RELIABILITY AND VALIDITY OF THE TURKISH VERSION OF THE SERVICE QUALITY ASSESSMENT SCALE

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ABSTRACT

THE RELIABILITY AND VALIDITY OF THE TURKISH VERSION OF THE SERVICE QUALITY ASSESSMENT SCALE

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The purpose of this study was to test the reliability and validity of the Turkish version of the Service Quality Assessment Scale (SQAS). The participants of this study constituted of 338 male (53.1%) and 298 female (46.9%) health-fitness club's members. The Confirmatory Factor Analysis (CFA) was used to examine the factor structure of the SQAS instrument, which assess the service quality of health-fitness clubs. Six-factor model of SQAS was analyzed based on the Maximum Likelihood (ML) estimation method. The goodness-of-fit indices of the model were admissible: for the expectation model Root Mean Square Error of Approximation (RMSEA) was = .067, Standardized Root Mean Square Residual (SRMR) was = .056, and both the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), besides the Non-Normed Fit Index (NNFI) was = .95. For the perception model RMSEA was = .059,

SRMR was = .054, and both the CFI, the IFI, as well as the NNFI was = .96. It was concluded that all of the goodness-of-fit indices of both the expectation and perception model were admissible, with the perception model slight better than the expectation model. The composite reliability and variance extracted was also calculated for expectation and perception model. Analysis indicated that CR values were all above .70 for both expectation model (.74 to 1.00) and perception model (.73 to 1.00). The variance extracted values with the exception of Child Care were comparatively lower than the .50 standard. The present study demonstrated that the SQAS with six-factor model appears to be a reliable and valid instrument to measure the service quality of health-fitness clubs.

Keywords: Reliability, validity, service quality, health-fitness clubs

ÖZ

HİZMET KALİTESİ DEĞERLENDİRME ÖLÇEĞİNİN TÜRKÇE VERSİYONUN GÜVENİRLİĞİ VE GEÇERLİĞİ

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Bu çalışmanın amacı Hizmet Kalitesi Değerlendirme Ölçeğinin Türkçe versiyonunun geçerliği ve güvenirliğini test etmektir. Çalışmaya sağlık ve zindelik kulüplerine üye olan 338 erkek (53.1%) ve 298 kadın (46.9%) katılmıştır. Sağlık ve zindelik kulüplerinde sunulan hizmet kalitesini ölçmek için geliştirilen ölçeğin faktör yapısını incelemede Doğrulayıcı Faktör Analizi (confirmatory factor analysis) yöntemi kullanılmıştır. Hizmet Kalitesi Değerlendirme Ölçeğinin 6 faktörlü modeli Maksimal Çıkarım İhtimali (maximum likelihood estimations) esas alınarak analiz edilmiştir. Modelin uyum indeksleri kabul edilebilir düzeyde bulunmuştur: beklenen hizmet modeli için uyum indeksi değerleri Ortalama Hatalar Karakökü (Root Mean Square Error of Approximation) = .067, Standartlaştırılmış Ortalama Karekök (Standardized Root Mean Square Residual) = .056, ayrıca Karşılaştırmalı Uyma

İndeksi (Comparative Fit Index), Adımsal Uyma İndeksi (Incremental Fit Index), ve Normlaştırılmamış Uyma İndeksi (Non-Normed Fit Index) = .95 olarak bulunmuştur. Algılanan hizmet modeli için Ortala Hatalar Karekökü = .059, Standartlaştırılmış Ortalama Karekök = .054, ayrıca Karşılaştırmalı Uyma İndeksi, Adımsal Uyma İndeksi, ve Normlaştırılmamış Uyma İndeksi için ise .96 değerleri bulunmuştur. Sonuç olarak, beklenen ve algılanan hizmet modelleri için elde edilen uyum indeksi değerleri kabul edilebilir düzeydedir ve algılanan hizmet modeli beklenen hizmet modeline göre biraz daha yüksek kabul edilebilirlik düzeyindedir. Beklenen ve algılanan hizmet modelleri için Bileşik Güvenirlik (Composite Reliability) ve Açıklanan Varyans (Variance Extracted) değerleri de hesaplanmıştır. Analiz sonuçları, hem beklenen (.74, 1.00) hem de algılanan hizmet (.73, 1.00) modelleri için tüm karışık güvenirlik değerlerinin .70'in üzerinde olduğunu göstermektedir. Çocuk bakımı boyutu dışında Açıklanan Varyans değerleri .50 standardı ile karşılaştırıldığında düşük olduğu bulunmuştur. Bu çalışma Hizmet Kalitesi Değerlendirme Ölçeğinin 6 faktörlü modeli ile sağlık ve zindelik kulüplerinin hizmet kalitesini ölçmek için geçerli ve güvenilir bir ölçek olduğunu ortaya koymuştur.

Anahtar Kelimeler: Güvenirlik, geçerlik, hizmet kalitesi, sağlık ve zindelik kulüpleri

To my wife, Şerife Gürbüz

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LIST OF SYMBOLS AND ABBREVIATIONS

SQAS	Service Quality Assessment Scale
ML	Maximum Likelihood
RMSEA	Root Mean Square Error of Approximation
SRMR	Standardized Root Mean Square Residual
CFI	Compartive Fit Index
IFI	Incremental Fit Index
NNFI	Non-Normed Fit Index
CFA	Confirmatory Factor Analysis
EFA	Exploratory Factor Analysis
CR	Composite Reliability
VE	Variance Extracted

CHAPTER I

INTRODUCTION

The interest in delivery of high quality service has been increasing in recent years as a partly result of today's highly competitive business environment. In other words, delivering high quality customer service is an indispensable policy to the overall success of an organization and to increase its strength in today's world. Service sector is undoubtedly essential for the economy since it accounts for 60 percent of the value added in the European Economic Community (Ghobadian, Speller, & Jones, 1994). Similarly, service sector is important for the United States economy as from 1900 to 1984 the percentage of population employed in this sector increased from 30 % to 74 % (Cronin &Taylor, 1992).

Regarding the percent of value added to economy and employed population, doing something wrongs increase the operating costs that may change between the 30 and 40 percent. This is a huge percent for the service sector managers so they try to find the way of decreasing or elimination this waste by meeting customers' expectations (Ghobadian et al., 1994). Therefore, quality improvement is a fundamental concern for the success of many service organizations.

An organization that wants to get more progress and profit obviously focused its attention on service quality (Hadikoemoro, 2002). Organizations that provide high service quality perceived by the customers tend to be the most profitable companies (Philip & Hazlett, 1997). Competitive position of an organization may change

according to their improved quality. Knowing that, not only the manufacturing sector but also the service sector makes an effort to find the way of improving their service qualities. An essential strategy in progressing the service quality is to measure the present service quality by assessing how far the service achieves customer satisfaction (FAN Yuen Wah, KWAN Wing Sang, & SO KA Man, 1999).

In business literature, service is a performance, it happens through interaction between consumers and service providers. Silvestro, Johnston, Fitzgerald, and Voss (1990) defined the service as an interaction period among the customer and service system and it includes contact personnel, equipment, service environments and also facilities. Similarly, Grönroos (1984) described the service as "an activity where production and consumption to a considerable extent take place simultaneously" (p.38). Service may perceived differently from producer to producer or customer to customer. Recently, the word of service expressed with the word of quality and quality definitions have become sophisticated. The quality concept as "excellence" has now been largely superseded by definitions emphasizing production or delivery context. Quality is often defined by subjective judgement. What is acceptable may vary from one day to the next or one person to the next. Quality has been viewed as an assessment of what the company has rather than with what the company does. However, it is so difficult to define the quality just one definition, the underlying reason is that quality is now recognized as a multi-faceted concept (Hernon, 2002). When individuals or companies were asked to define the quality probably they would make different definitions. Indeed, definition of quality draw the policy of a company in relation to how work should be done or how customers are to be treated (Edvardson, Thomasson, & Øvretveit, 1994). To talk about better quality and

progressing service quality without defining the term "service quality" will be so complicated.

Consequently, considering the service and quality, many have attempted to find definitions of service quality, such as Parasuraman, Zeithaml, and Berry (1985) defined the service quality as the degree and the direction of discrepancy between customers' service perceptions and expectations. Robinson (1999) described the service quality as an attitude or overall decision about the superiority of a service. Generally, service quality definitions concentrate on providing better service to meet the customers' needs and also how well the delivered service matches the expectations' of the customers.

Service quality and customer satisfaction reached very little interest despite the long history of it to the mid-1980s. Both service marketing and service quality have not received considerable attention from researchers. Hardly, the work of Parasuraman et al. (1985) service quality has become a demanding topic of the various researches. Since 1976, at least there are 293 major publications on service quality in professional and academic journals. However, there is no agreement upon the factors that effect the consumer perceptions or measurement of service quality. In addition to this, there has been a deep concentration on developing tools for the assessment of service quality (Philip & Hazlett, 1997).

The issue of service quality and customer satisfaction has not received considerable attention in sport sector in the earlier period. However, nowadays in reaction to this highly competitive environment, sport organizations have recognized the importance of delivering quality service for success and survival in today's world. Over the past 15 to 20 years, few people recognised the worth of performing a physical activity at least two or three times in a week for a health-life style. Hence,

the number of sport and fitness centres considerably increased in many countries (Papadimitriou & Kostantinos, 2000). It is the main reason of competition among the sport organisations. Having lots of alternatives, sport participants moved up their expectations for more benefits and for quality in sport products and services (Howat, Crilley, Absler, & Milne, 1996; Mawson, 1993). This implies that sport service providers should provide better service or increase their quality of service to respond the needs and expectations of customers who have more alternatives to participate a physical activity.

That's why many sport organisations are taking serious measures to improve their performance in relation to their competitors. Nowadays, managers placed their focus on effective sports management and providing better service to their members. Since, they believe that succeed in service quality is the key factor to satisfy the expectations of their members and at the same time the best way of positioning themselves more effectively in the market place. If the member satisfied by the organization's performance and the quality of service exceeds the member's expectations, the member will likely to continue relationship with the organization. Therefore, it is important for the health-fitness club managers to understand the expectations of their clients and to provide better service that meet their needs (Papadimitriou & Kostantinos, 2000).

Although, researchers have agreed that service quality and customer satisfaction are the two significant constructs that have to be examined to gain competitive advantage over the other organisations in the sector, sport management researchers have ignored the study of these two constructs and relationship between them (Theodorakis, Kambitsis, & Laios, 2001). Hence, there are a limited number of studies in sport literature related to service quality. Expressed simply, sport managers

understood that service quality is the key factor that affects the performance of their organizations. Even though, they would like to get more specific information about their service quality or identify customer wants and the level of service they desire, they have not enough information about them. It may occur due to the lack of instrument with good properties and practical application values and also a limited number of studies that have been carried out (Lam, 2000). In this situation, researchers concentrate on developing applicable instruments to measure the service quality that is provided in health-fitness clubs.

An increasing attention has been paid to service quality from both academicians and practitioners with the aim of how to develop a useful tool for the measurement of service quality. The study of Parasuraman et al. (1985) was a first effort to develop a model and an instrument to operationalize the concept of service quality and they developed "Gap Model" and SERVQUAL instrument in 1985 (Chang, Chen, & Hsu, 2002). Many researchers used this approach to measure service quality to compare customers' expectations and perceptions about delivered service.

Although, it is the most popular one among the service quality researchers, several researchers did not find appropriate it or discussed its usefulness for many aspects because of various deficiencies, and inconsistencies (Carman, 1990; Cronin & Taylor, 1992; Finn & Lamb, 1991). For example, Carman (1990) pointed out that, although the SERVQUAL is a generic instrument, it needs to be customized by adding items or changing the wording of items.

Even though several researchers have been conducted a lot of studies by applying SERVQUAL, some of the researchers continue to explore and proposed different models that are quite different from Parasuraman et al. (1985). Besides,

some of the authors argued that while SERVQUAL was developed to be a generic instrument to assess service quality at any service setting, developing more specific instruments for specific settings might be more useful or appropriate (Chang et al., 2002). For that reason, Kim and Kim (1995) developed an instrument called as "QUESC" to measure the sport and fitness centers' consumer expectations in relation to service quality. The Kim and Kim's model consists of 33 items of service quality that are categorized in 11 dimensions. Theodorakis and Kambitsis (1998) designed SPORTSERV to measure spectator's perceptions of service quality in professional sports. The instrument is composed by five dimensions and consists of 22 items. As well as, Lam (2000) designed the Service Quality Assessment Scale (SQAS), which measures service quality expectations of health and fitness clubs' customers. The SQAS formed by a six-factor model with 40 items. These are: Staff (9 items), Program (7 items), Locker Room (5 items), Physical Facility (7 items), Workout Facility (6 items), and Child Care (6 items). Participants were asked to rate each item on a 7-point Likert scale ranging from 1 (least important) to 7 (most important).

Even if there is an increased attention to service quality and customer satisfaction in sport sciences in many countries, there is not any study that investigated sport service quality issues in Turkey. Therefore, investigating service quality of sport and fitness centers will provide specific information that help practitioners to offer better service to the members of sport and fitness centres. In addition, the fore coming results of these studies may provide specific information that has practical implications for managers of sport and fitness centres and this may lead to improve weak service dimensions or provide better service that meet the customer's expectations.

