

## Relationship Quality in High-Credence Service Setting (An Empirical Study on Top Performing Hospitals Operating in Ethiopia)

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**Abstract :** The main purpose of this study was to investigate the antecedents and outcomes of the relationship between Service providers and consumers of a “high-credence” service, in Ethiopia. Relationship quality model was used to conceptualize as the degree of trust and satisfaction with the antecedent variables and Behavioral Outcomes of Relationship Quality. A self-administered structured Questionnaire was distributed to 354 Patients of top 12 public and private hospitals. Although a total of 354 questionnaires were distributed, only 322 questionnaires were returned at the end of the data collection process, which gave the response rate of 91 per cent. During the data cleaning process only 302 were found usable and used for the subsequent statistical analysis. The data was analyzed by Partial Least Squares (PLS) structural equation model -SmartPLS 3 software to test the twelve hypotheses. After testing the hypothesis, the service providers’ expertise, likeability, and communication effectiveness showed a significant influence on relationship quality. Furthermore, expertise, likeability, and communication effectiveness influenced relationship quality which in turn led to the likelihood of re-patronage and word-of-mouth recommendation. On the other hand, Empathy was found insignificant in influencing relationship quality. In this study Relationship Quality, has significantly mediated antecedents with Behavioral Outcomes of Relationship Quality. The study also suggests ways in which service providers can improve the quality of the medical service providers -patient relationship. Future research can be conducted to investigate other high-credence service sectors operating in Ethiopia or high-credence service sectors in other developing countries particularly in Africa. This study examined the association between four possible antecedents and relationship quality in a real-world setting. The finding of this study will be valuable for customer relationship strategists in a high-credence context.

**Keywords:** Relationship quality, Antecedents Services, Behavioral Outcomes of Relationship Quality Partial Least Squares. Ethiopia

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### I. Introduction

The study report is organized into Eight sections: First, statement of the problem is briefly highlighted; Secondly, basic research questions related to the mediated role of relationship quality between antecedents and Behavioral Outcomes of Relationship Quality are clearly articulated; Thirdly, Scope of The Study regarding geographical, conceptual, methodological and time dimensions are stated clearly; Fourthly, previous literatures on the Relationship Quality Survey in The High-Credence Service Setting is addressed; fifthly, the broad framework is operationalized into a testable model, and research hypotheses are developed; Sixthly, the findings of the study are presented and discussed; Seventhly, a statement of conclusion that has been drawn from the study are presented; Finally, Limitation and direction for future research has been proposed.

### II. Statement of The Problem

Quality service in the hospital setting can be provided by several departments including nursing, customer support, food and beverages, laboratory services, pharmaceutical services, information technology, doctors and hospital management. These departments are equally important in providing quality service to the patient, consequently ensuring patient satisfaction (Pui-Mun, 2004). Reasons for improving the service quality in a healthcare institution includes: Health care providers believe that improving the service quality in the private healthcare sector to be the right thing to do (Direktör, 2007). The involvement and satisfaction of the customer affect behavior (Direktör, 2007). As the service quality of the provider improves, the expectations of the customer increases. Lee (2005) explained that as customers become more quality conscious, requirements for higher quality service increased. Essentially, any medical service encounter is a negative experience. It is used to restore lost health. It is associated with discomfort, pain, risk and in many cases also some degree of humiliation. In this regard patients’ service encounters are significantly different from the most other service

experiences which are regarded to be either a less negative experience (servicing your vehicle) or even a positive service experience (dining out, traveling or holiday accommodation). This poses the first problem of the medical service encounter – a difficulty to define quality or to compare the service quality to other industries. This leads to the next difficulty, namely to define service quality accurately. Close customer relationships have come to be regarded as a key asset of a firm and gained increased prominence in the priorities of many service firms (Gruen et al., 2000). Such collaborative relationships rely on relational forms of exchange that enable both parties to focus on the long-term benefits of the relationship (Ganesan, 1994).

Ethiopia is the second most populous country in sub-Saharan Africa, with a population of over 100 million people. The country introduced a federal government structure in 1994 composed of nine Regional States: Afar, Amhara, Oromia, Somali, Benishangul Gumuz, Southern Nations Nationalities and Peoples Region (SNNPR), Gambelias, Tigray and Harrari and two city Administrations (Balabanova et al, (2011). The Regional States are administratively divided into 78 Zones and 710,800 Woredas. Ethiopia experiences a triple burden of disease mainly attributed to communicable infectious diseases and nutritional deficiencies, NCD and traffic accident (<http://www.ethiomedic.com>). Shortage and high turnover of human resource and inadequacy of essential drugs and supplies have also contributed to the burden. However, there has been encouraging improvements in the coverage and utilization of the health service over the periods of implementation of Health Sector Development Plan (HSDP).

HSDP constitutes the health chapter of the national poverty reduction strategy and aims to increase immunization coverage and decrease under-five mortality at large. The health service currently reaches about 72% of the population and The Federal Ministry of Health aims to reach 85% of the population by 2009 through the Health Extension Program (HEP). The HEP is designed to deliver health promotion, immunization and other disease prevention measures along with a limited number of high-impact curative interventions (WHO, 2016). The government published the country's first health policy in 1993 in 50 years, articulating a vision for the health care sector development. The policy fully reorganized the health services delivery system as contributing positively to the country's overall socioeconomic development efforts. Its major themes focus on:

- Democratization and decentralization of health system;
- Expanding the primary health care system and emphasizing preventive, promotional, and basic curative health services; and
- Encouraging partnerships and the participation of the community and nongovernmental actors.

In pursuit of the health policy goals of improving the health status of the Ethiopian population and to implement the health policy, a Health Sector Development Program (HSDP) was developed every five years beginning in 1997/98. HSDP II included a strategy, called the Health Extension Program (HEP), for scaling up an institutionalized primary health care system. (USAID, 2012). The Health Extension program was introduced under HSDP II in 2002/03 with a fundamental philosophy that if the right health knowledge and skill is transferred, households can take responsibility for producing and maintaining their own health. The Health Extension Programme (HEP) is a community-based intervention designed to make basic health services accessible to the rural and underserved segments of the population (UNICEF, 2016). The HEP was launched in the four big agrarian regions, expanded to the remaining regions in subsequent years. The program has been tailored to the particular requirements of pastoral and agropastoral communities and, more recently, to urban communities. (World Bank, 2016).

