Does Patient Satisfaction and Trust Matter in the Relationship between Service Quality and Patient Loyalty in the Ghanaian Health Sector?

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ABSTRACT

In today’s fast-paced society, patients expect high-quality healthcare services that meet their unique health requirements. Similarly, healthcare providers emphasize quality care, utilization of advanced technologies, and promoting a culture of excellence to deliver the best possible outcomes for their clients. This study investigated how patients’ satisfaction and trust influence the relationship between service quality and patient loyalty. The theory that underpins this study was the Anderson Health Belief Model of health services use. The research adopts a quantitative descriptive research design and used a simple random sampling strategy to select 254 respondents from a target population of 1,384 who have patronised the services of the Upper East Regional Hospital in Ghana at least twice. A survey questionnaire was designed in the form of a five-point Likert scale to collect data while Structural Equation Modeling (SEM) was utilised to analyze the data. The study’s findings showed a significant and positive correlation between service quality characteristics and patient loyalty. Patient satisfaction mediates the relationship between service quality and patient loyalty. However, trust did not moderate the relationship between patient satisfaction and patient loyalty. It is recommended that healthcare organizations, in particular public health facilities, should be aware of the importance that patients place on quality dimensions and use this knowledge to improve upon patient loyalty and satisfaction.

Keywords: Customer Satisfaction, Customer Loyalty, Healthcare Services, Structural Equation Model, Ghana

I. INTRODUCTION

The provision of high-quality services is a critical differentiator in the competitive healthcare industry as it gives health service providers a competitive edge in the marketplace (Jiang et al., 2020). To achieve this, healthcare organisations must develop strategies that do not only maintain but also enhance their financial performance (Elizar et al., 2020). Meeting customer expectations is essential for any organization survival, and providing services that meet their needs is vital for retaining their loyalty and attention (Liu et al., 2021).

The delivery of healthcare services is a unique challenge due to the intangible and subjective nature of service quality. Healthcare services play a critical role in modern society, and achieving optimal health is a global social objective that requires collaboration from various sectors (Alma-Ata, 1978). Moreover, the success of delivering high-quality care to everyone hinges on the caliber of care delivered by health systems (Akachi & Kruk, 2017). Prioritizing quality improvement and continuous service assessment is essential for success in the competitive service sector (Fatima et al., 2018; Lee & Yom, 2007).

Customer satisfaction is a critical ingredient that influences customers' long-term behaviour (Oliver, 1980). In the healthcare industry, customer satisfaction is particularly important, as patients often seek high-quality care for their well-being. Therefore, healthcare organisations need to prioritise customer satisfaction and continually assess their services to ensure that they meet the evolving needs of patients.

An increase in customer satisfaction increases the tendency for customers to stay loyal to the company (Anderson, & Sullivan, 1993). The public looks up to service providers who are more willing to meet the requirements of their customers and place a higher priority on providing excellent customer service (Boscarino, 1992; Hays, 1987). Customer satisfaction is crucial for businesses, as satisfied customers often purchase more, revisit, and spread positive word-of-mouth experiences to others (Chotivanch, 2014). Prioritizing customer satisfaction, therefore, leads to increased loyalty, reduced transaction costs, increased revenue, and reduced tendency of customers contemplating to switch (Chu et al., 2012).

Private healthcare providers strive to enhance the quality of healthcare service they offer to their clients by providing significantly better services. It has been shown that a higher standard of healthcare services tends to create satisfaction and loyalty and develop trust (Fatima et al., 2018). Suki et al. (2011) revealed that patients’ evaluations of exclusive health services were dissatisfactory, mainly due to their belief that, waiting for more than an hour was excessively long, and the healthcare professionals were slow in handling concerns. Similarly, Asamrew et al. (2020) found that some physical facilities in a public hospital caused disaffection to inpatients. These results contradict
Fatima et al.’s (2018) findings, thereby creating inconsistencies in the literature that needs to be filled or validated. Thus, this research seeks to fill the gap by investigating the impact of service quality on customer loyalty, examining the mediating role of customer satisfaction and the moderating role of customer trust in the relationship between customer satisfaction and loyalty.