As pointed out above, there is limited number of studies that investigated the service quality of sport and fitness centres in sport science literature**.** Again, it may the result of lack of instrument that is useful to measure the sport services quality. So it is necessary to add helpful and practical instruments to measure the performance of health and fitness centers. Finally, There is a great need to increase our research agenda about the constructs of service quality and customer satisfaction.

1.1. Statement of the Problem

The problem of this study was to test the reliability and validity of the Turkish version of the Service Quality Assessment Scale (SQAS).

1.2. Operational Definitions

Quality: The consumer's overall impression of the relative inferiority/superiority of the organisation and its services (Bitner & Hubbert, 1994).

Service: It refers to an interaction period among the customer and service system and it includes contact personnel, equipment, service environments and also facilities (Silvestro et al., 1990).

Service Quality: The degree and the direction of discrepancy between customers' service perceptions and expectations (Parasuraman et al, 1985).

1.3. Assumptions of the Study

i. It is assumed that the subjects will complete Service Quality Assessment Scale (SQAS) unbiasly and truthfully.

ii. It is assumed that the subjects followed the instruction of the scale.

1.4. Limitation of the Study

The limitation of this study was that the sample only included the members of health-fitness clubs in Ankara. For that reason, the result of this study could be generalised only for this group of subjects.

1.5. Significance of the Study

A review of current literature in quality literature demonstrated that service quality has become a significant subject matter because of its relationship to customer satisfaction and costs. There is a strong relationship between service quality and customer satisfaction that in turn positively affects the customers' repurchase intentions and eagerness to recommend the organization. Thus, for many service organizations the improvement of service quality is a fundamental concern since superior service may lead to advanced success.

Even if not only accurate but also efficient measurement of service quality is the first step developing appropriate and effective strategy to improve service quality, there are limited number of studies that investigated the service quality in quality literature. In addition, in the literature, researchers generally investigated service quality in same settings (banking, health, library, hospitality), but there are very few studies concerning sport service quality, especially in Turkey. SERVQUAL is the most frequently used service quality scale that has been suspected to be inappropriate in any setting. Consequently, there is a great need to development of valid and reliable instrument of service quality scale.

CHAPTER II

REVIEW OF LITERATURE

2.1. Quality and Service

Quality and service is growing interest to researchers and managers from many disciplines, including sport and sport science for several reasons since Industrial Revolution and persist to be a topic of deep curiosity nowadays. Researchers used different models in the earlier period besides more recent approaches that have been utilized to better understand the constructs of service and service quality (Chang et al., 2002). In addition to these, the researchers from various disciplines defined quality and service differently. On the other hand, there is not any agreement on the distinctiveness of them. The focus of this study will be on the sport and fitness service sector. This chapter presents a review of the literature concerning service quality. First, basic definitions and concepts of service and service quality. Second, service quality models. Third, dimensions of service quality. Finally, related researches on it.

2.1.1. Basic Definitions & Concepts

Service quality has received lots of attention in service marketing literature since 1980s. Although, its short history, there are many definitions of service in the business literature. Service may identified in a different way from producer to producer or consumer to consumer. Service quality involves every feature of the

organization. Therefore, it is not easy to put into the service in a single definition. For instance, Parasuraman, Zeithaml, and Berry (1988), defined the expression service quality as the degree of inconsistency between customers' normative expectations for the service and their perceptions of the service performance. Cronin and Taylor (1992) defined service quality as a form of consumer attitude. In another work, Hernon (2001) indicated that, service quality involves an evaluation of specific attributes. Service quality focuses on the interaction between the customer and the service provider and also how well the service delivered corresponds the customers' expectations.

In recent years, the researchers focus has been set on the need to realize the role of expectations. To understand the role of expectations is so vital since service quality perceptions result from a comparison of consumer expectations with actual service performance (Parasuraman et al., 1985). In another work Hernon, Nitecki, and Altman (1999) specified the magnitude task of expectations and defined the service quality as " reducing the gap between the services provided (perceived or real) and customer expectations" (p.4). Generally, service quality concept has been explained by using different models. Parasuraman and his colleagues developed one of the most popular service quality model named as "Gap Model" in 1985. Even though the model has been extensively cited in business literature, it has been widely discussed because of its shortcomings.

At this point, it is beneficial to look the service side. Once more, there is no general agreement between researchers about concept of service. The conceptualization can be divided into two groups. The researchers who support first approach indicated that; there is a need to differentiates the service from goods and for each of these concepts. Zeithaml, Parasuraman, and Berry (1985) defined four

aspects of services that distinguish it from goods. These are: (a) intangibility, (b) inseparability of production and goods, (c) heterogeneity and (d) perishability. However, the second approach group researchers view service from perspectives of service customers and they concentrate on the utility and total value that the service provides for the customer (Chang et al., 2002). According to Philip and Hazlett (1997) not only service but also consumer has a role to play in the production and delivery operation. Seeing as, before the service affair can take place, consumer may present some information that is helpful for the organization.

2.1.2. Service Quality Models

From the previous literature, we understood that measuring the service quality is so significant for the many service organizations. Besides that, in service quality literature, many studies illustrates that perceived service quality has an important effect on buying behaviors of consumers. Higher levels of perceived service quality are linked with more positive evaluation of quality (Headley & Miller, 1993). They specified that perception of service quality affects the future consumer behavior. If consumers' perception were positively effected, they would mostly intend to purchase the service again. On the other hand, if it was opposite, they would make a complaint about the service or not prefer such a service again.

Zeithaml and Berry (1996) stated that service quality shows similar effect as advertising effects since it is cumulative. Besides, it consists of these variables; pricing, advertising and efficiency and that have a power on profits. Therefore, it is so vital to understand the nature of service quality and delivering it to the consumers successfully. For that reasons, several service quality models were developed (Brady, 1997; Grönroos, 1984; Dabholkar, Thorpe, & Rentz, 1996; Parasuraman et al.,

1985). In the following sections: a) Gap Model, b) Grönroos' Perceived Service Quality Model, and c) Other studies on service quality will be examined.

2.1.2.1. Gap Model

More than a few researchers approached service quality from different point of view by focusing on diverse features of service quality. Researchers have been trying to develop a model that is useful, applicable or not having shortcomings. Therefore, in the literature on service quality, there are large numbers of models present to accomplish service quality. In general, all of these quality models focused on measuring the gap between customer expectations and experiences as a determinant of customers' satisfaction.

The "Gap Model" developed by Parasuraman et al. (1985) based on customer-oriented definition of service quality that the degree and the direction of discrepancy between customers' service expectations and their perceptions of the actual service carried. As well, they pointed out that; consumers' quality perceptions are influenced by a series of distinct gaps occurring on the marketers' side. As clarified above, this model has five gaps these are:

Gap 1: Consumer expectations-management perception gap

Gap 2: Management perception-service quality specification gap

Gap 3: Service quality specifications-service delivery gap

Gap 4: Service delivery-external communications gap

Gap 5: Expected service-perceived service gap

The authors developed this model according to the disconfirmation of consumers' expectation theory that is included in customer satisfaction theories. They indicated that the disparity between performance and expectations is the origin for measuring service quality. This model not only evaluates the consumer's service expectations but also perceptions of the provider's performance. It points out that a consumer will have some expectations about service and after service was delivered the consumer's perceptions and expectations will be compared to define the level of service quality. If consumer's perception does not meet the expectations, a gap will arise between perceived service and expected service. They have characterized this gap as "Service Quality". In other words, the gap between expectations and perceptions is measured by performance minus expectations. If the score is positive, it shows better than expected service but negative score shows poor quality. Zero score means that firm's quality is satisfactory (Robinson, 1999).

Zeithaml, Berry, and Parasuraman (1988) indicated that in there is some factors in Service Quality Model, which can take place in organizations influence service quality and identified four gaps. They specified that gap implies a barrier in accomplishing a satisfactory level of service quality and these gaps potentially affect consumers' perceptions of service quality. This is schematically illustrated in Figure 1. This figure reviews the concept of quality and things have an effect on it.

Zeithaml, Parasuraman, and Berry (1990) stated that a gap can be occur between perceived and expected service quality since some organizations misunderstood the consumers' expectations. Service Quality Model presents some suggestion to solve this important problem. The submission is that service organization should formulate a number of research and pay attention to marketing research since quality does not improve unless it is measured. By marketing

researches or measurements, organizations may easily respond the consumers' expectations and needs (Karatepe, 2002). By this way, there will be a decrease at consumers' complaints and their satisfaction and after that purchase intention level increase.

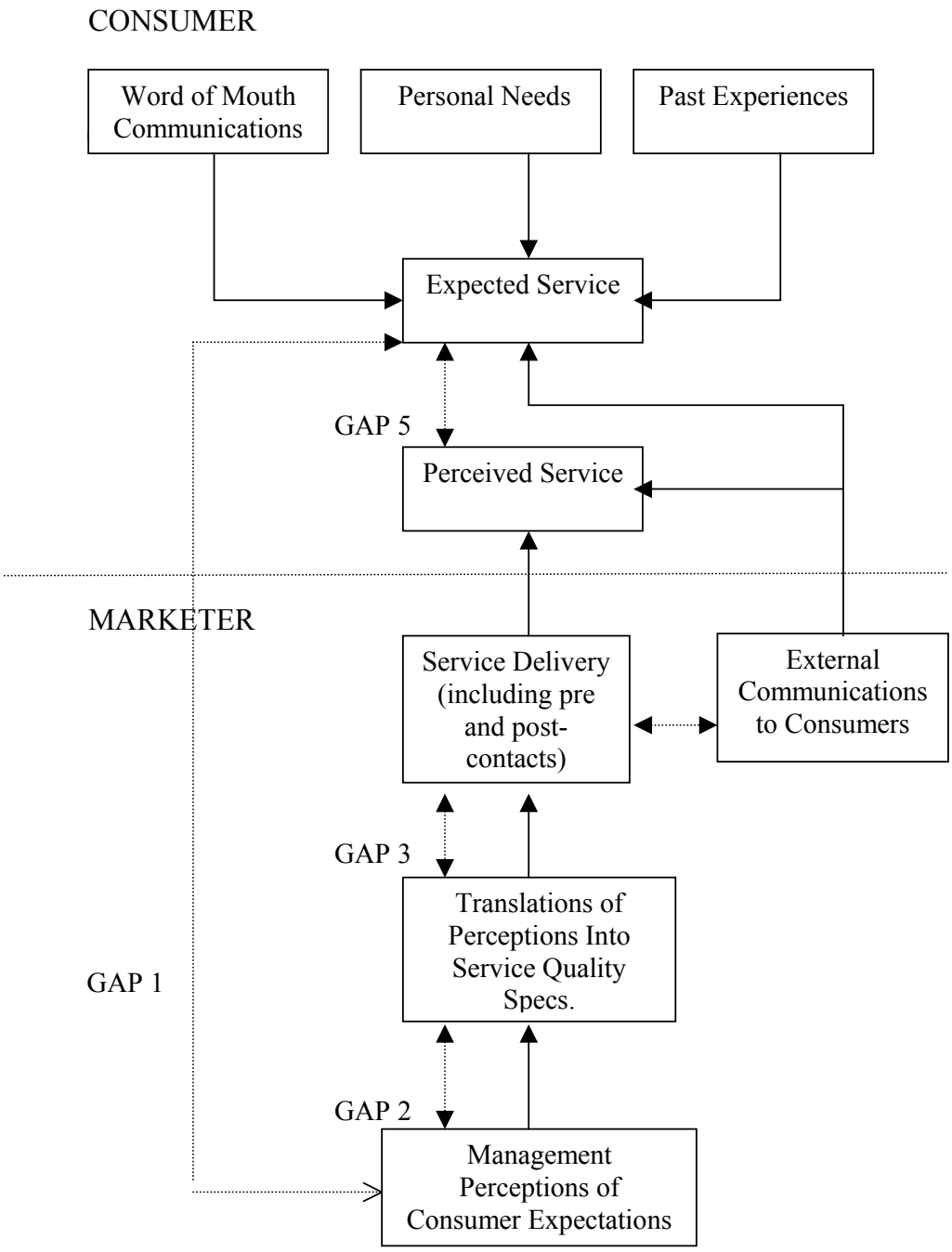

Figure 2.1. Conceptual Model of Service Quality (Adapted from "Communication and Control Process in the Delivery of Service Quality" by Zeithaml et al., 1988, Journal of Marketing, 52, p. 36.)

Some companies admitted that measuring and understanding the consumer's expectations is the first and vital step for delivering superior service. Therefore, these companies developed or formulated various ways to respond their consumers' expectations. They also reached their focus groups and respond their expectations for a while. However, they lost their potential consumers' and popularities in time. There is several contribution of this result. One of them is that these expectations are not stable and may change over time (Parasuraman, Berry, & Zeithaml, 1991). Second reason is that, they are changeable according to service circumstances or consumers'. Problem is that, they did not aware that, their consumers' profile can change over the time. As well, types of expectations will alter in the same parallel. Conversely, some companies did not modify their service policies to answer these changed expectations. As a result, they have just dropped their advantage position among the competitor companies.

