Dimensions of Patient-Perceived Healthcare Service Quality: A Conceptual Framework

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Abstract

With the rising competition in the Indian healthcare sector, the hospital managers and researchers are interested in exploring how patients form their service perceptions. Delivering high-quality service is a constant challenge for hospitals. Hospitals today are increasingly focusing on service quality and satisfaction, which play a significant role in the healthcare sector. The current study helps the hospitals understand the dimensions of perceived service quality and their effect on patient satisfaction levels. The dimensions identified in the study based on the literature review are hospital image, infrastructure, coordination, staff competence, safety, administrative procedures, and hospital interaction. To adequately accommodate the patient's needs, the hospital must focus on these dimensions. The proposed instrument can be empirically tested to obtain feedback from patients on medical care performance.

Keywords: Healthcare, healthcare service quality, patient satisfaction

Type: A review paper

Introduction

Service quality remains an essential concept across the health care service industry. Today the consumer lives in a world of numerous healthcare choices and is well informed about the healthcare options available. To develop a loyal customer base, it is of utmost importance that health care providers establish a congruence between their service delivery and patient expectations. There is a huge opportunity to improve the quality of health services and increased awareness and urgency among healthcare managers to implement the same. Healthcare must be accessible, beneficial, centered around patients, equitable, efficient, and safe. (WHO,2006). Good quality services persistently focus on delighting patients by providing services that meet the clinical standards and are productive and efficient. While providing services, it is essential to keep in mind patient needs and technical aspects of medical care (Mosadeghrad,2013).

Healthcare is an essential service and is regarded as patient's need rather than a want. It has certain dissimilar features compared to other services like surrendering patient privacy, patients unable to control their admission and discharge directly, close collaboration between patient and healthcare provider, and the risk involved in the treatment

process (Berry and Bendapudi, 2007). Patients exercise maximum caution while selecting a healthcare provider. They choose a provider whom they can trust, is reliable, and has their best interests at heart. Patients who are content with hospital services spread positive words about the hospital and return for future treatments(Ramsaran-Fowdar, 2005). The perception of patients is central to the entire process of the healthcare delivery process. It determines the outcomes crucial for various healthcare stakeholders, such as the patient's process of choosing a healthcare provider, patient feedback, and patient's compliance with the provider's advice(Sofaer and Firminger, 2005). Incorporating patient views leads to better service delivery, healthcare outcomes, high user satisfaction, increased repeat usage of services, and improved quality of life. Thus, healthcare managers regard patient participation as a useful concept and are willing to base their services around the patients' needs and liking (Vahdat et al., 2014). This study concentrates on identifying critical healthcare quality dimensions by conducting an extensive literature review. Service quality and satisfaction are closely related to each other, and in the healthcare sector, the quality was found to influence patient satisfaction. The study has developed a conceptual framework to depict the relationship between satisfaction and quality dimensions.

Review of Literature

Healthcare Service Quality

The literature review establishes that health care perceived quality is a multi-dimensional concept; however, there is no consensus on the number of dimensions and items representing it. SERVQUAL model, given by Parasuraman et al. (1985), is often used in the healthcare sector(Butt and Run, 2010; Lee, 2005; Le and Fitzgerlad, 2014; Mecev and Goles, 2015; Neyadi et al., 2015; Papanikolaou and Zygiaris, 2012; Peprah and Atarah, 2014; A. &Iyer, 2018; Purcarea et al., 2013; Ramanujam, 2011; Shafiq et al., 2017; Sohail, 2003; Turan and Bozaykut-Bük, 2016). Modified SERVQUAL scale is also frequently applied to suit a particular healthcare service context (Eleuch, 2011; Mahapatra, 2013; Murti et al., 2013; Rashid and Jusoff, 2009; Vinagre and Neves, 2008).

