service provided, however, as the age increases, the satisfaction levels of the older people decrease over time due to the increase in the habit of the service provided. On the other hand, as customers' participation time increases, their satisfaction levels increase. However, as the experiences of customers increase, their satisfaction levels increase depending on the increase in their skills for sports. Unlike our study, there are also studies in the literature where there is a significant difference between customer satisfaction and age variable (De Jager and Gbadamosi, 2010; Kim and Trail, 2011; Özsari et al., 2017). On the other hand, there are also studies that are similar to our study. It was observed that satisfaction levels decreased as the age of athletes increased and there was a positive relationship between the duration of participation in sports and satisfaction levels (Yu et al., 2014). There was no relationship between customer satisfaction and the age variable (Dessemontet et al., 2014; Keskin, 2013), but there was a significant relationship between sports participation time and satisfaction levels (Aksoylu, 2019; Sabırlı and Yetim, 2019). Age and education level variables have a positive effect on service quality at the same time. Both variables explain 75% of service quality perception. When the averages of the variables are taken into consideration, as the ages and education levels of the customers increase, their perceptions of service quality also increase. Similar studies were encountered in our study in terms of some findings. It was determined that increasing education level had a significant and positive effect on perceived service quality (Jain et al., 2011; Kömür, 2018; Wei and Ramalu, 2011). Unlike our study, no relation was found between the education variable and the perceptions of service quality (Demirel, 2013; Figen, 2005; Yüzgenç and Özgül, 2014). In the literature, there are studies that the quality of service has a positive effect on customer satisfaction (Tsuji et al., 2007; Suh and Pedersen, 2010; Tsitskari et al., 2014; Thamnopoulos et al., 2012). In our study, together with the perceived service quality, the sub-scales were analyzed separately and their effects on the satisfaction of the athletes were examined. In addition, in the Structural Equation Modeling analysis, it has been determined that the perceptions of customers' service quality have a positive and positive effect on their satisfaction levels ($p < 0.001$). Of these sub-dimensions, the biggest effect belongs to the program ($\beta = .33$) dimension. When the effects of other sub-dimensions on satisfaction were examined, " $\beta = .28$ " value was observed in the staff sub-dimension, and " $\beta = .27$ " value in installations sub-dimension.

5. Conclusion

The results of our research have shown that the quality of service offered in public sports facilities has a huge impact on customer satisfaction ($\beta = .620$). Therefore, precautions for high quality and increasing this phenomenon in sports facilities belonging to public institutions can be realized by taking into consideration the quality perceptions and expectations of the customers. This approach can not only ensure the promotion policy in the marketing mix but also increase the loyalty of the customers. Thus, the perception

of quality will create an effective advertisement with word of mouth communication. In our study, the effect the program sub-dimension of service quality with a higher value on customer satisfaction necessitates the further development of training programs implemented by coaches in public sports facilities. At the same time, it is important to make the programs scientific and to improve their knowledge and skills by giving in-service training to the coaches working in the institution. Thus, it can further increase the customers' perception of quality and satisfaction levels.

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