

A STRUCTURAL EQUATION MODEL TEST OF PATIENT SATISFACTION IN THE HEALTH SERVICE ORGANIZATIONS IN TRABZON CITY

Ahmet Mutlu AKYÜZ¹
Hasan AYYILDIZ²

ABSTRACT

This study investigated the factors that are thought to be affect patient satisfaction in the health service organizations in Trabzon city within the framework of patient satisfaction in health services. The proposed hypotheses were tested under a structural equation model (SEM). The sample population for the study are the individuals who have already hospitalized and discharged from Trabzon City hospitals and accepted to represent their observations about health-care services. A draft questionnaire was developed to measure the factors in the model. All items under the factors were measured on a five-point Likert scale. Questionnaires were asked to adults who are over the age of 18 during face-to-face interviews. Data collection was carried out from January to March 2010 and 400 completed surveys were collected with a response rate of 89.5 percent. The Amos software package was used to perform the SEM and it was successfully performed. From the results of tested hypotheses, it was understood that patient satisfaction in the health service organizations in Trabzon city are respectively affected by managerial services, attention and politeness, cleanliness and hygiene, hospital informing services both directly and indirectly.

Keywords: Customer satisfaction, Patient satisfaction, Marketing of health services

JEL Classification: M31, M39, I19

TRABZON İLİNDEKİ SAĞLIK KURULUŞLARINDA HASTA MEMNUNİYETİNİN BİR YAPISAL EŞİTLİK MODELİ DENEMESİ

ÖZ

Bu çalışmada, sağlık hizmetlerinde hasta memnuniyeti konusu çerçevesinde, Trabzon ilindeki sağlık kuruluşlarında hasta memnuniyetine etki ettiği düşünülen faktörler incelenmiş olup, konuyla ilgili tasarlanan hipotezler bir Yapısal Eşitlik Modeli ile test edilmiştir. Çalışmanın örnek kitlesini Trabzon ili sağlık kuruluşlarında tedavi olup taburcu olan hastalardan, aldıkları sağlık hizmetleri hakkındaki izlenimlerini sunmayı kabul edenler oluşturmaktadır. Araştırma modeli içerisinde yer alan faktörleri ölçmek üzere bir anket formu düzenlenmiştir. Yapılan ankette 5'li Likert ölçeği kullanılmıştır. Araştırma, 18 yaş ve üzeri erişkin bireylerle yüz yüze soru cevap şeklinde yürütülmüş olup Ocak 2010-Mart 2010 tarihleri arasında gerçekleştirilmiştir. 400 kişiyle yürütülen anketlerde %89,5'u soruların tamamına yanıt vererek anketi tamamlamıştır. Yapısal eşitlik modelinin test edilmesinde Amos istatistik programı kullanılmış olup kurulan model başarılı olmuştur. Test edilen hipotezlerin sonuçlarından, Trabzon ilindeki sağlık kuruluşlarında hasta memnuniyetinin idari hizmetler, ilgi ve nezaket, temizlik ve hijyen, bilgilendirme hizmetleri faktörleri tarafından doğrudan ve dolaylı olarak etkilendiği tespit edilmiş olup geliştirilen model başarılı olmuştur.

Anahtar Kelimeler: Müşteri memnuniyeti, Hasta memnuniyeti, Sağlık hizmetlerinin pazarlanması

JEL Sınıflandırması: M31, M39, I19

¹ Assist.Prof.Dr. Gumushane University, ahmetmutluakyuz@gmail.com

² Assist.Prof.Dr., Karadeniz Technical University, hayyildiz@yahoo.com

1. Introduction

Hospitals services that take part in the subject of health care services which constitute a part of marketing services are a set of activities in a number of factors that interact with each other and come together by creating the customer experience.

The subject of needs for protection and improvement of service standards is as well as a common sense of all sectors, also a very important matter in the health services industry in particular (Ashill, Carruthers, Krisjanous, 2005: 293). Health service is of vital importance, watertight service area which is directly related to human life and offered with the aim of improve people's physical, mental and social aspects of health protection, and ensure continuity of this situation for the development of welfare and happiness of society. Compared with many other public services, it is understood that there is a need to focus on it as more sensitive as possible and it should be produced with high-quality (Aslantekin et al., 2007: 56). Like as in all other service-based industries, issues such as patient satisfaction, patient loyalty, and quality management are on the front burner in also health services.