Despite efforts made by the Ethiopian government doctors patient ratio, shortage of branded drugs, lack of modern- of- the- art medical examination equipment's, shortage of basic chemicals required for conducting laboratory examinations, the non-availability of service- oriented health care providers, Inadequate foreign currency to import required medical equipment's, and a multitude of other observed problems during the preliminary survey has the non-availability of well-organized and well systematized scientific study conducted on relationship quality in high-credence service setting Sstimulated this study to be undertaken.

### **III. Research Questions**

In line with statement of the problem stipulated above, the following questions were raised in this study.

- To identify factors influencing Relationship quality in major Hospitals operating in Ethiopia?
- What is the effect of antecedentson relationship quality in major Hospitals operating in Ethiopia?
- To what extent relationship quality determine service outcomes in major hospitals in Ethiopia?

### **IV. Scope of The Study**

This study is delimited to Major Hospitals in major cities in Ethiopia- engaged in health care marketing. The study incorporated the major cities including Addis Ababa, BahirDar, Gondar, Hawassa, Nathreth and Dire Dawa. The variables under this study are delimited to antecedents (expertise, Empathy, Likeability, Communication), relationship quality (trust, satisfaction), outcomes(re=patronage and

recommendation). Methodologically, it is delimited to 12 hospitals operating in those major cities. The data collected for data analysis is cross-sectional.

### V. Literature Review

New perspectives of marketing have emerged in which the focus is on intangible resources, the creation of value, and relationships (Vargo and Lusch, 2004). According to the marketing relationship theory, benefit exchanges also arise from relationships per se, in the form of trust, special customer service or social ties (Groenroos, 2001). Thus, transactional choice models need to be replaced by models in the context of relationships (Rust, 2004), suggesting the discipline’s movement from understanding marketing as an exchange to one of marketing as relationships (O’Malley et al., 2008). In terms of social exchange theory, relationships are interpersonal and built on inherent reciprocity, moral obligations, interdependence, trust and relational norms (Kingshott,2006). Such relationships require a long-term view, mutual respect and the acceptance of customers as partners and co-producers of value, not just passive recipients (Gummesson, 1998). One of the factors that contributed to the popularity of relationship marketing was the growth of the service economy (Noble and Phillips, 2004), in which retailing can also be included.

Relationship quality is a meta-construct involving several key dimensions, reflecting the overall nature of relationships between companies and consumers (Hennig-Thurau, 2000). Groenroos (2007, p. 91) relationship quality as “... the dynamics of long-term quality formation in ongoing customer relationships”, which means that customers’ perceptions are holistic and cumulative (Groenroos, 2004). As such, the factor is an important determinant of the permanence and intensity of the relationship per se and, therefore, the success of relationship marketing (Hennig-Thurau, 2000).

The provision of service quality is of great importance to the management of all service organizations and hospitals interested in providing excellent clinical care to provide quality service to their patients (Biermann, 2006, p. 16). Furthermore, several studies (historic and recent) have indicated that a high level of service quality is related to an increase in profits, cost savings, and market share (Rundle-Thiele & Russell-Bennett, 2010). These studies show that it has, and remains, vitally important in the current competitive market that providers deliver patient satisfaction, quality service and effective medical treatment through the better understanding of service quality as defined by the customer and how to deliver this type of service.

### VI. Conceptual Framework & Hypothesis of the study

#### 6.1 Conceptual framework of the study

##### Antecedents Relationship Quality Behavioral Outcomes of Relationship Quality

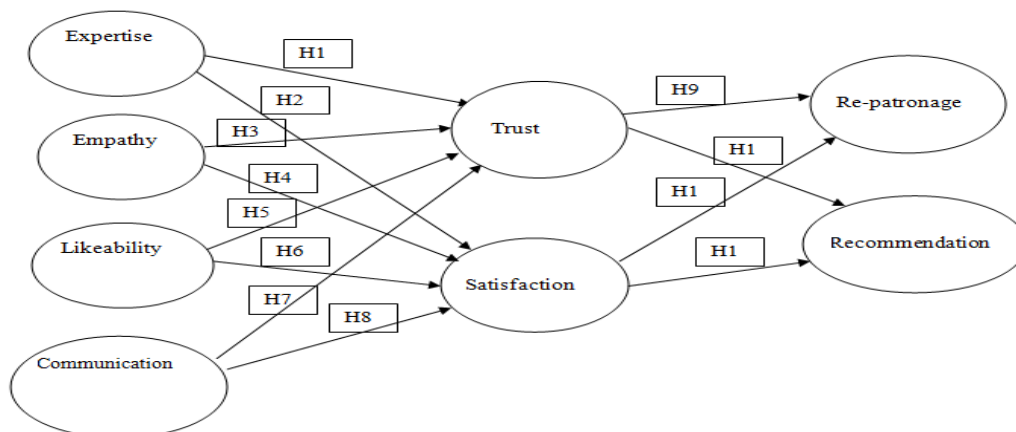


Figure 1: Relationship quality model in the high-credence service setting

Source: adapted from Zhen Xiong Chen, Yizheng Shi & Da-Hai Dong (2007),

#### 6.2 Hypothesis of the study

- **H1:**Trust will be positively associated with the perceived expertise of the service provider.
- **H2:**Satisfaction will be positively associated with the perceived expertise of the service provider
- **H3:**Trust will be positively associated with the perceived empathy of the service provider.
- **H4:**Satisfaction will be positively associated with the perceived empathy of the service provider
- **H5:**Trust will be positively associated with the perceived likeability of the service provider.
- **H6:**Satisfaction will be positively associated with the perceived likeability of the service provider
- **H7:**Trust will be positively associated with the perceived communication effectiveness of the service provider.