A gap could come out because of the diversity between management perception and service quality specification. Zeithaml and his collegeaus (1990) have given an example to clarify such a kind of gap reasons. The example is that, when consumers came to the car repair service, they expect quick response to their but problem this is not possible from time to time. In view of the fact that, some companies have a huge number of consumer and they have not enough trained service personnel for several reasons. Then, consumers have to spend more time to solve their car problems in the service. As a result, the service performance does not respond to customer's expectations. This is such a kind of example; it may be increased.

A different major proposition of the Gap Model is that the gap between service quality specifications and actual service delivery will affect service quality from the consumer's standpoint (Parasuraman et al., 1985). To preserve the standardized quality is so difficult since person put in an appearance in every aspects of service. While organizations respond to the consumers' expectations, their performance may vary according to their service person. A contact person may treat to a consumer different from each other. In parallel to this statement, the level of perceived service quality about same organizations may show differences from one consumer to another because of the dissimilarities in contact personnel performance. Organizations try to overcome this problem by generating some solutions and some of them reach their goals.

The first and the most essential solution are to accommodate the teamwork policy. Teamwork is the principal factor because of the heterogeneity of the services. Working as team and providing coordination between employees for a common purpose not only important for organization and managers but also important for the dimension of service quality purchased by the consumer. The other solutions are: a) perceived control, b) avoiding role ambiguity and role conflict between the employees c) effective recruitment, d) technology-job fit and e) supervisory control systems. As stated above, many solutions were developed for that purpose but decreasing this type of error to the score of 0-5 % is so not easy because of the human factor (Zeithaml et al., 1988).

A gap may occur between consumers' perceptions and expectations of service quality because of the inconsistency between the committed service and actualized service delivery. The suggestions to avoid this gap are horizontal communication and propensity to over promise.

Horizontal communication between departments of an organization may have a huge role delivering better service or matching the consumers' expectations. Horizontal communication means that presenting coordination among the people and departments' of the organization to accomplish overall aim of targets of the organization. For example, this type of communication must be formed between the advertising department and contact personnel. Since, occasionally operation personnel may not have information about the image presented in advertising and therefore delivered service may not match the expectation of consumers' (Zeithaml et al., 1988). This example conform the type of insufficient communication between advertising and operations.

Inadequate communication may occur because of deficient contact among sales and operations personnel and difference in policies and procedures across branches and or units. Zeithaml et al. (1988) proposed a number of ways to overcome this problems these are: creating similar procedures across departments and units, increase level communication among sales and operations people, and extent of input by operations people in advertising planning and execution.

Finally, Parasuraman et al. (1988) developed an instrument named as "SERVQUAL" designed to measure service quality as a gap between expectation and perception. Even though, most of the researchers offered greater importance to this instrument, some researchers view the concept from different perspective and discussed its usefulness at any sector by revealing its shortcomings (Chang et al., 2002). In other words, it is not clear whether this instrument is applicable to all services. Detailed information was presented in the final part, which was about measurement of service quality and researches on it.

2.1.2.2 Grönroos' Model

Several researchers approached service quality from different point of view. For instance, Grönroos (1984) developed two-dimensional model to better explicit the service quality concept. The author highlighted that in the service quality literature there are many publication or research reports but these are not include any obvious information about how the quality of service is perceived and evaluated by the consumers. Consequently, there is a great need to focus on it and components of service quality for being good at developing explicit service quality model.

According to the author, there is not any service quality concept and thus he developed a conceptual model of service quality. His model presents that consumer contrasts perceived quality with the expected quality. This can be called as an evaluation process and the outcome of this process was entitled as "Perceived Service Quality" (Grönroos, 1984). This model is based on the disconfirmation of expectations theory, which is included in consumer satisfaction theories. This model hypothesizes that total quality of a service is a function three different components: (a) corporate image, (b) technical quality, and (c) functional quality (Grönroos, 1982). Figure 2 illustrates a model of service quality.

Even if, both technical and functional quality dimensions have received greater importance, corporate image gained only limited notice in service literature (Odekerken, De Wulf, Kasper, Kleijnen, Hokstra, & Commandeur, 2001). However, it is obvious that corporate image as a third quality dimension is also vital to the most service organizations. Outward appearance of the facility, the appearance of personnel, and similar elements can be included in corporate image (Wright, 1996). The corporate image can be defined as how the consumers perceive the firm. This means that, not only the technical quality but also the functional quality built up the

corporate image (Grönroos, 1984). There is, however, the other factors may influence the image of the organization. This is indicated by the left part of the Figure 2.

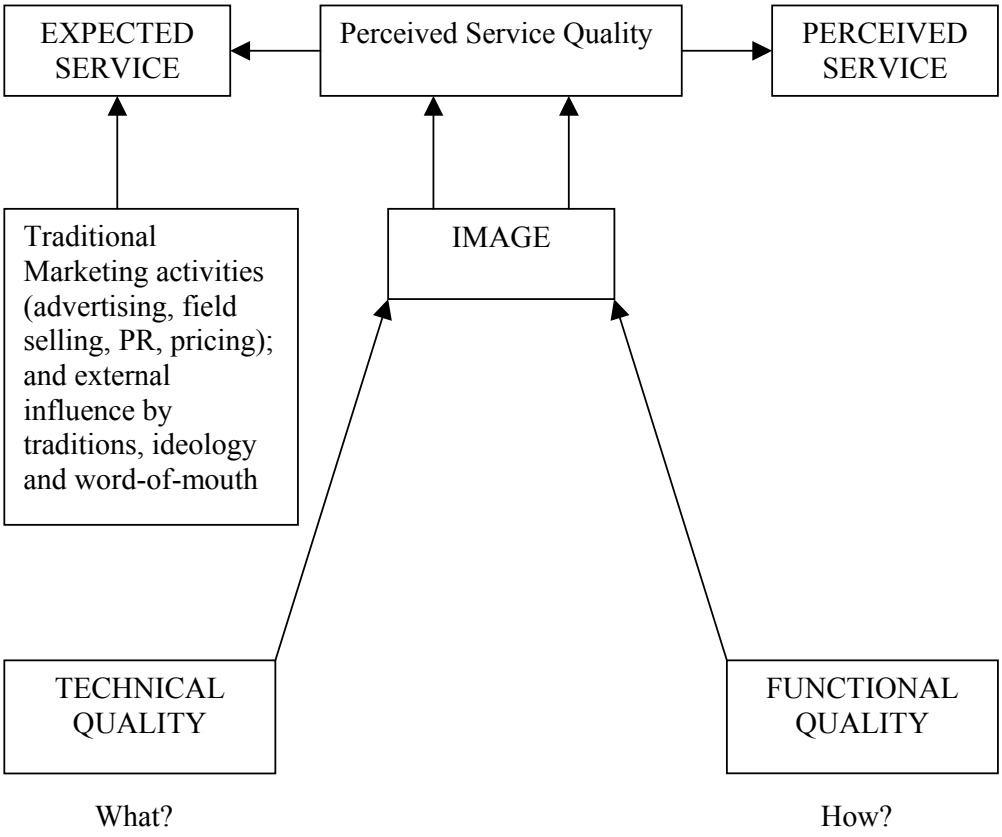

Figure 2.2. The Service Quality Model (Adapted from "A Service Quality Model and its Marketing Implications" by C. Grönroos, 1984, European Journal of Marketing, 18, p. 40.)

While technical quality refers to what the customer gets, functional quality replies the question of how he gets it. These three functions as a quality dimension will be explained in the next section.

2.1.3 Dimensions of Service Quality

Dimensions is an overall expression for what some researchers call determinants, others factors or categories (Edvardson et al., 1994). Each of dimensions represents different elements of the service. Consumers in evaluating the service quality of an organization use these dimensions. Therefore, it is important to clarify the quality dimensions that help to choose priorities for quality improvement. In the literature, there are numerous researches that focused on the description of these dimensions, which affect customer-perceived quality in services (Grönroos, 1982,1984; Parasuraman et al., 1985, 1988; Wright, 1996; Zeithaml et al., 1990).

Parasuraman et al. (1988) made a focus-group research to illustrate the underlying dimensions of service quality and to operationalize these dimensions. The study was carried out through the focus group interviews (3 groups per sector) with users of four services. These focus group interviews exposed quality definitions of customers in four services and the criteria that are used by customers in assessing the quality of service (Akan, 1995). On the basis of focus group study, They were able to define service quality, suggest key aspects that influence customers' expectations, and identify ten general dimensions that represents the assessment criteria is used by customer to evaluate the quality of service.

Based on the findings of focus group interviews, Zeithaml et al. (1990) declared that consumers used fundamentally similar criteria in assessing the quality of service no matter the type of service. Then, they identified ten general dimensions

that represent the criteria used by consumers in judging service quality. These ten dimensions of service quality include: tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication and understanding the customer. Table 1 encloses these ten dimensions and their brief definitions.

Table 2.1. Dimensions and Definitions of Service Quality

Dimension	Definition
Tangibles	Appearance of physical facilities, equipment personnel, and communication materials
Reliability	Ability to perform the promised service dependably and accurately
Responsiveness	Willingness to help customers and provide prompt service
Competence	Possession of the required skills and knowledge to perform the service
Courtesy	Politeness, respect, consideration, and friendliness of contact personnel
Credibility	Trustworthiness, believability, honesty of the service provider
Security	Freedom from danger, risk, or doubt
Access	Approachability and ease of contact
Communication	Keeping customers informed in language they can understand and listening to them
Understanding the Customer	Making the effort to know the customers and their needs

Note: Adapted from "Delivering Quality Service: Balancing Customer Perceptions and Expectations." By Zeithaml et al., 1990, p.21-22, Copyright 1990 by The Free Press A Division of Macmillan, Inc.

The dimensions of service quality that have come out as result of factor analysis, in the exploratory research. Based on this research, they arranged a quantitative research for developing an instrument with the aim of measuring the consumers' perceptions of service quality (Zeithaml et al., 1990).

Although, the three authors' study was of consumer perceived service quality in four services, in further studies of service quality they conducted their surveys in five different service categories: product repair and maintenance, retail banking, long-distance telephone, securities brokerage, and credit cards (Zeithaml et al., 1990). As a result of their quantitative research, they developed the most popular instrument named as "SERVQUAL". In further work ten dimensions were reduced into five dimensions: Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

While tangibles, reliability, and responsiveness stayed same as in their previous research, competence, courtesy, credibility and security unified as assurance. The final three dimensions were merged under the name of a new dimension that is called as empathy. A summary of this process and the explanations of these five dimensions highlighted in Table II.

Table 2.2. SERVQUAL Dimensions

Original Ten Dimensions	SERVQUAL Dimensions	Refers To
Tangibles	Tangibles	Physical representations or images of service
Reliability	Reliability	Ability to perform the promise service dependably and accurately
Responsiveness	Responsiveness	Willingness to help customers and present punctual service
Competence Courtesy Credibility Security	Assurance	Knowledge and courtesy of employee and their ability to inspire trust and confidence
Access Communication Understanding the Customer	Empathy	Caring individualized attention that you present your customers

In another study Grönroos (1984) defined three different kinds of dimensions of service quality that affect the perceptions of consumers. These are: corporate image, technical quality, and functional quality. He described the technical quality as what the consumer receives as a result of his interactions with an organization. Wright (1996) defined the technical quality as the extent to which the service leads to

an satisfactory result". Obviously, for an organization being technically acceptable is essential for the consumer thoughts and evaluation (Grönroos, 1982). The technical quality dimension can be assessed objectively. Especially in sport sector, modern-looking equipments and variety of these equipments in the health-fitness clubs play important role to actualize the technical quality at the intended level.

On the other hand, not only the service outcome but also how this technically quality is transferred to the consumer is crucial for the consumer evaluation. Functional quality is based on the attitudes and manners of the personnel, on ease of access and on the physical environment (Edvardson et al., 1994). Especially in interpersonal nature of environment, functional quality has been recognized as an important component that influences the consumer thoughts. For example, in a health and fitness clubs, how a fitness instructor is well mannered, pleasant, responsive, provide information or assist to a consumer through his/her workout.

It is obvious that, the sport service is produced and consumed at the same time, therefore in sport service there is a great need to create high interaction between the consumer and provider. Since, there is an increased competition between the sport organizations that are using similar marketing tactics and strategies (Odekerken et al., 2001). For that reason, functional quality becomes a major competitive factor for the sport organizations.

Finally, as mentioned above, while the technical quality can be measured objectively, the functional quality can only be evaluated in a subjective way. It is important to recognize that all quality components cannot be distinguished from the other one, since each of the component complete each other.