Sixma et al. (1998) calculated service performance as perceived by patients on four aspects of care: the process of care, structure, indicators specific to a region, and category-related indicators. Dagger et al. (2007)proposed administrative quality, interpersonal quality, environmental quality, and technical quality as the four healthcare quality scale dimensions. Padma et al. (2010) tested a service quality model with eight dimensions:

infrastructure, safety, social responsibility, personnel quality, trustworthiness, the process of care, image, and administrative procedures as the eight dimensions of healthcare service quality. Duggirala et al. (2008) developed a seven-dimensional instrument for hospitals to gather comprehensive patient feedback regarding the quality of health services received. Aagja and Garg(2010) developed a scale to measure the difference between patient expectation and perception level using five dimensions: social responsibility, overall service, discharge, medical service, and admission. Zineldin(2006) encapsulated processes, infrastructure, interaction, object, and atmosphere qualities as the significant areas in patient care management. Maintaining the quality of services based on these dimensions is an effort towards total relationship management. Lee(2014) developed the HEATHQUAL instrument to measure the hospital service quality. The patients ranked the degree of improvement dimension the highest followed by tangibles, efficiency, and safety. Swain and Kar(2018) proposed personnel, social support, technical, interaction, procedural, and infrastructural as the six aspects to assess overall hospital services. Sower et al. (2001)operationalized hospital care quality as an eight-dimensional scale that provides useful feedback to hospital administrators.

Amin and Nasharuddin(2013) identified overall service, discharge, social responsibility, admission, and medical facility as the five dimensions which positively impact the overall hospital service quality. Andaleeb (1998) established baksheesh, assurance, responsiveness, discipline, and communication as the essential quality parameters for hospitals. Kondasani and Panda (2015) empirically verified customer friendliness, responsiveness, reliability, privacy, communication, and physical aspects of the environment as the six dimensions to evaluate private hospitals' quality. Choi et al. (2004) developed a model to assess service quality using four constructs: physician's concern, tangibles, the convenience of medical care, and physician's concern. Chahal and Kumari (2010) tested a scale in the Indian context and found interaction, physical environment, and outcome as the three significant-quality aspects.

Healthcare Perceived Service Quality and Patient Satisfaction

Satisfaction determines a patient's total experience with the health care service and is shaped after receiving medical care(Priporas et al.,2008). Satisfaction is an indicator of the outcome of care, which suggests the success of medical treatment. Empathy, the medical care process, and communication skills are some of the factors that strongly predict the level of patient satisfaction(Cleary and

McNeil,1988). The satisfaction construct reflects the patient's attitude, which is majorly shaped by the patient's evaluation of service attributes. Personal characteristics of patients and the delivery of medical care help shape the satisfaction of admitted patients(Sitzia and Wood,1997). Ware et al.(1983) conceptualized patient satisfaction into eight broad areas: interpersonal traits, technical quality, cost of care, availability of resources, continuity of a provider, accessibility, physical surroundings, and service efficacy.

In the healthcare industry, satisfaction and healthcare quality share a significant relationship (Naidu, 2007). Patients are satisfied with a health care service when the service quality matches their needs and expectations (Jandavath and Byram, 2016). Naidu (2007), in their conceptual work, established that service quality positively impacts patient satisfaction. The satisfaction level further determines the patient's intention to reuse and recommend the service. Jandavath and Byram(2016) investigated the relationship between dimensions of patient healthcare quality and satisfaction levels. Except for the reliability dimension, tangibility, assurance, empathy, and responsiveness strongly influenced the satisfaction variable. Andaleeb(1998) confirmed a strong relationship between quality of care and patient satisfaction. Assurance and discipline dimensions emerged as the most important predictors of satisfaction, while baksheesh the least important.

Similarly, Mehta(2011) also established a significant relationship between service quality and patient satisfaction. Priporas et al. (2008) categorized the external environment, assurance and reliability, responsiveness, and quality of interactions as the most crucial quality dimensions. Neyadi et al. (2016) compared the scores on the satisfaction construct of patients visiting public and private hospitals using a modified SERVQUAL instrument. The study suggested that the two concepts must not be seen in isolation while improving health service conditions. Wu et al. (2008)tested and validated a model that supported the direct relationship between service quality and satisfaction. The model revealed that high perceptions of quality lead to satisfied patients who also show revisit intentions. Fatima et al. (2018)clearly stated the interdependence between service quality and patient satisfaction. Privacy and safety dimensions exerted the maximum influence on patient satisfaction.

