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The Impact of Service Quality Dimensions on Patient Satisfaction, Repurchase Intentions and Word-of-Mouth Communication in the Public Healthcare Industry

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Abstract

The aims of this study are investigating the effect of service quality (SQ) dimensions on satisfaction, identifying the effect of satisfaction on word of mouth (WOM) communication and repurchase intention (RI) and searching a significant relationship between WOM and RI. Improving CS and delivering SQ help service providers to differentiate the offering. Thus our motive is to find out that the statement is true for healthcare industry. This study has adopted the work of Parasuraman et al.'s SERVQUAL variables. A structural equation model (SEM) that utilizes data from 369 patients facing a range of services is used and finds that empathy and assurance dimensions are positively related to customer satisfaction. However, customer satisfaction has a significant effect on WOM and RI which are found highly related.

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Selection and peer-review under responsibility of the 2nd International Conference on Strategic Innovative Marketing.

Keywords: Service Quality Dimensions, Customer Satisfaction, Word-Of-Mouth, Repurchase Intention, Hospitality

1. Introduction

Competition has an important place for the improvement of quality and patient satisfaction in healthcare institutions. In the environments where there is no competition, that's to say when demand surpasses the supply, hospitals offer their patients unsatisfactory services because of the idea that the patients have no other alternatives and they would accept the present services unconditionally. In the healthcare industry, hospitals provide the same types of service but they are differentiated based on the quality of service (Chaniotakis, IE. and Lymperopoulos, C., 2009). Herein, WOM is a very important promotion tool to share this service quality in a hospital with other people. Therefore, this topic was chosen to study.

Though the relationships between the concepts in question, there is a gap in marketing literature related to impact of service quality dimensions on satisfaction, repurchase intentions and word-of-mouth, particularly in the public healthcare industry. In this context, the purposes of this study are to investigate the effect of service quality dimensions on patient satisfaction, to identify the effect of satisfaction on word of mouth (WOM) communication and repurchase intention (RI) and to search a significant relationship between WOM and RI in the public healthcare industry. Specifically, based on Parasuraman et al.'s (Parasuraman, A. Zeithaml, VA. and Berry, LL., 1985) SERVQUAL variables, the authors tried to identify the impacts of each variable on satisfaction repurchase intentions for patients in Turkiye.

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Rest of the paper is organized as follows. After a brief presentation of the service quality dimensions, satisfaction and word-of-mouth, the research hypotheses are proposed and the research methodology is explained. The analysis of the collected data and testing of the hypotheses are complemented by a discussion of the main results in relation to the complaining literature. The article ends with a revision of the main findings and limitations of this study, and also with a proposal for future research.

2. Literature Reviews

Service Quality and Its Dimensions

Some researchers have developed alternate concepts for service quality. From the two internationally recognized schools of service management, the Nordic school view (Grönroos, C., 1984) and the American school view [2, 4]; the Nordic school explains the service quality on two dimensions as functional and technical quality. Ever then, the American school defines service quality on five dimensions: (1) Tangibles (Physical facilities, equipment, and appearance of personnel); (2) Reliability (Ability to perform the promised service dependably and accurately); (3) Responsiveness (Willingness to help customer and provide prompt service); (4) Assurance (Knowledge and courtesy of employees and their ability to inspire trust and confidence); (5) Empathy (Caring, individualized attention the firm provides its customers)

Parasuraman et al. (Parasuraman, A. Zeithaml, VA. and Berry, LL., 1988) defined service quality as the gap between customers' expectations of service and their perception of the service experience. The Gap Model, which was first developed by Parasuraman and his colleagues, and is considered the most eminent work done on the topic (Jun, M., Yang, Z. and Kim, D., 2004), and focuses on the differences between consumers' viewpoints and marketers' viewpoints (Svensson, G., 2006), has evoked a revolution (Redman, T. and Mathews, B. P., 1998), and encouraged many researchers to investigate service quality constructs as part of the marketing concept (Chowdhary, N. and Prakash, M., 2007). The debates and contributions within the framework of measuring and conceptualizing service quality have evolved around the SERVQUAL scale (Espinoza, M. M., 1999), and the roots of the efforts of conceptualizing service quality have now reached to that model and scale (Hamer, L. O., 2006). The pioneer work of Parasuraman et al. (1988), propounded that service quality leans on multi-dimensional factors (Saunders, S.G., 2008). This conceptual model provides an advantage on easily understanding service quality components (Kuei, C. and Lu, M.H., 1997).