2.1.4. Related Researches

As stated earlier, in today's highly competitive world, the terms quality and service quality have been seen as one of the weapons to enhance one's strength. Therefore, the eventual aim of many organizations' is to increase customers' perceptions of service quality and satisfaction. Managers of such organizations impose to a technique that assists them understand the nature and level of service quality that they present. For that reason, within the service management literature, there has been extensive agreement among both practitioners and academics to conceptualize and measure the service quality. Accordingly, service quality and customer satisfaction have received more admiration and interest from service marketers and academics (Buttle, 1996; Cronin & Taylor, 1994; Grönroos, 1984; Hernon, 2002; Parasuraman et al., 1985, 1988; Teas, 1993). However, researchers have not been attained a consensus on how to conceptualize or operationalize the construct. The following section presents a review of the literature regarding measurement of service quality.

Firstly, most of the researchers have concentrated on the definitions and characteristics of service quality. They have been originated many attempt to make a single definition of this construct. Nevertheless, they have not reached a consensus on it. For example, some of the researchers used customer satisfaction instead of service quality. Even if several researchers have used these two terms interchangeably, most of the researchers highlighted that they are related but these terms should be considered differently. Rust and Oliver (1994) named the terms of consumer satisfaction as the "consumer's fulfillment response". They have also indicated that consumer may be satisfied even if the level of service quality is low since his or her expectations in a given situation are low. Finally, they pointed out

that “service quality as affecting service satisfaction at the encounter-specific level” (Rust & Oliver, 1994; p. 7). Although some researchers have agreed the ideas of them, some of the other researchers have not accepted it. Therefore, these terms are still the subject of debate between the researchers.

It is generally accepted that measuring the level of service quality is crucial for most of the organizations to endure in today’s highly competitive environment. However, measuring the level of service quality is not so easy as it is seen. In view of the fact that, there are several difficulties in measuring service quality. While many researchers illustrate a huge interest to the reasons why measurement of service quality is so hard, little empirical research appears to have been undertaken to explore service organizations attempts to overcome problems in service quality measurement (Silvestro et al., 1990).

Silvestro and his colleagues (1990) answered the question “why the measurement of service quality is difficult” by pointing out that; service is usually the result of relations between the customer and the service system. The service system includes contact personnel, equipment, service environment and facilities. Services have some characteristics (perishability, heterogeneity, and intangibility) and they make provision, measurement of service quality is so difficult. In other words, these fundamental characteristics of service make the service organizations basically different from that of manufacturing organizations. Similarly, Zeithaml, et al. (1985) indicated that, measurement of service quality may be hard, services are performances rather than objects and also they cannot be seen or tasted. Since quality occurs during service delivery; typically in an interaction period and in view of that service quality is dependent on the performance of the organization’s staff.

Edvardson et al. (1994) considered this topic quite different from others and pointed out that managers of organizations do not use developed service measurement systems. Since few questionnaires have some designing problems, for example, they were based on wrong assumptions. A second problem is that some of the customer expectations level may increase throughout measuring customer perceptions. Therefore some of the managers do not prefer to measure their organizations' service quality level. Finally, they defined that not only customers but also the employees may tire because of too much measurement.

These are the risks and difficulties in measurement of service quality. However, there is a great need for most of the organizations to specify their service quality level. For that reason several authors have attempted to find the best way of measuring service quality and they have offered many suggestions (Buttle, 1996; Cronin & Taylor, 1992; Parasuraman et al., 1988; Parasuraman, Zeithaml, & Berry 1994). Nevertheless, none of the work did not become popular except from the Parasuraman and his colleagues (1988) study. They have developed the SERVQUAL instrument as a result of their exploratory empirical work. It was developed for measuring service quality in 1988, and later refined in 1991 (Parasuraman et al., 1994).

SERVQUAL consists of 22 items that measures service quality along five dimensions of service quality expressed in previous chapter: tangibles, reliability, responsiveness, assurance, and empathy. It is founded on the disconfirmation model in the customer satisfaction literature. Customer satisfaction is operationalized in terms of the relationship between expectations and outcomes (Buttle, 1996). It uses a "difference score approach" for measuring perceived service quality in a service setting. It involves the subtraction of scores on one measurement from another

measurement to make a new variable that is used in subsequent data analysis (Parasuraman et al., 1988). The instrument has been widely cited in marketing literature. Many researchers from different disciplines inspect and apply the scale in various settings (Headley & Miller, 1993).

In the following pages, the studies that investigated service quality and related concepts were briefly presented.

It can be seen that many researchers from different disciplines defined or approached service quality in many different ways. While some of definitions are closely related to each other, some others are relatively different. Many researchers used either the original form or the modified version of the SERVQUAL. For instance, in their study, McAlexander and Kaldenberg (1994) examined the efficacy of four models to measure service quality. Their main approach was to develop the performance measure that match to the 10 dimensions of the original conceptualization of service quality from which SERVQUAL was derived. Totally, three hundred forty six patients were administered the questionnaire. Results of the study showed that, there is not significant difference between the models. It was also indicated that patient satisfaction has significant effect on purchase intentions of the patients. The authors also concluded that SERVPERF are superior to SERVQUAL methods and found that evaluations of provider performance influence the dental patients' assessments of overall service quality.

In another study, Headley and Miller (1993) adapted the SERVQUAL instrument for medical care services to examine whether it is applicable for different setting or not. Since, Parasuraman et al. (1988) declared that the SERVQUAL was improved as a broad instrument to measure service quality at all services. The adapted version of SERVQUAL was mailed to 967 randomly selected adult patients.

They were requested to complete a pre-encounter questionnaire that sought their general expectations. Post-encounter surveys were provided to the patients that returned a pre-encounter survey.

Finally, the researchers received totally 159 usable sample sizes. Then, they reported that, there is a strong relationship between perceived service quality and future consumer behaviours. If consumers have positive perceptions about service quality of an organization, it means that consumers' intent to repurchase and praise services and this is consistent with the existing literature. As well as, findings of this study illustrate that, in this medical care services setting, service quality dimensions of reliability, dependability, and empathy have superior significance than others in explaining a consumer's purpose to act. As a conclusion, the SERVQUAL can be used as a reliable instrument by adapting it in medical care service setting.

In their study, Dean and White (1999) conducted a study to find out which dimension is the best forecaster of overall service quality. The other aims of their study were to investigate the reliability and validity of customized SERVQUAL scale and set up the number of dimensions of service quality in the hospitality industry. Firstly, the authors modified the original scale for suiting it to the hospitality setting. For that reason, some of the items were either adapted or added to the original scale, and some of them deleted. Finally, the scale was developed and consists of totally 27 items. The new one referred to as HOLSERV and applied in five hotels. The findings of the study indicated that, the best forecaster dimension of service quality in hospitality setting is "employees". Moreover, tangibles and reliability are the two other dimensions of service quality in hospitality setting. The results of the study also presents that HOLSERV is reliable and applicable scale but much shorter.

To monitor the way in which quality is managed in ISO-accredited all ten hotels in Cretan, Ingram and Daskalakis (1999) construct a survey. The other aim of this study was looking into the extent to which hotels have incorporated the rudiments of service quality. Questionnaires were designed in accordance with the SERVQUAL model of assessing the gaps. Totally, 200 respondents were completed the questionnaire and male and female percentages are almost equal. The findings of this study suggested that twenty-eight percent of the sample replied that the service quality was excellent, and fifty-seven percent of them answered that the service was very good. The rest of the respondents indicated that they were less excited from the service quality presented in the hotel. Although twenty-five percent of the respondents argued to be undecided and three percent of them showed that were not eager to visit the same hotel again, the huge majority seventy-two percent of them proclaimed visit the same hotel again in the future.

The level of service quality presented in libraries has been investigated over a period of time (Banwet & Datta, 2002; Cook &Thompson, 2000; Martin, 2003). For example, Martin (2003) investigated service quality of ten libraries within the southwest peninsula. The survey was based on SERVQUAL instrument. The scale was sent out to each of the librarians with instructions and all libraries offered data for individual analysis. The results of the study demonstrated that, the libraries are providing high quality service with regard to reliability, responsiveness, empathy and assurance. Customers stated that they expect a professional service from the libraries. Finally, the scale that was used in this survey was simple to manage and a useful diagnostic tool.

Similarly, Devinder et al. (2002) carried out a survey to measure the quality of services offered in an academic library. Totally, 120 students who use the library completed the questionnaire, which consisted of a service quality scale, a service satisfaction scale and a service-importance scale. All students once more completed questionnaire six months later. The respondents situated more importance on the outcome of library service than other service dimensions. This was consistent with the precedent research. As a conclusion, researchers reported that the level of service quality offered in the library has fallen for the duration of six months.

More recently, Kang, Jame, and Alexandris (2002) examined internal service quality of a university in Seoul. The major aim of this study was to evaluate the transferability of the SERVQUAL scale to assess internal service quality. The authors stated that internal marketing is an imperative advance to promote a service- and customer-oriented culture in an organization. They adapted the SERVQUAL scale for a service setting and empirically tested and confirmed it's all five dimensions' reliability and validity. The instrument was administered to 140 employees who are eager to complete the scale but a total of 120 of the questionnaires regarded suitable for the data analysis. Although, hardly previous studies have not confirmed the validity and reliability of all five dimensions of SERVQUAL, the results of this study confirmed it. In addition to this, all of the five dimensions of SERVQUAL were distinct and theoretically clear.

Different from the previous studies, Lin, Chiu, and Hsieh (2001) looked at the relationship between the personality of service providers and the service quality performance they offer. To verify this relationship both Five-Factor model of personality and the SERVQUAL model of service quality were applied. Not only the Mini-Marker instrument developed by Saucier (1994) but also the latest 21-item

version of SERVQUAL (Parasuraman et al., 1994) were used in this study. The data were gathered in Taiwan (mostly in Taipei) from four different service sectors: life insurance, real-estate agencies, information services and securities. Completely, 143 couples of questionnaires were gathered. The results of this study exemplified that openness is a valid forecaster of assurance, conscientiousness correlates with reliability, extraversion is positively correlated with responsiveness, and agreeableness is a valid predictor of assurance and empathy. Although, for male customers, openness is the most important factor for the service provider, for female customers conscientiousness is a vital factor. Finally, the relationship between personality and service quality is moderated by gender.

There appears little uncertainty that SERVQUAL is the most popular and widely used instrument by many researchers from different settings. Many researchers agree to the approach of service quality presented by Parasuraman and his colleagues (1985,1988). However, there have been several criticisms in the literature to SERVQUAL as well (Carman, 1990; Chang et al., 2002; Cronin & Taylor, 1994; Robinson, 1999; Sureshchandar, Rajendran, & Kamalanabhan, 2001; Teas, 1993).

The criticisms of authors' about the SERVQUAL are not only theoretical but also operational. For instance, Carman (1990) selected four different settings different from those used by Parasuraman and his colleagues in the original test. The author specified that there is no opportunity to exploit the 22 SERVQUAL items originally as proposed. Therefore, it is necessary to customize the scale inserting new items or altering the wording of items. In addition, there is more general issue related with the wording. For example, it is essential to reverse wording to stay the respondent alert and to keep away from nay saying or halo effects. From a practical

point of view, the procedure is even less desirable since respondents were asked to complete both the expectations and perceptions form at one administration. He also submitted that it might be more suitable as a next step to do more replication and analysing of the SERVQUAL dimensions and evaluates earlier than recognizing it as a valid generic instrument to measure service quality in any service settings.

Another criticism to SERVQUAL or Gap Model stated by Sureshchandar et al. (2001) and they claimed that the SERVQUAL have some problems in addressing the critical dimensions of service quality is in question. The reason is that, a watchful examination of the instrument items reveals that the items at a large concentrate on the human aspects of service delivery and the remaining on the tangibles of service.

In their empirical work, Cronin and Taylor (1992) argued that conceptualization and operationalization of service quality is insufficient. As, the "Gap Model" offered that the difference between consumer's expectations about the performance of a service provider, their evaluations of the actual performance of an organization within that class drives the perception of service quality. On the other hand, as the basis for measuring service quality, none of the theoretical and experimental proof supports the consequence of the expectations-perceptions gap. For that reason they developed their own measurement instruments. Besides that, they concluded that, it is unsuitable to use the performance-minus expectation as a base in measurement of service quality and they recommended that the satisfaction of consumer exert a stronger influence on the intent of consumers' buying behaviours than does service quality.

Although, researchers has not been attained a consensus related with the model and instrument of Parasuraman, Zeithaml, and Berry's study (1985) and the instrument has been used widely in the marketing literature and still keeps its high

popularity. In other words, despite the criticisms against it, many researchers still continue to use SERVQUAL as an instrument to measure the service quality at different settings.

2.1.4.1. Studies that investigate the service quality of sport settings

Papadimitriou and Kostantinos (2000) indicated that in service management literature, there has been significantly increasing interest in service quality and customer satisfaction. Therefore, numerous studies from different sectors have investigated the concept of service quality. The trend is similar for the sport organizations. Rushton (1999) explained this trend by pointing out that never in time has service quality played such an important role in sports, leisure and recreation industry as in the present.

As stated by Papadimitriou and Kostantinos (2000) the theoretical attention in service quality is also obvious in the sport-related literature. They gave the example of European Association of Sport Management (EASM) sixth annual congress to support their ideas since; EASM devoted its sixth congress to "Service Quality in Sport". Especially, over the last two decades, not only the service quality but also the customer satisfaction have started to conceptualised and measured by researchers from the field of sport management and marketing (Theodorakis et al., 2001). The reason is same, with the explosion of sport and fitness centres in many countries over the last decade, the competition among them has been continuing to increase.

