

**How to Increase Customers' Identification on Organizations – Using Taiwan
Health Care Industry as Example**

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How to Increase Customers' Identification on Organizations – Using Taiwan Health Care Industry as Example

ABSTRACT: *Drawing on organizational identification theory, we developed a framework of service quality. Two mechanisms of how consumers identify with service supplier, i.e. personalized belongingness and uncertainty reduction are demonstrated. We test our framework by two samples in health care industry of Taiwan. In Study 1, we found staff service quality influences the empathy of service quality, while tangibility influences the reliability of service quality by using 788 health care service workers survey data. In Study 2, we extend the finding by using 657 patients survey data, showing empathy of service quality results in consumers' identification, mediates the relation between staff service quality and consumers' identification. Important theoretical and practical implications are highlighted.*

Keywords: customer service, healthcare management, governance, professional identities

INTROCUPTION

Taiwan's national health system has attracted worldwide attention in recent years because of relatively low costs and short waiting times (Wen, Tsai, & Chung, 2008). The implementation of Taiwan's national health insurance (NHI) program has resulted in universal coverage, easy access, affordable cost, acceptable quality, and high public satisfaction. As such, an increase in access to healthcare resources further encourages patients to demand better quality in healthcare services (Huang & Li, 2010). Especially, for not-central hospital, it is important to build positive image and brand distinction for the public. Also, health service quality has resulted in fierce competition between hospitals (Chang, Wei, & Huang, 2006), and patient identification with hospitals has become critical in the current climate. This paper investigates the question of patient identification with hospitals under Taiwan's health care industry.

Customer-company identification was defined as the sense of connection between an individual and a company (Ahearne, Bhattacharya, & Gruen, 2005). Customers' identification is extremely important because it determines customers' future behaviour, including long-term buying, switching, voice (Zeithaml, Berry, & Parasuraman, 1996). How health service quality influences satisfaction and behavioural intention has been the subject of past research (Olsen, 2002; H. L. Wu, Liu, & Hsu, 2008). While satisfaction and behavioural intention are important outcomes of service quality, patients' identification has been largely ignored. In this study, we will utilise two important mechanisms,

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namely, uncertainty reduction and personalized belongingness, of organizational identification theory to explore the construction process of patients' identification with hospitals (Cooper & Thatcher, 2010).

Another shortfall in previous research about health service quality concerns the lack of clarity of the framework of different dimensions of service quality. Huang and Li (2010, p. 175) have noted that all dimensions of service quality are interrelated. Yet, to our knowledge, no research investigates the relationship between different dimensions of service quality. Empirical studies have shown that different dimensions of health service quality have different functions (Huang, Li, & Yang, 2011; Li, Huang, & Yang, 2011), which imply that these dimensions do not simply form one construct. It is very likely that there are causal relationships between various dimensions. We will also use the framework of organization identification theory to structure the relationships between different dimensions of service quality.

Previous research has shown that patients may have been unable to correctly assess health service quality because of a lack of professional knowledge and skills to make judgements (Fitzpatrick & Hopkins, 2008; Newcomer, 1997). As a result, we do not only test the relationships between different service quality dimensions in patient samples, but also in hospitals' employee samples, who have more expertise and information to judge health service quality.

Our research makes a three-fold contribution to the literature. Firstly, Organizational identification theory is widely studied in human resource management (Edwards & Edwards, 2012), organizational psychology research (Sluss, Ployhart, Cobb, & Ashforth, 2012), but is rarely applied in service quality research. By introducing organizational identification theory, we provide an alternative perspective to understand how service quality influences patients' identification to the hospitals. Thirdly, to our knowledge, this is the first empirical study about the relationship between different dimensions of health service quality. Secondly, we use organizational identification theory to frame the relationship between dimensions of service quality, which provides the theoretical foundation and mechanism about the process of how customers' identification is generated. Finally, we test our theory with two different samples, including different stakeholders. Our theory is supported by different stakeholders,

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which is considered more powerful in theory building and testing (Ferris, Hochwarter, & Buckley, 2011; Hochwarter, Ferris, & Hanes, 2011).