1.1 Statement of the Problem

In spite of the fact that healthcare facilities place a high priority on service quality, a sizable proportion of patients encounter negative service outcomes which discourage healthcare services, especially, in public health facilities. The healthcare system in Ghana has in recent times been subjected to public criticism due to growing worries about the standard of healthcare services (Abuosi, 2015; Tenkorang, 2016). The provision of healthcare in Ghana is plagued by healthcare providers who appear to take advantage of the vulnerabilities of their patients and refuse to take responsibility (Owusu-Dapaa, 2021). Literature has shown that in the Ghanaian context, not much has been done regarding service quality in healthcare performance between public and private health facilities, resulting in fierce competition between public and private healthcare providers (Atiga et al., 2011). A comparative study on patients’ perception about service quality in public and private health facilities by Kwateng et al. (2017) revealed that the care and attention receive at private health facilities is higher than public facilities. Mistrust and dissatisfaction tend to reduce patient loyalty and retention in these facilities. Apparently, healthcare personnel’s attitude and the general health facility environment does not entice patients who are particular about such elements. This study, therefore, seeks to investigate the underlying causes that create the dichotomy in service quality and its effect on patient satisfaction, trust, and loyalty.

1.2 Research Objective

The main objective driving this study is to examine the effect of service quality on patient satisfaction, trust, and loyalty.

1.3 Research Questions

i. What is the effect of service quality on patient satisfaction, trust and loyalty?

ii. Does customer satisfaction mediate the relationship between service quality and patient loyalty?

iii. Does patient trust moderate service quality and patient loyalty?

II. LITERATURE REVIEW

2.1 Theoretical Foundation: Andersen’s Behavioural Model of Health Service Use

Andersen's Behavioural Model (ABM) has been widely used as a conceptual framework to identify the variables influencing the utilization of healthcare services. For instance, Shao et al. (2018) applied the model to ascertain how migrants in Beijing utilize health services. In the same vein, Zhang et al. (2019) did a review on nutrition utilization survey based on Andersen’s model. These researchers found that various individual-level characteristics, including predisposing factors, are strong and reliable indicators of healthcare utilization patterns. In contrast, Shao et al., (2018) study revealed that the healthcare system was not designed to facilitate migrant individuals in accessing suitable healthcare services.

Per the ABM predisposing factors, enabling factors, and need factors are the three main characteristics that influence an individual’s willingness to seek healthcare (Andersen, 1995). Predisposing factors include characteristics that may limit a person's capacity to receive medical care. Enabling factors include income, wait times, community, health insurance, etc., while need factors are perceived as a need for services. These factors are given due consideration to ensure informed choices when making decisions about accessing healthcare. This research aligns with the ABM, as patients who prioritize their health and well-being first may value responsiveness and empathy from healthcare professionals more. The resultant effect is that adhering to the provision of quality service will lead to an increase in customer satisfaction. Therefore, the benefit of utilising healthcare services may influence patients’ evaluation of the overall service quality.

2.2 The Concept of Quality

In today’s consumer-driven market, the pursuit of high-quality products and services has become a top priority (Young & Chen, 2020). As a result, business leaders recognize that quality is a key strategic imperative for differentiating themselves and gaining a competitive advantage. A rise in a product's or service's quality leads to reduce expenses, more output, and improved customer offerings (Mosadehhrad, 2013). The idea of quality has been given diverse definitions and understandings in numerous writings related to services. Crosby (1979) defines quality as conforming to specification while Juran et al., (1974) considers it to be a combination of specification and customer satisfaction, while
Advance in healthcare have resulted in competition and enhanced the standard of care among healthcare services (Ferlie & Shortell, 2001). Due to these improvements, the primary demands on the system involve attaining the expected quality of care and preserving the system's conditions. In this regard, consistently evaluating and improving service quality is essential for healthcare facilities to deliver superior patient care (Taner & Antony, 2006). The quality of hospitals and clinics services plays a crucial role in the healthcare sector since these are essential factors to consider when making assessments or implementing preventive measures for the overall system (Karasan et al., 2022). In the health services sector, services offered include clinical laboratories, treatment of diseases, surgical and non-surgical care, pharmacy services, ear, nose, and throat treatment. The study therefore defines beneficiaries of these services as patients. Thus, in defining service quality refer to customers as patients.

Patient satisfaction is a crucial indicator of a country's healthcare development (Senić and Marinković, 2013). This is because various stakeholders in the healthcare industry, including policymakers, healthcare professionals, and patients, have distinct goals and perspectives on what constitutes high-quality healthcare. Nevertheless, research suggests that there is a strong link between patients' satisfaction with their medical care and the quality of care they receive. Moreover, the availability of dedicated, competent, and clinically effective medical staff is essential for providing high-quality healthcare services (Liyanage & Egbu, 2005).