Service providers or managers tries find to satisfy or meet the expectations of their customers because of the increasing competition between the sport and fitness sectors. Increased number of sport and fitness centres means that customers have more alternatives and simultaneously their expectations for more profit from the

participated activity or organizations moved up. Most of the providers who see this trend placed their focus on offering quality services in order to stay cost-effective and taking advantage than the other organizations (Papadimitriou & Kostantinos, 2000).

Although, service quality have received much attention from the health-fitness clubs' managers, their effort to benefit its submission is restricted because of their limited appreciating of the subject matter (Papadimitriou & Kostantinos, 2000). In this situation, customer satisfaction and service quality has received enormous attention from the sport management and marketing the researchers (Kelley & Turley, 2001; Kim & Kim, 1995; Lam, 2000; Papadimitriou & Kostantinos, 2000; Theodorakis et al., 2001; Westerbeek, 2000).

In the following pages, the studies that explored service quality and related concepts were briefly presented.

Theodorakis et al. (2001) conducted a to examine relationship between service quality and customer satisfaction in spectator sports. SPORTSERV developed by Theodorakis and Kambitsis (1998) was administered to the 200 spectators before two basketball games that took place in Athens, Greece, but only 173 questionnaires were used in this study because of missing values and haphazard answers. They developed the scale to measure sport spectators' perceptions of service quality in professional sports. It consists of 22 items and five dimensions these are: (a) access, (b) reliability, (c) Responsiveness, (d) Tangibles, and (e) Security. The main difference of this instrument from the others is that it does not include any expectation battery. The results of this study indicated that, the five service quality dimensions predicted 40 % of the variation in overall satisfaction.

Besides that, on overall satisfaction reliability and tangibles exerted the strongest influence and followed by responsiveness, access, and security dimensions.

A similar study was conducted by Westerbeek (2000) to test the relationship between five place-specific factors of service quality in spectator sport settings and two critical demographic variables frequency of attendance and age. The instrument developed by Westerbeek (1999) administered 419 spectators at three Australian Rules Football Matches. In this study, respondents were categorized as light users (28 %), medium users (29 %), and heavy users (43 %). The results indicated that heavy users scored significantly higher than light users on the factor of Home and Religious as well. However, on the factor of Uncertainty of Outcome, heavy users scored significantly than light users. Older spectators at Australian Rules Football Matches scored significantly higher than young spectators on the factor of Home and Social Facilitation. On the other hand, older spectators scored significantly lower than young spectators on the factor of Religious. As a conclusion, heavy users place importance on those characteristics of the stadium and its environment more than light users that make them feel at home.

Rushton (1999) conducted a study to examine the expectations about and perceptions of the delivery of fitness services provided by the YMCA of Hong Kong Fitness Centre. The other purpose of this study was to evaluate the level of importance of the five service dimensions in evaluating the overall quality of services and investigate whether service gap exist in this center or not. Although, a SERVQUAL questionnaire was administered to the one hundred and seventy-two members of the YMCA of Hong Kong Fitness Centre, only one hundred and fifty-one questionnaires were used in this study. The results indicated that, while the assurance was the most important in evaluating the overall quality of fitness services,

tangible is the least important service dimension. The results also indicated that respondents ranked a score of five or higher and over one quarter of the respondents ranked the overall quality of this fitness services a six or greater on a 7-point Liker scale. It means that the overall quality service offered by the fitness center was relatively good in other words respondents satisfied with the overall services.

Cho Chun-on and Lau Ka-sing (1998) conducted a study to evaluate the perceptions of service quality in the tennis courts provided by Urban Council. A revised questionnaire from the SERVQUAL modified and 300 respondents participated the study from each of the six tennis courts. The results showed that all of the 22 SERVQUAL items are essential in presenting quality services to the users. As well, there is a gap between the expectations and perceptions towards the service quality provided by the selected tennis courts. Besides, respondents that have lower income would have higher perceptions of the service quality than higher income groups.

Kelley and Turley (2001) carried out a study to examine the importance of service attributes sports fans use when evaluating the quality of service experienced at sporting events. Completely, 316 fans included in the study and consisted of about 60 % male and 40 % female respondents. The results indicated that the quality of the game and outcome of the game were the most important attributes considered in the survey and followed by cleanliness of the arena, security in the parking area, seat location, parking location, and cleanliness of the restrooms. As well, outcomes of the study highlighted that the concession workers, food, and location; as well as the ushers, are less important for sports fans in evaluating to level of service quality associated with their entertainment experience. As previously stated, some of the quality factors are unique to this particular service encounter. In this study, game

experience and show time are the examples of these unique service quality dimensions. While the game experience is the most important service attribute appeared in this study, concession is the least significant service attribute.

FAN Yuen Wah et al. (1999) conducted a study not only identify the significance among the five dimensions but also assess the service quality of three sports centres by measuring their customer satisfaction. A total of one hundred users of three non-government recreation and sports organizations were included to the study. From the results of this study, most of the items in the scale truly reflected the attitude of the users and also all of the five dimensions could evaluate customer satisfaction. The users, in descending order, as Tangible, Reliability, Responsiveness, Assurance and Empathy, graded the importance of the five dimensions. Furthermore, there is a gap between the user's expectations and perceptions with regard to service quality provided by sport center. Additionally, the level of service quality presented by the three organizations was not good enough to meet the users' expectations.

Lam (2000) conducted a study to develop an instrument to measure service quality of health and fitness clubs and mainly it consists of four steps. In first step, the related literature was reviewed and observed the health-fitness clubs. Then, health-fitness clubs' top management invited a panel to develop items for the service quality scale and an item list was formed. This list was asked to health-fitness club members to obtain their opinions concerning what questions should be asked in formulating a questionnaire. Finally, a scale that contains 46 items was structured. In second step, one health-fitness club was chosen to make a pilot study with the intention of assessing the scale and testing the process.

In third stage, exploratory Factor Analysis (EFA) was used to determine the underlying constructs of the scale. Six factors emerged as a result of EFA and all factors had moderate correlation with each other, with exception of Child Care. These factors are: Staff, Program, Locker Room, Physical Facility, Workout Facility, and Child Care.

Finally, to confirm the factor structure of the scale Confirmatory Factor Analysis (CFA) was conducted. Even if it was advocated from the EFA that the scale was made up of six factors, a five-factor model (without Child Care) was proposed because of the following reasons. First, there were missing data in the Child Care items than in any other section. Child Care was the only factor that did not correlate with the other factors, as specified in the correlation matrix. The CFA was conducted for the retained five-factor model with 34 items until the model achieved a value of .90 for most of the goodness-of-fit indexes. As a result, a five-factor model with 20 items was generated: Staff (6 items), Program (4 items), Locker Room (4 items), Physical Facility (3 items), and Workout Facility (3 items).

As it can be seen from literature, several researchers have conducted studies that examine the level of service quality and its dimensions for different settings (banking, library, hospitality, and health care sector) and also in sport and fitness centers. Although, the concept has been reached huge interest between the researchers, they have not been agreed on how to conceptualize or operationalize the construct (Chang et al., 2002). This is similar for the sport field; there is extremely limited research in this setting of sport industry, especially in Turkey. Even if, over the past 10 years, modern and large health and sport centers was placed in Turkey, service quality has received little interest by researchers who study in sport management field. It can be raised for different sources but lack of instrument is the

main reason. Consequently, it is eventually favorable to the improvement of instruments to measure this construct.

CHAPTER III

METHODS AND PROCEDURE

In this chapter information about the selection of participants, data collection instrument and data collection procedures will be presented. Data analysis procedure will also be given in detail.

3.1. Selection of Participants

The participants of this study constituted of 338 male members (53.1%) and 298 female members (46.9%) who were randomly selected from eight different health-fitness clubs in Ankara. Health-fitness clubs were selected according to their size, programs, and number of member. Members in the sample were from different age groups, income groups and profession groups. Membership types were 72% individual (252 males and 206 females), family 26.9% (82 males and 89 females), and other 0.9% (3 males, 3 females).

Detailed information about the members is represented in Table 3.1.

Table 3.1.1. Descriptive Information about Participants Numbers, Ages, and Membership Type.

		Gender		
Membership Type	Range	Male	Female	Total
Individual	Under 18	9	7	16
	18-25	128	63	191
	26-35	73	74	147
	36-50	33	54	87
	51-65	7	8	15
	Over 65	2	-	2
	Total	252	206	458
Family	Under 18	1	3	4
	18-25	6	16	22
	26-35	38	39	77
	36-50	26	26	52
	51-65	10	4	14
	Over 65	1	1	2
	Total	82	89	171
Other	Under 18	1	-	1
	18-25	2	1	3
	26-35	-	2	2
	Total	3	3	6

3.2. Data Collection Instrument

The Service Quality Assessment Scale (SQAS) was used developed by Lam (2000) to collect data on members' expectations and perceptions of the service quality offered by eight different health-fitness clubs in Ankara. The mentioned instrument above will be described in detail in the following sections.

3.2.1. Service Quality Assessment Scale (SQAS)

SQAS is a 40-item inventory was developed by Lam (2000) to measure service quality of health-fitness clubs (Appendix A). Although the SQAS was designed to evaluate the perceived service quality of health-fitness clubs, it was later extended to include both the expectation and perception scores. He developed the scale in four steps these are: (a) content validity stage, (b) pilot study, (c) the initial test administration and exploratory factor analysis and (d) confirmatory factor analysis. The Turkish form of the Service Quality Assessment Scale (SQAS-T) was used in this study formed by a six-factor model with 40 items (Appendix B). These are: Staff (9 items), Program (7 items), Locker Room (5 items), Physical Facility (7 items), Workout Facility (6 items), and Child Care (6 items). Participants were asked to rate each item on a 7-point Likert scale ranging from 1 (least important) to 7 (most important). While the expected part of the instrument was introduced with a statement asking "How important is this to you"? The perception part was introduced by asking the participants "How's the club doing"?

For the translation of the instrument from English to Turkish following procedure was carried out:

3 specialists in English linguistics and the researcher translated SQAS into Turkish. The researcher collected the four translations and argued the results with these people to decide upon the most suitable draft. Then this draft of the instrument was given to English teachers to translate the Turkish version of SQAS back into English. The researcher compared the SQAS that was translated into Turkish and back again into English, to the original version of this scale, to determine if any differences existed between original version and translated version. The purpose of doing this translation was to make certain that the wording of items in Turkish would be equivalent to the original meaning of items in English.

3.3. Data Collection Procedure

From the 24 health-fitness clubs that are currently operating in Ankara, 9 were randomly selected and made contact for participation in the study. Some of the health-fitness centers were eliminated from the sample because of the their limited number of member, programs, size and not having permanent sport facilities. The researcher contacted with randomly selected 9 health-fitness clubs' managers in Ankara not only for their permission but also to get information about their working hours and the schedule of their programs. Only one of the health-fitness club did not give permission to collect data in their setting with saying that our members do not volunteer to fill any questionnaire because of being included in too many research before that.

The SQAS-T was administrated to members in their club setting especially before the exercise period. Before the administration of the scale information were given to the members who agreed to participate voluntarily about how to complete the inventory by reading the instruction part and explained the purpose of the study.

Participants who returned incomplete inventories were eliminated from this study. In overall, the data were analyzed for the 636 of the 683 inventories that were returned from the members.

3.4. Data Analysis Procedure

The procedure in this stage included confirmatory factor analysis (CFA) to analyze the data from the respondents of the scale. The purpose of the CFA is not to identify the numbers of factors, but to confirm the factor structure of the scale. Consequently, CFA is more of theory-testing procedure that variables can be specified to be loaded on certain factors, and the number of factor are fixed in advance. In CFA, the researcher begins with a hypothesis prior to analysis (Stevens, 1996). CFA was completed within the framework of the Windows LISREL 8.5 (Jöreskog, & Sörbom, 2002).

Using Windows LISREL 8.5 (Jöreskog, & Sörbom, 2002) computer program, the six-factor model (40 items) was analyzed based on the Maximum Likelihood (ML) estimation method. The following five steps were used in the application of the CFA:

(1) Model specification

(2) Identification

(3) Estimation

(4) Testing fit

(5) Respecification

In model specification, an initial model is generated prior to estimation. The formulation of this model is founded on the theory or past research. Afterward, to perceive whether the model is possible to find distinctive values for parameters of the specified model. Once a model is identified, an estimation method is selected. The selected estimation technique is based on the distributional properties of the variables being analyzed. The model is tested whether it is consistent with the data, after obtaining the estimates. If so, the process can be stopped. If not, the model could be improved through respecification. In doing so, steps 2 through 5 may be repeated, usually many times (Bollen & Long, 1993).