Hospitals in which full satisfaction and the best medical care and services (The speed of services, attention and courtesy, administrative, technical and bureaucratic convenience, etc.) are given, will interest more patients (Erdem et al., 2008: 96). Depending on the economic and social change customers' expectations about the services they have consumed are changing quickly and constantly. The way to ensure customer satisfaction depends to be aware of the level of all these customers' expectations and to focus in this direction to improve services. The growth of trained human population has also played a major role in this experienced expectation change. Like as in all other sectors, a consumer segment which is more conscious than before is occurring also in medical sector. By passing beyond the definitions that were done by health professionals, description of service quality has also changed in this parallel and started to become more customer focused (Aslan et al., 2008: 24). Because the concept of customer satisfaction is also a concept applies to patients, hospitals now must begin to see patients as their customers and in a way to fulfil their expectations they should concentrate on customer relationship activities. Hospitals should use the information that obtained by creating an effective customer relationship management system, to make decisions suitable for both them and their customers' benefits (Kılınç, 2007: 309). In fact, the main goal that is targeted with all these performed is to increase productivity and profitability of the hospitals. When considered from this point of view, to attract new patients to a healthcare organization is a far more costly process than to increase the commitment of existing patients. Hence, satisfaction of existing patients will bring along new patients.

In that, especially on the subject of health, people are more impressed with the recommendations of their spouses, acquaintances and close friends. So of that,

as in all sectors, patient satisfaction is proportional to the quality of services that offered.

Although there are many similar definitions in the literature (Bitner and Hubert, 1994; Lewis and Blooms, 1983; Parasuraman et al., 1988), the shared common opinion is that the concept of service quality is not an objective concept (Philip and Stewart, 1999: 199). Usually we define service quality in terms of customer perception. Therefore, most of the proposed operational definitions or concepts for quality of service are based on marketing concepts. Researchers are investigating the service quality with dividing into two parts: technical quality and functional quality. If we think in terms of the technical quality, it is seen that "product" has a meaning for service quality, but on the other side in terms of the functional quality, "how a product was presented or the way of delivering" has a meaning for service quality. While the technical quality is defined with the factors such as the average length of stay, the rates of reapplying for the service and the infection rates and parameters in the health sector, the functional quality is defined with the factors such as doctors', nurses' and the other medical staffs' attitudes and behaviours towards patients, cleanliness and hygiene in the activities and the quality of hospital food (Anderson, 1995: 33). But, eventually in order to achieve patient satisfaction, the role of service quality that takes part in the services marketing programs which are referred is not well explained in health care marketing literature (Ashill, Carruthers, Krisjanous, 2005: 294). Health service professionals mostly overemphasize on clinical or professional components when they try to define quality as relevant to themselves. Generally in other services and production industries, while professionals define quality, a fortiori they head towards outward and base on customers or their opinions. Although there were numerous attempts to take health service users' opinions about offered health services, they did not take place adequately in experimental applications to improve the services. From a view of medical point, the majority of the researches on quality especially have focused on to the technical side-on the components of health services- in the hospital sector (Bell, 2004: 403). Actually the measurement of offered quality in health services is a very difficult job. Although there is a complete consensus about defining and explaining the quality, customer satisfaction is accepted as an important determinant for having an opinion about the quality of health services (Tam, 2007: 735). Assessment of patient satisfaction can be a guide for the identification and elimination of deficiencies in the health-care sector and service quality (Aksakal and Bilgili, 2008: 243). Also in assessment of health services, the patient satisfaction which has taken place for the last decade has begun to be seen as essential evidence in terms of deciding the need of how existing resources should be used in the most accurate and efficient manner because of the increasing costs in health services (Özcan et al., 2008: 97). Patient satisfaction measures are playing a driving role in the issues of developing the perceived quality of health services in a positive direction and developing the properties of the services that doctors and other staff are serving and also completing lack of services in healthcare organizations (Nesanır and Dinç, 2008: 420).

The quality of health services is an important issue not only in terms of patients and health care providers but also in terms of governments. Quality health services will contribute people to become healthier and happier. Healthy and happy people will both allow a reduction in the health-care expenditures and an increase on the government's votes in elections. Therefore, the quality of health services, patient satisfaction and examination of the behaviour of consumers of health services have become important issues (Dursun and Çerçi, 2004: 1). Patient satisfaction can be evaluated in a number of different dimensions: Humaneness, information, overall quality, overall satisfaction, competence, bureaucracy, availability, cost, physical conditions, the result (the result of treatment), the continuity, psychosocial support are all some dimensions that are frequently used (Önsüz, 2008: 34).

2. Methodology

The purpose of this paper is to evaluate empirically the expectations and the satisfaction levels of the hospitalized people in Trabzon City from the hospital and other health services. In other words the study presented here focuses on patient satisfaction with hospital and other health services in Trabzon City.

