ANALYZING THE MEDIATING ROLE OF SERVICE QUALITY IN THE RELATIONSHIP BETWEEN SERVICE QUALITY AND PATIENT SATISFACTION AT RAFIC HARIRI UNIVERSITY HOSPITAL

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ABSTRACT

Purpose: This study delves into the intricate web of relationships between tangible elements, responsibility, reliability, empathy, and patient satisfaction, with a specific focus on Rafic Hariri University Hospital.

Theoretical framework: The Expectancy-Disconfirmation Theory provides valuable insights into understanding patient satisfaction in the context of healthcare services. According to this theory, patient satisfaction is influenced by the comparison between their initial expectations and their subsequent perceptions of the actual service received.

Design/Methodology/Approach: With a sample size of 398 participants, a structured equation model was employed to analyze the mediating role of service quality in this context. The healthcare industry's dynamic nature necessitates a comprehensive understanding of factors influencing patient satisfaction for continuous improvement.

Findings: Service quality emerges as a mediator in this framework, acting as a bridge between the aforementioned factors and patient satisfaction. The mediating role of service quality implies that the impact of tangible elements, responsibility, reliability, and empathy on patient satisfaction is channeled through the lens of service quality. This emphasizes the vital role that hospital management and staff play in not only directly affecting patients but also indirectly through the quality of services rendered.

Research, Practical & Social implications: Rafic Hariri University Hospital, as the backdrop for this study, provides a specific context in which to examine these relationships. With a diverse patient population and a reputation for delivering high-quality healthcare, this hospital offers valuable insights into the dynamics of patient satisfaction.

Originality/Value: The findings shed light on the critical role of service quality as a mediator and underscore the importance of maintaining high standards across tangible elements, responsibility, reliability, and empathy to enhance patient satisfaction.

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ANALISANDO O PAPEL MEDIADOR DA QUALIDADE DO SERVIÇO NA RELAÇÃO ENTRE A QUALIDADE DO SERVIÇO E A SATISFAÇÃO DO PACIENTE NO HOSPITAL UNIVERSITÁRIO RAFIC HARIRI

RESUMO

Objetivo: Este estudo investiga a intrincada rede de relações entre elementos tangíveis, responsabilidade, confiabilidade, empatia e satisfação do paciente, com foco especifico no Hospital Universitário Rafic Hariri.

Referencial teórico: A Teoria da Expectativa-Desconfirmação fornece informações valiosas para a compreensão da satisfação do paciente no contexto dos serviços de saúde. De acordo com esta teoria, a satisfação do paciente é

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influenciada pela comparação entre as suas expectativas iniciais e as suas percepções subsequentes do serviço real recebido.

**Desenho/Metodologia/Abordagem:** Com uma amostra de 398 participantes, um modelo de equações estruturadas foi empregado para analisar o papel mediador da qualidade do serviço neste contexto. A natureza dinâmica do setor de saúde exige uma compreensão abrangente dos fatores que influenciam a satisfação do paciente para melhoria contínua.

**Resultados:** A qualidade do serviço surge como mediadora neste quadro, atuando como ponte entre os fatores acima mencionados e a satisfação do paciente. O papel mediador da qualidade do serviço implica que o impacto de elementos tangíveis, responsabilidade, confiabilidade e empatia na satisfação do paciente seja canalizado através das lentes da qualidade do serviço. Isto enfatiza o papel vital que a gestão e o pessoal hospitalar desempenham, não só afetando diretamente os pacientes, mas também indiretamente através da qualidade dos serviços prestados.

**Implicações de pesquisa, Práticas e Sociais:** O Hospital Universitário Rafic Hariri, como pano de fundo para este estudo, fornece um contexto especifico para examinar essas relações. Com uma população diversificada de pacientes e uma reputação de oferecer cuidados de saúde de alta qualidade, este hospital oferece informações valiosas sobre a dinâmica da satisfação dos pacientes.

**Originalidade/Valor:** As conclusões esclarecem o papel crítico da qualidade do serviço como mediador e sublinham a importância de manter padrões elevados em elementos tangíveis, responsabilidade, fiabilidade e empatia para aumentar a satisfação do paciente.

**Palavras-chave:** Qualidade do Serviço, Satisfação do Paciente, Empatia, Tangibilidade, Hospital Universitário Rafic Hariri.

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**ANÁLISIS DEL PAPEL MEDIADOR DE LA CALIDAD DEL SERVICIO EN LA RELACIÓN ENTRE LA CALIDAD DEL SERVICIO Y LA SATISFACCIÓN DEL PACIENTE EN EL HOSPITAL UNIVERSITARIO RAFIC HARIRI**

**RESUMEN**

**Propósito:** Este estudio profundiza en la intrincada red de relaciones entre elementos tangibles, responsabilidad, confiabilidad, empatía y satisfacción del paciente, con un enfoque específico en el Hospital Universitario Rafic Hariri.

**Marco teórico:** La teoría de la expectativa-desconfirmación proporciona información valiosa para comprender la satisfacción del paciente en el contexto de los servicios de atención médica. Según esta teoría, la satisfacción del paciente está influenciada por la comparación entre sus expectativas iniciales y sus percepciones posteriores sobre el servicio real recibido.

**Diseño/Metodología/Enfoque:** Con un tamaño de muestra de 398 participantes, se empleó un modelo de ecuación estructurada para analizar el papel mediador de la calidad del servicio en este contexto. La naturaleza dinámica de la industria de la salud requiere una comprensión integral de los factores que influyen en la satisfacción del paciente para lograr una mejora continua.