THEORY and HYPOTHESES

Organizational identification theory: uncertainty reduction and personalized belongingness

Ashforth and Meal (1989) systematically introduce social identification and try to focus on the function of social identification in organizations. In organizational contexts, members' desire for interpersonal attachments is motivated by their perceived status within an organization (Tyler & Blader, 2003). Drawing from the concept of 'respect' from the group-engagement model (Blader & Tyler, 2009), we argue that the service offered by hospital staff will enhance patients' perceived respect, which leads to patients' belongingness. The treatment of patients by healthcare workers is critical in determining whether patients feel that they are respected in the service delivery process (W.-Y. Wu & Tsai, 2008). Direct interaction has pronounced effects in the service industry, and the perception of respect makes patients believe that they have a high internal status, consequently, propelling them to identify with a particular hospital.

In terms of the uncertainty reduction mechanism, people tend to have control over their place in the social world (M. A. Hogg & Terry, 2000). Attractive external appearances, including equipment and decor, as well as prestige considerations, will increase people's psychological security to invest in their identity (M. Hogg & Abrams, 1993). For customers, the more attractive the stores where they consume, the greater the level of trust they will place on the products from these stores (Keh & Xie, 2009). In our case, the cognitive judgements of patients on whether a hospital is sufficiently qualified are made based on the quality of hospital equipment as well as the appearance of the hospital environment. Since patients have limited information about the quality of a hospital, the appearances and equipment of a hospital are the most direct evidences they use to make judgements.

The relationship between different service quality dimensions

It has been widely acknowledged that health service quality is a multi-dimensional construct (Cho, Lee, Kim, Lee, & Choi, 2004). Identifiable dimensions include technical aspects such as the

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quality of techniques related to service; and the process of service delivery, such as the quality of the service provided by staff (Gronroos, 1982; Ward, Rolland, & Patterson, 2005). Parasuraman, Zeithaml, and Berry (1988). Two of these dimensions, responsiveness and assurance, are considered is the proxy of staff service quality. Responsiveness indicates the efficiency in responding to patient demands, while assurance indicates the knowledge and courtesy of employees and their ability to encourage patients (Parasuraman et al., 1988). Both responsiveness and assurance contain the judgement of staff service quality. Empathy is a patient-centred care perception, which focuses on patients' specific needs instead of a routine or task. Staff service quality generally reassures a patient that he or she is special, rather than ordinary (W.-Y. Wu & Tsai, 2008). The above conceptual analysis leads to the following hypothesis:

Hypothesis 1: Staff service quality has a positive effect on patients' empathy

Tangibility is defined by the quality of physical facilities, equipment and appearances of personnel in the hospital (Parasuraman et al., 1988). A well-decorated environment and sufficiently advanced modern equipment have a positive effect on customers' trust in the capability or quality of the hospital. If the attractiveness of the hospital is of a high quality, it sends the signal that it has sufficient resources to provide high quality services. Customers tend to trust the service provider if the service provider has better physical surroundings. The above conceptual analysis leads to the following hypothesis:

Hypothesis 2: Tangibility has a positive effect on patients' view of a hospital's reliability

In-group perception determines whether people define themselves as part of a specific group (Tajfel, 1978). Recent research on the group-engagement model shows that people's identification is influenced by the evaluation of their status within the group (Blader & Tyler, 2009; Tyler & Blader, 2003). Empathy is defined as customers' perception of caring and individualized attention from the service provider (Parasuraman et al., 1988). Empathy serves as the reference point on how patients judge their status in the health caring process. The above conceptual analysis leads to the following hypothesis:

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Hypothesis 3: An increase in empathy will positively impact on patients' identification with a hospital

Restubog, Hornsey, Bordia, and Esposito (2008) find organization members' trust has a positive effect on their identification with their organization. To avoid risk, people tend to identify better with an organization which is more reliable. A reliable hospital provides greater security and people tend to invest identity in more secure situations. Members of organizations with a positive image tend to identify with such organizations because a good reputation is usually indicative of exceptional service (Nam, Ekinici, & Whyatt, 2011). This conceptual analysis leads to a fourth hypothesis.

