Impact Of Service Quality On Customer Satisfaction With Reference To NABH Accredited Hospitals

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Abstract
Maintenance of service quality especially in hospital is more crucial for both service provider and the customers. NABH Accreditation in healthcare industry setup the standards of service quality that ensure the fulfillment of customers' expectation. The principal motive of the present research study was to understand the degree of impact of service quality on customer satisfaction with reference to NABH accredited hospitals. The present research initiative was considered for collecting data from both original sources and the relevant domain of secondary sources. The collected data were analyzed after the systematic classification, codification and graphical presentation. With the consideration of the common characteristics and nature of data, the Multiple Regression Analysis was implied for understanding the relationship between dependent variables and independent variables. The principal outcome of the research study is presented as the most appropriate service quality that has great impact on customer satisfaction in the healthcare industry. Maintenance of standard service quality fulfill the customer expectation that leads to the high degree of satisfaction and build long run relationship in the corporate world. The research outcomes are well connected to the future research initiatives in the area of services quality, customer relationship management, corporate goodwill, continuous improvement of healthcare services as per customers' expectation and ensuring better services for the society.

Keywords: Service Quality, Effective Communication, Medical Services, NABH Accreditation, corporate goodwill and Customer Satisfaction

CONCEPTUAL FRAMEWORK

There is a paradigm shift towards service industries from production in recent times in developing countries as it allures revenue both at national level and global level and contributes significant share towards GDP. While people are getting more cautious about their health, healthcare industry is playing major part out of different service industries [2]. Maintaining the quality of care must be given utmost significance. Service quality offered decides the customer satisfaction and fidelity.

Service Quality Parameters

Quality of care is given priority as it involves risk of life. Quality means not the mere services of doctor but also reviewing the services of other staff members, infrastructure, medical equipment's, continuous process of gaining the confidence of customers, arrangements to fulfill customer needs.

Service quality is not a term which exists at one point of time during the period. Instead, it is a continuous process of meeting the demands of the customers effectively and efficiently. Service quality is not a term which exists at one point of time during the period. Instead, it is a continuous process of meeting the demands of the customers effectively and efficiently. To survive in the market consistency in the given quality of service is crucial [7]. The dimensions for assessing service quality in healthcare can be identified as degree of improvement of care services assurance.
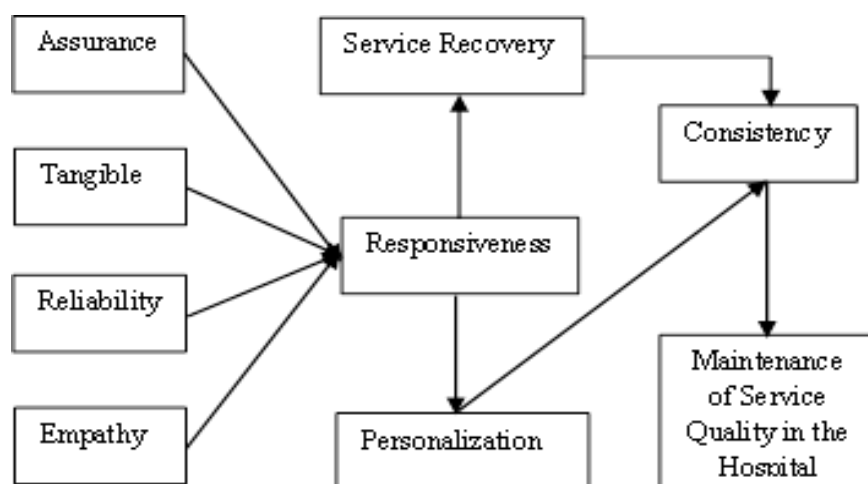
Fig. 1 presents the service quality flowchart of systematic operations for maintenance of better service quality in hospital

Standardized services offered minimizes variations and errors, readiness of medical staff to explain the diseases and appropriate care provided should result in the improvement of the medical condition. Personalization though in medical care there is no much scope for customization [9]. Consistency is to assure customer retention having consistency and improving the care accordingly with updated technology and proficiency is essential.