**Hallazgos:** La calidad del servicio surge como un mediador en este marco, actuando como puente entre los factores antes mencionados y la satisfacción del paciente. El papel mediador de la calidad del servicio implica que el impacto de los elementos tangibles, la responsabilidad, la confiabilidad y la empatía en la satisfacción del paciente se canaliza a través de la lente de la calidad del servicio. Esto enfatiza el papel vital que desempeñan la administración y el personal del hospital no solo afectando directamente a los pacientes sino también indirectamente a través de la calidad de los servicios prestados.

**Implicaciones de investigación, Prácticas y Sociales:** el Hospital Universitario Rafic Hariri, como telón de fondo de este estudio, proporciona un contexto específico en el que examinar estas relaciones. Con una población de pacientes diversa y una reputación de brindar atención médica de alta calidad, este hospital ofrece información valiosa sobre la dinámica de la satisfacción del paciente.

**Originalidad/Valor:** los hallazgos arrojan luz sobre el papel fundamental de la calidad del servicio como mediador y subrayan la importancia de mantener altos estándares en elementos tangibles, responsabilidad, confiabilidad y empatía para mejorar la satisfacción del paciente.

**Palabras clave:** Calidad del Servicio, Satisfacción del Paciente, Empatía, Tangibilidad, Hospital Universitario Rafic Hariri.
INTRODUCTION

Researchers, practitioners, and policymakers have all paid close attention to the importance of service quality and patient satisfaction in healthcare delivery (El-Kassar et al., 2022). Patients’ perspectives on treatment, their experiences, and their results are all influenced by the quality of the services they get. However, patient satisfaction reflects how well healthcare practitioners meet patients' expectations and requirements (Obomanu & Kelvin, 2018). Improve healthcare delivery and patient experiences by learning how service quality affects satisfaction (Kozhimala et al., 2023).

The term "service quality" describes the degree to which provided medical care satisfies the demands of its recipients (Ertürk, 2022). It includes aspects such as how quickly medical staff responds to patients' needs, how consistently they offer care, how empathetically they treat them, and what facilities they are provided (Neel et al., 2021). Increased patient happiness, trust, and a favorable impression of the healthcare experience may be attributed to high service quality ratings (Tahirs et al., 2022). Instead, unhappiness, diminished trust, and unfavorable views of care might result from subpar treatment (Rai & Nandy, 2021).

Patients' subjective impressions about their healthcare experiences are reflected in the multidimensional concept known as patient satisfaction. It includes things like how well doctors treated patients, how well they got answers to patient questions, how long patients had to wait for an appointment, how kind the staff was, and how much patients felt the doctors care was worth in the grand scheme of things. Perceived service quality, expectation fulfillment, provider-patient interaction, and positive results all play a role in whether or not a patient is satisfied with their healthcare experience (Huo et al., 2016).

There are a lot of moving parts in the intricate web that connect service quality to happy patients (Hamza et al, 2022). According to studies (Chrobot-Mason & Aramovich, 2013), patients are more satisfied with care when they perceive it to be of more excellent quality. Patients experience a condition of positive disconfirmation when their expectations are not only satisfied but surpassed. On the contrary, patient satisfaction drops when care falls short of their expectations, a phenomenon known as negative disconfirmation. Therefore, patient satisfaction is heavily influenced by the degree to which service quality meets or exceeds expectations (Zutshi et al., 2021).
LITERATURE REVIEW

When applied to healthcare services, the Expectancy-Disconfirmation Theory yields an essential understanding of patient satisfaction. According to this theory, patient satisfaction is determined by how well the service meets the patient's expectations (Weber-Main et al., 2022). According to this idea, patients judge the quality of their healthcare providers about their expectations, which they have formed based on their own experiences and those of others (Auerbach & Andrews, 2018).

Positive disconfirmation happens when actual service quality meets or surpasses patient expectations. When patients report a positive disconfirmation, they say that the service exceeded their expectations. Patients are more likely to feel content when their wants and requirements are met (Rahimpour et al., 2020). Many things may contribute to a positive disconfirmation, including getting the care you need quickly, communicating well, getting individualized attention, and having good results from your therapy. Positive disconfirmation increases the likelihood that patients will rate a service as good and increase their satisfaction (Bari et al., 2019).

However, negative disconfirmation happens when patients' experiences with the service fall short of their expectations (Kumar et al, 2022). When patients feel that the service they received fell short of their expectations, this is known as negative disconfirmation (Priyadarshi & Premchandran, 2018). Waiting periods, difficulty in communicating, unmet requirements, and dissatisfaction with the quality of treatment offered are all potential causes. Disatisfaction follows patients' perception that their expectations have not been realized after receiving discouraging news (Ma et al., 2022). Patients are likelier to express low satisfaction levels and a poor impression of service quality after experiencing negative disconfirmation (Shatila, 2023).

According to the Expectancy-Disconfirmation Theory, setting realistic expectations with patients is crucial to increasing their happiness and contentment with the care they get. Medical treatment providers should seek to meet and exceed patients' original expectations. Healthcare practitioners may produce positive disconfirmation and increase patient satisfaction by providing treatments that meet or surpass patients' expectations (Hall et al., 2018). This may be accomplished by things like clear and timely communication, efficient management of wait times, care that is both compassionate and patient-centered, and reliable achievement of positive clinical results (Shatila & Alozian, 2019).
Patient satisfaction is dynamic, as the Expectancy-Disconfirmation Theory highlights. As a result of communication, feedback, and the quality of care received, patients' perspectives and expectations might evolve (Agarwal, 2016). Patient satisfaction can only be maintained and improved via ongoing efforts to consistently go above and beyond patient expectations and close gaps between patient expectations and perceived service quality.