Service quality dimensions have been employed to measure the extent of healthcare quality in healthcare institutions. Notable among them is the SERVQUAL model known to be the fundamental model (Parasuraman et al., 1988). The ten dimensions of this model tangibility, reliability, assurance, responsiveness, empathy, communication, competence, credibility, courtesy, and security were later condensed into five indicators, each with twenty-two items on the scale: tangibility, reliability, assurance, responsiveness, and empathy. The SERVQUAL model has been altered in this study by adding health professionals (nurses and medical physicians) and removing assurance.

The dominant feature that stands out in service quality is its technical and functional excellence (Gronroos, 1982). Thus, the overall perceived quality is a combination of the tangible items employed for service provision (technical quality) and how the service is provided (functional quality) (Gronroos, 1982). Shafei et al.'s(2015) study confirmed that the quality of hospital services is influenced by several key factors. These factors include the physical environment of the hospital premises, the appearance and behavior of hospital employees, the responsiveness and knowledge of staff during the admission process, the quality of food and cleanliness of the hospital, and the level of courtesy and knowledge demonstrated by staff during the discharge process. Several key factors in determining the quality of hospital services need to be considered as vital elements in determining the quality of hospital services. Factors considered include reliability, assurance, nursing staff appearance, responsiveness, and interaction with physicians, as well as their competence and ability to provide diagnostic services.

2.4 Patients’ Satisfaction

Satisfaction is the positive emotional response or feeling of contentment a consumer experiences when their needs or expectations after consuming a good or service (Wong, 2004). Oliver (1980) developed the Expectancy Disconfirmation Theory provides a fundamental framework for understanding customer satisfaction. The theory is based on the idea that customers assess a product or service's performance by comparing its actual performance to their initial expectations. Patients evaluate the level of satisfaction they experience after learning and consuming a service or product. The expectancy disconfirmation theory is linked to customer satisfaction. Customers have pre-purchase expectations regarding the performance of the items and services they acquire. Thus, after purchasing and using a good or service, the outcomes are evaluated in the light of the presumptions made about its functionality. Positive disconfirmation occurs when services and products that are received exceed expectations. On the contrary, negative disconfirmation occurs when goods and services consumed fall short of expectations. (Oliver, 1980). Businesses can offer goods and services that provide customers with the desired results by having a solid understanding of the concept of customer satisfaction. This sense of satisfaction can lead to long-term loyalty and commitment from the client (Ismoyo et al. 2017). Though, service quality and satisfaction are distinct in some sense these two constructs are related, since service quality precedes satisfaction (Park & Yi, 2016). In healthcare delivery, the extent of patients’ satisfaction is seen as a direct result of matching their expectations for their experiences receiving healthcare services with the actual experiences.
they have (Strauss et al., 2013). By implication, patients’ satisfaction will be achieved when their expectations regarding healthcare services are fulfilled. Anything less than that will result in dissatisfaction after encountering the service provided. Equally, patients’ satisfaction will be boosted when they perceive a highly positive dissonance (Abekah-Nkrumah et al., 2021). Patient satisfaction serves as a significant and frequently employed yardstick for assessing quality in healthcare delivery (Tefera et al., 2016; Stepurko et al., 2016). Carretta et al. (2017) reported in their study that patients generally rated the medical dimension as more satisfying than the accommodation dimension. Higher levels of satisfaction were linked to the bed linens’ quality, the doctors’ civility, and the nursing staff’s warmth and politeness. Assessing patient satisfaction with the SERVQUAL model of private hospitals through the application of structural equation modeling, assurance, empathy, reliability, responsiveness, and tangibility as influential factors; were found to be significantly related to the overall patient satisfaction in private hospitals (Azmi et al., 2017).