Customer Satisfaction
Satisfaction is a psychological term or outcome due to experience of services received. It is the pleasure of receiving one thing in exchange of another. Each service industry has many unique factors that contribute to the Satisfaction of a customer in the services experienced [10]. The service quality of hospitals will have direct impact on the customer satisfaction. National Accreditation Board for Hospitals and Healthcare providers also observe that customer satisfaction is one of the important measures to assess the service quality of hospital [11]. It is most important to organization as it helps to forecast how customer view the services offered to them. In the present digital era at one click information and reviews of services by doctors at different healthcare centers are available to compare and make decisions [13].
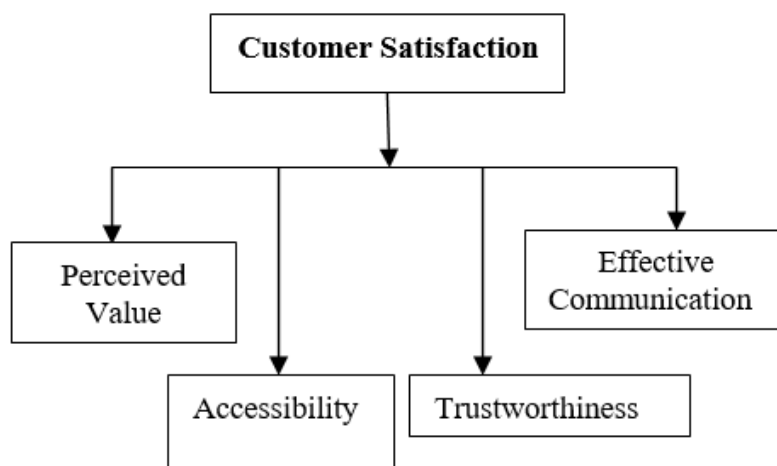

Fig. 2 shows the elements of Customer Satisfaction with reference to the Hospital Service Quality

Foremost in hospitals, availability of all required medical services is important, but crucial part is accessibility of these services [12]. Patients and their family members will be psychologically weak in which case the medical services and other facilities and auxiliary services in the hospital should be accessible at the right time and at right place [14].

REVIEW OF LITERATURE
K.V.D.H.S.Kalutharawithana (2017) the research article explained about the positive impact of effective services on customer expectation that leads to customer satisfaction. Ramesh Neupane and Manju Devkota (2019) explained about the service quality dimensions that include the accessibility, assurance, tangible, reliability and continuous improvement [15]. The researchers described the effectiveness of service quality elements on customer's expectation in healthcare services. Koteswara R K and Rajeev K (2020) presented the efficient medical services that build the loyalty in private sector healthcare services. The efficient medical services ensure the trustworthiness and perceived value of healthcare services in private hospital. A.R.Jaswal (2021) described the consumer perception towards the effective services quality that indicates the reputation and goodwill of the hospital [16]. NABH accreditation ensures the better service for the

fulfilment of patient expectations. Vishal Kamra, and Harjot Singh (2019) revealed the impact of patient satisfaction on the reputation of hospital. The researchers identified the problems of maintaining best quality of services in hospital and given the necessary recommendations to solve the issues. Madhu Arora, and Sheetal Thakur (2022) described the comparative study on service quality variations among the accredited and non-accredited hospitals. They discovered the major differences of maintaining service quality and responsiveness to the patients. Padma Panchapakesan (2021) explained about the patients experiences from NABH accredited hospitals and services.

STATEMENT OF PROBLEMS

The present study was considered the quality aspects of hospital services and relevant research outcomes. Few articles described about the effectiveness of services quality assurance through NABH accreditation system. The present research title and the principal motive delegates to address the issues related to customer perception and satisfaction of hospital services especially the super specialty hospitals with NABH accreditation which was not addressed by the existing research outcomes.