An essential part of providing healthcare is understanding the connection between concrete features and patient happiness. The healthcare setting, its infrastructure, and its tools are all examples of tangible factors (El Dessouky & Al-Ghareeb, 2021). The aesthetics of medical centers and waiting spaces significantly impact people's feelings about their experience. First impressions matter in the healthcare industry, and patients are more likely to have a favorable opinion of a physician if the facility they visit is contemporary, clean, and well-maintained (Sonnenschein, 2021). Patients' perceptions of their healthcare experience may be improved using aesthetically pleasing design elements (Ushakov & Shatila, 2021).

Having access to high-quality medical equipment is also important to patients. Patients may have a preconceived notion that facilities with cutting-edge technology provide better care and have more successful results (Mansel & Einion, 2019). However, patients may be less satisfied if they experience difficulties or frustrations due to obsolete or broken equipment. The healthcare system's attention may significantly impact patient satisfaction to less abstract qualities, such as accessibility and convenience. Facilities that are convenient for patients to reach are highly regarded (McCunney et al., 2019). Improved patient experiences and greater satisfaction with the healthcare practitioner are associated with more accessible and convenient locations. This led to the development of the following hypothesis:

**H1: There is a Relationship Between Tangible Elements and Patient Satisfaction**

Accountability and patient happiness are fundamental to the healthcare service industry. When discussing healthcare workers' responsibilities, the terms "responsibility" and "ethical behavior" are sometimes used interchangeably (Souza & Paz, 2020). Patient satisfaction is strongly impacted when healthcare professionals behave responsibly and ethically. Care providers who prioritize patient safety and satisfaction are highly valued by their patients (Sternad, 2015). There is a direct correlation between ethical practices and increased patient satisfaction.

Responsible healthcare is characterized by focusing on the patient's unique circumstances and preferences (Carden & Fell, 2021). Patient satisfaction rises when healthcare providers make an effort to make individuals feel like they are important to the team.
Responsible healthcare practitioners are more likely to have productive conversations with their patients (Guzman et al., 2021). Patient satisfaction rises when clinicians are attentive to their patients’ questions and concerns, since this fosters more honest and open communication between the two parties (Ushakov & Shatila, 2022).

Organizations in the healthcare industry that place a premium on responsibility are more likely to accept responsibility for the quality of treatment their patients get (Van Schalkwyk et al., 2020). By accepting responsibility for service quality, attempts to enhance it may be maintained, and factors that may affect patients' happiness can be identified. For healthcare organizations to provide high-quality treatment and improve patient experiences, they must understand the connection between accountability and satisfaction (Althammer et al., 2021). Higher levels of patient satisfaction are associated with healthcare practitioners that exhibit responsibility, ethics, patient-centered care, good communication, and accountability for the quality of their services. This had led to the development of the following hypothesis: **H2: There is Relationship Between Responsibility and Patient Satisfaction**

One of the most important aspects of providing healthcare is ensuring that patients are happy with the treatment they get. The term "reliability" is used to describe the dependability and uniformity of patient treatment (Rahimpour et al., 2020). Patient satisfaction may be greatly influenced by the reliability with which services are provided. Trustworthy healthcare services are highly valued by patients (Branch et al., 2017), and they include correct diagnoses, on-time visits, and a consistent treatment plan. Patient satisfaction is influenced favorably by the healthcare provider's reliability since patients gain faith in them.

Trust and confidence in healthcare providers are increased when they are reliable. Confidence in care is higher when patients believe their healthcare practitioners can be trusted (Parent-Lamarche et al., 2021). A healthy patient-provider relationship is facilitated by patient trust in their healthcare practitioner. Communication between healthcare practitioners and patients is directly correlated with reliability (Bolton et al., 2019). Patients are more likely to be satisfied with their healthcare when they are given accurate and timely information about their diagnosis, treatment choices, and test results.

Volerman and Poeppelman (2019) found that patients’ anxiety and stress levels decreased when they had a consistent healthcare experience. When patients have faith in the quality of their healthcare providers, they are more likely to relax and focus on getting well. In healthcare, reliability plays a crucial role in determining whether or not a patient will return. Loyalty to a healthcare provider increases when patients get consistent, high-quality treatment
(Bell, 2021). Repeat business and word-of-mouth advertising come from satisfied patients. This had led to the development of the following hypothesis: **H3: There is Relationship Between Reliability and Patient Satisfaction**

A crucial part of providing quality healthcare is recognizing the need of empathizing with patients. To have empathy is to comprehend and share the experiences and viewpoints of one's patients (Bai, 2020). The ability to empathize with a patient is crucial for developing a strong therapeutic relationship. More patients will report feeling respected and loved by their healthcare providers if they believe their physicians understand their worries and feelings (Mama Irbo, 2018). Relationships that are built on mutual trust and respect between patients and their healthcare providers are crucial to the success of both parties. Doctors and nurses who put their patients first tend to have better communication skills and hence increase patient satisfaction. To better care for their patients, healthcare personnel may develop their empathy skills (Daxini et al., 2019). A patient's comprehension, anxiety, and pleasure with their healthcare experience may all benefit from better communication. The ability to empathize with one's patients is essential in providing treatment that is patient-centered (Chadha, 2018). In order to provide a more individualized and satisfying healthcare experience, empathetic care must take into account the patient's emotional and psychological well-being. This had led to the development of the following hypothesis: **H4: There is Relationship Between Empathy and Patient Satisfaction**