- **H8:** Satisfaction will be positively associated with the perceived communication effectiveness of the service provider
- **H9:** Trust will be positively associated with the likelihood of re-patronage.
- **H10:** Trust will be positively associated with Likelihood of word of mouth recommendation.
- **H11:** Satisfaction will be positively associated with the likelihood of re-patronage.
- **H12:** Satisfaction will be positively associated with the Likelihood of word of mouth recommendation

### **Antecedents of Relationship Quality**

Thoroughly examining the literature in business-to-customer settings revealed that the literature on comprehending the relationship quality phenomenon is generally divided into two groups. Studies in the first group conceptualize relationship quality mainly through basic dimensions such as satisfaction, trust, or commitment. Historical overview of consumer relationship quality studies revealed that despite the concept's epistemological depth, only Hennig-Thurau's (2000) study operationalized customer relationship quality in a two-dimensional way.

### **Expertise of The Service Provider and Relationship Quality:**

Frazier and Summers (1984) suggest that a strategy of relationship marketing is to influence the perceptions of the other party of one's own abilities and competence. In the health care literature, Tomas and Ng (1995) indicate that patients strongly believe that doctors should be thorough in their interactions with patients and demonstrate competence in clinical skills. Many Empirical studies also supported that expertise is perhaps the most important antecedent of relationship quality and has the Positively associated with relationship quality (Shamdasan et. al.2000). If the expertise is proven after consumption, the trust and satisfaction of customers towards the service provider will increase (Smith, 1998).

### **Empathy of The Service Provider and Relationship Quality:**

Empathy is the ability to put oneself in the place of others or treat others as one would like to be treated (Murphy, 1999). In a high-credence service setting, empathy is viewed as a personal involvement in the service situation, with caring and individualized attention to the customers (Bowers et al., 1994). In an empirical study in a health care setting, Bowers et al. (1994) find that empathy displayed by the health care service providers is positively related to the overall satisfaction of patients.

### **Likeability of The Service Provider and Relationship Quality:**

The likeability of the service provider refers to the evaluation by customers of whether the service provider is friendly, nice, and pleasant (Doney and Cannon, 1997). One of the important components of trust is perceived benevolence (Ganesan, 1994). A friendly service provider will usually try to give the customer the impression that he or she is benevolent, which in turn leads to trust. Furthermore, a likable service provider is more likely to make the customer feel pleasant and satisfied.

### **Communication capability of the Service Provider and Relationship Quality:**

Communication is defined as "the consumer's perception of the extent to which a retailer interacts with its regular customers in a warm and personal way". Such an interaction is reflected in the feelings of familiarity and friendship, personal knowledge, and the use of the client's family name and/or first name on the sales spot (Naoui and Zaiem, 2010). Communication is considered as one of the important factors in fostering relationship development and maintenance (Dagger et al. 2011). It provides an understanding of the exchange partners' intentions and fosters trust and information exchange needed to promote long-term customer relationships. Despite its significance, communication has attracted limited attention in the relationship marketing and services marketing domain. In response to the recent calls for empirical inquiries into the role of communication (Finne and Grönroos 2009), this study contributes to literature by examining the strategic role of relationship communication in the B2C service relationships.

### **Components of Relationship Quality:**

Relationship quality has been suggested to be a good indicator of the future well-being of long-term service relationships (Crosby et al., 1990). As argued by many scholars, relationship quality has been viewed as a higher order construct composed of at least two dimensions, including customer trust of and satisfaction with the seller (Kumar et al., 1995). Relationship Quality is operationalized as a higher order construct with two components, namely, satisfaction and trust as seen in various research (Al-Alak & Alnawas, 2010; Kim & Cha, 2002).

**Trust of the service provider:**

Trust is the “cornerstone of long-term relationships (Jus’s Grigate, 2011). Trust is “... “A willingness to rely on an exchange partner in whom one has confidence”. A betrayal of this trust by the supplier or service provider could lead to defection (Ndubisi and Wah, 2005). Trust in organizations comes from customers’ positive experiences that induce them to continue with the relationship (Vesel and Zabkar, 2010). The development of trust is an interpersonal process rather than a personal characteristic of the trusted parties (Deshpande, Farley, & Webster, 1993). Baloglu, Zhong, and Tanford’s (2014) study of a casino industry in Vegas for example found that trust has a significant effect on positive WOM.

**Customer satisfaction:**

According to Churchill and Surprenant (1982) “customer satisfaction is an outcome of purchase and use resulting from the buyers’ comparison of the rewards and costs of the purchase in relation to the anticipated consequences”. Customer is a customer’s emotional response to his or her evaluation of the perceived discrepancy between his or her prior experience with and expectations of product and organization and the actual experienced performance as perceived after interacting with organization and consuming the product.” (Vavra, 2002. p.5). Customer satisfaction has been defined as a cumulative construct which means that, instead of capturing encounter-specific evaluations and emotions, the focus is on the consumer’s general level of satisfaction based on all experiences with a particular retailer. (Guenzi and Pelloni, 2004). Storbacka et al. (1994) comment that improved service quality leads to improved customer satisfaction, while the latter leads to a stronger customer relationship. According to Kara et al. (2005) customer satisfaction passes through two stages, first the customer develops expectations from the service provider through advertising, word of mouth or any other media, second the customer compares those expectations to what they have actually received. Customer’s satisfaction for example has been found to lead to relationship outcomes like WOM, repeat purchase, frequent buy of product/ services, and buy more product variant/line (Wong, Hung, & Chow, 2008)

**Behavioral Outcomes of Relationship Quality**

The anticipation of future relational exchange is generally expressed in terms of two behavioral outcomes, namely, repeated purchase (re-patronage) and word-of-mouth recommendation (Bitner, 1990). Customers who are satisfied with and trust in the service provider will tell their friends, relatives, and colleagues (word-of-mouth) about their positive experience with the service provider.