Hypothesis 4: An increase in the reliability of a hospital will positively impact on a patient's identification with a hospital

Mechanism 1: personalized belongingness

Identification is a cognitive process (Ashforth & Mael, 1989) and staff service quality will impact on patients' identification through cognitive judgements. Patients evaluate whether staff are especially focused, and on that basis, will determine whether they can positively identify with a particular hospital (W.-Y. Wu & Tsai, 2008). If they perceive that they are specially cared for by the hospital, it is more likely that they will look favourably towards this hospital. The feeling of personalized belongingness facilitates identification (Cooper & Thatcher, 2010) as patients believe that they are a part of the hospital. It is therefore reasonable to argue that staff service quality works through a psychological evaluation on identification. The above conceptual analysis leads to a fifth hypothesis.

Hypothesis 5: Empathy mediates the positive relationship between staff service quality and patients' identification with a hospital

Mechanism 2: uncertainty reduction

Customers will identify with well-designed stores and stores with advanced equipment. In the healthcare industry, customers express higher reliability on hospitals with better quality equipment and patient-friendly environments. Similar to the cognitive process mentioned above, a high quality in the external appearance of a hospital can aid in influencing patients to trust that the hospital is

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sufficiently capable of providing the service they require, further increasing their identification with this hospital. The process is driven by patients' tendency to reduce uncertainty (Cooper & Thatcher, 2010). The more reliable a hospital is, the lesser the propensity to make mistakes in medical treatment. Reliability considerations are therefore important in patients' identification with a hospital. The above conceptual analysis leads to a sixth hypothesis.

Hypothesis 6: The reliability of a hospital mediates the positive relationship between tangibility and patients' identification with this hospital

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Insert Figure 1 Here

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The theoretical model is shown in Figure 1.

METHODOLOGY

We test our theoretical model using two empirical studies.

Study 1

Participants and Procedures

We distributed survey to the member hospitals of the Around Taiwan Health Care Alliance (ATHCA). Frontline employees of these hospitals were asked to put the questionnaire into a sealed envelope and then either placed it into the collection box or give it to the person in charge of collecting questionnaires. In total, 1,556 questionnaires were distributed. Regarding the questionnaires received, 787 completed answers, representing a response rate of 50.58%.

Measures

Multiple-item scales were used to measure the variables. Back-translation strategy was applied (Brislin, 1980). Seven-point Likert scales from 1='strongly disagree' to 7='strongly agree' were applied to all variables. Five dimensions of service quality are measured by using the Chinese SERVQUAL scale, which developed by Huang and Li (2010). This scale is adapted from Parasuraman et al. (1988), based on Chinese scale development and adaptation methods, which was suggested Farh, Cannella, and Lee (2006). Scale reliability estimates α were presented in parentheses on the diagonal of table 1.

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Tangibility was measured by using 4 items. We ask how advanced employees think the modern equipment and high-quality hardware of their organizations. One example is ‘This hospital has modern-looking equipment (e.g., computed tomography scan, x-ray machine, magnetic resonance imaging scan, treadmill).’

Reliability was measured by 5 items. One sample item is ‘When this hospital promises to do something by a certain date (e.g., laboratory examinations, follow-up checks, outpatient surgery), it does so.’

Staff service quality was measured by responsiveness, which describes how efficiently employees response to patients’ requirement, and assurance, which describes how comfortable the services is. Responsiveness was measured by using 4 items. One sample item is ‘Personnel of this hospital are never too busy to respond to patients’ requests.’ Assurance was measured by using 4 items. One sample item is ‘Personnel of this hospital are consistently courteous with their patients.’ Empathy was measured by using 5 items. One sample item is ‘Personnel of this hospital understand the specific needs of their patients.’

Results

Table 1 presents descriptive statistics, zero-order correlations and reliability coefficients of study. All proposed pairs of relationships were statistically significant. We could see tangibility and reliability are positively correlated, empathy positively and staff service quality (two dimensions: responsiveness and assurance) with each other.