In healthcare settings, the connection between service quality, tangible outcomes, and patient happiness is crucial. The term "tangibility" is used to describe the visible and palpable features of healthcare delivery, such as the condition of buildings and medical tools (Zamani et al., 2021). Patient satisfaction may be affected by tangibles since they create first impressions and views of the healthcare service. Patients establish opinions about a medical center based on superficial factors including its appearance, cleanliness, and technological sophistication (Aranganathan & Sivarethinamohan, 2016). Service quality, which includes both physical and intangible aspects, mediates the connection between tangibility and patient happiness. Patient satisfaction is mostly determined by intangible factors like communication, empathy, and personalization despite the fact that tangible factors might impact first impressions (Lee et al., 2022). Healthcare businesses may increase patient happiness and results by emphasizing service quality and adopting measures to enhance both tangible and intangible parts of the patient experience. This had led to the development of the following hypothesis: **H5: Service Quality Mediates the Relationship Between Tangibility and Patient Satisfaction**
Reliability is one component of the multidimensional concept that is service quality (Sung & Kim, 2021). Other aspects of service quality that contribute to patient satisfaction include responsiveness, assurance, empathy, and tangibility. Several factors contribute to patients’ impressions of their healthcare experiences; nonetheless, dependability is the most important of them (Yildiz, 2014). Healthcare providers may increase customer satisfaction by focusing on two main areas: dependability and service quality. Reliability and patient satisfaction may be directly affected by taking steps to reduce wait times, decrease appointment cancellations, and enhance medicine administration (Bishaw et al., 2022). To boost other aspects of service quality, healthcare professionals can also engage in training programs that highlight communication, empathy, and patient-centered care (Fulgence, 2019). This had led to the development of the following hypothesis: H6: Service Quality Mediates the Relationship Between Reliability and Patient Satisfaction

One of the most important parts of providing healthcare is understanding the connection between accountability, service quality, and patient happiness. Providers' accountability and ethical conduct in caring for their patients is what is meant by "responsibility in healthcare" (Gammons et al., 2018). On the other side, service quality refers to how well patients are cared for and how efficiently and effectively their healthcare needs are met. Responsibility is one component of service quality, which is a multi-factor construct (Mittal, 2020). Reliability, responsiveness, empathy, and tangibility are further elements of service quality that contribute to patient satisfaction. Although accountability has a direct impact on a patient's level of satisfaction, many factors contribute to how they feel about the treatment they get (Kocakulah et al., 2016). Patient satisfaction is linked to both individual accountability and the quality of care provided to them. Responsibility is the bedrock of service quality, and it influences patient satisfaction through indirect pathways (Farooq & Sultana, 2021). An increase in patients’ trust and confidence in their healthcare professionals is one indicator of the quality of that service (Ayub et al., 2021). Higher levels of patient satisfaction are associated with patients' perceptions of their healthcare professionals' competence and caring. This had led to the development of the following hypothesis: H7: Service Quality Mediates the Relationship Between Responsibility and Patient Satisfaction

One of the most important aspects of healthcare delivery is the connection between empathy, service quality, and patient happiness. According to Daumiller et al. (2021), empathy is defined as "the ability to understand and share the feelings and perspectives of one’s
The quality of healthcare services is measured by how well they are delivered to patients in terms of both efficiency and efficacy.

The connection between compassion and happy patients is mediated by how well the service is delivered. Patient satisfaction is directly influenced by empathy, which serves as the bedrock of service quality (Jordan et al., 2016). For instance, McCann and Russon (2019) point out that high-quality services depend on favorable connections between healthcare personnel and their patients. When a patient feels heard and understood, they are more likely to report feeling satisfied with the care they received. This had led to the development of the following hypothesis: **H8: Service Quality Mediates the Relationship Between Empathy and Patient Satisfaction**

**RESEARCH METHODOLOGY**

A quantitative research approach with an emphasis on quantitative methodology would be an appropriate choice for researching the service quality factors that tend to affect patient satisfaction in Rafic Hariri Hospital and how Tangibility, Reliability, Responsibility and Empath are mediated by service quality with respect to patient satisfaction. It is quantitative method since the research relied on survey constructed based on the variables based on Likert Scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree).

The population for this research are patients in Rafic Hariri Hospital. The thesis aims to investigate the service quality factors that affect patients' satisfaction in Rafic Hariri Hospital. The research involves collecting data from the population of interest through surveys. The findings of the research provide insights into these factors to increase patient satisfaction and enhance reputation of the hospital. Convenience sampling would be employed. Pilot research had been conducted throughout distributing the questionnaires over 10 patients to check for grammatical mistakes and questionnaires consistency, after that the questionnaires had been distributed through google forms to 450 and only 398 filled the questionnaires. Yemen formula had been used to calculate the sample size, \( n = N \frac{(1+N)}{N} \times e^2 = 250,000 \frac{(1+250,000)}{250,000} \times 0.05^2 = 398 \). Convenience sampling is a non-probability sampling method where participants are selected based on their accessibility and willingness to participate.
RESULTS AND DISCUSSION

The given Table represents the gender distribution of a sample population, encompassing a total of 398 individuals. The table provides the frequency, percentage, valid percentage, and cumulative percentage for each gender category, namely Male and Female.

Upon analyzing the table, it becomes evident that the sample comprises 328 males, which constitute 82.4% of the total sample. This percentage serves as both the valid percentage (discounting any missing data) and the cumulative percentage (the aggregate percentage up to this category). On the other hand, there are 70 females in the sample, accounting for 17.6% of the total sample.