SERVQUAL framework was proposed to assess perceived service quality for variety of sectors. Many applications of SERVQUAL have been reported while it has been tested and used to measure service quality in various contexts, like banking sector (Ehigie, BO., 2006), (Karatepe, OM. Avci, T. and Tekinkus, M., 2005), (Mels, G. Boshoff, C. and Nel, D., 1997), (Poolthong, Y. and Mandhachitara, R., 2009), (Jabnoun, N. and Al-Tamimi HAH, 2003), (Zhou, L. Zhang, Y. and Xu, J., 2002), hospitality industry (Nadiri, H. and Hussain, K., 2005), (Butler, D. Oswald, SL. and Turner, DE., 1996), (Mei, AWO. Dean, AM and White CJ. 1999), (O'Neill, M. Watson, H. and McKenna, M., 1994), insurance (Tsoukatos, E. and Rand, GK., 2006), restaurant (Qin, H. Prybutok, VR. and Zhao, Q., 2010) and internet marketing (Long, M. and McMellon, C., 2004).

Several studies to assess perceived service quality have been performed in healthcare industry. Some of studies have been done about public healthcare (Aagja, J. P. and Garg, R., 2010), (Andaleeb, SS. and Millet, I., 2010), (Camilleri, D. and O'Callaghan, M., 1998), (Manaf, NHA., 2005) while some of them have been done about private healthcare (Andaleeb, SS. and Millet, I., 2010), (Camilleri, D. and O'Callaghan, M., 1998), (Butt, MM. and Run, EC., 2010).

Previous work on healthcare service quality has primarily focused on service performance measurement methodologies, while Butt, MM. and Run, EC. (2010) suggested that literature could benefit from the application of gap-theory methodology for analysing service quality. As a result, they developed, from best practices in marketing and services research, a conceptual theory-based model focusing on the dimensionality of patient expectations of healthcare service quality. Isik et. al. (Işık, O. Tengilimoğlu, D. and Akbolat, M., 2011) examined the applicability of SERVQUAL dimensions to a healthcare service through structural equation modelling analysis. The results of this research suggest that the SERVQUAL instrument is a useful measurement tool in assessing and monitoring service quality in hospitals, enabling the staff to identify where service improvements are needed from the customers' perspectives.

Service quality has established itself as an important determinant of both customer satisfaction and word-of-mouth communication (Lang, B., 2011). The interrelationships between the concepts of the study can be summarized as follows: perceived service quality is the antecedent of satisfaction (Lee, H. Lee, Y. and Yoo, D., 2000), (Murray, D. and Howat, G., 2002); perceived service quality has direct and indirect effects on behavioral intentions such as positive WOM (Ladhari, R., 2009); there is a positive relationship between service quality, satisfaction, and revisit intention (Lee, J. Kim, H, Ko, YJ. and Sagas, M., 2011) and service quality positively influences to customer satisfaction (Kuo, Y. Wu, C. and Deng, W., 2009).

Customer Satisfaction and Service Quality

Customer satisfaction has been recognized in marketing thought and practice as an important goal of all business activities (Wang, Y. and Lo, HP., 2002). Besides of having an importance for businesses based on its effect on repurchase intention and word-of-mouth communication, customer satisfaction is also labelled as the cheapest promotion tool (Pizam, A. and Ellis, T., 1999). Combining the purchase and consumption processes with the phenomenon of post-purchase (Kandampully, J. and

Suhartanto, D., 2000), customer satisfaction may be a guide for tracking and developing the current and potential performance of businesses (Zairi, M., 2000).

As being one of the mostly studied components in marketing literature (Phillips, WJ. Wolfe, K. Hodur, N. and Leistriz, FL., 2011), there are varied attempts to define the customer satisfaction concept (Yang, Z. and Peterson, RT., 2004), but a generally agreed definition has not been exposed yet (Tsiotsou, R., 2006).

In the light of the previous studies, a customer satisfaction definition can be done as:

“As a construct, customer satisfaction has been noted as a special form of consumer attitude; it is a post-purchase phenomenon reflecting how much the consumer likes or dislikes the service after experiencing it” (Woodside, AG. Frey, LL. and Daly, RT., 1989).