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Insert Table 1 Here
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To assess model fit we adopted the standard from existing literature.¹ The proposed four factors model shows it fits data well ($\chi^2 (197) = 785.18$, $p < 0.001$, CFI = 0.938, TLI = 0.927, RMSEA =

¹ Tucker-Lewis fit index (TFI) and comparative fit index (CFI) of above 0.9 (Arbuckle, 1995; Brown, 2006; Hu & Bentler, 1999; Kline, 2010), RMSEA values less than .10 (Hu & Bentler, 1999) would indicate model fit.

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0.062)²(shown in Table). For evidence of discriminate validity, a three factor model was estimated. Then, we combine responsiveness and assurance since both of these two variables share the characteristic that employees' service quality to patients. The three factors model indicated a poor model fit the data, $\chi^2(199) = 1098.04$, CFI = 0.905, TLI = 0.89, RMSEA = 0.076. Comparison between the four and three factors model by a chi-square difference test revealed that three-factors Model had a significantly better fit than four-factors Model ($\Delta\chi^2(2) = 312.86$, $p < 0.001$). We also tested the two and one factor model, which showed significantly worse fit than four factors model. Next, we evaluated the degree to which our hypothesized path model fits the observed covariance structure of our sample by changing the links between different variable into causal directions. We hypothesized staff service quality has a positive effect on empathy and tangibility has a positive effect on reliability. This model showed a good model fit ($\chi^2(239) = 954.07$, $p < 0.001$, CFI = 0.92, TLI = 0.91, RMSEA = 0.06). We found the direct effect from staff service quality to empathy was positive and significant ($B = 1.07$, $\beta = 0.68$, $p < 0.001$). Also, the effect from tangibility to reliability was positive and significant ($B = 1.07$, $\beta = 0.94$, $p < 0.001$). The R^2 for structural equations was 0.46 for empathy, 0.89 for reliability, suggesting that a large amount of variance in these variables was accounted for by our model specifications. The results are presented in Table 2. Thus, hypothesis 1 & 2 were supported.

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Study 2

Methodology

Second study was done for two purposes, first, we used customers data to replicate our findings in study one; second, the second study extended our model test.

Participants and Procedures

We collect data from customers in the same hospitals, where we collected hospital employees' data. For each hospital, a sample of 100 outpatients was randomly selected. In total, 1,557

² Staff service quality is a second order constructed which are loaded by responsiveness and assurance, both of responsiveness and assurance has high factor loading on staff service quality, the factor loading of responsiveness is 0.73, the factor loading of assurance is 0.9.

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questionnaires were distributed. A total of 685 of these questionnaires from outpatients were completed and used in the data analysis, representing a response rate of 44.02%.

Measure

We used the same scales from Study 1 in the second study for five service quality dimensions. Customer identification was measured by using 5 items developed by Zeithaml et al. (1996). One sample item is ‘I would like to come to this hospital more and more for seeking medical care.’

Results

We displayed descriptive statistic, zero-order correlations and reliability coefficients in Table 3. All proposed pairs of relationships were statistically significant. We could see tangibility and reliability positively correlated, empathy positively and staff service quality (two dimensions: responsiveness and assurance) correlated with each other, customer identification to organization positively correlated with both reliability and empathy.

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Insert Table 3 Here
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Measurement model

We used same procedure to assess model fit of this study. The proposed five factor model showed the best fit in all models. $\chi^2(308) = 1110.61$, $p < 0.001$, CFI = 0.94, TLI = 0.93, RMSEA = 0.06. Following the same procedure of study 1, we tested other model. The four-factor model indicated a poor model fit the data, $\chi^2(310) = 1615.15$, CFI = 0.9, TLI = 0.89, RMSEA = 0.08. Comparison between the five and four factors model by a chi-square difference test revealed that five-factors Model had a significantly better fit than four-factors Model ($\Delta\chi^2(2) = 504.54$, $p < 0.001$). We tested the three, two and one factor model, which showed significantly worse fit than four factors model.