OBJECTIVES AND HYPOTHESIS FORMULATION

The research title and purpose of initiating the research indicates the following objectives:

i)   To identify the Service Quality Parameters that indicates the systematic operations for the maintenance of better service quality in hospital.
ii) To find out the elements of Customer Satisfaction with reference to the Hospital Service Quality.
iii) To identify the relationship between service quality and customer satisfaction in hospital.
iv) To analyze the impact of service quality on customer satisfaction with reference to NABH accredited hospitals.
v)   To list out the relevant suggestions and future scope of the research study.

Hypothesis Formulation

Null Hypothesis: H_0 = There is no significant level of impact of service quality on customer satisfaction with reference to NABH accredited hospitals.

Alternative Hypothesis: H_1 = There is a significant level of impact of service quality on customer satisfaction with reference to NABH accredited hospitals.

RESEARCH METHODOLOGY

The research study is the combination of descriptive and exploratory research design with the consideration of historical data and the data collected from the original sources. The questionnaires were distributed and collect the responses from the respondents using snowball sampling method. Total 400 respondents were selected from 20 Hospitals with 10 each belonging to NABH accredited hospitals and 10 belonging to non-accredited hospitals in Bangalore. The research work includes the data collection, classification and analysis based on the responses and observation of real time experiences from the patients, relatives and other people involved in the hospital services. The collected data were analyzed using statistical tool of Multiple Regression Analysis including t-test, ANOVA test and F-ratio.

RESULTS AND DISCUSSION

(i) Analysis related to identify the Service Quality Parameters that indicate the systematic operations for the maintenance of better service quality in hospital.

Based on the expert's opinion regarding the service quality parameters in the hospital services include the Assurance, Tangible, Responsiveness, Reliability, Empathy, Service recovery, Personalization, and Consistency.

Table No. 1 presents the Service Quality Parameters with respect to the preferences of the respondents

Sl. No.	Service Quality Parameters	Preference of Respondents
1	Assurance	22
2	Tangible	19
3	Responsiveness	14
4	Reliability	10
5	Empathy	9
6	Service recovery	6
7	Personalization	8
8	Consistency	12

The questionnaire was designed and distributed among the representatives of the stakeholders in hospital services and analyzed based on the relevant opinion about the customer satisfaction.
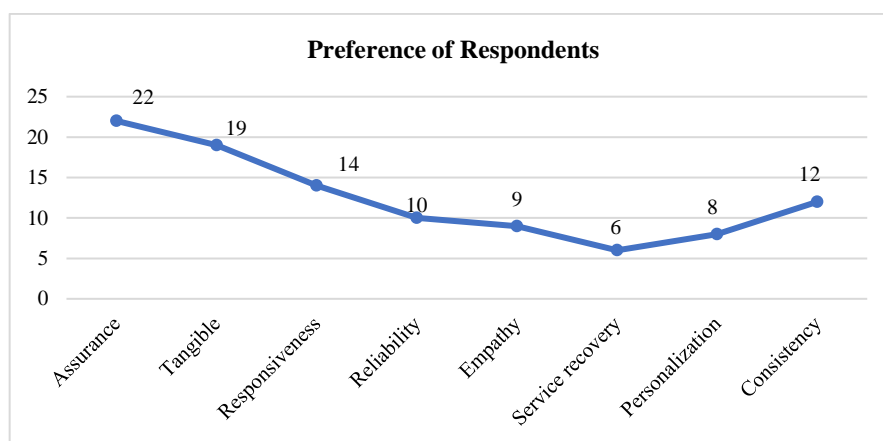
Preference of Respondents

Fig. 3 shows the Preference of Respondents regarding the service quality parameters

Based on the responses, the assurance of better-quality services indicates 22%, tangible 19%, responsiveness 14%, reliability 10%, empathy 9%, consistency 12%, service recovery 6% and personalization 8% of frequency of occurrence. The experts specified that the assurance build the trust among the patient and the relatives to maintain long term relationship. Tangibility is indicated the next level of preferences for better service quality. Empathy and reliability are the important factors that influence service quality.

(ii) Analysis related to find out the elements of Customer Satisfaction with reference to the Hospital Service Quality.
Based on the expert's opinion regarding the elements of Customer Satisfaction with reference to the Hospital Service Quality include Effective communication, Perceived value, Accessibility, and Trustworthiness. In healthcare sector especially in hospitals the factors that lead to customer satisfaction can be listed as affordability, nursing and staff response, and patient care.