**Repeated Purchase:**

Repeated purchase is viewed as an indicator of whether or not a customer will maintain the relationship with the company (Zeithaml et al., 1996). Relationship quality contributes to a lasting bond by offering assurance that the service provider will continue to meet and exceed customer expectations (satisfaction) and will not knowingly distort information or otherwise subvert the customer interests (trust) (Crosby et al., 1990). Satisfaction, which is an emotive response to service attributes and service information (Spreng et al., 1996), is perhaps the basis for customer retention. It may further be viewed as a summary psychological state resulting when a customer’s surroundings exceed her expectations and dispel her preconceived negative feelings about the consumption experience (Alam and Khalifa, 2009). When satisfaction is achieved, the consumer’s loyalty is strengthened and she is more likely to re-patronize the store (Law et al., 2004)

**Word-Of-Mouth Recommendation**

Word-of-Mouth Recommendation is the extent to which customers will inform their friends, relatives, and colleagues about the consumption experience (Soderlund, 1998). Customer loyalty is defined as a consumer’s intent to stay with an organization (Zeithaml et al. 1996). It represents a commitment by the customer to purchase more and varied products from the focal organization and to help it, where possible, to succeed (through word-of-mouth recommendations). Taking a behavioral intention perspective of loyalty rather than a behavioral or repeat- purchase perspective avoids confusing spurious loyal those who have a low relative attitude toward the organization but are constrained to repeat purchase (Dick and Basu 1994)—with genuinely loyal customers. Satisfied customers are found to convey their satisfying experiences to an average five others in comparison to nine for dissatisfied customers and their dissatisfying experience (Knauer, 1992).

**VII. Research Design & Methodology**

Health care service is highly intangible and complex, as the customers, or patients, usually lack the professional knowledge to assess the service quality of the service providers (i.e. medical doctors and other medical staff).

### **7.1 Sampling Design**

The study population consisted of the patients' visiting a specific private hospital over a two-week period. It included patients in the surgical, medical and maternity wards. The study made use of a convenience sampling. The sample consisted of conveniently selected patients from the medical facility throughout the two-week period. The data was collected by physically distributing the questionnaires to patients at the point of discharge with a request to complete the questionnaire there and then. This provided the respondents with the best possible ability to evaluate the whole service provided to them during their stay in the hospital, whilst the researchers were able to collect the completed questionnaires without. Personnel of the hospital were trained to gather the data, where after they assisted in the distribution and collection of the questionnaires. Where respondents had difficulty in answering the questions the personnel explained the relevant terminology to the respondents. The sample adequacy was statistically determined by calculating the Kaiser, Meyer and Olkin test for sample adequacy (KMO). Bartlett's tests were also calculated. All the values were below the required 0.005 margin showing that the data was suitable for factor analysis.

### **7.2 Research Instrument**

A questionnaire was constructed and employed criteria, experiences and research of previous studies as foundation concepts. The formulation, wording and phrases were modified to be applicable to the current facility and hospital environment. The questionnaire consists of different sections that encompassed the services delivered by the hospital and included service quality from admission to the rooms, and various other service encounters (Farid, 2008, pp. 55-56). Additionally, the questionnaire also contained a section where demographic variables could be recorded.

All of the variables were measured by a five-point Likert scale, ranging from 1 – strongly disagree (definitely would not) to 5 – strongly agree (definitely would). The majority of the items in the measures were adopted from established scales. As this study focused on the relationship between patients and doctors in a healthcare setting, we used doctor to represent the service provider and patient to represent the customer. Because of the medical care service setting, we also developed some items that were based on the results of a focus group study which included medical doctors, nurses, and patients.

## **VIII. Measures and Model**

Reliability coefficients of the identified factors. Reliability refers to how the study should be measured, thus how consistent the variables are in relation to what it is supposed to measure (Welman et al., 2005, p. 145). Cronbach Alpha determines this consistency and is the most widely used technique to measure reliability (Cronbach, 1951, p. 297). The Cronbach Alpha for the data collected was determined to ensure that the responses of the respondents were reliable and that if the study was repeated the respondents would answer the questions in the same manner. As stated earlier coefficients of 0.70 or higher are regarded to be satisfactory (Field, 2009, p. 664), but due to attitudinal and social factors, a Cronbach Alpha of 0.58 can be acknowledged as adequate. Such data can be used for analytical scrutiny (Kade, 2009, p. 26).

## **IX. Result and Discussion**

This study has empirically verified the entire process of relationship quality from its antecedents to its outcomes in a health care setting. Theoretically, we first examined the association between the four groups of antecedents and relationship quality that consists of trust and customer satisfaction. Then, we investigated the connections between relationship quality and patient relational behavior in a high-credence service setting. The findings of this study indicate that among the four antecedents, empathy, expertise, and communication effectiveness are positively correlated to trust, and communication effectiveness, empathy, and likeability are found to be significant predictors of customer satisfaction, while likeability and expertise of the service provider are not significant in influencing trust and customer satisfaction, respectively.

In this study, we employed a two-step procedure that included confirmatory factor analysis (CFA) and structural equation modeling (SEM) using LISREL 8. In the first step, we conducted CFA to examine the distinctiveness of the eight constructs. The hypothesized eight-factor model was compared to a null model and a one-factor model.

In the second stage, we tested the hypothesized model with SEM. We reduced the number of items and created two indicators for each construct. On the basis of the factor analysis results, the items with the highest and lowest loadings for each construct were combined first, followed by the items with the next highest and lowest loadings until all of the items for each construct had been assigned to one of the indicators. The scores for each indicator were then computed as the mean of the scores of the items that constituted each indicator. To assess the model fit, we used the overall model  $\chi^2$  measure, the Tucker-Lewis index (TLI), the goodness-of-fit index (GFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA).

### 9.1 Demographic profile of respondents

Although a total of 354 questionnaires were distributed, only 322 questionnaires were returned at the end of the data collection process, which gave the response rate of 91 per cent. However, during the data cleaning only 302 were usable and used for the subsequent statistical analysis. The demographic profile of the respondents is shown in Table 1. Out of the 302 respondents, 64.6 per cent are female and 45.4 per cent are male. The age ranges of the respondents are: below 25 (7.3%), 26-35 (52%), 35-50 33.4%) and above 50 (7.3%). 64.6 per cent of the respondents were married while 35.4 per cent were single. With respect to their income, majority of the respondent's 61.6 percent were get above Birr 6000 and 76.5 percent were salaried. Similarly, majority of the respondent's 72.8 percent were having bachelor degree.