In the healthcare industry, past research on patient satisfaction has also found a linkage between service quality and satisfaction. For example, Anbori, A. Ghani, SN. Yadav, H. Daher, AM. and Su, TT. (2010) shows that empathy and assurance dimensions, which mainly represent word-of-mouth communication, had strong influence on patient’s willingness to come back to the hospital. Another study, which tested the dimensionality of the SERVQUAL instrument in the Northern Cyprus health care industry, indicates that while all three dimensions are somewhat influential on patient satisfaction, in public hospitals tangibles dimension seems to exert no significant influence on satisfaction (Yeşilada, F. and Direktör E., 2010).

The related literature acknowledges the importance of repurchase and WOM communication and thus uses these two dimensions as consequences of service quality perceptions (Anderson, EW., 1998). The customer satisfaction is found as the direct predictor of repurchase and WOM communications (Cronin, JJ. and Taylor, SA., 1992).

Word-of-mouth (WOM) and Repurchase Intentions (RI)

WOM and RI can be seen as sub-dimensions of customer loyalty. Among these two constructs, RI is an personal aim of the customer on sustaining the relationship with a service provider and purchasing the next service from the same one (Jones and Taylor, 2005). In marketing literature, researchers have reported that word-of-mouth plays an important role in the product choice process and in the selection of service providers (Gilly, MC. Graham, JL. Wolfenbarger, MF. and Yale LJ., 1998). Word-of-mouth (WOM) may be defined as an informal communication source among senders and receivers about service or good (Murray, K., 1991). Sweeney et al. (2008) suggests that the potential of WOM to impact on perceptions or on actions depends on the nature of the sender-receiver relationship, the richness and strength of the message and its delivery.

In some studies, WOM has been identified as a primary source of informational influence in consumer repurchase decision-making as well as a vehicle for expressing satisfaction or dissatisfaction with a service experience (Repo, KL., 1999).

Word-of-mouth can be positive and negative. If a customer recommends to other people about service or good that is positive WOM. However, if a customer complains to other people about service or good that is negative WOM. Of course, marketers promote positive WOM rather than negative WOM. But in the real world, the situation is different. According to Wang’s study (Wang, X., 2011), satisfied consumer may or may not result in positive WOM about service, while a dissatisfied consumer has a strong tendency to tell others about his/her anger and even exaggerates the bad experience. Ennew et al. (2000) indicate that positive WOM from satisfied customers can increase purchases. Furthermore, Gremler and Brown (1996) suggest that customers who are willing to offer positive WOM communications are more likely to become loyal customers. Besides all, in actuality, positive WOM is a very important advertising tool for firms. According to early studies, it is nine times as effective as traditional advertising (Mazzarol, T. Sweeney, JC. and Soutar, GN., 2007).

Turkish Healthcare Industry

The Turkish healthcare system was characterised by strong public sector component since 2002. The general economic prospective of Turkiye was changed and the number of provide hospitals has increased rapidly. Healthcare has been the biggest components of Turkish’s budgetary expenditure. Consequently, the government has attempted to shift the burden of healthcare to the private sector. Several private hospitals have been established in most of the major cities of Turkiye. With the economical development, the public’s expectation of health service has rapidly changed. The government’s goal has been to modernise public hospitals to ensure that they offer qualified service.

Healthcare sector has been gaining importance due to population growth and the rise in the income per capita. According to data of Health Statistics Yearbook 2010, published in 2011, though state-private health cost per capita was 128` in the year 2000, this increased up to 812` in 2008. 17% of this figure accounts for the amount of money spent by the patients themselves for healthcare costs. As it is understood, state supports 83% of the citizens’ healthcare costs (Türkiye Cumhuriyeti Sağlık Bakanlığı, Sağlık İstatistikleri Yıllığı, 2010). Due to the fact that income per capita has increased, the consumers head towards the institutions offering better services. Healthcare institutions having the advantage of competition with their services step forward in the sector.

Figure I. shows the conceptual model of study.