2.5 Customer Trust

The role trust plays in various businesses and disciplines has been subjected to varied definitions. As alluded to by (Walterbusch et al., 2013), an attempt to carve an accepted definition may not be difficult, however, from the point of view of organizational, managerial, psychological, social, or cultural standpoint, demands considerable effort. Due to the elusive nature and complexity of trust, (Josang, et al., 2007), varied definitions have been given to it (Rousseau et al., 1998). As such, any attempt to give any definition should focus on the context it is used, especially looking at the research on building, maintaining, and ultimately losing trust (Walterbusch et al., 2014). Customer trust refers to the conviction customers have, that service providers will genuinely and reliably fulfill their commitments (Sirdeshmukh et al., 2002). Patrick (2002) noted that customer trust is a combination of mental, emotional, and behavioral expressions that occur when clients believe that a service provider will act in their best interest while they relinquish control. According to Hall et al. (2001), trust is the willingness to accept a situation where you are vulnerable, believing that the person or entity you are trusting will act in your best interests and take care of you. Caterinccio (1979), sees trust as what reflects the sense of trust or belief in the medical practitioner. Trust is when a patient chooses to be vulnerable and knows that the healthcare practitioner will look out for his best interests (Anderson & Dedrick, 1990). Trust is essential in building a strong relationship with nurses (Price, 1993). To some experts’ strong patient-provider interactions directly influence the therapeutic process (Gilson, 2006). While some behaviors, such as respectful treatment, both strengthen and justify trust, actions like deception undermine trust and justify distrust (Goold, 2001). Mistrust in healthcare services and processes can result in a decline in trust in healthcare organizations (Khullar, 2019). Research has proven that open communication and trust which is focused on patients improves healthcare outcomes offered by the health facilities; this gives patients the expected satisfaction (Ward, 2018). Building trust in patients results in higher patient satisfaction (Ward, 2018). Hess and Story (2005) alluded to the fact that customer satisfaction is precedent to trust based on customers consistently consuming a service or product.

2.6 Customer Loyalty

The strength of organizations, specifically, service organizations lie in customer loyalty as the driving force of competitiveness and survival (Dick & Basu, 1994). The theoretical perspective of customer loyalty is premised on attitudes and purchasing behaviors that have an indirect effect on the competitiveness of one firm over the other (Watson et al., 2015). Loyalty refers to the unwavering commitment and dedication to a particular cause, individual, or philosophy, characterized by steadfast support and devotion over time (Webster's New World Dictionary of American English, 1988). It is evident from this definition that loyalty extends to other fields. The context in which the construct is defined is crucial for clearer understanding. The possibility of finding a novel definition for loyalty, therefore, is paramount due to the spreading nature of the construct over several contexts and disciplines. Loyalty is seen as multidimensional, and research shows that there are two types of loyalties: those that are more clearly related to specific individuals and those that are too very large groups based on higher order abstractions (also known as abstract loyalties) (Aksoy et al., 2015). The attitudinal aspect of customer loyalty (Moorman et al., 1993) and the purchasing styles of customers (Ailawadi et al., 2008; De Wulf et al., 2001) impact on the ability of service firms to retain customers (Gupta et al., 2004). It has been argued that it is more profitable to retain existing customers than to seek to attract them since it costs more heavily to attract new customers than to keep existing ones (Kotler, 2009; Richard & Zhang, 2012). Customer Relationship Management (CRM) can improve patients’ satisfaction and loyalty in hospitals by enhancing communication and hospital performance. Healthcare administrators and policymakers should implement Customer Relationship Management (CRM) strategies to enhance patient satisfaction and overall experience (Hajkikhani et al., 2016). CRM is essential for enhancing patient loyalty in the medical field. Accordingly, in hospitals, elements like communication, customer service, and service quality have a big influence on patient loyalty (Abekah-Nkrumah et al., 2021). Elizar et al. (2020) reported on a study on Service Quality, patient satisfaction, patient trust, and patient loyalty in the Service of Paediatric Polyclinic over Private H Hospital of East Jakarta, Indonesia, anddiscovered that, even though
other paediatric polyclinics provide better services, customers will grow more devoted to the pediatric polyclinic at Private Hospital. The bottom line is that patients will return to the facility. Quantitative results from a study by Nguyen et al. (2021) support the notion that customer loyalty is strongly impacted by customers' satisfaction and perceived value.

2.7 Service Quality, Patients’ Satisfaction, and Patients’ Loyalty

The significance of service quality and customer satisfaction in businesses lies in their substantial impact on a company's growth. This growth is largely influenced by a firm's ability to retain customers through efficient services and ensuring their satisfaction (Edward & Sahadev, 2011). As service quality improves patients’ satisfaction is enhanced and consequently, fosters a stronger patient relationship (Chang et al., 2017). It is expected that more satisfied patients will result from high-quality service efficacy. Consequently, this will improve their engagement and cultivate more robust relationships among patients. Research has shown that the overall level of service quality significantly impacts patient satisfaction, leading to increased patients’ loyalty (Gong & Yi, 2018). Patient trust and customer satisfaction are closely linked and have a significant positive relationship with customer loyalty (Akbar & Parvez, 2009). Additionally, they discovered that customer loyalty and perceived service quality are mediated by customer satisfaction. Based on these discussions, it hypothesized that:

**H1:** Service quality significantly and positively influences patients’ loyalty.

**H2:** Service quality significantly and positively influences patients’ satisfaction.

2.8 Patient Satisfaction and Loyalty

In the highly competitive market of medical tourism, retaining repeat purchases is crucial for a medical clinic's financial success, as it generates a steady stream of revenue and helps to build a reputation for quality care. (Han & Hyun, 2015). When a patient compares their expectations with the real performance of a product or service, they are satisfied (Kotler & Armstrong, 2012). Customers are delighted when performance exceeds expectations (Kotler et al., 2018). It is expedient, therefore, that service providers strive to meet the expectations of existing and potential patients. Han and Hyun (2015) suggest that the intentions to return to clinics are significantly influenced by factors such as perceived quality, satisfaction, and trust in the personnel and facilities. An exploratory study by Birkhäuer et al. (2017), found a significant and positive correlation between patient satisfaction and trust. Similar research by Liu et al. (2021), also revealed that patient loyalty comes after patient satisfaction. Moreover, there was no clear correlation between patient loyalty and satisfaction. Studies have consistently demonstrated that there is a strong correlation between customer satisfaction and loyalty (Abassi et al., 2011). The successes of most businesses rest on the loyalty of customers (Yap et al., 2012). Minta (2018) noted that customer satisfaction does not only directly relate to loyalty, it is influenced positively (Anwar et al., 2019). Based on the study’s purpose, the following hypotheses are predicted.

**H3:** Patient’s satisfaction significantly and positively influences patients’ loyalty.

2.9 The Mediating Role of Customer Satisfaction

The quality of healthcare services is a crucial factor in the healthcare sector, as it directly impacts patient satisfaction and loyalty. According to the Expectancy Disconfirmation Theory, Oliver (1980), service quality precedes satisfaction, and research has shown that overall service quality has a significant impact on patient satisfaction (Gong & Yi, 2018), leading to increased loyalty. Moreover, patients evaluate the level of satisfaction they experienced after receiving a service, which is closely linked to trust and has a significant positive relationship with customer loyalty. Research suggests that satisfaction plays a mediating role between service quality and loyalty. Specifically, service quality influences customer satisfaction, which in turn affects customer loyalty. Akbar and Parvez (2009) found that customer satisfaction is a mediator between perceived service quality and customer loyalty, indicating that patients who are satisfied with the service quality are more likely to be loyal to the healthcare provider. Based on these analogies, it is hypothesised that:

**H4:** Patient satisfaction mediates the relationship between service quality and patient loyalty.

2.10 The Moderating Role of Patient Trust

Research has consistently shown that open communication and trust are crucial factors in improving healthcare outcomes, leading to increased patient satisfaction. Building trust with patients is essential for achieving higher patient satisfaction (Ward, 2018). Additionally, studies have found that customer satisfaction is a precursor to trust, as customers are more likely to develop trust when they are consistently satisfied with a service or product (Hess & Story, 2005).

The findings from Leninkumar’s (2017) study highlight the significance of patient trust in fostering patient
loyalty. The study revealed a significant positive correlation between patient trust and loyalty, as well as between customer satisfaction and loyalty. Furthermore, the study demonstrated that customer satisfaction is an antecedent of customer trust and that patient trust has a moderating role between patient satisfaction and patient loyalty. This means that patient trust acts as a mediator between patient satisfaction and loyalty, suggesting that patients who are satisfied with their healthcare experience are more likely to develop trust, which in turn increases their loyalty to the healthcare provider. It is therefore hypothesised that:

H5: patient trust moderates the relationship between patient satisfaction and patient loyalty.

III. METHODOLOGY

3.1 Research Design

Three different types of study designs are proposed by Malhotra (2020) namely: causal, descriptive, and exploratory research designs. This study employs the quantitative approach. Primary data was collected using structured questionnaire. Structured questionnaire was distributed to respondents who had ever visited the selected health facility to find out how they perceive service quality and satisfaction on trust and loyalty. The selected hospital serves as referral facility for the municipals and districts hospitals within Upper East Region of Ghana.

3.2 Sampling Technique and Data Collection

A simple random sampling technique was used to select 254 respondents for the study. Respondents were mainly drawn from lecturers and students from the School of Business, Bolgatanga Technical University, who have visited the Bolgatanga Regional Hospital at least twice. The response rate was 100%. This was possible due to the fact that all respondents were within the University community and could be reached easily. The Regional hospital serves as the biggest referral health facility in the Region. The selection was based on picking the first respondent and the subsequent one after every fifth person. The researcher used two weeks to sample the respondents and administered the questionnaire. The questionnaire remained with respondents for three days after which they were retrieved. This was to give the respondents ample time to respond to the questionnaire appropriately. The questionnaire was in two parts; respondents’ demographics (age, gender, educational level, and occupation) and structured questionnaire. The structured questionnaire was in the form of a 5-point Likert scale ranging from: 1 = strongly disagree, = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. Respondents were to indicate the extent to which they agreed with the statements by selecting the appropriate alternative. The questionnaire was structured around five constructs, service quality indicators (tangibles, reliability, empathy, responsiveness, and medical service), customer satisfaction, customer (patient) satisfaction, customer (patient) trust, and customer (patient) loyalty.