Reliability Analysis

The descriptive statistics in Table 2 present the reliability of various variables measured using Cronbach's alpha coefficient. This coefficient is commonly used to assess the internal consistency or reliability of a set of items or variables. In this analysis, six variables were examined: Tangibility, Reliability, Responsibility, Empathy, Service Quality, and Patient Satisfaction.

The variable "Tangibility" exhibited a Cronbach's alpha coefficient of 0.833, indicating a high level of internal consistency among its items. This suggests that the items related to tangibility, such as physical facilities or equipment, are reliably measuring the same underlying construct.
Similarly, the variable "Reliability" demonstrated a Cronbach's alpha coefficient of 0.765, which is above the recommended threshold. This implies that the items related to the reliability of the service being provided are consistently measuring the same concept.

The variable "Responsibility" showed the highest Cronbach's alpha coefficient of 0.855, indicating a strong internal consistency among its items. This suggests that the items related to the responsibility of the service provider, such as trustworthiness or dependability, are highly reliable measures.

Moving on to "Empathy," it had a Cronbach's alpha coefficient of 0.771, indicating a satisfactory level of internal consistency. This implies that the items related to empathy, such as understanding or sensitivity towards patients' needs, reliably measure the same construct.

The variable "Service Quality" obtained a Cronbach's alpha coefficient of 0.750, meeting the acceptable threshold. This suggests that the items related to overall service quality are reliably measuring the underlying concept.

**Regression Weights**

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Satisfaction</td>
<td>---</td>
<td>.051</td>
<td>.018</td>
<td>2.798</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>---</td>
<td>.136</td>
<td>.021</td>
<td>6.526</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>---</td>
<td>.691</td>
<td>.068</td>
<td>10.175</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>---</td>
<td>1.055</td>
<td>.060</td>
<td>17.661</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>---</td>
<td>.655</td>
<td>.050</td>
<td>13.120</td>
</tr>
</tbody>
</table>

Source: Author Work

Table 3 presents the regression weights, including the estimates, standard errors (S.E.), critical ratios (C.R.), and p-values, for the relationships in the regression model. These statistics help assess the strength and significance of the relationships between "Patient Satisfaction" and the variables "Tangibility," "Reliability," "Responsibility," "Empathy," as well as the relationships between "Service Quality" and the same set of variables.

The results of the regression analysis indicate the following:

The relationship between "Patient Satisfaction" and "Tangibility" is statistically significant, as indicated by an estimate of 0.051, an S.E. of 0.018, a C.R. of 2.798, and a p-value of 0.005. This suggests that "Tangibility" has a positive influence on "Patient Satisfaction."
Similarly, the relationship between "Patient Satisfaction" and "Reliability" is highly statistically significant. The estimate of 0.136, S.E. of 0.021, C.R. of 6.526, and p-value of 0.001 indicate a strong positive influence of "Reliability" on "Patient Satisfaction."

The relationship between "Patient Satisfaction" and "Responsibility" is also highly significant, as denoted by the estimate of 0.691, S.E. of 0.068, C.R. of 10.175, and p-value of 0.002. This suggests that "Responsibility" strongly affects "Patient Satisfaction."

Furthermore, the relationship between "Patient Satisfaction" and "Empathy" is highly significant, as indicated by an estimate of 1.055, S.E. of 0.060, C.R. of 17.661, and p-value of 0.002. These findings highlight a substantial positive impact of "Empathy" on "Patient Satisfaction."

The relationship between "Patient Satisfaction" and "Service Quality" is highly significant, with an estimate of 0.655, S.E. of 0.050, C.R. of 13.120, and p-value of 0.001. This suggests that "Service Quality" strongly influences "Patient Satisfaction."

### Mediation Analysis

<table>
<thead>
<tr>
<th>Hypothesis Model</th>
<th>Direct Effects</th>
<th>Indirect Effects</th>
<th>Total Effect</th>
<th>P-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAN→PS</td>
<td>0.612</td>
<td>0</td>
<td>0.612</td>
<td>0.011</td>
<td>X</td>
</tr>
<tr>
<td>REL→PS</td>
<td>0.521</td>
<td>0</td>
<td>0.521</td>
<td>0.025</td>
<td>X</td>
</tr>
<tr>
<td>RES→PS</td>
<td>0.496</td>
<td>0</td>
<td>0.496</td>
<td>0.016</td>
<td>X</td>
</tr>
<tr>
<td>EMP→PS</td>
<td>0.436</td>
<td>0</td>
<td>0.436</td>
<td>0.029</td>
<td>X</td>
</tr>
<tr>
<td>TAN→SQ→PS</td>
<td>0.282</td>
<td>0.423</td>
<td>0.705</td>
<td>0.006</td>
<td>Partially Mediate</td>
</tr>
<tr>
<td>REL→SQ→PS</td>
<td>0.464</td>
<td>0.402</td>
<td>0.866</td>
<td>0.023</td>
<td>Partially Mediate</td>
</tr>
<tr>
<td>RES→SQ→PS</td>
<td>0.316</td>
<td>0.569</td>
<td>0.885</td>
<td>0.036</td>
<td>Partially Mediate</td>
</tr>
<tr>
<td>EMP→SQ→PS</td>
<td>0.269</td>
<td>0.328</td>
<td>0.597</td>
<td>0.012</td>
<td>Partially Mediate</td>
</tr>
</tbody>
</table>

Source: Author Work

Table 4 provides the results of the mediation analysis, including the hypothesis model, direct effects, indirect effects, total effects, p-values, and the resulting interpretation for each hypothesis.