**Table 1: Profile of Respondents**

Item	Description	Frequency	%
Gender	Female	137	45.4
	Male	165	54.6
Age	Below 25	22	7.3
	26 to 35	157	52.0
	36 to 50	101	33.4
	Above 50	22	7.3
Marital Status	Single	107	35.4
	Married	195	64.6
Income	1001-2000	2	0.7
	2001-3000	17	5.6
	3001-4000	18	6.0
	4001-6000	67	22.2
	Above 6000	186	61.6
	Missing	12	4.0
Occupation	Salaried	231	76.5
	Business	38	12.6
	Student	31	10.9
Educational Level	Diploma	18	6
	Bachelor's Degree	220	72.8
	Post graduate	84	21.2
Number of Observation		302	

### 9.2 Data Analysis and Hypothesis Examination

To analyze the research model, Partial Least Squares (PLS) technique -SmartPLS 3 software (Ringle, Wende & Becker, 2018) has been used. Following the recommended two-stage analytical procedures by Anderson and Gerbing (1988), the measurement model (validity and reliability of the measures) has been tested, followed by an examination of the structural model (testing the hypothesized relationship) (Ramayah et al., 2011; 2013; Rahman et al., 2016). Besides, to test the significance of the path coefficients and the loadings a bootstrapping method (5000 resamples) was used (Hair et al., 2017).

#### 9.2.1 Measurement Model

Before analyzing the data by SMART-PLS statistical tool, the data was first inserted in to SPSS and a preliminary stage of measurement item was first identified. Then, the psychometric properties of the measurement model in terms of internal consistency, reliability, convergent validity, and discriminant validity were evaluated by SMART-PLS. Similarly, Measure of sampling adequacy (0.805), Cronbach alpha (0.951) reliability measure were verified by SPSS 20 version. Factor analysis has been used by SMART PLS as a data reduction technique. From 74 original items, 33 items were recorded with lower loading below the minimum criteria of 0.50 for a sample of 300 or above (Hulland 199, P 198) and removed from the items. Therefore, 41 items were used in this study. All reflective indicator loadings above 0.5 were considered as good measurement of latent variables construct. Therefore, other loadings below 0.5 were removed. To assess the measurement model two types of validity were being examined - first the convergent validity and then the discriminant validity.

#### 9.2.2 Reliability and Convergent Validity

The convergent validity of the measurement is usually ascertained by examining the loadings, average variance extracted (AVE) and also the composite reliability (Gholami et al., 2013; Rahman et al., 2015). The loadings were all higher than 0.842, the composite reliabilities were all higher than 0.842 and the AVE of all constructs were also higher than 0.5 as suggested in the literature (see Table 2, 3 and 4). A measurement instrument has good reliability if the question-statements (or other measures) associated with each latent variable are understood in the same way by different respondents.

Therefore, all Cronbach alpha coefficients which evaluate the items in terms of uni-dimensionality of as set of scale items are above 0.7 ranging from 0.733 to 0.837 demonstrating good internal consistence. However, Cronbach alpha is based on a restrictive assumption that all indicators are equally important. An alternative conceptualization of reliability is that it represents the proportion of measure variance attributable to the underlying dimension (Werts et al. 1974). According to Chin, W. W. (1998), while Cronbach’s alpha with its assumption of parallel measures represents a lower bound estimate of internal consistency, a better estimate can be gained using the composite reliability.

Similarly, composite reliability of all latent variables of this is above 0.7 ranging from 0.842 to 0.880 for all measures. Similarly, Dhillon Goldstin rho measures internal consistence like composite reliability which is acceptable above 0.7(Gefen, 2000). On the other hand, the average variance extraction (AVE) of all variable is above the threshold of 0.5 except empathy. The AVE threshold frequently recommended for acceptable validity is 0.5 (Fornell & Larcker, 1981).

**Table 2: Reliability analysis**

	<b>Cronbach's Alpha</b>	<b>rho_A</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted (AVE)</b>
Communication	0.837	0.852	0.877	0.507
Empathy	0.822	0.845	0.867	0.487
Expertise	0.802	0.816	0.858	0.503
Likeability	0.829	0.825	0.875	0.539
Recommendation	0.774	0.793	0.855	0.598
Re-patronage	0.828	0.837	0.880	0.597
Satisfaction	0.733	0.783	0.842	0.642
Trust	0.771	0.792	0.867	0.685

**Discriminant Validity**

AVE may also be used to establish discriminant validity by the Fornell–Larcker criterion: for any latent variable, the square root of AVE should be higher than its correlation with any other latent variable. This means that for any latent variable, the variance shared with its block of indicators is greater than the variance it shares with any other latent variable. In SmartPLS output, in the Fornell-Larcker criterion table, the square root of AVE appears in the diagonal cells and correlations appear below it. Therefore, in absolute value terms, if the top number (which is the square root of AVE) in any factor column is higher than the numbers (correlations) below it, there is discriminant validity.

**Table 3: Latent variable Correlation and Discriminant Validity**

	<b>Communication</b>	<b>Empathy</b>	<b>Expertise</b>	<b>Likeability</b>	<b>Recommendation</b>	<b>Re-patronage</b>	<b>Satisfaction</b>	<b>Trust</b>
Communication	0.712							
Empathy	0.511	0.698						
Expertise	0.592	0.584	0.709					
Likeability	0.619	0.465	0.294	0.734				
Recommendation	0.496	0.597	0.515	0.401	0.773			
Re-patronage	0.614	0.513	0.611	0.360	0.726	0.773		
Satisfaction	0.487	0.401	0.474	0.394	0.504	0.681	0.801	
Trust	0.607	0.538	0.498	0.503	0.472	0.600	0.643	0.828

In a good model, indicators load well on their intended factors and cross-loadings with other factors they are not meant to measure should be markedly. Discriminant validity is shown when each measurement item correlates weakly with all other constructs except for the one to which it is theoretically associated.