Structure Model Analysis

Next, we evaluated the degree to which our hypothesized path model fits the observed covariance structure of our sample changing the links between different variable into causal directions. We hypothesized staff service quality has a positive effect on empathy and tangibility has a positive effect on reliability. This model showed a good model fit ($\chi^2(359) = 1314.5$, $p < 0.001$, CFI = 0.92, TLI =

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0.91, RMSEA = 0.07). We found the direct effect from staff service quality to empathy was positive and significant ($B= 1.2, \beta= 0.37, p<0.001$). Also, the effect from tangibility to reliability was positive and significant ($B= 0.88, \beta= 0.89, p<0.001$). The R^2 for structural equations was 0.15 for empathy, 0.78 for reliability, suggesting that a large amount of variance in these variables was accounted for by our model specifications. Thus, both hypothesis 1 and 2 were supported.

For patients' identification to hospital, we found the direct effect from empathy to customers' identification is positive and significant ($B= 0.09, \beta= 0.1, p<0.05$). Also, the effect from reliability to customers' identification is positive and significant ($B= 0.3, \beta= 0.26, p<0.05$). Thus, both hypothesis 3 and 4 were supported. In terms of mediation analysis, we could see from figure 2 that the mediators significantly related to independent variables and dependent variables customers' identification. We also use bias-corrected bootstrap analysis to calculate the confidence intervals (MacKinnon, Lockwood, & Williams, 2004).

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Insert Figure 2 Here

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A joint significance test indicates that paths (staff service quality \rightarrow empathy \rightarrow customers' identification) in the model were approaching significant ($a_1*b_1=0.11, p<0.1, CI[0.00; .22], \alpha = .05$). The direct effect from staff service quality to customers' identification is positive and significant ($B= 1.51, \beta= 0.53, p<0.01$). The other path (tangibility \rightarrow reliability \rightarrow customers' identification) is significant, ($a_2*b_2=0.263, p<0.5, CI [.02; .52], \alpha = .05$). The direct effect from tangibility to patients' identification to hospital is insignificant ($B= -0.03, \beta= -0.03, p>0.05$). These results suggested there is a full mediation effect between tangibility and customer identification to organization through reliability. The squared R^2 for structural equations was 0.56 for patients' identification to hospital, suggesting that a moderate amount of variance in these variables was accounted for by our model specifications. Accordingly, hypothesis 5 was partially supported and hypothesis 6 was supported. The results are presented in Table 4.

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Insert Table 4 Here

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We also tested the competing model, which exclude the direct links from tangibility to patients' identification to hospital since we do not find significant path coefficient between these two variables. A chi-square test between original mediation model and competing model indicates $\Delta \chi^2 (1) = 0.05$ ($p > 0.05$), which indicate the second model do not fit the data worse. Based on parsimony principle, we accept model 2.

According to results of study 1 and study 2, Hypotheses 1 and Hypotheses 2 were supported in both samples, Hypotheses 3-6 were supported in second sample, except hypothesis 5 only was partially supported. Generally, our studies support our theory.

DISCUSSION and CONCLUSION

Our research use organization identification theory to frame multi-dimensions of service quality, and explain the relationship between service quality and patients' identification to hospital. By using samples in health care industry in Taiwan, we found supportive evidence from different stakeholders in health care industry. Based on these, our research leads to two important theoretical implications.

First, our research is the first to investigate the relationship between different dimensions of service quality. Previous research treat these dimensions as sub-aspect of a general construct—service quality, or assume these dimensions independently. However, empirical research found these dimensions are significantly related with each other (Karl & Peluchette, 2006). Our research use organizational identification theory to build the theoretical framework for these dimensions, which provides a theoretical foundation for investigating the relationship between different dimensions of service quality. However, in the mediation test from staff service quality to customers' identification through empathy, we found a marginally significant result. Second, we test our theory in different population. The equivalent relationship in different population suggests the relationships are stable and decontextualized. Our findings show both patients and health care workers have same perceptions on the relationship between different service quality dimensions. The interesting contribution will be made if future research can investigate whether the relationship can be identify in other population, for example patients' family. Also, why patients and health care staffs have same view on this is another interesting issue. As mentioned above, literature suggests these two groups have different

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knowledge on health care. It is highly likely they will have different views, but our research find opposite pattern. Some qualitative research will provide more evidence and explain this mechanism.