The results of the mediation analysis are as follows:

Hypothesis 1: TAN -> PS: The direct effect of Tangibility (TAN) on Patient Satisfaction (PS) is significant with an estimate of 0.612. However, no indirect effect was found. The total effect of TAN on PS is 0.612, and the p-value is 0.011. Therefore, TAN has a direct influence on PS.
Hypothesis 2: REL -> PS: The direct effect of Reliability (REL) on Patient Satisfaction (PS) is significant with an estimate of 0.521. Similar to Hypothesis 1, no indirect effect was found. The total effect of REL on PS is 0.521, and the p-value is 0.025. Hence, REL has a direct impact on PS.

Hypothesis 3: RES -> PS: The direct effect of Responsibility (RES) on Patient Satisfaction (PS) is significant with an estimate of 0.496. Again, no indirect effect was observed. The total effect of RES on PS is 0.496, and the p-value is 0.016. Therefore, RES has a direct influence on PS.

Hypothesis 4: EMP -> PS: The direct effect of Empathy (EMP) on Patient Satisfaction (PS) is significant with an estimate of 0.436. Similarly, no indirect effect was found. The total effect of EMP on PS is 0.436, and the p-value is 0.029. Thus, EMP has a direct impact on PS.

Hypothesis 5: TAN -> SQ -> PS: The relationship between Tangibility (TAN) and Service Quality (SQ) is mediated by Patient Satisfaction (PS). The direct effect of TAN on PS is 0.282, while the indirect effect through SQ is 0.423. The total effect of TAN on PS is 0.705, and the p-value is 0.006. Therefore, the relationship between TAN and PS is partially mediated by SQ.

Hypothesis 6: REL -> SQ -> PS: The relationship between Reliability (REL) and Service Quality (SQ) is also partially mediated by Patient Satisfaction (PS). The direct effect of REL on PS is 0.464, and the indirect effect through SQ is 0.402. The total effect of REL on PS is 0.866, and the p-value is 0.023.

Hypothesis 7: RES -> SQ -> PS: The relationship between Responsibility (RES) and Service Quality (SQ) is partially mediated by Patient Satisfaction (PS). The direct effect of RES on PS is 0.316, while the indirect effect through SQ is 0.569. The total effect of RES on PS is 0.885, and the p-value is 0.036.

Hypothesis 8: EMP -> SQ -> PS: The relationship between Empathy (EMP) and Service Quality (SQ) is partially mediated by Patient Satisfaction (PS). The direct effect of EMP on PS is 0.269, and the indirect effect through SQ is 0.328. The total effect of EMP on PS is 0.597, and the p-value is 0.012.

The results of the mediation analysis indicate that the direct effects for variables TAN, REL, RES, and EMP on Patient Satisfaction (PS) are significant, demonstrating a direct influence of these variables on PS.

Furthermore, the findings reveal that the relationships between TAN -> SQ -> PS, REL -> SQ -> PS, RES -> SQ -> PS, and EMP -> SQ -> PS are partially mediating. These
relationships have both significant direct and indirect effects on Patient Satisfaction, indicating that Service Quality (SQ) partially mediates the relationship between these variables and Patient Satisfaction.

The quality and availability of medical equipment and facilities in Rafic Hariri Hospital play a role in patient satisfaction. Patients value having access to state-of-the-art equipment and well-equipped treatment rooms, which can enhance their confidence in the hospital's ability to deliver high-quality care. Tangible elements such as ease of access and convenience at Rafic Hariri Hospital are essential for patient satisfaction. Convenient locations, ample parking, and clear wayfinding signage contribute to improved patient experiences and higher levels of satisfaction with the hospital's services.

The comfort and privacy offered in Rafic Hariri Hospital are critical factors influencing patient satisfaction. Patients appreciate private and comfortable examination rooms, pleasant waiting areas, and respect for their privacy during medical procedures, leading to positive patient perceptions of the hospital. Tangible elements at Rafic Hariri Hospital can influence patient expectations of the overall healthcare experience. Patients may form initial expectations based on the physical appearance of the hospital and the medical equipment they encounter. Meeting or exceeding these expectations is crucial to enhancing patient satisfaction.

Responsibility at Rafic Hariri Hospital is reflected in the delivery of high-quality care. Patients expect reliable and consistent healthcare services, accurate diagnoses, and timely treatments. Healthcare providers who take responsibility for the quality of care provided can positively influence patient satisfaction. In cases of service failures or patient dissatisfaction, responsibility is crucial in service recovery efforts. At Rafic Hariri Hospital, taking accountability for service failures and addressing them promptly and effectively can positively influence patient satisfaction and restore trust in the hospital.

Responsibility in healthcare at Rafic Hariri Hospital is a significant factor influencing patient loyalty. Patients who consistently experience responsible and satisfactory care are more likely to become loyal to the hospital and recommend it to others. Loyal patients are more likely to return for future healthcare needs, contributing to the hospital's positive reputation. In the context of Rafic Hariri Hospital, the relationship between responsibility and patient satisfaction is essential for delivering high-quality care and creating positive patient experiences. Healthcare providers who demonstrate a sense of responsibility, ethical behavior, patient-centered care, effective communication, and accountability for service quality are more likely to achieve higher levels of patient satisfaction. By prioritizing responsibility and fostering a
culture of responsibility within the hospital, healthcare providers can positively influence patient satisfaction and build a compassionate and patient-centered healthcare environment.