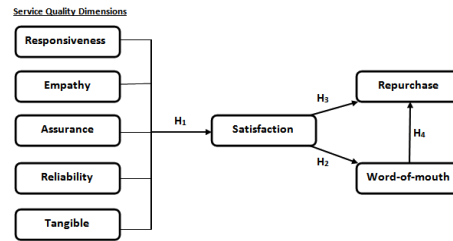


Fig. 1. Conceptual Model

3. Methodology and Data Characteristics

The SERVQUAL scale is based on a gap model (Parasuraman, A. Zeithaml, VA. and Berry, LL., 1985), which suggests the gap between customers' expectations and their perceptions of actual performance drives the perception of service quality. Both the original version of SERVQUAL (Parasuraman, A. Zeithaml, VA. and Berry, LL., 1988) and its revised version (Parasuraman, A. Zeithaml, VA. and Berry, LL., 1991) contain five dimensions of service quality namely tangibles, reliability, responsiveness, assurance and empathy.

Each these, and the indicators used to assess them can be summarised as follows:

“Tangibles” (TAN). The indicators of the variable, which is related to the physical facilities, appearance of personnel and the equipment of the hospital, stated “Neat appearance of employees” (TAN1), “Visual appealing facilities” (TAN2), “Neat appearance of polyclinic service” (TAN3), “Professional appearance” (TAN4), and “Modern equipments” (TAN5).

“Assurance” (AS). The indicators of the variable, which is related to the knowledge and courtesy of employees and their ability to inspire trust and confidence, stated “Constantly courteous” (AS1), “Able to instill confidence in patient” (AS2), “Having the knowledge to answer patients' questions” (AS3), and “ability to handle patients' problems” (AS4).

“Empathy” (EMP). The indicators of the variable, which is related to the caring, individualized attention the firm provides its customers, stated “Given individual attention” (EMP1), “Convenient consultation hours” (EMP2), and “Understand the specific needs of patient” (EMP3).

“Reliability” (REL). The indicators of the variable, which are related to the ability to perform the promised service dependably and accurately, stated “a sincere interest in solving problem” (REL1), “Maintains error-free records” (REL2), and “Providing services as promised” (REL3).

“Responsiveness” (RES). The indicators of the variable, which are related to the willingness to help customer and provide prompt service, stated “Offering prompt services to patients” (RES1), “Responding quickly” (RES2), and “Willing to help patients” (RES3).

This study focuses on the effect of service quality on satisfaction; repurchase intention and word-of-mouth in the healthcare industry. The following hypotheses, based on a review of the literature, provide the scope and depth of the study.

H1: All the five service related factors have significantly positive influence on patient satisfaction.

H1a: Responsiveness has a significantly positive influence on patient satisfaction.

H1b: Empathy has a significantly positive influence on patient satisfaction.

H1c: Assurance has a significantly positive influence on patient satisfaction.

H1d: Reliability has a significantly positive influence on patient satisfaction.

H1e: Tangible has a significantly positive influence on patient satisfaction.

H2: Patient satisfaction has a significantly positive influence on word-of-mouth.

H3: Patient satisfaction has a significantly positive influence on repurchase.

H4: There is a significant linkage between word-of-mouth and repurchase intentions.

The survey questionnaires consisted of two sections. The first section of the questionnaire was a 21-item scale measuring the dimensions of service quality. These questions were based on the literature of service quality. The second section includes questions to determine the demographic profiles (age, education level, income, occupation and gender) of the respondents. In section one, respondents were required to rate on a 5-point Likert scale for data collection with “1” as “strongly disagree” and “5” as “strongly agree” (Likert, 1934). The data were collected from patients who were treated in one of the largest university hospital in Turkiye between April 2011 and May 2011. The total number of visitors to all polyclinics of the hospital from January 2010 to January 2011 was 181.200 patients. The hospital treats average 950 patients every day. The questionnaire was pilot tested in early March 2011 by ten patients who visited the hospital. Respondents in the pilot test did not have problems with the questionnaire, although a few minor changes of wording were suggested.

Following the pilot test, a large-scale consumer questionnaire was administered by three master students (of a local university). The research questionnaire, which was in Turkish, was finally administered by personal interviews to 380 patients in all polyclinics of the hospital, representing different age groups. Convenience sampling was implemented due to time and

budget restrictions. 369 usable questionnaires were collected. Face-to-face interviews were conducted in order to ensure a high response rate and to reduce the missing data in the questionnaires. Subjects are asked to assess items of different factors, which are viewed as antecedents of service quality, satisfaction, repurchase intention and word-of-mouth in terms of their perceptions based on five-point scales. The questionnaire was in Turkish. SPSS 18.0 for Windows and AMOS 5.0 were used for data analysis.