Framework for Measuring Healthcare Service Quality

There are no universally accepted quality factors applicable across all services (Cronin and Taylor,1992). Health care service quality is measured using different

dimensions across several studies. Therefore, more probing is required before accepting a factor structure for the healthcare industry (Aagja and Garg, 2010). It has been accepted that the constructs of quality developed in one culture might not be valid in another culture (Amin and Nasharuddin, 2013; Jandavath and Byram, 2016). Similarly, most studies conducted in developed countries on hospital service quality cannot be replicated in a developing country (Murti et al., 2013; Padma et al., 2009). The SERVQUAL model was developed outside the healthcare sector, and so there is a need to test whether the instrument comprehensively evaluates hospital service quality measures(Ramsaran-Fowdar, 2005). Therefore, whenever the SERVQUAL model is applied in a different culture or context, it is recommended to verify the perceived service quality factor structure in that context (Jandavath and Byram, 2016). Berry and Seltman's (2008) stated that health care services have few similarities with other services, and thus relying on scales developed in different contexts may not give the desired results. Even though various research works have been conducted on healthcare service quality dimensions, a comprehensive model combining all the relevant constructs of existing frameworks appears possible. Therefore, the study objectives are (i) develop a conceptual framework for measuring healthcare service quality, (ii) enhancing patient-perceived healthcare service quality and satisfaction.

METHODOLOGY

A review of the literature was conducted to identify significant healthcare service quality works using databases such as EBSCO and Google Scholar. A combination of keywords like, 'healthcare', 'healthcare service quality', 'service quality', 'dimensions', 'measurement', 'patient satisfaction',' satisfaction 'were used for the search. The inclusion criteria of the articles were set as follows: (a) published in peer-reviewed journal, (b) the paper be full -text in English language, (c) the paper should pertain to qualitative/quantitative analysis related to healthcare services. Easterby-Smith et al. (2002) stated that when sufficient questionnaire-based research is available, borrowing items from pre-existing questionnaires is justified.

Based on the literature review, seven broad areas that patients keep in mind while judging the quality of healthcare services were identified. The fields are safety, infrastructure, hospital image, hospital interactions, staff competence, administrative procedures, and coordination. An instrument to measure patient-perceived quality was formed based on these seven dimensions. The physical facilities dimension used in the current study is similar to

the physical environment dimension (Fatima et al., 2018); Quality of infrastructure dimension (Itumalla et al., 2014); Health scape dimension(Pai et al., 2018); Infrastructure amenities dimension (Duggirala et al., 2008); Hospital premises dimension (Shafei et al., 2015). The items under each dimension were grouped. Certain items under the dimensions shared the same meaning.' Health care centres had modern equipment', an item placed under the tangibles dimension (Andaleeb et al., 2007), is similar to the item' hospital is well equipped with all necessary medical equipment' under the dimension physical environment (Kondasani and Panda, 2015). These two items were related to the item' Operation theatre is well equipped with up-todate equipments' under tangibles dimension (Chahal and Kumari,2012) and 'Availability of adequate and up-to-date technological capability in the hospital' under infrastructure dimension (Duggirala et al., 2008). In such scenarios, one item is selected from the list of similar options. Thus, the instrument was framed to measure seven quality dimensions (Appendix 1). Our research instrument follows a method adopted by Badri et al. (2005), while designing a patient satisfaction instrument. The method includes selecting items for patient health care service quality by conducting a literature review followed by grouping similar items together.