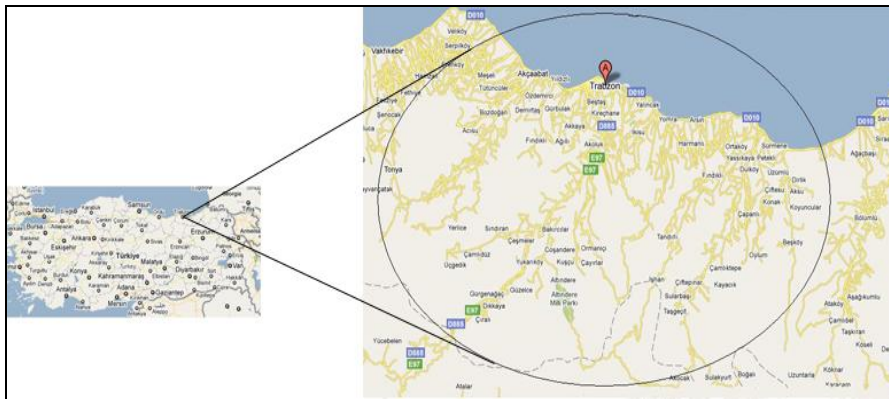


Figure 1: Location map of Trabzon City in Turkey by Google maps

In Trabzon City which is shown together with its 18 districts in Figure 1, there are 17 public hospitals, one university hospital and two private hospitals. In the province, 213 family practice centres, 191 health houses, one tuberculosis dispensary, two mother and child care and family planning centres, one medical centre, one oral health centre provide health care services with 1388 doctors, 189 dentists, 1707 nurses and 647 midwives in these units (www.trabzon.gov.tr/?page_id=69; 20.05.2010).

Most consumer research in the health-care industry has been segregated into two groups: former patient satisfaction studies and community awareness studies.

Patient studies measure perceptions of a particular hospital's quality based on user experience. Community awareness surveys measure the general public's (including visitors and potential customers') overall perceptions of one or more hospitals in a geographic location (Butler et al., 1996: 12). The sample population for our study represents observers of hospital services in Trabzon City hospitals. We define users as those individuals who have recently been hospitalized.

Table 1: The Distribution of Surveys According to the Distribution of Population in Trabzon City

Districts of Trabzon City	Population**	%	Number of Surveys	%
1-Akcaabat	110.957	15	50	14
2-Arakli	49.199	6	26	7,3
3-Arsin	27.585	4	14	3,9
4-Caykara	16.939	2	9	2,5
5-Macka	24.494	3	12	3,4
6-Of	48.463	6	20	5,6
7-Surmene	28.108	4	11	3,1
8-Tonya	16.716	2	9	2,5
9-Merkez (Centrum)	297.710	39	140	39,1
10-Vakfikebir	26.434	3	14	3,9
11-Yomra	30.614	4	15	4,2
12-Besikduzu	21.699	3	11	3,1
13-Salpazari	11.305	1	6	1,7
14-Carsibasi	15.954	2	8	2,2
15-Dernekpazari	4.305	1	0	0
16-Duzkoy	15.547	2	7	2
17-Hayrat	11.930	2	6	1,7
18-Koprubasi	5.755	1	0	0
Total	763.714	100	358	100

** Population-Based Address Registration System (Institutional) Database, Turkish Statistical Institute, 3w.tuik.gov.tr/AltKategori.do?ust_id=11, 01.04.2010.

The sample of this study is based on the relative population weights of the centre and other districts that create the total population of Trabzon City according to 2010 census records in Turkey. The participants are chosen from the centres of the districts whose weights are over %1 after the calculation of 18 districts' populations' weights on the total population in Trabzon City (Table 1).

Table 2: Type of the Health Service Location

	Frequency	Percent
Hospital	180	50,3
Health Care Centre	178	49,7
Total	358	100

In Table 2, it is seen that there are two location types in which participants can take health services. Hospitals are forming the %50.3 of these locations and the rest 49.7% are health care centres.

It is understood that almost half of the hospitals and $\frac{1}{4}$ of the health care centres are settled in the Trabzon City centre and the rest are in the districts according to the distribution of numbers of these locations for every district in Table 3.

Table 3: The Cross-Tabulation of Districts and Type of the Health Service Location

District	Hospital	Health Care Centre	Total
1-Akcaabat	28	22	50
2-Arakli	16	10	26
3-Arsin	0	14	14
4-Caykara	0	9	9
5-Macka	8	4	12
6-Of	15	5	20
7-Surmene	7	4	11
8-Tonya	6	3	9
9-Merkez (Centrum)	94	46	140
10-Vakfikebir	6	8	14
11-Yomra	0	15	15
12-Besikduzu	0	11	11
13-Salpazari	0	6	6
14-Carsibasi	0	8	8
15-Duzkoy	0	7	7
16-Hayrat	0	6	6
Total	180	178	358

2.1 Demographic Variables of the Participants

From a total of 400, only 358 participants fully completed the surveys and participated in the study. As it is seen from the following Table 4, 45.5% of the participants are men and 54.5% are women.