When the correlation of the latent variable score with measurement item need to show an appropriate pattern of loading, one in which the measurement item load highly on their theoretically assigned factor and not highly on other factors. In this case all loadings are highly showed appropriate pattern of loading than the cross-loading o other variables. At a minimum, no indicator variable should have a higher correlation with another latent variable than with its own latent variable. If it does, the model is inappropriately specified.



**Table 4:** Discriminate validity

	Communication	Empathy	Expertise	Likeability	Recomm endation	Re-patronage	Satisfaction	Trust
Comm1	0.674	0.294	0.493	0.350	0.334	0.399	0.328	0.280
Comm2	0.696	0.306	0.427	0.305	0.238	0.326	0.302	0.399
Comm3	0.742	0.223	0.367	0.537	0.228	0.431	0.378	0.624
Comm4	0.691	0.357	0.409	0.458	0.471	0.563	0.320	0.456
Comm5	0.592	0.468	0.456	0.365	0.375	0.456	0.347	0.287
Comm6	0.800	0.501	0.489	0.479	0.464	0.493	0.434	0.491
Comm7	0.768	0.442	0.342	0.541	0.386	0.378	0.288	0.357
Emph1	0.463	0.610	0.419	0.394	0.492	0.377	0.304	0.287
Emph2	0.288	0.536	0.165	0.203	0.373	0.258	0.151	0.240
Emph3	0.441	0.787	0.487	0.363	0.404	0.436	0.405	0.452
Emph4	0.431	0.796	0.391	0.309	0.410	0.445	0.304	0.469
Emph5	0.184	0.678	0.304	0.353	0.483	0.274	0.228	0.331
Emph6	0.307	0.700	0.466	0.284	0.419	0.284	0.277	0.318
Emph7	0.343	0.740	0.538	0.354	0.395	0.376	0.232	0.455
Expert1	0.363	0.384	0.787	0.141	0.372	0.512	0.389	0.352
Expert2	0.455	0.467	0.689	0.324	0.494	0.436	0.268	0.324
Expert3	0.535	0.375	0.641	0.094	0.297	0.400	0.259	0.328
Expert4	0.459	0.218	0.632	0.333	0.411	0.435	0.267	0.271
Expert5	0.361	0.441	0.738	0.112	0.293	0.330	0.375	0.367
Expert6	0.408	0.547	0.755	0.279	0.366	0.491	0.414	0.445
Likeab1	0.305	0.375	0.267	0.658	0.263	0.279	0.390	0.346
Likeab2	0.447	0.443	0.309	0.652	0.350	0.268	0.357	0.360
Likeab3	0.561	0.459	0.248	0.793	0.398	0.317	0.178	0.375
Likeab4	0.399	0.390	0.199	0.786	0.241	0.141	0.101	0.333
Likeab5	0.510	0.182	0.067	0.754	0.352	0.274	0.277	0.350
Likeab6	0.487	0.206	0.176	0.751	0.160	0.259	0.320	0.416
Recom1	0.421	0.539	0.502	0.308	0.801	0.632	0.402	0.410
Recom2	0.291	0.416	0.409	0.141	0.697	0.558	0.381	0.278
Recom3	0.421	0.530	0.408	0.385	0.862	0.553	0.424	0.465
Recom4	0.394	0.333	0.256	0.398	0.723	0.505	0.350	0.274
Repatr1	0.318	0.421	0.407	0.099	0.384	0.665	0.515	0.508
Repatr2	0.335	0.290	0.359	0.149	0.469	0.747	0.559	0.407
Repatr3	0.594	0.348	0.547	0.329	0.592	0.847	0.530	0.424
Repatr4	0.536	0.434	0.565	0.375	0.677	0.862	0.602	0.542
Repatr5	0.619	0.505	0.472	0.471	0.701	0.725	0.385	0.415
Satisf1	0.580	0.399	0.577	0.434	0.489	0.593	0.837	0.598
Satisf2	0.329	0.338	0.266	0.278	0.446	0.583	0.862	0.562
Satisf3	0.145	0.167	0.202	0.167	0.200	0.433	0.696	0.316
Trust1	0.513	0.616	0.508	0.414	0.447	0.600	0.543	0.879
Trust2	0.405	0.397	0.282	0.440	0.395	0.358	0.508	0.826
Trust3	0.582	0.284	0.415	0.404	0.323	0.498	0.547	0.775

Ideally, there is simple factor structure, by rule of thumb taken to mean that intended loadings should be greater than 0.7 (some use .6). The table above achieved indicators loads as all well on their intended factors. Lack of simple factor structure diminishes the meaningfulness of factor labels (ex., the re-patronage factor here still has substantial cross-loadings with the indicators for word of mouth recommendation).

**Collinearity Statistics (VIF)**

As a rule of thumb, we need to have a VIF of 5 or lower (i.e., Tolerance level of 0.2 or higher) to avoid the collinearity problem (Hair et al., 2011). Similarly, the recommended threshold for VIFs test multicollinearity also 3.3 or less for latent variable. To check the possibility of multi-co-linearity test whenever factor loadings are exceeding 0.70 values the correlation between the predictors of a variable has to be verified. Existence of multi co-linearity falsely inflates the standard errors and certain model parameters may sometimes become unstable (Kock, 2011). To assess the degree of multicollinearity, variance inflation factors (VIFs) are evaluated for each of the predictor variables. As shown in table 5 all VIFs value were less than 3.3 ranging from 1.350 to 2.841 meeting the recommended threshold values which points to the nonexistence of multi-collinearity for all outer indicators. Similarly, the inner VIF values are less than the recommended level ranging from 1.705 to 2.317.