IV. FINDINGS & DISCUSSIONS

4.1 Factor analysis

Exploratory factor analysis was performed to assess the correlation between items. Bartlett’s test of sphericity $\chi^2$ (378) = 6449.539, p-value= 0.000, indicated that correlations between the items were sufficient. Field (2009) and Hutcheson and Sofroniou (1999), suggest a KMO of 0.5 is deemed good. The analysis of the data indicates that the KMO (Kaiser–Meyer–Olkin) value is equal to 0.842. This measure is in line with the sample adequacy and exceeds the minimum requirement of 0.5. The analysis further showed that six (6) factors explained 73.332 % of the variance.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>KMO and Bartlett’s Test</th>
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</thead>
<tbody>
<tr>
<td>Kaiser-Meyer-Oklin Measure of Sampling Adequacy.</td>
<td>0.842</td>
</tr>
<tr>
<td>Bartlett’s Test of Sphericity</td>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td></td>
<td>df</td>
</tr>
<tr>
<td></td>
<td>Sig.</td>
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</table>

4.2 Common Method Bias

According to Podsakoff et al. (2012), Common Method Bias (CMB) is a kind of inaccuracy that arises while attempting to estimate the association between two variables because Common Method Variance (CMV) is present. The variance that can be attributed more to the measurement technique than to the relevant construct is known as CMV. The existence of CMV tends to weaken a research's findings if not controlled. In other words, the error could be so huge that
it may undermine the validity of the correlations or relationships. To make sure that CMV is not a reason for concern in this study, the Harman one-factor test (using SPSS) was used to check for this phenomenon. In this analysis, all of the components (observed variables) are aggregated onto a single common factor using the principal axis extraction method, with no rotation ([Podsakoff et al., 2012]. A single-factor total variance of less than 50% suggests that the data may not be greatly impacted by the CMB. The single-factor extraction total variance in this study was 40.68%, which is below the 50% cutoff and suggests that there is no CMB in the data. This paves the way for further analysis.

4.3 Model Fit Assessment

A structural equation model with partial least squares was used to calculate the goodness-of-fit indices. The SRMR score, according to Hair et al. (2017), is a measure of how differently the predictor and observed models' correlations differ from one another. It also shows whether there are any errors in the model. SRMR value ranges between 0 and 1. Iacobucci (2010) indicates that small residual values between are very good. To Hu and Bentler (1999) SRMR value which is less than 0.08 demonstrates that the model is good as well as its fitness. The SRME value from the analysis is 0.086, an indication of an adequate fit (see Table 1). A chi-square value ranging between 0 and 2 is accepted to be a good model (Schermelleh-Engel et al., 2003). Susanty et al. (2018) asserts that NFI value greater than 0.90 indicates a good model, NFI value greater than 0.5 but less than 0.8 represents a marginal fit, adequate to represent a model fit. This paper recorded an NFI value of 0.681 (see Table 2). This indicates that the model had a marginal fit.

Table 2
Model Fit

<table>
<thead>
<tr>
<th>Saturated Model</th>
<th>Estimated Model</th>
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<tbody>
<tr>
<td>SRMR</td>
<td>0.086</td>
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<tr>
<td>d_ULS</td>
<td>1.715</td>
</tr>
<tr>
<td>d_G</td>
<td>1.281</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>1676.4</td>
</tr>
<tr>
<td>NFI</td>
<td>0.681</td>
</tr>
</tbody>
</table>

4.4 Measurement Model

Reliability and validity are two key components of the measurement model. Validity refers to the degree to which measurements accurately capture the constructs they are designed to assess. Convergent validity is guaranteed when scores from two instruments measuring the same concept have a strong correlation with one another (Sekaran & Bougie, 2016). One way of establishing convergent validity is to consider the outer loadings and average variance extracted (AVE) (Hair et al., 2017). Accordingly, outer loadings (indicator reliability) should be 0.708 or 0.700 (Hair et al., 2017). A standardized loading exceeding 0.7 indicates that the indicators have a stronger relationship with the relevant underlying latent variable in contrast to the random error in the data. According to Chin (1998), a 0.50 as a lower bound might be sufficient. Hulland (1999) indicates that a value of 0.4 or greater is acceptable in exploratory. Loadings that did not meet the minimum cutoff were deleted. The outer loadings and the AVE for the constructs are shown in Table 3.