Implication for Practice

Prior research has indicated that by enhancing customer identification, customer loyalty through an integration of marketing, sales, service to differentiate an organization's products/services, business profits increase (Tiwana & Williams, 2000). From the managerial perspective, the aim is to improve customer satisfaction, boost customer loyalty, and consequently stimulate revenues from customers. For example, in IT industry Kalakota and Robinson (2001) state that CRM (customer relation management) which is a combination of business process and technology is an essential way to understand a company's customers from multiple perspectives to competitively differentiate a company's products and services. CRM involves a concerted effort to improve customer identification. Different from thinking "externally", our study extends the concepts of customer identification in both internal (e.g., staff) and external way (e.g., equipment). Also, our study extends the concepts of customer identification beyond a simple assertion from service quality to customer identification and provides empirical evidence from hospital industry to explicitly show the path to systematically improve customer identification through internal (i.e., staff service quality) and external (i.e., firm's appliances) business conditions.

Our study provides the way for managers to think about how to increase customer identification. Rather than purely focusing on external business conditions (e.g., CRM, IT, or firm appliances), this study emphasizes both internal and external conditions involving staff service quality and organization appliances. Managers can help firms to improve profits from equipment-oriented to quality-oriented practices and thinking as anticipated.

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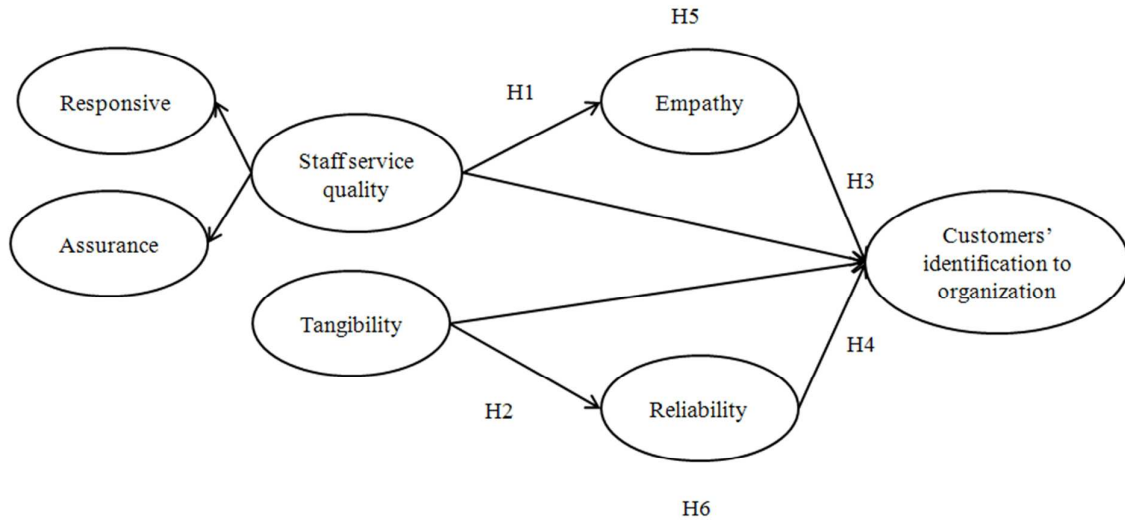