Table No. 2 presents the elements of Customer Satisfaction that reflects the preferences of the respondents

Sl. No.	Customer Satisfaction	Preference of Respondents
1	Effective communication	32
2	Perceived value	26
3	Accessibility	22
4	Trustworthiness	20

Based on the responses, the elements of Customer Satisfaction indicate 32% effective communication, 26% perceived value, 22% accessibility, and 20% trustworthiness which are very close to each other.
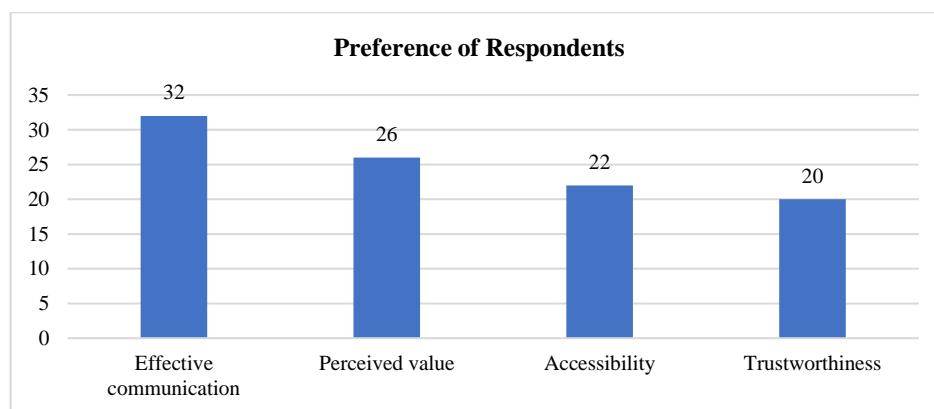
Preference of Respondents

Fig. 4 shows the Preference of Respondents regarding the elements of Customer Satisfaction

Effective communication is crucial in the context of hospital services to ensure the highest level of patient care, collaboration among healthcare professionals, and efficient operations. Understand their emotions and fears, and validate their experiences. Maintain a professional and compassionate demeanor at all times.

(iii) Analysis related to the service quality and customer satisfaction in hospital.
The attenders, relatives and other people involved in the hospital services are the feedback provider and the major influencer for the assurance of better services. The quality of services is based on the customers' expectations and reflect the feedback based on their level of satisfaction. When patients receive high-quality services, their satisfaction levels tend to increase. Patient satisfaction is closely tied to the alignment between their expectations and the services they receive.

If the hospital fulfills or exceeds patient expectations, they are more likely to be satisfied. Clear communication about the available services, treatment options, and potential outcomes can help manage expectations effectively. The critical observation of the researchers' revealed the issues related to customer dissatisfaction and compares the services variation from hospital to hospital.

(iv) Analysis related to the impact of service quality on customer satisfaction with reference to NABH accredited hospitals

The research study critically examined the issues related to patients satisfaction level and responses regarding the services in hospitals. The beneficiaries of hospital services from Bengaluru were responded about the service quality on customer satisfaction with reference to NABH accredited hospitals.

Null Hypothesis: H_0 = There is no significant level of impact of service quality on customer satisfaction with reference to NABH accredited hospitals.

Alternative Hypothesis: H_1 = There is a significant level of impact of service quality on customer satisfaction with reference to NABH accredited hospitals.

The null hypothesis (H_0) was tested under two categories namely ANOVA Test (Regression Analysis) and t-test. ANOVA Test (Regression Analysis) was employed to confirm about eight independent variables together have impact on customer satisfaction with reference to NABH accredited hospitals. Similarly, t-test was executed to confirm about the level of impact of individual independent variable on dependent variable.

Analysis

The result of ANOVA (Regression Analysis) test indicates significant at 0.05 level (at 5% level of significance). The result from Table 1 specifies that all eight independent variables together have the positive effectiveness on dependent variable. The t-test values with reference to Assurance, Tangible, Responsiveness, Reliability, Empathy, Service recovery, Personalization, and Consistency are significant at 0.05 level. The service quality parameters have positive impact on customer satisfaction of Beneficiaries in Bengaluru. The individual significant p values are less than 0.05 and 5% level of significance.