The PRELIS 2.53 (Jöreskog, & Sörbom, 2002) computer program was used to examine the degree of skewness and kurtosis as well as multivariate normality. The composite reliability (CR) of both Expectation Scale and Perception Scale for the six-factor model was also calculated based on the following formula.

$$\frac{(\Sigma \text{ Lambda X})^2}{(\Sigma \text{ Lambda X})^2 + \Sigma \text{ Theta Delta}}$$

The variance extracted (VE) was calculated based on the following formula (Fornel & Larcker):

$$\frac{\Sigma \text{ (Lambda X}^2)}{\Sigma \text{ (Lambda X}^2) + \Sigma \text{ Theta Delta}}$$

CHAPTER IV

RESULTS

4.1. Confirmatory Factor Analysis

The original Service Quality Assessment Scale (SQAS) was developed by Lam (2000) and has six factors. Though it was designed to assess the perceived service quality of health-fitness clubs, the SQAS was later extended to include both the expectation and perception scores. The Turkish version of the SQAS (SQAS-T) was directly translated from the SQAS, the applicability of the SQAS-T, however, was uncertain. The purpose of this study was to examine the factor structure of the SQAS-T using Confirmatory Factor Analysis (CFA). Since the original SQAS has six factors, a six-factor model was proposed for the SQAS-T.

4.1.1. Expectation of Service Quality

One of the basic assumptions of CFA is multivariate normality. In this regard, the data was examined through PRELIS 2.53 (Jöreskog & Sörbom, 2002) computer program. The basic assumption of multivariate normality was not met (i.e., χ^2 = 105,585, $p < .00$). The distributions of most items in this current sample were negatively skewed and leptokurtic. Nevertheless, the Maximum Likelihood (ML) estimation method was used in conducting CFA. The skewness and kurtosis values of the expectation model (40-items) are depicted in Table 4.1.

Table 4.1. Descriptive Statistics of the Expectation Model (40-items)

Item	M	SD	Skewness	z	p	Kurtosis	z	p
Staff								
S1	6.58	0.85	-2.60	-16.08	0.00	8.50	10.55	0.00
S2	6.51	0.86	-2.04	-14.11	0.00	4.81	8.65	0.00
S3	6.44	0.85	-1.53	-11.84	0.00	1.76	5.30	0.00
S4	6.25	1.11	-1.93	-13.68	0.00	4.98	8.76	0.00
S5	6.35	1.01	-2.16	-14.56	0.00	6.30	9.56	0.00
S6	6.37	1.12	-2.83	-16.77	0.00	10.7	11.28	0.00
S7	6.51	0.92	-2.85	-16.84	0.00	11.5	11.52	0.00
S8	6.25	1.21	-2.30	-15.08	0.00	6.39	9.60	0.00
S9	6.43	0.97	-3.05	-17.39	0.00	14.34	12.17	0.00
Program								
P1	6.03	1.17	-1.49	-11.65	0.00	2.99	7.02	0.00
P2	6.20	1.01	-1.68	-12.57	0.00	4.57	8.47	0.00
P3	6.17	1.20	-2.47	-15.63	0.00	8.49	10.54	0.00
P4	6.34	1.10	-3.18	-17.75	0.00	14.1	12.12	0.00
P5	5.87	1.63	-2.14	-14.49	0.00	4.89	8.70	0.00
P6	5.94	1.43	-1.68	-12.58	0.00	2.96	6.99	0.00
P7	6.33	1.06	-2.43	-15.51	0.00	8.60	10.58	0.00
Locker Room								
L1	6.55	0.81	-2.00	-13.93	0.00	3.63	7.68	0.00
L2	6.59	0.77	-2.66	-16.26	0.00	10.8	11.33	0.00
L3	6.66	0.81	-3.94	-19.55	0.00	22.7	13.46	0.00
L4	6.07	1.40	-1.85	-13.33	0.00	3.35	7.41	0.00
L5	6.46	1.08	-2.86	-16.84	0.00	9.78	10.99	0.00
Physical Facility								
F1	6.20	1.09	-1.68	-12.57	0.00	3.45	7.51	0.00
F2	6.33	1.04	-2.25	-14.88	0.00	6.93	9.87	0.00
F3	5.76	1.79	-1.73	-12.80	0.00	2.32	6.18	0.00
F4	5.60	1.66	-1.35	-10.93	0.00	1.38	4.57	0.00
F5	5.75	1.82	-1.83	-13.23	0.00	2.76	6.75	0.00
F6	6.25	1.20	-2.33	-15.19	0.00	6.98	9.90	0.00
F7	6.11	1.22	-1.92	-13.63	0.00	4.92	8.72	0.00
Workout Facility								
F8	6.07	1.24	-1.71	-12.71	0.00	3.53	7.58	0.00
F9	6.39	0.99	-2.31	-15.10	0.00	7.07	9.94	0.00
F10	5.99	1.41	-1.92	-13.63	0.00	4.19	8.17	0.00
F11	6.39	0.94	-2.29	-15.05	0.00	7.85	10.29	0.00
F12	6.47	0.80	-1.94	-13.71	0.00	5.35	9.01	0.00
F13	6.49	0.86	-2.64	-16.19	0.00	10.89	11.33	0.00

(table continues)

Table 4.1. (continued)

Item	M	SD	Skewness	z	p	Kurtosis	z	p
Child Care								
C1	1.98	3.05	0.91	8.23	0.00	-1.11	-15.66	0.00
C2	2.03	3.10	0.88	8.00	0.00	-1.18	-19.83	0.00
C3	1.99	3.05	0.91	8.23	0.00	-1.11	-15.41	0.00
C4	2.00	3.07	0.91	8.18	0.00	-1.12	-16.07	0.00
C5	2.01	3.09	0.91	8.21	0.00	-1.13	-16.39	0.00
C6	1.99	3.06	0.91	8.20	0.00	-1.12	-15.91	0.00

Skewness: Z-score: 225.50 ($p < .00$) Kurtosis: Z-score: 52.07 ($p < .00$)
Multivariate Normality: $\chi^2 = 53564$, ($p < .00$).

Using Windows LISREL 8.5 (Jöreskog, & Sörbom, 2002) computer program, the six-factor model (40 items) was analyzed based on the ML estimation method. The chi-square statistics of the model was significant (i.e., $\chi^2 = 2{,}615$, df = 725, $\underline{p} < .01$) but the df to χ^2 ratio was low (i.e., under 1:4). The goodness-of-fit indices of the model were admissible. For example, the Root Mean Square Error of Approximation (RMSEA) = .067, Standardized Root Mean Square Residual (SRMR) = .056, and both the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), as well as the Non-Normed Fit Index (NNFI) = .95. All these indices indicated that the model provided a reasonable fit to the data. The results of goodness-of-fit indexes and model-fit statistics of six-factor model are presented in Table 4.2.

Table 4.2. The Results of Goodness-of-Fit Indexes and Model-Fit Statistics for Expectation and Perception Model

	RMSEA	SRMR	CFI	IFI	NNFI	χ^2	df
Expectation of Service Quality	.067	.056	.95	.95	.95	2,615	725
Perception of Service Quality	.059	.054	.96	.96	.96	2,227	725

Both the CFI, IFI, and NNFI fit indices (i.e., .95) in this study demonstrated that the six-factor expectation model provided reasonable fit to the data set. The interfactor correlations, standardized factor structure coefficients, and errors of measurement estimated by the CFA are presented in Figure 4.1.

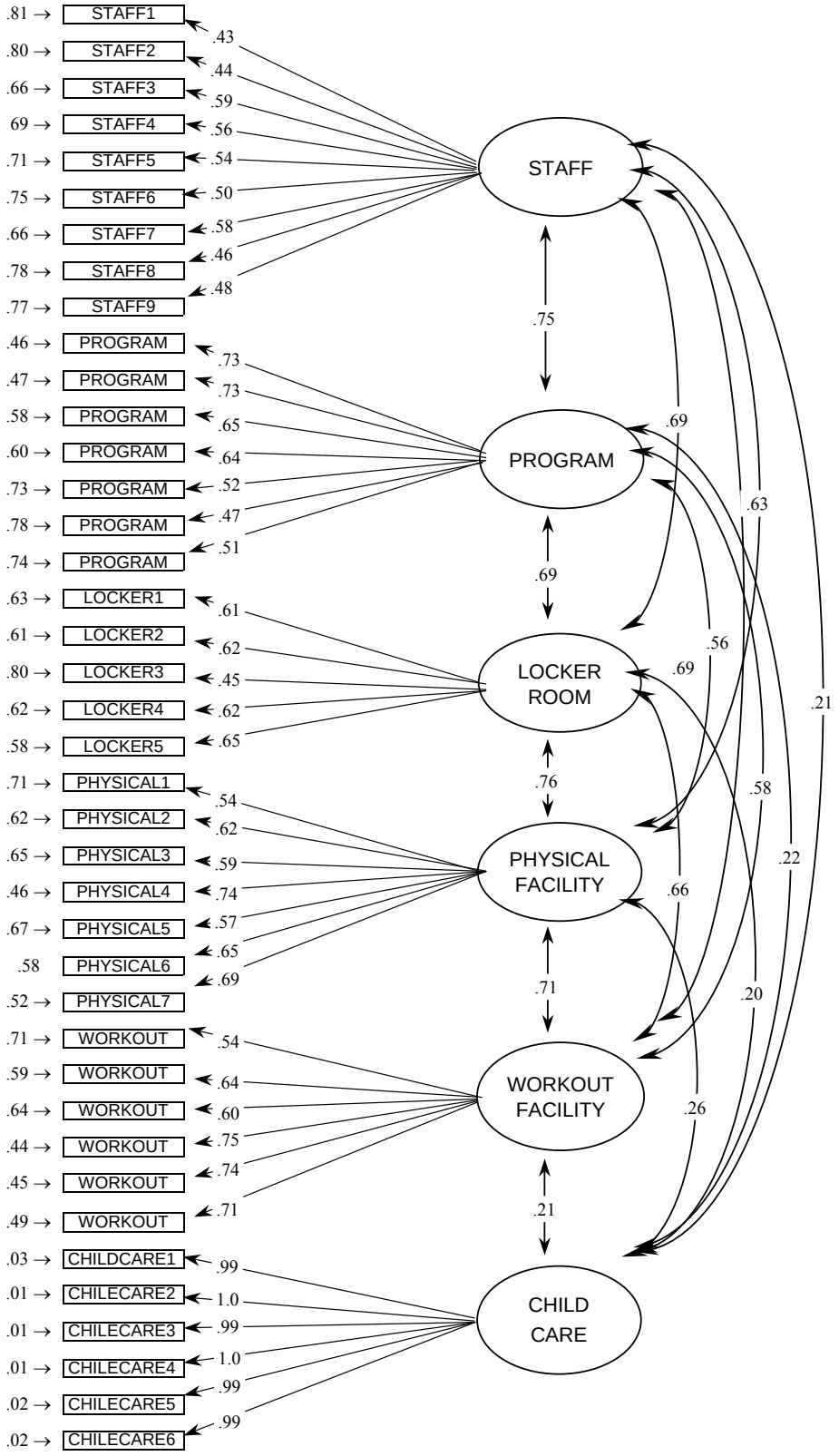

Figure 4.1. Factor Structure Coefficients, Interfactor Correlations, and Errors of Measurement of the Expectation Model of the SQAS-T

4.1.2. Perception of Service Quality

The perception data was first examined through PRELIS 2.53 (Jöreskog & Sörbom, 2002) computer program. The basic assumption of multivariate normality was not met (i.e., χ^2 = 19,002, p < .00). Similar to the expectation model, the distributions of most items in the perception model were negatively skewed and leptokurtic. The skewness and kurtosis values of the perception model (40-item) are depicted in Table 4.3.