The stability and consistency of the measurements are referred to as reliability. If a measurement regularly produces results with the same values, it is said to be dependable (Blumberg et al., 2005). Internal consistency is commonly measured using Cronbach’s Alpha (CA) and composite reliability (CR). Extant literature (Bagozzi & Yi, 1988; Hair et al., 2012) indicates that CR can be a good substitute for CA. Even though CR is sometimes considered more appropriate, it takes care of only items differential weights, unlike CA which weighs all indicators equally. For internal consistency, a Cronbach Alpha of 0.70 is considered acceptable (Hair et al., 2017; Hair et al., 2012). The computed CA values were in the range of 0.842 to 0.909. The range of CR values was 0.894 to 0.933. Internal consistency reliability was demonstrated by the CA and CR for the latent variable (tangibles, dependability, empathy, assurance, medical, trust, customer happiness, loyalty) all meeting the minimum criterion (see Table 3).

Notes: CL = Customer loyalty, CS = Customer satisfaction, SQ = service quality, CT = Customer trust
Table 3
Reliability Test

<table>
<thead>
<tr>
<th>Outer Loadings</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted</th>
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<tbody>
<tr>
<td>SQ</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SQ10</td>
<td>0.711</td>
<td></td>
<td></td>
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<tr>
<td>SQ2</td>
<td>0.752</td>
<td></td>
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<tr>
<td>SQ3</td>
<td>0.742</td>
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<td>SQ4</td>
<td>0.791</td>
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<td>SQ5</td>
<td>0.751</td>
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<td>SQ7</td>
<td>0.787</td>
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<td>SQ8</td>
<td>0.724</td>
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<tr>
<td>SQ9</td>
<td>0.755</td>
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<tr>
<td>CS</td>
<td></td>
<td>0.909</td>
<td>0.933</td>
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<td>CS1</td>
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<td>CS2</td>
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<tr>
<td>CS3</td>
<td>0.888</td>
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<td>CS4</td>
<td>0.862</td>
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<tr>
<td>CS5</td>
<td>0.795</td>
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<tr>
<td>CT</td>
<td></td>
<td>0.842</td>
<td>0.894</td>
</tr>
<tr>
<td>CT1</td>
<td>0.784</td>
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<tr>
<td>CT2</td>
<td>0.768</td>
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<td>CT3</td>
<td>0.896</td>
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<td>CT4</td>
<td>0.841</td>
<td></td>
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</tr>
<tr>
<td>CL</td>
<td></td>
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</tr>
<tr>
<td>CL1</td>
<td>0.872</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL2</td>
<td>0.881</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL3</td>
<td>0.914</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL4</td>
<td>0.860</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: CL = customer loyalty, CS = customer satisfaction, SQ = service quality, CT = customer trust

4.4 Discriminant Validity

When a model construct accurately describes a unique phenomenon that is not captured by any other concept, discriminant validity is proven (Hair et al., 2022). Discriminant validity indicates how effectively each factor connects to its predicted construct. Discriminant validity is confirmed when two distinct factors have no connection, and the results from a validity test also show no correlation (Sekaran & Bougie, 2019b). Fornell and Larcker (1981) state that the square root of the Average Variance Extracted (AVE) for each latent variable can be used to demonstrate discriminant validity. This is anticipated to be greater than the correlations of the latent variables. Cross-loadings and the relationship between the square roots of AVE and the correlations between first-order constructs first examined by Chin (1998) and then further developed by Fornell and Bookstein (1982) serve as examples of discriminant validity. Table 4 illustrates the study’s discriminant validity.

Table 4
Discriminant Validity

<table>
<thead>
<tr>
<th></th>
<th>CL</th>
<th>CS</th>
<th>CT</th>
<th>SQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL</td>
<td>0.882</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.874</td>
<td>0.857</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT</td>
<td>0.541</td>
<td>0.66</td>
<td>0.824</td>
<td></td>
</tr>
<tr>
<td>SQ</td>
<td>0.693</td>
<td>0.796</td>
<td>0.663</td>
<td>0.752</td>
</tr>
</tbody>
</table>

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4.5 Results of Hypotheses Testing

H1: A positive and significant relationship exists between service quality positively and customer satisfaction ($\beta = 0.883$, $t = 34.913$, $p = 0.000$)

H2: A direct and significant relationship exists between customer satisfaction and customer loyalty ($\beta = 1.337$, $t = 13.298$, $p = 0.000$).