The result indicates that there is a significant impact of effective service quality on the level of customer satisfaction. The quality services create environmental ecosystem that facilities both hospitals and patients with the best experience of excellence in treatment, post treatment support etc.

Test of Hypothesis

The calculated F-value (Fstat) is 31.966 and the critical F-value (Fcritical) for this test can be obtained from the F-Table with numerator degree of freedom (8) and the denominator degree of freedom (391), Fcritical (8, 391) = 1.938. Since the (Fstat) is greater than (Fcritical), so, the Null Hypothesis is rejected. From the results of Multiple Regression Analysis, the p-value is 0.000 which is less than 0.05 at the 5% level of significance. Again, the Null Hypothesis is rejected.

Table No. 3 Summary of impact of service quality on customer satisfaction to NABH accredited hospitals

Highlights of MRA						
Dep Var: customer satisfaction, N: 400						
Service Quality Parameters	Coeff	Std Error	Std Coeff	Tolerance	t	p
Constant	4.302	0.609	0.000	-	7.064	0.00
Assurance	0.054	0.029	0.116	0.256	2.829	0.00
Tangible	0.327	0.066	0.307	0.271	3.682	0.00
Responsiveness	0.766	0.074	0.739	0.201	9.332	0.00
Reliability	0.314	0.060	0.304	0.304	10.225	0.00
Empathy	0.342	0.054	0.386	0.275	7.314	0.00
Service recovery	0.515	0.049	0.599	0.314	4.268	0.00
Personalization	0.175	0.044	0.248	0.263	8.968	0.00
Consistency	0.368	0.057	0.298	0.482	7.441	0.00
Source	**Sum-of-Squares**		**df**	**Mean-Square**	**F-ratio**	
Regression	430.136		8	53.767	31.966	
Residual	657.624		391	1.682	P=0.00	

Both the results (F-value and p-value) lead the same decision regarding the validity of regression model. So, the analysis can be concluded that the overall regression model is significant and valid. There is a significant relationship between the dependent variable and at least one of the independent variables. There is a significant level of impact of service quality on customer satisfaction with reference to NABH accredited hospitals.

Interpretation

Customers expect reliable and consistent service in hospital. Their exaptation is to deliver the promised service accurately and dependably, meeting deadlines, and following through on commitments [19]. It involves providing service that can be trusted and relied upon.

The responsiveness plays very important role in hospital services that shows the ability to promptly and proactively meet customer needs and handle their inquiries, requests, or complaints [22]. Being responsive means being attentive, providing timely assistance, and offering solutions to customer issues.

Assurance relates to the knowledge, competence, and credibility of the service providers. It includes building trust and confidence by demonstrating expertise, professionalism, and a customer-centric approach [2]. Assurance also involves providing clear and accurate information to customers.

Empathy involves understanding and addressing the customers' emotions, concerns, and individual needs [12]. It requires actively listening, showing genuine care and compassion, and adapting the service experience to create a personalized and positive interaction.