Table 4: Gender of the Participants

	Frequency	Percent
Female	195	54,5
Male	163	45,5
Total	358	100

From Table 5, it is seen that 76.3% of the participants are married and the rest 23.7% are unmarried. In this study the participants whose marital statuses were widow considered to be celibate.

Table 5: Marital Status of the Participants

	Frequency	Percent
Married	273	76,3
Unmarried	85	23,7
Total	358	100

From the Table 6, it is understood that 18.7% of the participants are between the ages of 18-25, 24.3% of them were between the ages of 26-35, between the ages of 36-45 were 33% and finally 24% at the ages 46 and over.

Table 6: Age Groups of the Participants

	Frequency	Percent
18-25	67	18,7
26-35	87	24,3
36-45	118	33
> 46	86	24
Total	358	100

When we looked at how the rate of income status showed a distribution in the participants, it is seen that level of participants who have an income between 0-1000 TL are 18.4%, between 1001-1500 TL are 29.9%, between 1501 and 2000 TL are 27.9% and lastly who have 2001 TL and over income are 23.7% (Table 7).

Table 7: Monthly Income Ranges of the Participants

	Frequency	Percent
0-1000 TL*	66	18,4
1001-1500 TL	107	29,9
1501-2000 TL	100	27,9
>2001 TL	85	23,7
Total	358	100
* TL= Turkish Lira		

Table 8 shows that the vast majority of the participants have university (51.4%) and high school graduates (32.7%).

Table 8: Educational Status of the Participants

	Frequency	Percent
Primary School	38	10,6
High School	117	32,7
University	184	51,4
MB and PHD	19	5,3
Total	358	100

When professional status of the participants are examined from Table 9, it is seen that 12.8% of the participants are students, 17.3% are workers, 18.2% are self-employed persons, 5.6% are unemployed people, 25.4% are public servants and 20.7% are composed of retirees.

Table 9: Professional Status of the Participants

	Frequency	Percent
Retiree	74	20,7
Student	46	12,8
Government Official	91	25,4
Worker	62	17,3
Self-employed	65	18,2
Unemployed	20	5,6
Total	358	100

2.2 The Research Model and Hypotheses

A draft questionnaire was developed to measure the four independent factors that used in the literature (Erdem et al., 2008: 101) as being key aspects of the hospital service influences and one dependent factor that is overall patient satisfaction (Figure 2, 4):

1. MS- Satisfaction with managerial services (four items);
2. AP- Satisfaction with attention and politeness (three items);
3. CH- Satisfaction with cleanliness and hygiene (three items);
4. I- Satisfaction with informing (three items);
5. OS- Overall patient satisfaction (one item).

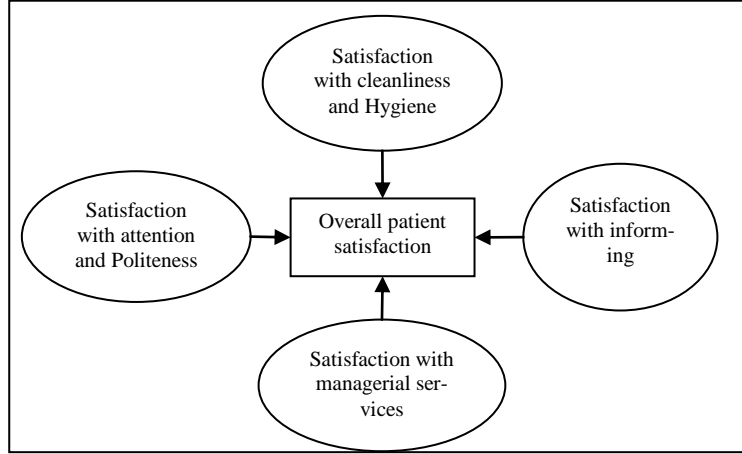


Figure 2: Proposed Conceptual Model of Construction Patient Satisfaction

The following four hypotheses are proposed:

H1. There will be a positive relationship between satisfaction with managerial services and overall patient satisfaction.

H2. There will be a positive relationship between satisfaction with attention and politeness and overall patient satisfaction.

H3. There will be a positive relationship between satisfaction with informing and overall patient satisfaction.

H4. There will be a positive relationship between satisfaction with cleanliness and hygiene and overall patient satisfaction.