4. Analysis of Model and Findings

Table I presents the mean scores and standard deviation of the respondents. The result shows that generated overall customer satisfaction ($\mu = 3.51$), repurchase ($\mu = 3.51$) and word-of-mouth ($\mu = 3.51$) is not high but they are above median value of 3. And also, all the mean scores for statements related to service quality dimensions are above median value.

Table I. Descriptive Statistics of Variables

Variables	Mean ^a	Std. Dev.	Min.	Max.
Neat appearance of polyclinic service	4.00	0.960	1	5
Professional appearance	3.95	1.008	1	5
Able to instil confidence in patient	3.91	0.979	1	5
Able to handle patients' problems	3.87	1.033	1	5
Neat appearance of employees	3.85	0.970	1	5
Modern equipments	3.79	1.039	1	5
Responding quickly	2.78	1.314	1	5
Have the knowledge to answer patients' questions	3.78	1.128	1	5
Visual appealing facilities	3.76	0.979	1	5
Willing to help patients	3.70	0.844	1	5
Maintains error-free records	3.63	1.323	1	5
Given individual attention	3.63	0.947	1	5
Constantly courteous	3.62	0.992	1	5
Convenient consultation hours	3.55	1.118	1	5
Overall satisfaction	3.51	0.850	1	5
Repurchase	3.51	1.014	1	5
Offers prompt services to patients	3.50	1.116	1	5
Word-of-mouth	3.45	1.021	1	5
Provides services as promised	3.36	1.089	1	5
Understand the specific needs of patient	3.30	1.130	1	5
A sincere interest in solving problem	3.05	1.143	1	5

Notes: ^aScale: 1-5 (1=strongly disagree, 5=strongly agree);(n=369)

The means of the resulting composite variables ranged from 3.05 to 4.00 and the standard deviations ranged from 0.84 to 1.323 (Table I). The result also shows that “Neat appearance of polyclinic service” ($\mu = 4.00$), “Professional appearance” ($\mu = 3.95$) and “Able to instil confidence in patient” ($\mu = 3.91$) are the factors that scored the highest.

Table II. Resulting Dimensions and Their Reliability Coefficients

Service Quality Dimensions (Items)	Factor Loading	Mean	Variance	(Accepted value >0.7)	(Accepted value >0.5)	
				Cronbach's α	AVE	CR
Tangibles		3.87	0.011	0.86	0.63	0.79
Neat appearance of polyclinic service	0.747					
Visual appealing facilities	0.738					
Professional appearance	0.693					
Modern equipments	0.673					
Neat appearance of employees	0.594					
Convenient consultation hours	0.470					
Assurance		3.80	0.016	0.83	0.60	0.78
Responding quickly	0.829					
Have the knowledge to answer patients' questions	0.776					
Able to instil confidence in patient	0.684					
Constantly courteous	0.675					
Empathy		3.50	0.029	0.82	0.58	0.74
Given individual attention	0.711					
Understand the specific needs of patients	0.656					
Reliability		3.35	0.082	0.73	0.54	0.74
Able to handle patients' problems	0.720					
Maintains error-free records	0.492					
Provides services as promised time	0.475					
Responsiveness		3.33	0.233	0.70	0.51	0.71

<i>Offers prompt services to patients</i>	0.741					
<i>Willing to help patients</i>	0.662					
<i>A sincere interest in solving problem</i>	0.584					

Both Average Variance Extracted (AVE) and Composite Reliability (CR) are used to evaluate the measurement models. The scale items used to measure the construct are shown in Table I. Convergent validity is evidenced by the large factor loadings. The composite reliability was above 0.70 (Fornell C. and Larcker, D., 1981).

The criterion for establishing reliability is that the average variance extracted measures should exceed 0.5 to ensure that, on average, the measures share at least half of their variation with the latent variable (Fornell C. and Larcker, D., 1981).

Inspection of loadings of items on their respective constructs revealed a high degree of individual item reliability, as all items have loadings of greater than 0.50 on their respective constructs (White, J.C., Varadarajan, P.R. and Dacin, P.A., 2003). A principal factor method with a Varimax rotation was applied to the scale. Based on eigenvalues greater than one, an evaluation of the scree plot, and minimum factor loadings of 0.50, the analysis indicated five factors (dimensions) of Service Quality. CFA is then used to confirm, and where necessary to modify, this factor structure using AMOS 5.0. For the scales' reliability analysis, average variance extracted, cronbach's alpha (α) and composite reliability were calculated for all variables' measurement scales. Finally, Table II summarizes the results concerning the measurement model related to the assessment of individual item reliability, internal consistency, and convergent validity, while Table IV provides an overview of the correlation coefficients and descriptive statistics of the constructs under study. According to results of the Table II, all service quality dimensions were reliable.

