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Service Quality Measurement of Elder Care Houses: Servqual Application[i]

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Abstract: *In our ageing World, multidisciplinary researches related with various fields of demographic ageing are needed to be increased and promoted. Besides the demographic data, collecting and analyzing specific data about the requirements and expectations of elderly supports the development of efficient policies. The quality and organization of elder care services is one of the most important topics of today's societies' agenda. The first step of improving the quality of elder care services is to measure the quality of the already given services. The purpose of this study is to measure the quality of the already presented services to elderly in care homes. In order to realize this purpose, the "Servqual" service quality measurement tool, which is based on comparing the expectation and perception scores of the services users, was used. The sample group of the study consists of 1086 elderly residents from 38 rest homes which are operated by the government, in 16 provinces of Turkey.*
Keywords:*Ageing, elder care, care home,Servqual, service quality*

I. Introduction

Ageing can be described as the decrease in biological productivity of the organism, the difficulty in adaptation to environment and decline in resistance mechanisms.Only a single description of "normal ageing" cannot be made since it is anticipated that ageing properties differ among various genetic/socio-cultural individuals and groups. On the other hand, although the medical and social developments move the "ageing border" upwards, "age 65" is assumed as the starting edge of ageing."Population ageing" refers to the increase in the shareof the number of 65+ people in total population. In our ageing world, we need to support and increase the specialized inter-disciplinary researches related with ageing issues. Data collection and analysis specific for demographic structure provides the foundation which is necessary for effective policies to meet the needs emerging with the demographic change. The organization and quality of elder care services issue is one of the most important and preferential topics in almost all societies and related sectors.

Since "services" in general, a performance-intense presentationand delivery, there are various descriptions made for "service quality" but within the context of generally accepted approaches, most of these descriptions are similar in fundamental. Service quality is stated as similar statements, such as; "the working area about increasing the satisfaction of the service-taker, the service presentation that meets/exceeds the customers' expectations"; "conformance with the expectations of customers" [1]; "the meeting level of the served service against the customers' expectations" [2]; "conformance with the specifications" [3]; "meeting level of the expectations, needs and necessities of customers"[4]. One of the most comprehensive definitions of service quality has been expressed by Parasuraman, Zeithaml and Berryas "the comparison of the expected and perceived service performances and a general evaluation related to the superiority of the service"[5].As it is seen in almost all the definitions related with the service quality, the customer's perception and satisfactionlevel comes out. Service quality which is revealed by the comparison between the expected and perceived service can be defined as the quality of the service perceived by the customer.Therefore, service quality is determined by the customer. Servicescannot be handled and are perishable, heterogeneousand inseparable (production and consumption take place at the same time) so, they cannot be counted, measured, stored, tested and verified before the presentation; consequently, services are in indefinite and complex structure. In most cases, the quality comes out during the interaction between the customer and the service staff while presenting the service.

II. Measurability Of Service Quality

Increasing the service quality level is not only important for companies but also for individuals and societies. It also helps to increase the competitive advantage of countries. It is seen that the share of services sector is very much bigger than the goods sector in developed countries. (In many developed countries, more than 80 percent of total gross domestic product –GDP comes from the services sector). Under this depressive competition and increasing customer consciousness environment, it is vital to present qualitative service to be successful.

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With the principle "without measuring your quality you cannot improve it", service companies have been trying to measure their own quality of service. But service quality measurement is a rocky road because of the characteristics of the service. Besides the common characteristics, the diversity of services makes the quality measurement process very hard and complex, but various models have been developed to make itunderstandable, measurable and improvable, by detecting the factors affecting quality and revealing the interrelations between them.

II.1. Developing a Service Quality Measurement Tool

The best known model among the researches related with service quality concept has been developed by Leonard L.Berry, A. Parasuramanve Valerie A. Zeithaml. In 1983, they started a series of studies to develop a model by focusing in three areas; describing the service quality with a wide perspective, determining the factors affecting it and designing a tool to make it measurable [6].