SUMMARY OF FINDINGS
Findings are the summary of data analysis and interpretation with consideration of research tile and objectives. Following the summary of findings:
i) Based on the expert's opinion regarding the service quality parameters in the hospital services include the Assurance, Tangible, Responsiveness, Reliability, Empathy, Service recovery, Personalization, and Consistency. With consideration of all the parameters, most of the customers are not clear about the service quality variations among NABH Accredited and non-accredited hospitals. But the respondents identified the service quality improved last few years in the super specialty hospitals in Bangalore.
ii) In healthcare sector especially in hospitals the factors that lead to customer satisfaction can be listed as affordability, nursing and staff response, patient care, professional conduct of doctors. The researchers found the issues related the customer dissatisfaction includes long waiting times, lack of communication, inadequate staffing levels, poor facility conditions, lack of personalized care, medication errors and safety concerns, and insufficient follow-up and post-discharge support that need to be addressed by the hospital management [19].
iii) The relationship between service quality and customer satisfaction in a hospital is crucial for maintaining patient loyalty, positive word-of-mouth, and overall success. When patients receive high-quality services, their satisfaction levels tend to increase [18]. Patient satisfaction is closely tied to the alignment between their expectations and the services they receive [20]. If the hospital fulfills or exceeds patient expectations, they are more likely to be satisfied.
iv) The t-test values with reference to Assurance, Tangible, Responsiveness, Reliability, Empathy, Service recovery, Personalization, and Consistency are significant at 0.05 level. The service quality parameters have positive impact on customer satisfaction of Beneficiaries in Bengaluru. The individual significant p values are less than 0.05 and 5% level of significance.
v) There is a significant relationship between the dependent variable and at least one of the independent variables. There is a significant level of impact of service quality on customer satisfaction with reference to NABH accredited hospitals.
vi) The observation of researchers revealed the educate patients and their families about their medical conditions, treatment plans, and potential risks. Use visual aids, diagrams, and written materials to reinforce verbal information. Encourage patients to ask questions and actively participate in their own care.

SUGGESTIONS
Hospital services are the vital experiences for both patients and service providers that build a healthier relationship for future perspective. When the hospital ensures the better service to the patients, they become satisfy with the service quality and responses from the hospital. On the other hand, poor service quality leads to the dissatisfaction and reflect the negative impact on hospital reputation [1]. Based on the research outcomes and major issues related to the hospital service quality include long waiting times, lack of communication, inadequate staffing levels, poor facility conditions, lack of personalized care, medication errors and safety concerns, and insufficient follow-up and post-discharge support the following suggestion are listed:
i) Improvement of Communication through the local languages that the patient understands and response. Enhance communication training for healthcare providers to ensure effective and empathetic communication with patients [7]. Implement systems for regular patient feedback and satisfaction surveys to identify areas of improvement.
ii) Need to reduce the waiting times during the doctor's consultation, test and medical report generation in hospital. Optimize scheduling processes to minimize wait times for appointments, tests, and procedures [5]. Implement technology solutions such as appointment reminders, online scheduling, and electronic medical records to streamline processes and reduce delays.
iii) Need to enhance staff training and development in hospital to ensure better service and customer relationship management [8]. Assess staffing needs regularly to ensure adequate healthcare provider and support staff levels. Invest in ongoing training and professional development programs for staff members to improve skills, knowledge, and patient-centered care.
iv) Need to ensure patient safety and Post-Discharge Support from the hospital. Conduct regular facility inspections and maintenance to ensure cleanliness, safety, and a pleasant environment [21]. Develop comprehensive discharge planning processes that include clear instructions, follow-up appointments, and access to support resources.
v) Service quality parameters are the guidelines for service providers to ensure the best performance in the hospital that builds the confidence among the patients and the attenders to re-visit the same hospitals [20]. The better experiences

regarding the hospital facilities socialize the information in the society that leads to build goodwill in the corporate world.

vi) NABH Accreditation is the standard authority to restrict the service operations and provide the systematic guidelines of maintaining the quality services [22]. Once the hospital registered for accreditation, the services quality will be improved progressively that facilitates the customer satisfaction.

FUTURE SCOPE OF THE STUDY

Research is undertaken to identify the factors influencing customer satisfaction in NABH accredited hospital and the impact of quality of care on customer satisfaction also to know level of satisfaction. The present study aims at general public getting best quality of service in healthcare. The results of the study will help organization know which factor highly influence customer satisfaction there by the hospitals can concentrate on those areas to improve service quality and aim at customer retention. In addition to the level of satisfaction of customers helps in taking decisions, educating staff on their behavior, quality of care. The research outcomes are associated to the future research initiatives in the area of services quality, customer relationship management, corporate goodwill, continuous improvement of healthcare services as per customers' expectation and ensuring better services for the society. Healthcare information system is the futuristic research area that will reduce the gap between hospital service providers and patients. The research initiative and the outcomes interconnect the customers and quality services operators without any language barriers in future.

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