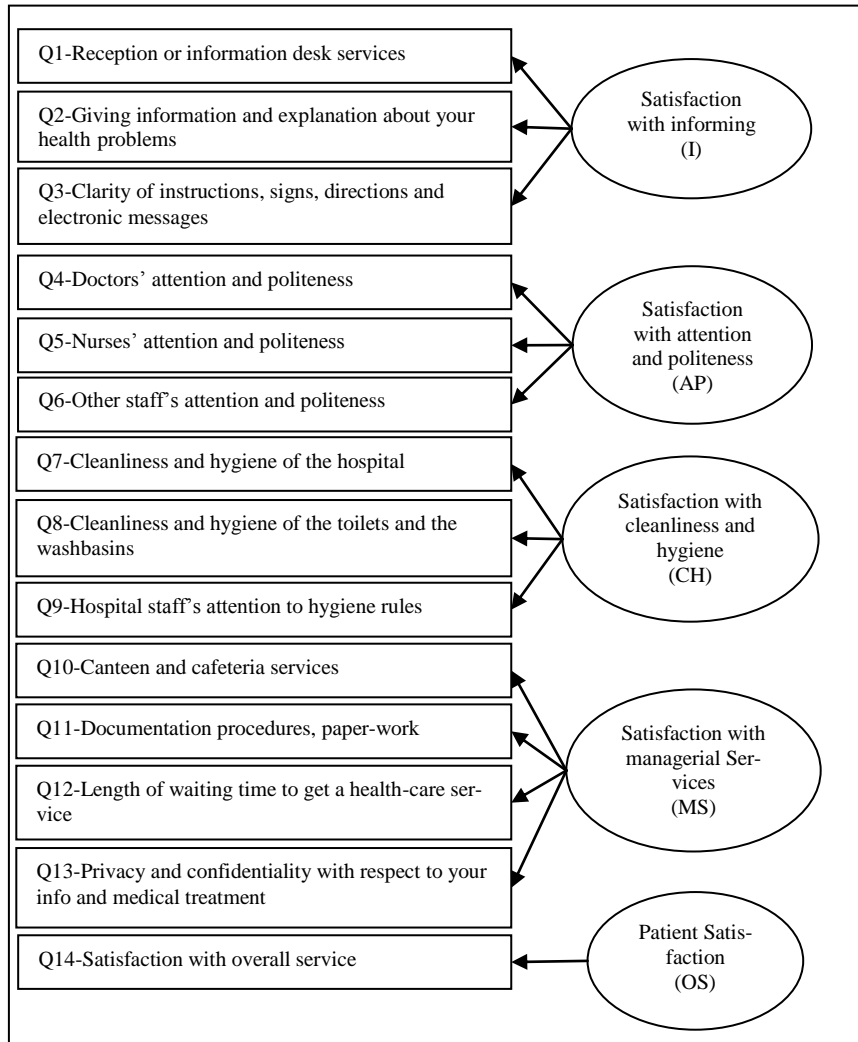


Figure 3: The Fit Measurement Model of Patient Satisfaction

The first section of the questionnaire collected demographic information. The second section of the questionnaire began with one screening question to identify qualified respondents. Then it continued with 14 items (their distribution to factors is given in Figure 3) in which one question was concerning overall satisfaction and 13 questions were asked to measure the other four factors that affect the overall patient satisfaction. All items were measured on a five-point Likert scale from 5 = very satisfied to 1 = very dissatisfied.

Questionnaires were asked to adults over the age of 18. To improve response accuracy, the questionnaire was administered during face-to-face interviews. 400 completed surveys were collected (response rate of 89.5 percent). Of the surveys completed, 358 were considered usable since many were not fully completed. Data collection was carried out from January to March 2010.

Table 10: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	34,2933	60,174	,407	,843
Q2	34,2151	60,483	,387	,844
Q5	34,2123	60,756	,392	,843
Q4	33,8547	59,267	,463	,839
Q5	33,5698	58,588	,463	,839
Q6	33,5335	58,950	,602	,829
Q7	32,8631	62,903	,431	,840
Q8	32,9609	60,940	,613	,831
Q9	33,2514	62,082	,645	,832
Q10	33,2402	56,519	,546	,833
Q11	32,8771	59,245	,474	,838
Q12	33,2318	59,372	,675	,826
Q13	33,1480	58,832	,696	,825
Cronbach's Alpha: 0.846				

The interviewers were six marketing students who had been trained and were experienced in face-to-face communication and survey questioning techniques. The retained 358 usable responses were analysed using SPSS (version 19.0) to compute their mean scores, standard deviation, skewness and kurtosis, thus ensuring a better understanding of the distribution of each item used in the construct operationalization. The results showed neither outlying nor severely skewed cases, thus increasing the confidence in the contribution of the questionnaire items to the measurement of their respective constructs (Table 10).