At the end of their research, Parasuraman and his colleagues stated that service quality decreases or increases according to the meeting level of expectations of customers. In order for the service quality to be satisfactory, the presented service should exceed (or at least meet) the expectations of customers, otherwise the service quality is evaluated as "poor".

II.1.1. Servqual Scale:

Servqual (SERVice + QUALity) scale was developed by Parasuraman and his colleagues, after researches to find a standard measurement tool suitable to use in services sector; and it is the most comprehensive one among other similar studies according to its style of handling the topic, scope and applicability. In order to evaluate the service quality, a number of studies can be seen but the scale which is widely acknowledged and applied in many sectors validly is the "servqual"[7,8,9].

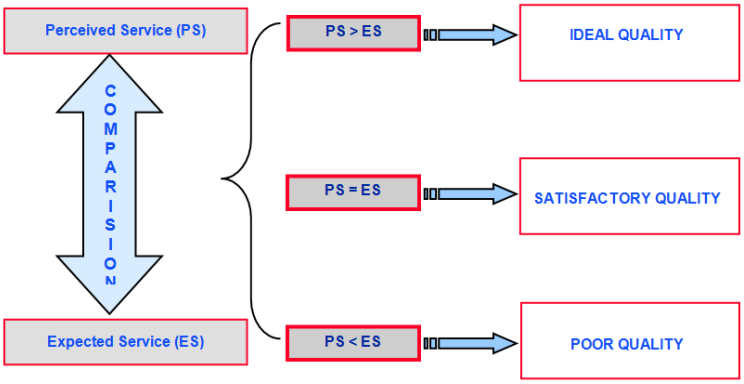

Figure 1. Expected and Perceived Service Quality(adopted from [5])

When it is looked at the researches which use servqual directly or with little changes, it is seen that the general validity of the scale is high enough. The high validity coefficient values of five dimensions of servqual show that the convergent validity of the scale is also high. Researches showed that the five dimensions of servqual scale have similar reliability coefficients and each dimension's internal consistency is high [8,10,11,12].

In servqual, first the customer's expectations related to a service, and then his/her perceptions related to the specific service presented to him/her, are measured. The difference between expectations and perceptions indicates the level of the service quality.

The servqual scale consists of five dimensions (which are described as the determiners of service quality) and in its final form, these five dimensions consist of totally 22 pairs of questions. Answers are marked in 5 or 7 Likert-type format.

The above mentioned determiners (or, the five dimensions)of service quality are defined in [13] as follows:

i. Tangibles: Physical facilities andequipment that the service organization has, physical appearance of the personnel and all the concrete components used during the service delivery, even if the other customers in the service area. This dimension includes 4 statements.
ii. Reliability: Ability to perform the promised service dependably, fullyand accurately during the first time. This dimension includes 5 statements.
iii. Responsiveness:Willingness and readiness to help customers and provide prompt service. (For example, informing by feed backing a customer who is waiting for any information about anything). This dimension includes 4 statements.

iv. Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence. This dimension includes 4 statements.
v. Empathy: Caring and the individualized attention, sensibility,individualized care and specialized services that the service organization provides its customers; and easy access and communication with the customers. This dimension includes 5 statements.

In order to calculate the servqual score, first the difference between the expected and perceived service quality points of each statement is calculated. For each client, the average of the difference points of statements under each dimension is calculated to find the "average difference score" of each dimension. And then the average of these five scores of five dimensions gives the "unweightedservqual score". This calculation does not take "the relative importance of quality dimensions for clients" into account.

Optionally, a section can be added to the servqual scale to ask clients about the "the relative importance of quality dimensions"[14]. For this purpose, the clients are asked to distribute a total of 100 points to these five quality dimensions. During the calculation of "unweightedservqual score" above, instead of using arithmetic average, if these relative importances of quality dimensions are used as "weights" of dimensions, the "weighted servqual score" can be calculated.