Table III. Estimated Model's Test Statistics

Goodness Measurement	Goodness-of-Model Fit	Acceptable Goodness Model Fit	The Model of Study
RMSEA	0<RMSEA<0.05	0.95 ≤ RMSEA ≤ 1	0.0693
NFI	0.95 ≤ NFI ≤ 1	0.90 ≤ NFI ≤ 0.95	0.926
CFI	0.97 ≤ CFI ≤ 1	0.95 ≤ CFI ≤ 0.97	0.985
GFI	0.95 ≤ GFI ≤ 1	0.90 ≤ GFI ≤ 0.95	0.935
AGFI	0.90 ≤ AGFI ≤ 1	0.85 ≤ AGFI ≤ 0.9	0.917
Standardized RMR	0.0122		
$p - 0.17$	$\chi^2 - 62,420$	$df - 21$	$0 < \chi^2/df < 3$
			$\chi^2/df - 2.972$

The Root Mean Square Error Average (RMSEA) is measure of model adequacy. The RMSEA is calculated from the average difference of the original data set's correlation matrix and a reproduced correlation matrix that is based on the proposed model. The smaller the RMSEA, the closer the fit between the model and data is. And RMSEA scores are generally considered to signal good fits if they are below 0.10 (Sieberer, UR. Freeman, J. Kokonyei, G. Thomas, CA. and Erhart M., 2009), (Mayfield, J. and Mayfield, M., 2008). RMR values close to zero suggest a good fit.

A family of model adequacy measures also exists, and these metrics are called fit indexes. All fit measures range from 0.00 to 1.00, and higher numbers are indicators of a better model fit. Two of the most commonly used fit measures are the Goodness-of-Fit Index (GFI) and the Adjusted-Goodness-of-Fit Index (AGFI). The AGFI is similar to the adjusted R-squared measure in regression, is derived from the GFI, and reduces score "inflation" from over-fitting a model. GFI and AGFI measures are considered to indicate good model fits when they are above 0.95 and 0.90, respectively. Other fit index includes the Bentler Centralized Fit Index (CFI). When this measure is above 0.95 they generally indicate a good model fit (Sieberer, UR. Freeman, J. Kokonyei, G. Thomas, CA. and Erhart M., 2009), (Mayfield, J. and Mayfield, M., 2008).

The results of the chi-square test used in conjunction with RMSEA, standardized RMR, Relative Chi-square, NFI, CFI, GFI and AGFI indices are sufficient to assess a model's overall fit. The model's GFI was 0.935, and the AGFI was 0.985. All other fit indexes scores were 0.9 or higher. According to the results, as presented in Table IV, all the important indicators of the model fit. The chi-square test p-value was 0.17, meaning that there is no significant difference between the model and the data. The cut-off value of Normed chi-square (χ^2/df) is less than 3.0 (Hu, LT. and Bentler, PM., 1999). The χ^2/df ratio was 2.97 that is within accepted guidelines. Besides, the RMSEA index was 0.06; showing a good fit between model and sample data collected for this study (Hu, LT. and Bentler, PM., 1999). Structural Equation Model (SEM) results indicated a good fit between the model and data.

Table IV. Bivariate Correlations, Discriminate Validity and Square Roots of AVE

	1	2	3	4	5	6	7	8
1-Responsiveness	0.887							
2-Empathy	0.769	0.867						
3-Assurance	0.722	0.821	0.914					
4-Reliability	0.724	0.766	0.567	0.948				
5- Satisfaction	0.321	0.631	0.603	0.532	0.913			
6- Word-of-Mouth	0.398	0.506	0.497	0.418	0.733	0.866		
7- Repurchase	0.425	0.455	0.445	0.431	0.648	0.863	0.913	
8- Tangible	0.567	0.582	0.630	0.646	0.414	0.311	0.395	0.991

Note: *Italic correlations significant at the 0.01 level; AVE on diagonal*

Table IV shows the correlation matrix for all the measures used in the model along with reliability statistics for the constructs. Hypotheses are supported at the correlation level as the correlations among the constructs were significant at $\alpha = 0.05$.