Following Tam's (2007) recommendations, measurement items were revised and refined using coefficient α , item-to-total correlations, and exploratory factor analyses. The results for internal consistency using coefficient α (i.e. Cronbach's α) confirm that the measures of the major constructs exhibit good reliabilities, and all coefficient α s reported 0.70 criteria for reliability acceptability.

In addition, exploratory factor analysis using principal component extraction with Varimax rotation was conducted on the measures of the major constructs, and the results are reported in Table 11.

Table 11: Factors and Factor Loadings Extracted From the Exploratory Factor Analysis

	Factors			
	MS	CH	AP	I
Q1				,865
Q2				,863
Q5				,855
Q4			,802	
Q5			,816	
Q6			,901	
Q7		,922		
Q8		,897		
Q9		,738		
Q10	,812			
Q11	,764			
Q12	,854			
Q13	,918			

All measurement items load distinctively on the subjective underlying constructs, which indicates that they were clearly grouped and operationalized to measure the major constructs. Finally four factor solution explains 78.87 percent of the total variance (Table 12).

Table 12: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,922	42,303	42,303	5,922	42,303	42,303	3,366	24,045	24,045
2	2,166	15,473	57,777	2,166	15,473	57,777	2,751	19,648	43,693
3	1,636	11,687	69,464	1,636	11,687	69,464	2,481	17,722	61,415
4	1,318	9,411	78,875	1,318	9,411	78,875	2,444	17,461	78,875
5	,591	4,224	83,099						
6	,476	3,401	86,500						
7	,396	2,830	89,330						
8	,341	2,435	91,765						
9	,332	2,374	94,139						
10	,299	2,133	96,272						
11	,195	1,394	97,666						
12	,159	1,134	98,800						
13	,097	,696	99,496						
14	,071	,504	100,000						
KMO: 0.826			Bartlett's Test: 3765.909, p<0.000						

3. A Structural Equation Model (SEM) of the Patient Satisfaction

Structural equation modelling techniques are considered today to be a major component of applied multivariate analyses. A structural model can be viewed as a guide that allows one to determine the relative strength of each variable included in explaining a desired set of outcomes. In its broadest sense, SEM is concerned with testing complex models of functional relationships between observed variables and

latent variables. The functional relationships are described by parameters that indicate the magnitude of the effect (either direct or indirect) that independent variables have on dependent variables (Saenz *et al.*, 1999: 203).

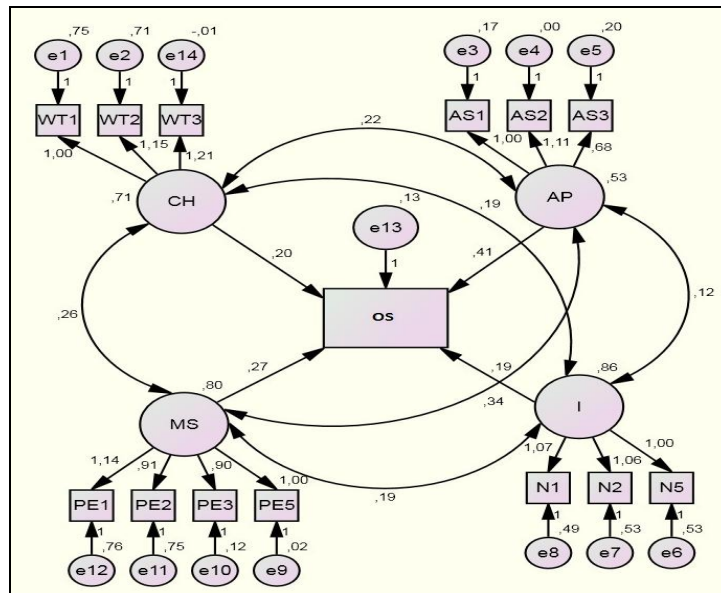


Figure 4: Structural Equation Model Output of the Patient Satisfaction

In this study, the Amos software package was used to perform the SEM, and the inter-relationships between the constructs of the hypothesized model that were investigated are shown in the Figure 4.

Table 13: GOF Indices for the Measurement Model

Fit indices	Recommended level	Fitted structural model
χ^2/DF	<2.00	23,948 / 68 = 3,396
NFI	>0.90	,940
RFI	>0.90	,919
IFI	>0.90	,957
TLI	>0.90	,942
CFI	>0.90	,956
RMSEA	≤ 0.10	,082

Testing the structural model would be meaningless until it has been established as a good measurement model. A critical issue in relation to any SEM is the assessment of the overall model fit. The overall fit of the baseline model was as-

sessed using multiple goodness-of-fit (GOF) indices including the ratio of chi-square χ^2 to the degrees of freedom, the root mean square error of approximation (RMSEA), the normed fit index (NFI), the relative fit index (RFI), the incremental fit index (IFI), the Tucker-Lewis index (TLI) and the comparative fit index (CFI). The GOF indices of this model are shown in Table 13.