**Table 5:** Collinearity Statistics (VIF)

Constructs	Items	Outer VIF Values	Recommendation	Re-patronage	Satisfaction	Trust
Expertise	Expert2	1.802			1.947	1.947
	Expert3	1.473				
	Expert4	1.360				
	Expert5	1.431				
	Expert6	1.605				
Empathy	Emph1	1.440			1.774	1.774
	Emph2	1.379				
	Emph3	2.118				
	Emph4	2.237				
	Emph5	1.967				
	Emph6	1.926				
Likeability	Likeab1	1.394			1.799	1.799
	Likeab2	1.441				
	Likeab3	2.496				
	Likeab4	2.670				
	Likeab5	1.916				
	Likeab6	1.865				
Communication	Comm1	1.942			2.317	2.317
	Comm2	2.044				
	Comm3	1.747				
	Comm4	1.618				
	Comm5	1.777				
	Comm6	2.649				
	Comm7	2.254				
Trust	Trust1	1.814	1.705	1.705		
	Trus2t	1.784				
	Trust3	1.381				
Satisfaction	Satisf1	1.360	1.705	1.705		
	Satisf2	1.891				
	Satisf3	1.552				
Re-patronage	Repat1	1.350				
	Repatr2	1.843				
	Repatr3	2.841				
	Repatr4	2.363				
	Repatr5	2.186				
Recommendation	Recom1	1.648				
	Recom2	1.338				
	Recom3	2.029				
	Recom4	1.549				

**9.2.2 R-Square and Q-square**

All the R square of this study were large above 0.35. The R<sup>2</sup>value, 0.487 showed that expertise, Empathy, Likeability and communication were predicted approximately by 48.7 percent of the variations in customer trust in decisions for high credit hospital service. The R<sup>2</sup>value, 0.400 showed that expertise, Empathy, Likeability and communication were predicted approximately by 40 percent of the variations in customer satisfaction decisions for high credit hospital service. Similarly, R<sup>2</sup> 0.570 indicates the contribution of trust and satisfaction in explaining variance of customer decision of making re-patronage in high credence service setting. Finally, customer trust and satisfaction explain about 35.7 percent of word of mouth recommendation.

**Table 6:** Quality criteria

	R-Square	R -Square Adjusted	Q2
Recommendation	0.357	0.353	0.289
Re-patronage	0.570	0.567	0.391
Satisfaction	0.400	0.392	0.151
Trust	0.487	0.480	0.394

**Predictive relevance (Q2)**

On the other hand, the predictive relevance of Q2 values on the inner model is important. In this study, the Q<sup>2</sup> of attitude and PBC were 0.481 and 0.485 which has large predictive relevance on endogenous latent variable (behavioral Intention) while Subjective norm and Behavioral intention has medium predictive

relevance. Note: 0.02, 0.15 and 0.35 indicate an exogenous construct has a small, medium and large predictive relevance for an endogenous latent variable respectively.

Following Cohen (1988), 0.02 represents a “small” effect size, 0.15 represents a “medium” effect size, and 0.35 represents a “high” effect size. On this basis, we can say that the model has a high degree of predictive relevance with regard to the entire endogenous factor (word of mouth recommendation, re-patronage, satisfaction and trust).

**F-Square**

Following Cohen (1988), 0.02 represents a “small” f2 effect size, 0.15 represents a “medium” effect, and 0.35 represents a “high” effect size. We can say that the effect of dropping satisfaction from the model is high on re-patronage while the effect of empathy is weak effect on satisfaction and the effect of expertise is also weak on customer trust.

**Table 7: Effect size (f square)**

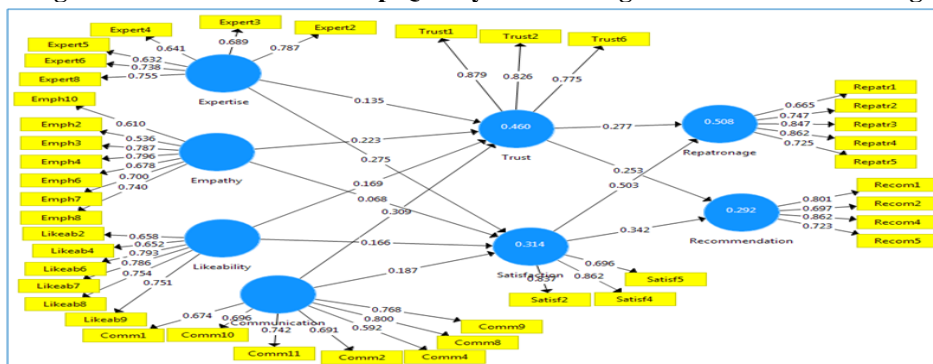
	Communication	Empathy	Expertise	Likeability	Recommendation	Re-patronage	Satisfaction	Trust
Communication							0.022	0.076
Empathy							0.004	0.052
Expertise							0.056	0.017
Likeability							0.022	0.029
Recommendation								
Re-patronage								
Satisfaction					0.097	0.302		
Trust					0.053	0.091		

**9.2.3 Hypothesis Testing Results**

To assess the structural model, Hair et al. (2017) suggested looking at the R2, beta (β) and the corresponding t-values via a bootstrapping procedure with a resample of 5,000. They also suggested that in addition to these basic measures researchers should also report the predictive relevance (Q2) as well as the effect sizes (f2).

As asserted by Sullivan and Feinn (2012), while a p-value can inform the reader whether an effect exists, the p-value will not reveal the size of the effect. In reporting and interpreting studies, both the substantive significance (effect size) and statistical significance (p-value) are essential results to be reported (p.279). As shown in Figure 1, expertise, empathy, likeability, and communication effectiveness influence relationship quality (trust and satisfaction); the variance explained by these four antecedents of two dimensions of relationship quality is 46 percent for trust and 31.4 percent for satisfaction.

**Figure 1: Result of Relationship Quality model in high credence service setting**



In turn, relationship quality (trust and satisfaction) influences behavioral outcomes; the variance explained by these two dimensions of relationship quality is 50.8 percent for re-patronage and 29.2 percent for word-of-mouth recommendation.