Satisfaction positively and directly influences word-of-mouth (H2) (0.781). Satisfaction is also directly affecting repurchases (H3), but repurchase is much less than word of mouth (0.82). Empathy (H1b) and assurance (H1c) dimensions positively and directly influence satisfaction. Other service quality dimensions just as responsiveness (H1a), reliability (H1d) and tangible (H1e) did not have a significant influence on satisfaction. Besides, word-of-mouth is found to drive repurchase (H4).

Table V. Conclusion of Research Hypotheses by PLS Graph

Hypotheses	Constructs	Path coefficient	t-values	P	
H _{1a}	Satisfaction ← Responsiveness	0.120	1.850	0.065	
H _{1b}	Satisfaction ← Empathy	0.371	4.789	0.000	
H _{1c}	Satisfaction ← Assurance	0.267	3.718	0.000	
H _{1d}	Satisfaction ← Reliability	0.102	1.630	0.104	
H _{1e}	Satisfaction ← Tangible	0.092	1.580	0.120	
H ₂	Word-of-Mouth ← Satisfaction	0.820	17.821	0.000	
H ₃	Repurchase ← Satisfaction	0.781	16.490	0.000	
H ₄	Repurchase ← Word-of-Mouth	0.761	22.867	0.000	
Model performance					
Dependent variable	R²	N	df	F	p > 0.05
Satisfaction	0.363	369	5	45.043	0.000
Word-of-Mouth	0.464	369	1	317.596	0.000
Repurchase	0.426	369	1	271.936	0.000

Significant at 0.05 level based on a t-test (two-tailed)

Considering the results concerning the specific hypotheses, it is seen that all except three hypotheses are supported at the 0.05 level (Table V). Figure II. shows the structure and the results of the analysis of this model.

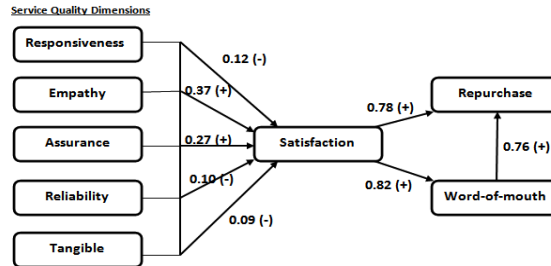


Fig. II. Empirically Validated Model

5. Conclusion

This research aimed to study the impact of service quality dimensions on satisfaction and the effect of satisfaction on repurchase intentions and on word-of-mouth communication for outpatients in Turkey. Moreover, this study examined the relationships among variables and provided statistical evidence for their significance.

Although the main objective of conducted research is to study how service quality dimensions influenced satisfaction by using a suggested research model, the study itself is also relevant to a broad range of service companies that focus their efforts on feeding long-term relationships with patient. The study suggests that two SERVQUAL dimensions (empathy, and assurance) are important antecedents of satisfaction, and, also the satisfaction effects to the ingredients of WOM communication and repurchase that are found highly interrelated.

A similar result was found in our study with the work of Chaniotakis and Lymperopoulos. In the study, which examined the relationships between service quality, patient satisfaction and WOM communication in healthcare industry, they stated that satisfaction influenced WOM. This study also showed that responsiveness, assurance, and tangibility had significant influence on patient satisfaction, while in the case of reliability and empathy significance were not confirmed.

The dimension of reliability is related with providing sufficient and dependable service. Accordingly, the result that exposed no relationship between patient satisfaction and reliability dimension, may be the consequence of the hospital's previous failures to provide sufficient and dependable service which cause reliance problems among its patients.

The findings of the present study are of importance for public hospital administrators in Turkey with respect to the outpatient aspects of service quality. The public hospital administrators must effort to modernise hospitals and have successfully improved the level of service quality.

Several limitations are related to the sample and the research design. The sample was fairly small and to obtain more reliable estimates it is recommended to replicate the study on a larger scale, and possibly extend it to other industries. Further research should attempt to replicate the findings in other contexts. Besides, a more representative sample selection will increase the validity of the study.

Other limitation of this study comes from the fact that the field research was conducted only a hospital in Sivas where is one of the largest cities in Turkiye.

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