Table 14: Standardized Regression Weights (Total Effects)

	Estimates	p
OS <--- CH	.232	.000
OS <--- AP	.410	.000
OS <--- I	.243	.000
OS <--- MS	.327	.000

A summary of standardized path coefficients, together with the squared multiple correlation (R^2), of the best-fit measurement model is shown in Table 14. All path coefficients are positive and statistically significant at $p=0.05$, thus their significance to the model is augmented.

Relationships between variables at a 0.05 significance level from the structural equation model are seen in Table 14. Test results of the research hypothesis were conducted by means of this table. According to this, hypothesis test results are:

H1. There will be a positive relationship between satisfaction with managerial services and overall patient satisfaction. **Accepted** ($r= 0.327$, $p=0.000$).

H2. There will be a positive relationship between satisfaction with attention and politeness and overall patient satisfaction. **Accepted** ($r= 0.410$, $p=0.000$).

H3. There will be a positive relationship between satisfaction with informing and overall patient satisfaction. **Accepted** ($r= 0.243$, $p=0.000$).

H4. There will be a positive relationship between satisfaction with cleanliness and hygiene and overall patient satisfaction. **Accepted** ($r= 0.232$, $p=0.000$).

Table 15: Covariances

	Estimate	Standard Error	Significance
MS <-->AP	,339	,041	,000
CH<--> AP	,222	,038	,000
CH<--> I	,187	,048	,000
CH<--> MS	,259	,046	,000
AP<--> I	,124	,040	,002
MS<--> I	,195	,050	,000

Table 16: Correlations

	Estimate
MS <-->AP	,517
CH <-->AP	,360
CH <-->I	,239
CH <-->MS	,343
AP <--> I	,183
MS <--> I	,234

4. Conclusion

Skinner et al. (2004) demonstrated that at local level, people's perceptions are based not only on their own experience but also on comparison with, and observation of, the treatment of their peers (p. 568). So it can be well understood the statement of Bell (2004) pointed out that there is need for the development of knowledge about quality from the patients' perspective (p.406) and also Nordgren (2009) concluded in his study that values like experienced health, quality of life, reduced waiting time and accessibility, trust, information, avoidable suffering and avoidable deaths should be encompassed for service productivity in health care (p.124).

Anderson (1995) pointed out that respectively reliability, assurance, responsiveness, empathy and tangibles are effecting the patient satisfaction in health care services. For instance, from the results of the studies in Turkey, Özcan et al. (2008) found that patients took account the factors such as bureaucratic processes, information system, consultation time, hospitality and courtesy in the evaluation of satisfaction. Nonetheless, Erdem et al. (2008) demonstrated that while courtesy has a big effect on the patient satisfaction at a level of %41, administrative services has %7 and medical services has only %1. On the other side, Kılınç (2007) concluded that the settlement of the health services and hospitals is an important factor and more effective on the satisfaction than the courtesy and hospitality of the hospital staff. However, in another study Aslan et al. (2008) indicated that quality (%43), paying court (%6), facileness (%17), price of the services (%19) are the main factors of patient satisfaction.

Though, in our study, a conceptual model was developed and tested using data and information gathered via a questionnaire survey covering the main attributes of patient satisfaction in health services. This model confirmed that all factors have a significant direct relationship with patient satisfaction, and they explain and influence 78.7 percent of the variance in patient satisfaction. In this study, we used structural equation modelling to empirically validate the proposed causal relationships between factors and overall patient satisfaction. The results improve our understanding of the causal relationships and determine where the organization should

focus its attention and efforts to achieve better goals.

It was found that there are direct and indirect relationships between managerial services, attention and politeness, cleanliness and hygiene, hospital informing services and overall patient satisfaction, respectively. It is clear that attention and politeness is the main driver to patient satisfaction. Managerial services are also important for high satisfaction. Then, informing of patients and cleanliness and hygiene are following as important effectors on satisfaction. From this point of view both public and private managers have to set a realistic communication and satisfaction policy throughout this solution in their organizations to get more advantageousness by comparison with their competitor health service organizations.

This study has certain limitations. First, it would have been better to add all health service organizations to the sample framework to gather more various data and information. Second, a single-item scale was used to measure overall satisfaction. In the future researches, it is needed reproducing the new factors that influence overall patient satisfaction with the changes as well as in technology, communication and management systems in health service organizations.