The findings of this study indicate that among the four antecedents, empathy, expertise, and likeability, communication effectiveness is positively correlated to trust, and expertise, communication effectiveness, and likeability are found to be significant predictors of customer satisfaction, while empathy of the service provider are not significant in influencing customer satisfaction.

Hahn and Ang (2017) have summarized some of the recommended rigor in reporting results in quantitative studies which includes the use of effect size estimates and confidence intervals, the use of Bayesian methods, Bayes factors or likelihood ratios, and decision-theoretic modeling. As suggested we have included effect sizes and confidence intervals as part of our reporting. (see Table 8).

Table 8: Hypothesis Testing

Hypothesis	Relationship	Std Beta(β)	STDEV	F value (β/STDEV)	P-Value	2.5%	97.5%	VIF	Decision
H1	Expert -> Trust	0.135	0.057	2.368	0.018	0.027	0.247	1.947	Supported
H2	Expert -> Satisf	0.275	0.061	4.510	0.000	0.152	0.391	1.947	Supported
H3	Emp -> Trust	0.223	0.059	3.803	0.000	0.110	0.335	1.774	Supported
H4	Emp-> Satisf	0.068	0.069	0.985	0.325	-0.046	0.218	1.774	Not supported
H5	Likeab -> Trust	0.169	0.054	3.106	0.002	0.062	0.269	1.799	Supported
H6	Likeab-> Satisf	0.166	0.053	3.100	0.002	0.058	0.272	1.799	Supported
H7	Comm -> Trust	0.309	0.059	5.272	0.000	0.184	0.412	2.317	Supported
H8	Comm -> Satisf	0.187	0.085	2.203	0.028	0.023	0.352	2.317	Supported
H9	Trust -> Re-patr	0.277	0.067	4.135	0.000	0.147	0.406	1.705	Supported
H10	Trust -> Recom	0.253	0.068	3.717	0.000	0.113	0.374	1.705	Supported
H11	Satisf -> Re-patr	0.503	0.066	7.613	0.000	0.370	0.628	1.705	Supported
H12	Satisf -> Recom	0.342	0.062	5.516	0.000	0.216	0.461	1.705	Supported

Note: both trust and satisfaction are relationship quality

### 9.2.4 Explaining Antecedent Factors on Relationship Quality

**Expertise** has significant impacts on both trust and satisfaction in this study. This is consistent with those of previous studies (Crosby et al.,1990). In this study, expertise has a significant impact trust and satisfaction of customers. Given that customers have a high degree of uncertainty and insufficiency of knowledge, especially in the early stage of the service consumption process, they need some channels to reduce their suspicion and confusion so that their confidence in the service provider can be enhanced. Empathy / Personal attention and care accompanied by an empathetic attitude on the part of the service provider are seen as important channels to increase the trust of consumers. However, in this study empathy is found as having an insignificant impact in driving customer satisfaction. One possible explanation may be that satisfaction is an evaluation of the experience itself by the customer after the event, while perceived empathy in most cases is the service obtained by customers before the transaction. The gap between the service provider - patient ratio might have forced the Ethiopian hospitals to give little empathy to patients. Likeability increases customer trust and satisfaction in this study. This finding is consistent with the results of previous studies that were predominantly based in Western settings and mainly about salespersons (Crosby et al., 1990). The findings of this study also suggest that a likable person is more likely to be trusted. In this study, Effective communication has a significant effect on increasing trust and customer satisfaction. This finding is consistent with that of a number of previous studies (Kim et al., 2001). Communication helps to shape realistic explications between exchange partners and to develop a sense of closeness and ease in the relationship. Two-sided rather than one-sided communication also helps customers build trust in and satisfaction with the service provider.

### 9.2.5 Explaining Relationship Quality on Re-patronage and Word of Mouth Recommendation

With respect to the outcomes of relationship quality, the result of this study is compatible with the previous literature. Trust in and satisfaction with the service provider leads to positive behavioral outcomes, such as re-patronage and word-of-mouth recommendation (Kim et al., 2001). Customers who trust in and are satisfied with a service provider are more likely to deal with him or her again and are also more likely to spread favorable comments about him or her. Committed and satisfied customers tend to believe that their service providers are different from those in the marketplace and that their service providers are hard to duplicate (Kim et al., 2001). Another finding in this study is that trust in the service provider has a stronger impact than has satisfaction on both re-patronage and word-of-mouth recommendation. To ensure future exchanges, service providers have to focus more on building, managing, and maintaining trust in a long-term relationship. Customer's satisfaction has been found to lead to relationship outcomes like WOM, repeat purchase, frequent buy of product/ services, and buy more product variant/line (Wong, Hung, & Chow, 2008)

## X. Limitation and direction for future research

One of the major limitation of this study is that it has tested the model in the health care service context. Thus, the findings cannot be generalized to other service sectors operating in Ethiopia. Although this study provides insights into the examination of the antecedents and outcomes of relationship quality in a high-credence service context, it still leaves several unanswered questions, such as how are these factors processed during different stages of the relationship? Is there any association between trust and satisfaction in the construct of relationship quality is not yet answered by this study? This study has provided some important managerial implications for marketing practitioners to better understand and manage customer relationships. For management of high-credence service industry, a focus on developing stable, rather than temporary,

relationships with customers is critical to enable the health care service providers to capture a larger portion of business in the market.

All of the four antecedents examined in high-credence service providers context have significant effects on relationship quality. Given limited resources to meet customer expectations, the service provider has to make trade-offs among the service features. One important way to build up trust is to improve and enhance expertise and competence. Competence and expertise include measurable technical knowledge; the ability to demonstrate such knowledge; proof of qualifications; and an explicit statement of availability, ability, and capacity to serve the customers. In high-credence services settings, it is therefore very important for the service provider to reduce the perceived risk and uncertainty of customers and build up their confidence and trust in the service provider during the service encounters. From the major findings of the study, future researcher can use a longitudinal design, which can address the related questions about how relationship quality develops in the early and later stages of service encounters, and about the relationship between trust and satisfaction. Since the findings cannot be generalized to other service sectors operating in Ethiopia, this study can be duplicated to these sectors.

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