III. The Purpose And Method

The main purpose of this research is to measure the service quality of the delivered service in elder care homes and rehabilitation centers. While doing this, it will also be learned at what percentage of the residents' expected service is being met by the delivered service and which quality dimensions are more important and preferential for the elderly.

Besides determining the expectations and perceptions of elderly, the study is also important to raise individual and organizational awareness by increasing sensibility of the related bodies and to make possible to develop the quality of service by bringing new perspectives to service sector.

III.1. Sampling

Before the study, the necessary permissions were taken from the Central Directorate of Social Services and before visiting, each of the 38 rest homes in 16 provinces were called and taken appointments according to the application plan. On the date of appointment, the purpose of the study was explained to the residents and the servqual scale was applied to the voluntary ones (who had been there at least for six months) by face-to-face interview technique. 1086 of the total 4028 residents of 38 rest homes (27% of the total residential population) were interviewed.

III.2. Data Collection Tool

The Servqual scale, which was adapted to elder care and rest homes, consists of 22 pairs of statements with 5-point Likert scale. Although these 22 statements were grouped in 5 dimensions during the analysis, they were mixed in the questionnaire during the application. The voluntary residents first expressed their expectations and then their evaluations (perceptions) about the delivered services to them, in a 5-point Likert scale ranging from (strongly disagree = 1) to (strongly agree = 5).

Table1. Distribution of the Sampling Data Used in the Study

Province	Number Of Rest Homes	Number Of Residents	Number Of Interviewed Residents	Interviewed Residentsin Total (%)
ADANA	2	292	55	19
ANKARA	4	655	147	22
ANTALYA	1	163	64	39
BARTIN	1	30	22	73
BİLECİK	1	80	47	59
BURSA	1	316	63	20
DÜZCE	1	50	25	50
ESKİŞEHİR	3	212	78	37
GAZİANTEP	1	84	42	50
İSTANBUL	6	808	217	27
İZMİR	4	591	68	12
KOCAELİ	4	231	105	45
MANİSA	4	200	76	38
SAKARYA	1	64	8	13
TEKİRDAĞ	2	160	45	28
ZONGULDAK	2	92	24	26
TOTAL	**38**	**4028**	**1086**	**27**

IV. Findings And Results

The results of the research were analyzed and interpreted with SPSS v.13 software. During the analysis, the confidence interval has been assumed between 0.01 and 0.05. In order to test the reliability of the expectation and perception statements of the scale, the reliability analysis; to test the significance of the differences between averages, the t-test; and to analyze the grouped variables, variance analysis (One-Way ANOVA) tests were used. As it was explained in the previous sections, the data collected by servqual scale were used to calculate the service quality scores of either for the quality dimensions and both of the un-weighted and weighted scores in general.

The valid demographic data of the 1086 residents were shown in Table-2. The questionnaires which were assumed as valid and included in the calculations did not contain any un-answered statements.

When the findings are examined, the conspicuous headlines according to the demographic properties are as follows:

- According to the "age group" variable; the 90-99 age group residents have the lowest expectations of all. Again, this age group's feeling of confidence and security during the communication, relationship and conversation with the care staff is also the lowest among all age groups.
- According to the "gender" variable; male residents' expectation about "the courtesy and respect of care staff against the residents" is higher than that of females.
- According to the "marital status" variable; the single (un-married) residents have lower expectations in general while widowed has the highest and married in the middle.
- According to the "child ownership" variable; the residents who have 5 or more children have lower expectations than others. These elderly also have higher (positive) perceptions about the physical conditions (tangibles) of the care/rest houses.