References

- AKSAKAL, T. and BILGILI, N. (2008), "The Evaluation of Satisfaction with Nursing Care; An Example of Gynaecology Service", *Erciyes Medical Journal*, Vol. 30 (4), 242-249.
- ANDERSON, E. A. (1995), "Measuring Service Quality at a University Health Clinic", *International Journal of Health Care Quality Assurance*, Vol. 8 No. 2, 32-37.
- ASHILL, N. J., CARRUTHERS, J., KRISJANOUS, J. (2005), "Antecedents and Outcomes of Service Recovery Performance in a Public Health-Care Environment", *Journal of Services Marketing*, 19/5, 293-308.
- ASLAN, Ş., SEZGİN, M., HAŞILOĞLU, S. B. (2008), "The Research of the Customer Satisfaction and Factors of Constitutive Satisfaction in Non-governmental Health Care Organizations", *Journal of Muğla University Institute of Social Sciences*, Vol. 20, 23-40.
- ASLANTEKİN, F., GÖKTAŞ, B., ULUŞEN, M., ERDEM, R. (2007), "Quality Experience In Health Services: Dr. Ekrem Hayri Üstündağ Gynaecology and Obstetrics Hospital Example", *Fırat Journal of Health Services*, Vol. 2, No. 6, 55-71.
- BELL, L. (2004), "Developing Service Quality in Mental Health Services", *International Journal of Health Care Quality Assurance*, Vol. 17, No. 7, 401-406.

BITNER, M.J. and HUBBERT, A. M. (1994), "Encounter Satisfaction versus Overall Satisfaction versus Quality", in Rust, R.T. and Oliver, R.L. (Eds), *Service Quality: New Directions in Theory and Practice*, Sage, London, 72-94.

BUTLER, D., OSWALD, S. L., TURNER, D. E. (1996), "The Effects of Demographics on Determinants of Perceived Health-Care Service Quality The Case of Users And Observers", *Journal of Management in Medicine*, Vol. 10, No. 5, 8-20.

DURŞUN, Y. and ÇERÇİ, M. (2004), "A Research on Perceived Service Quality, Perceived Value, Patient Satisfaction and Behavioural Intention Relationships", *Erciyes University, Economics and Administrative Sciences Faculty Journal*, Vol. 23, 1-16.

ERDEM, R., RAHMAN, S., AVCI, L. ET AL. (2008), "The Effect of Patient Satisfaction on Patient Commitment", *Erciyes University, Economics and Administrative Sciences Faculty Journal*, Vol. 31, 95-110.

KILINÇ, C. Ç. (2007), "A Research on Customer Relations Management at Hospital Managements in Health Sector", *Review of Social, Economic & Business Studies*, Vol.9/10, 309-332.

LEWIS, R.C. and BLOOMS, B.H. (1983), "The Marketing Aspects of Service Quality", in Berry, L.L. (Ed.), *Emerging Perspectives on Service Marketing*, American Marketing Association, Chicago, IL, 99-104.

NESANIR, N. and DINÇ, G. (2008), "Patient Satisfaction Level of the Patients Who Were Hospitalized in Manisa City", *TAF Preventive Medicine Bulletin*, Vol. 7/5, 419-428.

NORDGREN, L. (2009), "Value creation in health care services – developing service productivity: Experiences from Sweden", *International Journal of Public Sector Management*, Vol. 22, No. 2, 114-127.

ÖNSÜZ, M. F. (2008), "İ Satisfaction Levels of Hospitalized Patients in a University Hospital in Istanbul", *Marmara Medical Journal*, Vol. 21 (1), 33-49.

ÖZCAN, M., ÖZKAYNAK V., TOKTAŞ, İ. (2008), "The Satisfaction Levels of Outpatients in Silvan State Hospital Public", *Dicle Medical Journal*, Vol. 35, No. 2, 96-101.

PARASURAMAN, A., ZEITHAML, V.A., BERRY, L.L. (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality", *Journal of Retailing*, Vol. 64 No.1, 12-40.

PHILIP, G. and STEWART, J. (1999), "Involving Mental Health Service Users in Evaluating Service Quality", *International Journal of Health Care Quality Assurance*, Vol. 12/5, 199-209.

SAENZ, T., MARCOULIDES, G.A., ELLEN, J., YOUNG, R. (1999), "The Relationship between College Experience and Academic Performance among Minority Students", The International Journal of Educational Management, Vol. 13/4, 199-207.

SKINNER, D., SAUNDERS, M. N.K. AND DUCKETT, H. (2004), "Policies, promises and trust: improving working lives in the National Health Service", The International Journal of Public Sector Management, Vol. 17, No. 7, 558-570.

TAM, J. L. M. (2007), "Linking Quality Improvement with Patient Satisfaction: A Study of a Health Service Centre", Marketing Intelligence & Planning, Vol. 25, No. 7, 732-745.

URL, www.tuik.gov.tr/AltKategori.do?ust_id=11, (01.04.2010).