Table 4.3. Descriptive Statistics of the Perception Model (40-items)

Item	M	SD	Skewness	z	p	Kurtosis	z	p
Staff								
S1	6.09	1.00	-1.26	-10.44	0.00	6.30	10.55	0.00
S2	6.07	1.01	-1.12	-9.61	0.00	4.08	8.65	0.00
S3	6.01	1.08	-1.17	-9.89	0.00	5.15	5.30	0.00
S4	6.00	1.08	-1.32	-10.74	0.00	6.76	8.76	0.00
S5	5.92	1.15	-1.46	-11.51	0.00	7.36	9.56	0.00
S6	5.86	1.30	-1.77	-12.98	0.00	8.34	11.28	0.00
S7	6.20	1.10	-1.97	-13.81	0.00	9.11	11.52	0.00
S8	6.01	.1.19	-1.74	-12.84	0.00	8.24	9.60	0.00
S9	5.95	1.20	-1.97	-13.81	0.00	9.41	12.17	0.00
Program								
P1	5.71	1.07	-0.98	-8.68	0.00	5.66	7.02	0.00
P2	5.78	1.11	-1.19	-10.01	0.00	6.83	8.47	0.00
P3	5.75	1.25	-1.67	-12.54	0.00	8.36	10.54	0.00
P4	5.80	1.22	-1.98	-13.86	0.00	9.61	12.12	0.00
P5	5.33	1.65	-1.66	-12.50	0.00	6.93	8.70	0.00
P6	5.45	1.55	-1.24	-10.32	0.00	4.75	6.99	0.00
P7	5.50	1.45	-1.17	-9.92	0.00	4.37	10.58	0.00
Locker Room								
L1	5.70	1.40	-1.29	-10.60	0.00	4.86	7.68	0.00
L2	5.71	1.29	-1.43	-11.37	0.00	6.64	11.33	0.00
L3	5.62	1.41	-1.48	-11.62	0.00	6.48	13.46	0.00
L4	5.88	1.31	-1.56	-11.98	0.00	6.72	7.41	0.00
L5	5.83	1.34	-1.62	-12.29	0.00	7.07	10.99	0.00

(table continues)

Table 4.3. (continued)

Item	M	SD	Skewness	z	p	Kurtosis	z	p
Physical Facility								
F1	5.75	1.29	-1.39	-11.13	0.00	6.26	7.51	0.00
F2	5.83	1.43	-1.66	-12.50	0.00	6.74	9.87	0.00
F3	5.55	1.65	-1.58	-12.10	0.00	6.28	6.18	0.00
F4	5.75	1.29	-1.71	-12.73	0.00	8.24	4.57	0.00
F5	5.45	1.71	-1.66	-12.49	0.00	6.66	6.75	0.00
F6	5.64	1.30	-1.10	-9.47	0.00	4.90	9.90	0.00
F7	5.81	1.21	-1.58	-12.10	0.00	8.04	8.72	0.00
Workout Facility								
F8	5.70	1.26	-1.26	-10.42	0.00	6.34	7.58	0.00
F9	5.81	1.16	-1.18	-9.93	0.00	5.26	9.94	0.00
F10	5.63	1.27	-1.40	-11.21	0.00	7.41	8.17	0.00
F11	5.82	1.10	-1.26	-10.41	0.00	6.72	10.29	0.00
F12	5.86	1.08	-1.19	-9.99	0.00	6.04	9.01	0.00
F13	5.77	1.24	-1.33	-10.79	0.00	6.08	11.33	0.00
Child Care								
C1	1.83	2.84	0.91	8.53	0.00	-10.62	-15.66	0.00
C2	1.82	2.82	0.94	8.55	0.00	-10.33	-19.83	0.00
C3	1.79	2.79	0.98	8.78	0.00	-8.45	-15.41	0.00
C4	1.81	2.82	0.98	8.77	0.00	-8.68	-16.07	0.00
C5	1.82	2.84	0.99	8.72	0.00	-9.32	-16.39	0.00
C6	1.80	2.83	1.05	8.82	0.00	-8.55	-15.91	0.00

Skewness: Z-score: 131.00 ($p < .00$) Kurtosis: Z-score: 42.89 ($p < .00$)
Multivariate Normality: $\chi^2 = 19002$, ($p < .00$).

Using Windows LISREL 8.5 (Jöreskog, & Sörbom, 2002) computer program, the six-factor perception model was analyzed based on the ML estimation method. The chi-square statistics of the model was significant (i.e., $\chi^2 = 2{,}227$, df = 725, $p < .01$). The df to χ^2 ratio was also low and under 1:4. The goodness-of-fit indices of the model were satisfactory. For example, the RMSEA = .059, SRMR = .054, and both the CFI, the IFI, as well as the NNFI = .96. The interfactor correlations, standardized factor structure coefficients, and errors of measurement estimated by the CFA are presented in Figure 4.2.

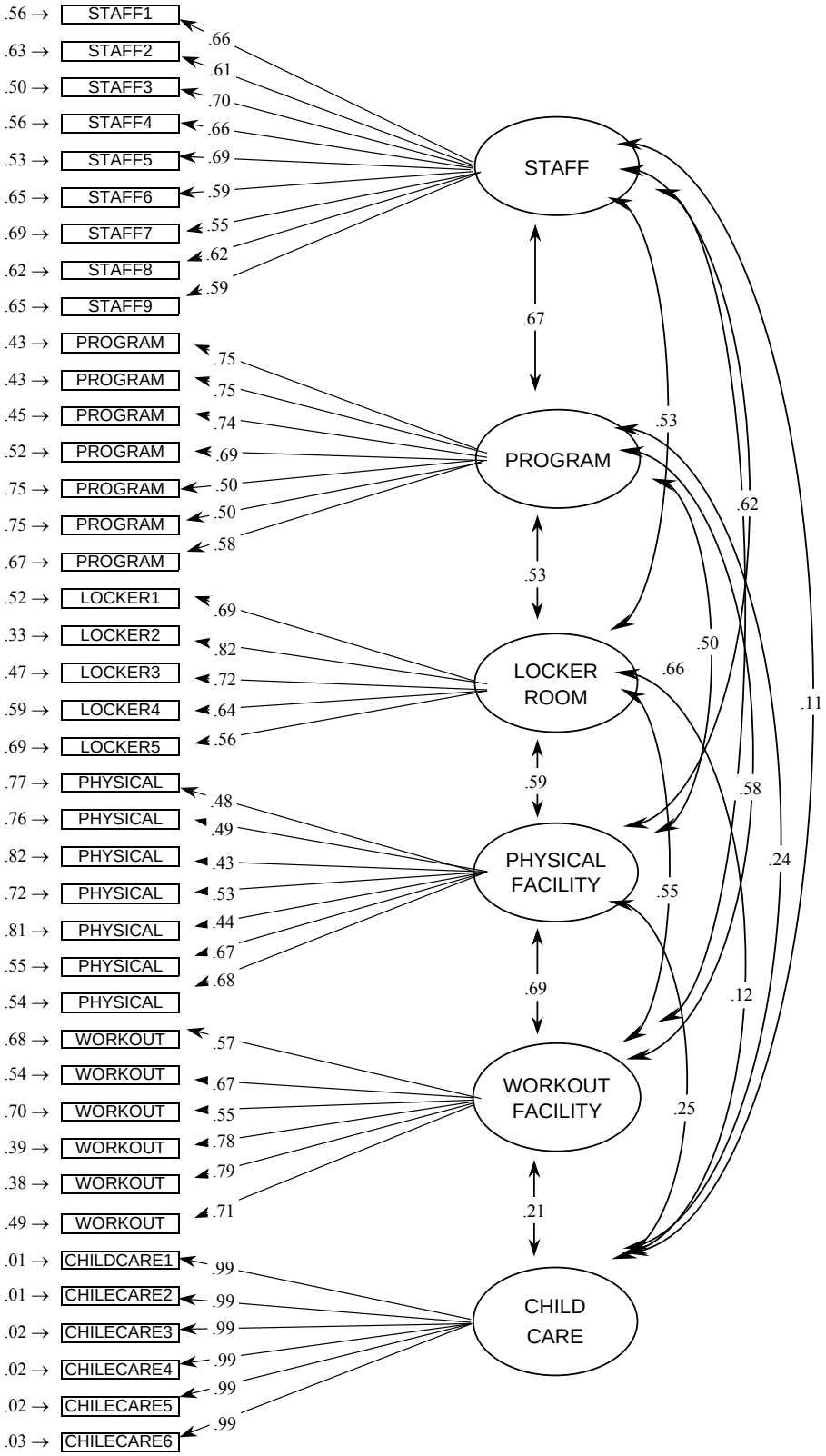

Figure 4.2. Factor Structure Coefficients, Interfactor Correlations, and Errors of Measurement of the Perception Model of the SQAS-T.

4.2. Reliability Analysis

Reliability refers to the accuracy and precision of a measurement procedure (Thorndike, Cunningham, Thorndike, & Hagen, 1991). Reliability answers the question, "how well does the instrument measure what is intended to measure"? There are some factors that influence the reliability such as: (a) range of the group, (b) level of ability in the group, (c) methods used for estimating reliability, and (d) length of the test.

In this study both CR and VE were calculated. The CR and VE measures were used in preference to Cronbach alphas as it has been shown to have more advantages (Ailawadi, Neslin, & Gedenk, 2001). The CR that is an internal consistency reliability measure that accounts for the measurement errors (theta delta) (Fornell & Larcker, 1981). The VE is defined by Fornell and Larcker (1981) as the "amount variance captured by the construct in relation to the amount of variance due to the measurement error" (p.45).

In this study, the CR and VE were computed separately for both expectation model and perception model. The results were presented in the following section.

4.2.1. Reliability Analysis for Expectation Model

The CR and VE by the six constructs of the expectation model are given in Table 4.4.

Table 4.4. Composite Reliability and Variances Extracted by six Constructs of the Expectation Model

	Composite Reliability	Variance Extracted
Staff	.76	.26
Program	.81	.38
Locker Room	.73	.35
Physical Facility	.82	.40
Workout Facility	.83	.45
Child Care	1.00	.99

The CR of the six factors of the expectation model was .76 (Staff), .81 (Program), .73 (Locker Room), .82 (Physical Facility), .83 (Workout Facility), and 1.00 (Child Care).

On the other hand, with the exception of Child Care (.99), the VE by the six constructs of the expectation model were comparatively low: 26 (Staff), .38 (Program), .35 (Locker Room), .40 (Physical Facility), and .45 (Workout Facility).

4.2.2. Reliability Analysis for Perception Model

The CR and VE by the six constructs of the perception model are given in Table 4.5.

Table 4.5. Composite Reliability and Variances Extracted by six Constructs of the Perception Model

	Composite Reliability	Variance Extracted
Staff	.86	.40
Program	.84	.43
Locker Room	.82	.48
Physical Facility	.74	.29
Workout Facility	.84	.47
Child Care	1.00	.98

The CR of the six factors of the perception model was .86 (Staff), .84 (Program), .82 (Locker Room), .74 (Physical Facility), .84 (Workout Facility), and 1.00 (Child Care).

According to Table 4.5, the VE ranged from .29 (Physical Facility) to .98 (Child Care) for perception model. These results were similar to the findings of expectation model.

CHAPTER V

DISCUSSION

The current study was designed to investigate the factor structure of the SQAS-T using Confirmatory Factor Analysis (CFA). Since, the original SQAS has six factors, a six-factor model was proposed for the SQAS-T.

The CFA was conducted for both the expectation model and perception model of the SQAS-T. Therefore, the results of present study were discussed in the framework that includes both the expectation and perception scores in terms of original scores of the SQAS that was developed by Lam (2000).

5.1. Examination of the six-factor Expectation-Perception Model with respect to goodness-of-fit statistics and model-fit statistics

The findings of the present study indicated that, in this current sample the distributions of most items were negatively skewed and leptokurtic. Nevertheless, the Maximum Likelihood (ML) estimation method was used in conducting the CFA since extensive research on the robustness of the ML method indicated that this method is almost always acceptable even when data are nonnormally distributed (Harlow, 1985; Hoyle & Panter, 1995; Muthén & Kaplan, 1985; Tanaka & Bentler, 1985; West, Finch, & Curran, 1995). Furthermore, Olsson, Foss, Troye, and Howell (2000) suggested that a sample size of 2,000 is necessary for the Weighted Least Square, instead of the ML, estimation method.

The findings of the expectation model of the SQAS-T demonstrated that the goodness-of-fit indices (RMSEA, SRMR, CFI, IFI, and NNFI) of the model were admissible. As pointed out by Steiger (1989) and Byrne (1998), values of the RMSEA less than .05 indicate a very good fit, and values up to .08 indicate reasonable errors of approximation in the population. MacCallum et al. (1996) further commented on these cutpoints by declaring that values of the RMSEA between .08 and .10 indicate mediocre fit, and those greater than .10 indicate poor fit. On the other hand, the SRMR ranges from zero to 1.00 and "in a well-fitting model this value will be small – say, .05 or less" (Byrne, 1998, p. 115). Since the RMSEA and SRMR values of the SQAS model were .067 and .056, respectively, the values were in the uppermost ranges.

In addition, Hu and Bentler (1999) further commented on the ML method that cutoff values close to .95 for CFI, .08 for SRMR, and .06 for RMSEA are needed before concluding that there is a relatively good fit between the model and the observed data. In this study both the CFI, IFI, and NNFI fit indices values (i.e., .95) demonstrated that the six-factor expectation model provided reasonable fit to the data set. The result of goodness-of-fit indexes and model-fit statistics for expectation model are similar with the original SQAS scores (RMSEA, SRMR, CFI, IFI, and NNFI).

Another result of this study is that, similar to the expectation model, the distributions of most items in the perception model were negatively skewed and leptokurtic. Therefore, the six-factor perception model was examined based on the ML estimation method. Similar to expectation model, even if the RMSEA and SRMR values of perception model values are slightly higher than .05 (.059 and .054), it is still within an acceptable range when other fit indices are good. In other

words, all indices (RMSEA, SRMR, CFI, IFI, and NNFI) indicated that the perception model provided a reasonable fit to the data. On the whole, both the expectation and perception model were admissible, with the perception model slightly better than the expectation model.

5.2. Examination of the six-factor Expectation Model with respect to composite reliability and variance extracted

The highest reliability was found for Child Care (1.00) and the lowest reliability were found for Locker Room (.73) that were all above the .70 which was considered acceptable (Fornell & Larcker, 1981). In this study, values of expectation model can be considered very good since all of the CR values were higher than .70.

The VE of six constructs of the expectation model ranged from .26 (Staff) to .99 (Child Care). On the other hand, with the exception of Child Care (.99), the variances extracted (VE) by the six constructs of the expectation model were comparatively low. These values were all lower than the .50 standard (Fornell & Larcker, 1981).