The reliability of service quality at Rafic Hariri Hospital is crucial for patient satisfaction. Patients expect consistent and high-quality care during every encounter with the hospital. Maintaining a reliable standard of service quality ensures positive patient experiences and satisfaction. Reliability at Rafic Hariri Hospital significantly influences patient expectations of the overall healthcare experience. Patients often form initial expectations based on the hospital's track record and reputation. Meeting or exceeding these expectations is essential in enhancing patient satisfaction.

In cases of service failures or patient dissatisfaction, reliability is critical in service recovery efforts at Rafic Hariri Hospital. Addressing and resolving issues promptly and transparently can positively influence patient satisfaction and restore patient trust. Reliability is integral to providing patient-centered care at Rafic Hariri Hospital. A reliable approach ensures that patients' needs and preferences are consistently considered, leading to enhanced patient satisfaction and a patient-centric healthcare environment. The relationship between reliability and patient satisfaction at Rafic Hariri Hospital is crucial for providing high-quality care and creating positive patient experiences. Reliability in healthcare ensures consistent service delivery, builds patient trust, enhances communication, maintains service quality, and fosters a patient-centered approach. By prioritizing reliability and consistently delivering dependable healthcare services, Rafic Hariri Hospital can positively influence patient satisfaction and create a compassionate and patient-centered healthcare environment.

In the context of Rafic Hariri Hospital, service quality plays a mediating role between reliability and patient satisfaction. Reliability refers to the consistency and dependability of healthcare services provided to patients, while service quality encompasses various dimensions of healthcare delivery, such as reliability, responsiveness, empathy, assurance, and tangibility.

In Rafic Hariri Hospital, the reliability of healthcare services, including accurate diagnoses, timely treatments, and consistent care, directly influences patient satisfaction. Patients' experiences of reliable healthcare contribute to their overall satisfaction with the hospital's services. Service quality acts as a mediator between reliability and patient satisfaction at Rafic Hariri Hospital. The reliability of healthcare services directly affects the perceived service quality by patients. When services are consistently reliable, they enhance the overall service quality, leading to higher patient satisfaction.
Reliability is one of the critical dimensions of service quality that influences patient satisfaction at Rafic Hariri Hospital. Patients' perceptions of the hospital's reliability are part of their overall evaluation of service quality. The reliability of healthcare services at Rafic Hariri Hospital contributes to patients' overall perception of service quality. Patients who consistently experience reliable care are more likely to perceive the hospital's services as high-quality, leading to increased patient satisfaction.

**CONCLUSION**

Rafic Hariri Hospital needs to work on the nitty-gritty of patient care. Updating and maintaining the hospital's infrastructure, appliances, and decor falls under this category. The tangible nature of healthcare services may be improved by investments in contemporary infrastructure, the creation of a pleasant and inviting atmosphere, and the maintenance of a clean and efficient hospital. By making a good first impression and fostering an atmosphere favorable to recovery, this will help boost patient satisfaction.

Rafic Hariri Hospital has to focus fast and consistent healthcare delivery to increase trustworthiness. Scheduling improvements, shorter wait times, and effective medical assessment and care delivery are all ways to accomplish this goal. The hospital may increase its dependability and win the faith and confidence of its patients by establishing standardized procedures and standards, monitoring and optimizing patient flow, and investing in cutting-edge medical technology. High levels of dependability may also be supported by ongoing training and education programs for healthcare personnel.

The staff at Rafic Hariri Hospital ought to recommit itself to ethical medical practice. For this reason, it is essential to use stringent hiring policies and mandate ongoing training for all medical staff. The hospital should also put patient safety first by following strict standards, encouraging a safety culture, and routinely analyzing and minimizing risks. The hospital's policies and procedures should be based on the highest ethical standards and patient-centered care, with an emphasis on treating patients with respect, decency, and honesty at all times.

Rafic Hariri Hospital should train their staff to be more empathetic by working on their communication and interpersonal skills. Listening attentively, showing empathy, and respecting patients' cultural backgrounds are all essential components of providing excellent care. Empathy may also be cultivated via the use of patient-centered treatment practices that take into consideration each person's unique needs, values, and concerns. Patients' experiences
in healthcare facilities may be improved by cultivating a caring and compassionate atmosphere in which they are heard and understood.

As a mediator between the independent factors and patient satisfaction, service quality is an important metric for Rafic Hariri Hospital to track and improve over time. Specifically, this calls for regular surveys and other forms of patient feedback to gauge how satisfied they are with the service being provided. The hospital should use the information to pinpoint problem areas, establish concrete goals for raising service standards, and launch campaigns to close any existing gaps. Rafic Hariri Hospital is able to provide its patients with excellent treatment by employing service quality as a go-between.

Rafic Hariri Hospital should keep gathering and evaluating data from patient surveys to fortify the quantitative approach and comprehend the link between the factors. The hospital will be able to monitor the level of patient satisfaction over time and spot patterns thanks to this. The hospital may learn more about the impact of initiatives aimed at the independent variables and service quality as mediators if it analyzes its data on a regular basis. These findings may guide future enhancements and facilitate evidence-based decision making, both of which will increase patient satisfaction.

Rafic Hariri Hospital should think about increasing the size of their sample for future studies because of the importance of the study and its potential influence on patient satisfaction. There will be more confidence in the results and their applicability if a larger sample is used for analysis. The link between the independent variables, the mediator, and patient satisfaction may be better understood and tested with a larger sample size.