Table2. Demographic Data of the Sampling

		f	*%*
Age	60-69	465	42,8
	70-79	404	37,2
	80-89	136	12,5
	90-99	81	7,5
Gender	Female	467	43,0
	Male	619	57,0
Marital Status	Married	194	17,9
	Single	166	15,3
	Widowed	726	66,9
Education	Illiterate	64	5,9
	Literate	321	29,6
	Primary school	423	39,0
	High school	56	5,2
	University	222	20,4
Child Ownership	No child	299	27,5
	1	235	21,6
	2	345	31,8
	3-4	155	14,3
	5 and more	52	4,8
Retirement	Not- retired	313	28,8
	Social Security	772	71,1
	Private Insurance	1	0,1
Monthly Income	No income	183	16,9
	Minimum wage	140	12,9
	550-1000 TL	659	60,7
	1001-2000 TL	102	9,4
	2000 TL +	2	0,2
Payment of Expenditures	(Him/Her)self	568	52,3
	Social security	518	47,7

The relative importance of quality dimensions, which were derived from the residents' distributions of 100 points to these five quality dimensions, is shown in Table-3. The most important dimension for elderly is seen as the "reliability", and then the "responsiveness" comes the second. The "tangibles" and the "empathy" dimensions seem to be the least important ones.

Table3. The Relative Importance of Service Quality Dimensions*(as percentages)*

DIMENSION	N	Minimum	Maximum	Average	SD
Reliability	1086	0,30	0,40	0,3239	0,04269
Tangibles	1086	0,10	0,15	0,1290	0,02469
Responsiveness	1086	0,20	0,30	0,2471	0,03228
Assurance	1086	0,15	0,20	0,1710	0,02469
Empathy	1086	0,10	0,15	0,1290	0,02469

Table4. Un-weighted Servqual Score

DIMENSION	Service Quality Score
Reliability	-0,8842
Tangibles	-1,0831
Responsiveness	-1,1653
Assurance	-1,0267
Empathy	-1,1230
Un-weighted Servqual Score	**-1,05646**

Table5. WeightedServqualScore

DIMENSION	Service Quality Score	Relative Importance of Service Quality Dimensions	Contribution of each dimension to the weighted average quality score
Reliability	-0,8842	0,3239	-0,2864
Tangibles	-1,0831	0,1290	-0,1397
Responsiveness	-1,1653	0,2471	-0,2879
Assurance	-1,0267	0,1710	-0,1756
Empathy	-1,1230	0,1290	-0,1449
Weighted Servqual Score			**-1,0345**

V. Conclusion

Both the "Weighted Servqual Score" and the "Un-weighted Servqual Score" were calculated in the previous section and it is seen there is not a great difference between them. When the service quality scores are evaluated, the calculated negative scores show that the quality of the service delivered to residents does not meet their expectations. The worst score (that means the expectations of residents are met minimum) is seen in "responsiveness" dimension while the best score (means the expectations are met higher) is seen in "reliability".

While a negative quality score refers to an inadequate quality level, the absolute value of the score is also important. In a survey which uses 5-point Likert scale ranging from (strongly disagree = 1) to (strongly agree = 5), theoretically, the quality score can take a value between (-4) and (+4). A score of (-4) refers to the worst case (i.e. an absolute dissatisfaction of the residents of the care/rest house). Therefore, the servqual score about (-1) of this study can be acceptable when compared with the worst case but it is clear that there is an inadequacy in the service delivery of the care/rest houses.

During the research, the question "would you like to change your care/rest house and move to another one?" was also asked. Their responses to such an offer are given in Table-6.

Table6. Residents' responses to "changing the institution" offer

	f	*%*
I want to move to another one	81	7,5
I'm torn	133	12,2
I don't want to change	872	80,3
Total	**1086**	**100,0**

Interestingly, although the service quality scores were calculated negative (-), (in other word, the delivered services do not fully meet the residents' expectations), 80 percent of them did not want to change their care/rest house. This result might be partially explained by the factors of elderly people's being not eager about risk-taking and avoidance of uncertainty. It seems worth to study up on it; both being not happy with the delivered service and also being not eager to move to another institution.

Besides this, another topic for future researches can be the relationship between the poor service quality score and the service staff. It should be studied that the working conditions of the staff, the difficulties in delivering service to elderly, occupational burnout and what other factors influence the delivered service quality at what level.

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