Finally, these results suggest that all items under each factor were reliable in estimating their respective construct.

5.3. Examination of the six-factor Perception Model with respect to composite reliability and variance extracted

The CR values of perception model that were obtained in this study were similar to the results of Lam (2000) which ranged from .82 to .93. Besides, the CR of perception model ranged from .74 to 1.00 that were all above the .70 which was regarded as acceptable (Fornell & Larcker, 1981). These results suggested that

translating the original SQAS into Turkish did not caused any major problem. In other words, all individual items contributed to the functioning of their subscale and language differences appeared not to compromise the effectiveness of items.

Similar to the expectation model, with the exception of Child Care (.98), the variances VE captured by the six constructs of the perception model were relatively low. The VE of the six-factors were .40 (Staff), .43 (Program), .48 (Locker Room), .29 (Physical Facility), and .47 (Workout Facility) respectively, which were not considered acceptable when compared to the minimum of requirement of .50 (Fornell & Larcker, 1981). These VE results were not similar to those produced by Lam (2000). Since, the VE values of the SQAS ranged from .61 (Physical Facility) to .72 (Locker Room) that were all greater than .50.

The findings of present study demonstrated that both the expectation and perception model proposed by Lam (200) were admissible. However, it should be considered, even when a model fits to the data well, the presence of other equivalent models should not be ignored (MacCallum, 1995). In other words, finding a model that fit to the data well does not signify that the model is the only, or optimal model for the data. This means that it still possible to increase the fit indices values. Therefore, further research is needed to deal with the increasing fit indices values of defined six-factor model.

As a conclusion, the present study demonstrated that the SQAS with its six-dimension structure proposed by Lam (2000) appears to be a reliable and valid instrument to measure the quality of service attributed at health-fitness club's in Ankara. Further work is required to be done with other groups in order to reach a definitive conclusion about the reliability and validity of SQAS for Turkish populations.

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APPENDICES

APPENDIX A

SERVICE QUALITY ASSESSMENT SCALE (SQAS)

This survey is for the purpose of providing better service to the members of the Club. All information is strictly confidential and will be solely used for research. Your sincere and honest response is greatly appreciated. Please respond **all** the questions by circling the number.

	EXPECTED SERVICE How Important is This to You?	**PERCEIVED SERVICE How's the Club Doing?**
STAFF	Least Important 1 2 3 4 5 6 7 Most Important NA	Poor 1 2 3 4 5 6 7 Excellent NA
1. Possession of required knowledge/skills	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
2. Neatness and dress	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
3. Willingness to help	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
4. Patience	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
5. Communication with members	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
6. Responsiveness to complaints	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
7. Courtesy	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
8. Provision of individualized attention by instructors	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
9. Provision of consistency of service	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
PROGRAM	Least Important 1 2 3 4 5 6 7 Most Important NA	Poor 1 2 3 4 5 6 7 Excellent NA
1. Variety of programs	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
2. Availability of programs at appropriate level	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
3. Convenience of program time/schedule	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
4. Quality/Content of programs	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
5. Appropriateness of class size	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
6. Background music (if any)	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
7. Adequacy of space	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
LOCKER ROOM	Least Important 1 2 3 4 5 6 7 Most Important NA	Poor 1 2 3 4 5 6 7 Excellent NA
1. Availability of lockers	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
2. Overall maintenance	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
3. Shower cleanliness	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
4. Accessibility	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
5. Safety	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
FACILITY	Least Important 1 2 3 4 5 6 7 Most Important NA	Poor 1 2 3 4 5 6 7 Excellent NA
1. Convenience of location	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
2. Hours of operation	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA

3. Availability of parking	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
4. Accessibility to building	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
5. Parking lot safety	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
6. Temperature control	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
7. Lighting control	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
8. Pleasantness of environment	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
9. Modern-looking equipment	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
10. Adequacy of signs and directions	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
11. Variety of equipment	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
12. Availability of workout facility/equipment	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
13. Overall maintenance of equipment	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA

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CHILD CARE	Least Important Average Most Important	Poor Average Excellent
1. Quality of staff	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
2. Cleanliness of equipment	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
3. Hours of operation	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
4. Adequacy of space	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
5. Safety of environment	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA
6. Diversity of experience provided	1 2 3 4 5 6 7 NA	1 2 3 4 5 6 7 NA

Things you like most in the Club: _____

Anything you dislike? Comments? _____

PLEASE PROVIDE THE FOLLOWING INFORMATION (<u>ONE</u> PERSON PER SURVEY) :

1. Please indicate your membership type (check one only).
   [1]☐ Individual [2]☐ Family [3]☐ Other (specify)_____

2. How long have you been a member?
   [1]☐ Longer than 10 years [2]☐ 7-10 years [3]☐ 5-6 years
   [4]☐ 3-4 years [5]☐ 1-2 years [6]☐ ____ months

3. On the average, about how frequently do you come to use our facilities?
   [1]☐ 1-2 times per week [2]☐ 3-4 times per week [3]☐ 5-6 times per week
   [4]☐ 7 or more per week [5]☐ Other (specify)_____

4. What is your average travel time to the Club?
   [1]☐ Under 10 minutes [2]☐ 10-15 minutes [3]☐ 16-20 minutes
   [4]☐ 21-25 minutes [5]☐ 26-30 minutes [6]☐ Over 30 minutes

5. What is your gender? [1]☐ Male [2]☐ Female

6. How old are you?
   [1]☐ Under 18 years [2]☐ 18-25 years [3]☐ 26-35 years
   [4]☐ 36-50 years [5]☐ 51-65 years [6]☐ Over 65 years

7. Marital Status (check one): [1]☐ Single [2]☐ Married
   [3]☐ Divorced [4]☐ Widowed [5]☐ Other (specify)_____

8. Household size: _____ people

9. Total annual household income (before taxes):

[1] ☐ Under $20,000	[2] ☐ $20,000-40,000	[3] ☐ $40,001-60,000
[4] ☐ $60,001-80,000	[5] ☐ $80,001-100,000	[6] ☐ $100,001-120,000
[7] ☐ $120,001-140,000	[8] ☐ $140,001-160,000	[9] ☐ Over $160,000

10. Ethnicity (check one):

[1] ☐ Caucasian/White	[2] ☐ Hispanic/Latino	[3] ☐ American Indian/Alaskan Native
[4] ☐ Asian/Pacific Islander	[5] ☐ Black/African American	☐ Other (specify)_____

11. Highest Education Level (check one):

[1] ☐ High School Diploma	[2] ☐ Some College	[3] ☐ College Degree
[4] ☐ Master's Degree	[5] ☐ Doctoral Degree	[6] ☐ Other (specify)_____

12. Profession (check one):

[1] ☐ Management	[2] ☐ Technical	[3] ☐ Professional
[4] ☐ Sales	[5] ☐ Clerical	[6] ☐ Education
[7] ☐ Homemaker	[8] ☐ Retired	[9] ☐ Other (specify)_____

THANK YOU FOR YOUR TIME. HAVE A GREAT WORKOUT!

APPENDIX B

SERVICE QUALITY ASSESSMENT SCALE (SQAS)
(TURKISH VERSION)

HİZMET KALİTESİ DEĞERLENDİRME ÖLÇEĞİ

Bu araştırma, kulüp üyelerine daha iyi hizmet sağlanmasını amaçlamaktadır. Bütün bilgiler gizli tutulacak ve sadece bu araştırma için kullanılacaktır. Sorulara vereceğiniz dürüst ve samimi cevaplar bu araştırma için önemlidir. Araştırmaya gösterdiğiniz ilgi ve katılımınız için teşekkür ederiz.

Açıklama:

Aşağıda üye olduğunuz işletmenin çeşitli yönleri ile ilgili ifadeler bulunmaktadır. Her ifadeyi dikkatle okuyarak düşüncenizi belirten rakamı daire içine alarak cevaplandırınız.

*** GD:** Bu sorunun bu işletme için geçerli olmadığını belirtmektedir.

	BEKLENEN HİZMET Bu Sizin İçin Ne Kadar Önemli?								**ALGILANAN HİZMET Kulübünüz Ne Kadarını Yaptı?**							
PERSONEL	Az Önemli						Çok Önemli		Zayıf			Orta			Mükemmel	
1. Gerekli bilgi ve becerilere sahip olmak	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
2. Temizlik ve kıyafet	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
3. Yardım etmeye istekli olmak	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
4. Sabır	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
5. Üyelerle iletişim	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
6. Şikayetlere cevap vermek	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
7. Nezaket	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
8. Eğitmenlerin müşterilere bireysel ilgi göstermesi	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
9. Sunulan hizmette tutarlı olmak	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
PROGRAM	Az Önemli						Çok Önemli		Zayıf			Orta			Mükemmel	
1. Programların çeşitliliği	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
2. Uygun seviyede programların varlığı	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
3. Program zamanının uygunluğu	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
4. Programların kalitesi ve içeriği	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
5. Sınıf mevcudunun uygunluğu	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
6. Arka plan müziği (eğer var ise)	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
7. Alan yeterliliği	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
SOYUNMA ODALARI	Az Önemli						Çok Önemli		Zayıf			Orta			Mükemmel	
1. Soyunma dolaplarının varlığı	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD
2. Genel bakım	1	2	3	4	5	6	7	GD	1	2	3	4	5	6	7	GD

3. Duşların temizliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
4. Soyunma odalarına ulaşım	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
5. Güvenlik	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
TESİS	Az Önemli Önemli Çok Önemli	Zayıf Orta Mükemmel
1. Yerleşim uygunluğu	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
2. Çalışma saatleri	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
3. Park olanakları	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
4. Binaya giriş	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
5. Park alanının güvenliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
6. Isı kontrolü	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
7. Aydınlatma kontrolü	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
8. Çevrenin hoşluğu	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
9. Araç-gerecin modernliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
10. İşaret ve yönlendirmenin yeterliliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
11. Araç-gereç çeşitliliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
12. Antrenman araç-gereçlerinin varlığı	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
13. Araç-gereçlerin genel bakımı	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD

Diğer Sayfa ➔ ➔ ➔ ➔

ÇOCUK BAKIMI	Az Önemli Önemli Çok Önemli	Zayıf Orta Mükemmel
1. Personel kalitesi	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
2. Araç-gereç temizliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
3. Çalışma saatleri	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
4. Alan yeterliliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
5. Çevrenin güvenliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD
6. Sunulan etkinliklerin çeşitliliği	1 2 3 4 5 6 7 GD	1 2 3 4 5 6 7 GD

Kulüpte en çok beğendikleriniz* _____

Beğenmedikleriniz? Açıklamalar* _____

LÜTFEN AŞAĞIDAKİ BOŞLUKLARI DOLDURUNUZ?

1. Üyelik şeklinizi belirtiniz? (Sadece 1 tanesi)
   [1]☐ Bireysel [2]☐ Aile [3]☐ Diğer (Belirtiniz)_____

2. Ne kadar zamandır bu kulübe üyesiniz?
   [1]☐ 10 yıldan fazla [2]☐ 7-10 yıl [3]☐ 5-6 yıl
   [4]☐ 3-4 yıl [5]☐ 1-2 yıl [6]☐ ____ ay

3. Ortalama olarak ne kadar sıklıkla tesislerimizi kullanıyorsunuz?
   [1]☐ Haftada 1-2 defa [2]☐ Haftada 3-4 defa [3]☐ Haftada 5-6 defa
   [4]☐ Haftada 7 ve daha fazla [5]☐ Diğer (Belirtiniz)_____

4. Ortalama olarak kulübe ulaşım süreniz nedir?
[1]☐ 10 dakikadan az [2]☐ 10-15 dakika [3]☐ 16-20 dakika
[4]☐ 21-25 dakika [5]☐ 26-30 dakika [6]☐ 30 dakikadan fazla

5. Cinsiyetiniz?
[1]☐ E [2]☐ K

6. Yaşınız?
[1]☐ 18 yaş altı [2]☐ 18-25 yaş arası [3]☐ 26-35 yaş arası
[4]☐ 36-50 yaş arası [5]☐ 51-65 yaş arası [6]☐ 65 yaş üstü

9. Medeni haliniz?
[1]☐ Bekar [2]☐ Evli
[3]☐ Boşanmış [4]☐ Dul [5]☐ Diğer (Belirtiniz)_____

8. Aile bireyleri sayısı: _____ kişi

9. Ailenin aylık ortalama toplam geliri:
[1]☐ 250 milyondan az [2]☐ 250 milyon-500 milyon [3]☐ 500 milyon-750 milyon
[4]☐ 750 milyon-1 milyar [5]☐1milyar-1,5 milyar [6]☐ 1,5 milyar-2 milyar
[7]☐ 2 milyar ve yukarısı

10. En son bitirdiğiniz okul?
[1]☐ Orta Öğretim [2]☐ Lise [3]☐ Üniversite
[4]☐ Yüksek Lisans [5]☐ Doktora [6]☐ Diğer (Belirtiniz)_____

11. Mesleğiniz: _____

TEŞEKKÜRLER, İYİ ÇALIŞMALAR !