These suggestions will help Rafic Hariri Hospital provide better healthcare to its patients, increase their level of satisfaction, and guarantee that the tangible, reliable, responsible, and empathetic variables, mediated by service quality, positively affect their lives.

Significant contributions were made to business owners, particularly those in the healthcare industry, by the quantitative method used to investigate the connections between tangibility, reliability, responsibility, empathy, service quality as a mediator, and patient satisfaction within the context of Rafic Hariri Hospital. The research results and suggestions provide useful information for enhancing company operations, boosting consumer happiness, and fueling long-term growth.

The study highlights the role that service quality plays in determining patient happiness. Business owners in the healthcare sector may set themselves apart by providing care of an exceptionally high standard. Business owners may differentiate themselves from the
competition by emphasizing their tangibility, dependability, accountability, and empathy in their value offer. Service quality advantages may be developed by investments in cutting-edge infrastructure, optimization of operational procedures, promotion of a culture of accountability and compassion among employees, and emphasis on patient-centered care.

The results of this study highlight the connection between service quality and patient pleasure, and from there to customer loyalty. Health care company owners may benefit from this connection by making patient pleasure a top priority. The best way for a company to gain and keep loyal customers is to provide them with continuous, high-quality service. Patients who have a positive experience with a company are more likely to continue using its services, to spread the word about it, and to help it succeed in the long run.

The findings of this study have implications for the professional standing and brand recognition of healthcare enterprise proprietors. High levels of patient satisfaction and positive feedback from patients go a long way toward building a solid name for a business. Patients who get high-quality treatment and have pleasant experiences with medical staff are more likely to recommend that practice to their friends and family. New customers will be attracted and the company's standing in the neighborhood will improve thanks to positive word of mouth. When business owners actively seek patient input, resolve complaints, and strive for service excellence, they are taking proactive steps to manage their reputation.

The results of the study have important ramifications for the long-term success and expansion of healthcare providers. Business owners may set themselves up for sustained success by making customer service and product quality top priorities. When patients are happy, they become loyal clients who are more likely to buy from you again and recommend you to their friends and family. Growth and sustainability may be fueled by repeat customers and new ones. A solid name for providing excellent treatment may also bring in new customers, help a company grow, and lead to prospects for strategic alliances with other players in the healthcare sector.

The findings highlight the importance of healthcare personnel in facilitating happy patient experiences and providing high-quality treatment. Employers that care about their workers' professional growth may fund training and development programs. Business owners may help their employees provide outstanding service by giving regular training in areas like communication, empathy, and patient-centered care. Staff who has been well taught and is highly motivated is more likely to deliver individualized care, connect with patients, and improve their overall hospital experiences.
In sum, healthcare company owners may benefit greatly from the findings of the study done within the framework of Rafic Hariri Hospital. The results stress the significance of service quality, patient happiness, reputation management, and continuing education for employees. When business owners put these things first, they boost their competitiveness, strengthen client loyalty, improve their brand's image, and secure their company's future.

It is important to recognize the limitations of the quantitative research approach used to investigate the connections between tangibility, reliability, responsibility, empathy, service quality as a mediator, and patient satisfaction within the setting of Rafic Hariri Hospital. Acknowledging these restrictions helps in identifying any gaps in the research and gives a framework for understanding the study's results.

The results may not apply outside of Rafic Hariri Hospital, which is one of the study's limitations. The study was limited to a single hospital, thus results may not generalize to other healthcare facilities or patient populations. Extrapolating the results to larger populations or healthcare systems should be done with caution. To verify the transferability of the observed associations, further research should attempt to replicate the current study in other settings.

The study may have low statistical power and limited generalizability due to its very small sample size of 398 patients. The sample may not be representative of the population served by Rafic Hariri Hospital or of Lebanon as a whole. The sample may also not be representative because of biases like non-response or self-selection. A deeper comprehension of the interconnections between the factors might result from future study with bigger and more varied populations.

The study also had issues with the way in which variables were measured. Self-reported measures of concreteness, dependability, responsibility, empathy, service quality, and patient satisfaction were used in the study. Data gathered by self-report measures may be unreliable due to the presence of biases including social desirability bias and recollection bias. Measurement bias may also exist since the research did not use objective metrics or validate the variables outside of the study. To reduce the risk of bias and improve the reliability of the results, future studies may include both self-report and objective assessments.

It is difficult to draw definitive conclusions about cause and effect from this study since it is cross-sectional in design. The study only looked at the correlations between the variables at one instant in time, making it difficult to draw any conclusions about cause and effect. Establishing temporal ordering and providing better evidence of causal links would need longitudinal research or experimental approaches. Furthermore, mediation analysis, which is
Jaber-Chehayeb, R. (2023) Analyzing the Mediating role of Service Quality in the Relationship Between Service Quality and Patient Satisfaction at Rafic Hariri University Hospital

the focus of this study, reveals correlations but does not prove causation between the variables. These connections need to be investigated further utilizing more rigorous research methods.

Although this study examined the correlations between tangibles, dependability, accountability, empathy, service quality, and patient happiness, there may be more variables at play. Potential confounding or interacting variables include healthcare expenses, health outcomes, and cultural issues. To further understand the elements that contribute to patient satisfaction, future studies should investigate include other variables.

REFERENCES


Jaber-Chehayeb, R. (2023). Analyzing the Mediating role of Service Quality in the Relationship Between Service Quality and Patient Satisfaction at Rafic Hariri University Hospital


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Jaber-Chehayeb, R. (2023). Analyzing the Mediating role of Service Quality in the Relationship Between Service Quality and Patient Satisfaction at Rafic Hariri University Hospital


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