H3: A direct and positive relationship exists between service quality and customer loyalty ($\beta = -0.279$, $t = 2.525$, $p < 0.012$).

H4: A direct and significant relationship exists between customer trust and customer loyalty ($\beta = -0.174$, $t = 2.266$, $p < 0.024$)

4.6 Moderated Mediation

SmartPLS version 3 was used to estimate the direct and indirect effects of service quality on customer loyalty with the inclusion of a mediator (customer satisfaction). The results showed that customer satisfaction mediated the relationship between service quality and customer loyalty ($\beta = 1.181$, $t = 10.375$, $p = 0.000$) (see Table 5). However, customer trust had no moderating effect on service quality and customer loyalty ($\beta = 0.000$, $t = 0.001$, $p = 0.999$).

Table 5

<table>
<thead>
<tr>
<th>Hypotheses path</th>
<th>Beta</th>
<th>Standard deviation</th>
<th>t- statistics</th>
<th>P Values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ -&gt; CS</td>
<td>0.883</td>
<td>0.025</td>
<td>34.913</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>SQ -&gt; CL</td>
<td>-0.279</td>
<td>0.111</td>
<td>2.525</td>
<td>0.012</td>
<td>Accepted</td>
</tr>
<tr>
<td>CS -&gt; CL</td>
<td>1.337</td>
<td>0.101</td>
<td>13.298</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>CT -&gt; CL</td>
<td>-0.174</td>
<td>0.077</td>
<td>2.266</td>
<td>0.024</td>
<td>Accepted</td>
</tr>
<tr>
<td>Indirect path</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SQ -&gt; CS -&gt; CL</td>
<td>1.181</td>
<td>0.114</td>
<td>10.375</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>MOD_CT_SQ_CL</td>
<td>0.000</td>
<td>0.100</td>
<td>0.001</td>
<td>0.999</td>
<td>Not accepted</td>
</tr>
</tbody>
</table>

Notes: CS = customer satisfaction, CT = customer trust, SQ = service quality, CL = customer loyalty
4.8 Discussions

The purpose of this study was to look into how, in a hospital setting, client trust and satisfaction are impacted by service quality. A quantitative cross-sectional survey was used for the study. This study aimed to test the moderated mediation of customer satisfaction and customer trust on service quality and customer loyalty, notwithstanding prior studies on the relationship between service quality and customer satisfaction and loyalty. The results showed that customer happiness and service quality are significantly and favorably correlated (β = 0.883, t = 34.9143, p = 0.000).

This result is consistent with the research conducted by Azmi et al. (2017), who discovered that patient (or customer) satisfaction was highly influenced by each of the SERQUAL indicators: assurance, empathy, reliability, responsiveness, and tangibility. According to Gong & Yi (2018), total service quality has a major impact on customer satisfaction, which leads to a rise in customer loyalty. Customer loyalty and service quality are significantly and favorably correlated (β = -0.279, t = 2.525, p = 0.012).

Liu et al. (2021) concur with the statement that patient satisfaction comes before loyalty. A bootstrapping mediation test was conducted following the structural model utilized in this investigation. The association between service quality and customer loyalty is mediated by customer satisfaction, according to the results (β = 1.181, t = 10.375, p = 0.000). This outcome is consistent with the research conducted by Liu et al. (2021). Conversely, it was discovered that the relationship between customer loyalty and service quality is not moderated by customer trust.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

This study examined the effect of service quality and customer satisfaction on trust and customer loyalty with customer trust and customer satisfaction playing the role of moderator and mediator respectively. Many authors have researched service quality, customer satisfaction, and customer loyalty, but not much work if any, has been done with the moderated mediated effect. Predicted hypotheses were all supported. The relationship between service quality, customer, and customer loyalty was established. While customer satisfaction was found to mediate service quality and customer loyalty, customer trust did not moderate service quality and customer loyalty.

5.2 Recommendations

The research findings underscore the implication it has on managers of healthcare institutions, especially public hospitals. The research demonstrates the importance of observing and keeping to the quality dimensions. Building trust and loyalty in patients should be a continuous activity in healthcare facilities to attract clients. It is also recommended that healthcare organizations, in particular public health facilities, should be aware of the importance that patients place on quality dimensions and use this knowledge to improve patient loyalty and satisfaction.

REFERENCES


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