Figure 1: Theoretical Model

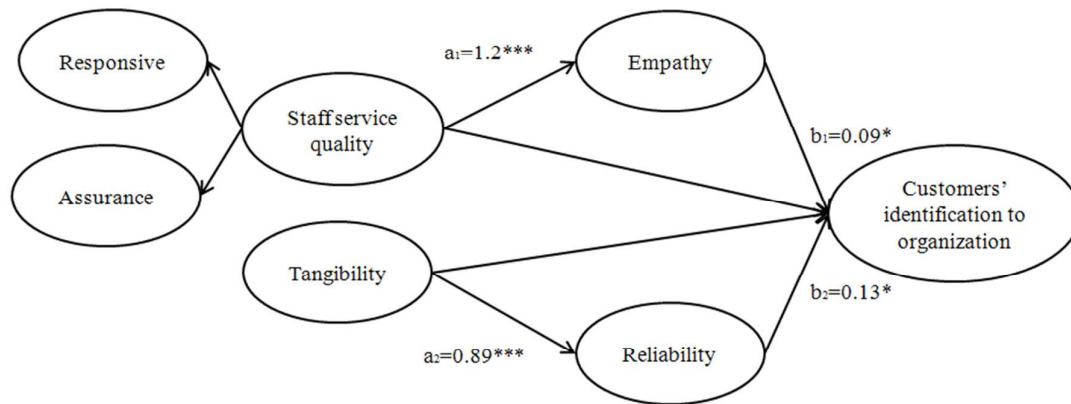


Figure 2 : Results of chain mediation model

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Table 1: Means, Standard Deviations, and Correlations of variables: patients

Variables	Mean	S.D.	1	2	3	4	5	6	7	8
1 Tangibility	5.32	0.90	0.77							
2 Reliability	5.57	0.86	.717**	0.89						
3 Responsiveness	5.08	1.22	.339**	.497**	0.80					
4 Assurance	5.42	0.90	.600**	.741**	.489**	0.80				
5 Empathy	5.16	1.11	.360**	.449**	.655**	.465**	0.83			
6 Gender	1.81	0.39	-0.01	-0.02	-0.01	-0.04	0.02			
7 Education	3.40	0.80	-.084*	-.086*	0.00	-0.05	-0.06	-.279**		

Note: N = 788; **. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

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	β	B	M(SE)	β	B	M(SE)
<i>DV:</i>		Empathy			Reliability	
<i>Control</i>						
Gender	0.01	0.03	0.08	-0.02	-0.042	0.05
Education	-0.03	-0.038	0.04	-0.05	-0.05	0.024
<i>IV</i>						
Staff service quality	0.676	1.07***	0.112			
Tangibility				0.94	1.07***	0.08
R-Square		0.46			0.89	

Note: $p < 0.05^*$, $p < 0.01^{**}$, $p < 0.001^{***}$.

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Table 3: Means, Standard Deviations, and Correlations of variables: patients

Variables	Mean	S.D.	1	2	3	4	5	6	7	8
1 Tangibility	5.51	1.00	0.85							
2 Reliability	5.64	0.94	.758**	0.90						
3 Responsiveness	4.71	1.37	.106**	.237**	0.87					
4 Assurance	5.47	0.99	.619**	.724**	.239**	0.87				
5 Empathy	4.38	1.27	.107**	.223**	.679**	.215**	0.86			
6 Customer identification	5.15	1.18	.496**	.563**	.253**	.583**	.286**	0.85		
7 Gender	1.59	0.49	-0.03	0.00	-0.01	-0.03	0.01	0.01		
8 Education	2.74	1.12	-0.14**	-.177**	-0.01	-.110**	-0.01	-.138**	0.01	

Note: N = 657; **. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

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Table 4: Hypotheses Test for Out-patients

	β	B	M(SE)	β	B	M(SE)	β	B	M(SE)	
<i>DV:</i>		Empathy			Reliability			Customers' identification to organization		
<i>Control</i>										
Gender	0.06	0.13	0.1	0.03	0.06	0.05	0.04	0.086	0.06	
Education	0.06	0.06	0.05	-0.07	-0.05*	0.02	-0.03	-0.029	0.03	
<i>IV</i>										
Staff service quality	0.37***	1.2***	0.178				0.53*	1.51**	0.5	
Tangibility				0.88***	0.89***	0.08	-0.030	-0.030	0.190	
<i>Mediator 1</i>										
Empathy							0.1*	0.09*	0.05	
a1*b1							0.040	0.11+	0.06	
<i>Mediator 2</i>										
Reliability							0.26*	0.3*	0.13	
a2*b2							0.23*	0.26*	0.126	
R-Square		0.15			0.78			0.56		

Note: p<0.05*, p<0.01**, p<0.001***.