The study further tests the face and content validity of the scale. The content validity ensures that the scale items sufficiently measure the content they are supposed to measure. The method devised by Badri et al. (2008) was used to measure content validity. All the items were extensively reviewed by a panel of academicians, who advised that the two items under safety: 'Correct treatment is provided at the hospital' and 'you are confident about the medical treatment provided' be categorized under the hospital image dimension. One item, 'The staff is readily available' under the interaction dimension, was found repetitive and thus removed. Later, the face validity was assessed by asking medical professionals for their views on the instrument (Pai and Chary, 2016). The items used in our study are reasonable as they are chosen from past healthcare literature. Patient responses on the items may be collected using a 7-point Likert scale representing "1" as strongly agree' and "7" as strongly disagree. The literature suggests frequent use of a seven-point scale(Le and Fitzgerlad, 2014; Padma et al., 2010; Swain and Kar, 2018; Duggirala et al.,2008; Wu et al.,2008; Amin and Nasharuddin,2013). A dimension scoring less than "4" indicates that a low level of quality is perceived on that dimension, and service improvements in that area should be undertaken. Thus, a hospital can assess its performance on service quality dimensions and compare it with standards set by other hospitals. A multiple regression

analysis of patient satisfaction as the dependent variable and healthcare quality dimensions as independent variables would help the hospital administrators understand the significance of each of the quality dimensions on patient satisfaction. This exercise would lead to prioritization of quality dimensions by the service providers based on patient feedback.

Determinants of Patient Perceived Service Quality Safety

Fatima et al.(2018) defined the safety dimension as an effort to control or avoid any potential harm while providing medical care. Patient safety touches all areas of the patient's treatment, from medication to injections to invasive and surgical procedures. Minimizing patient risk can be achieved by competent policies, robust health care systems, and strong leadership in the organization ("Patient Safety," 2020). Proper safety in hospitals assures the patients of the right treatment devoid of risks. Patient's survival depends on the hospital's quality of services, and hence hospitals must focus on providing adequate protection and privacy measures for their patients (Padma et al.,2010). This dimension significantly influenced patient satisfaction levels in previous studies (Padma et al.,2010; Duggirala et al.,2008; Fatima et al.,2018; Itumalla et al.,2014).

Infrastructure

This dimension evaluates the physical facilities available in the hospital like medical equipment, medicines, power supply, lab facilities, cleanliness of the hospital, housekeeping facilities, waiting areas, and sleeping rooms, furniture, cleanliness of the hospital, and drinking water facility. Several studies have studied this aspect of quality under various dimensions like tangibles, physical environment, environment, atmospherics, infrastructure amenities, cleanliness, hospital tangibles, health scape, and physical maintenance. Tangibles dimension played a dominant role in influencing patient satisfaction(Butt and Run, 2010; Murti et al., 2013). Similarly, physical maintenance exerted a positive and profound impact on patient satisfaction (Chahal and Mehta, 2013). Mitropoulos et al. (2018) found the physical environment as one of the most crucial factors affecting patient satisfaction.

Hospital Image

The items under this dimension represent the availability of good doctors, reputation of the hospital, sincerity of patient care provided, ethics in practice, and unbiased hospital attitude towards patients. When a service organization focuses on the greater good of society, it results in high-profit margins and a good impression on the patient's

minds. Thus, hospitals promoting the welfare of society are regarded highly by the community. According to Ramli(2019), hospitals can create a positive image by keeping good relationships with the patients. Hospital image and aspects similar to it like social responsibility and image showed a strong relationship with satisfaction(Aagja and Garg,2010; Padma et al.,2010; Duggirala et al.,2008; Amin and Nasharuddin,2013; Chahal and Kumari,2010; Pai et al.,2018).

Interaction at Hospital

The amount of interaction between patients and healthcare personnel affects their perception of the quality of services. There is a high involvement of patients in medical care due to frequent collaboration between patients and providers during the treatment process(Mohamed and Azizan,2015). The production and consumption of services occur during the interaction between a healthcare producer and consumer, making interaction an essential link in the formation of patient perception. A well-informed patient feels more confident and better prepared during the treatment process (Andaleeb,1998). Manner of conduct, the relationship established with the provider, and communication are the three parts of interaction quality(Dagger et al., 2007).

Staff Competence

It indicates the professional knack, ethics, ability, and prowess displayed by the healthcare providers. The perceived finesse of providers is linked to high patient satisfaction(Batbaatar et al.,2016). Competent staff is quintessential in delivering reliable quality services. Therefore it is crucial that hospitals thoroughly scrutinize the personnel before recruiting and impart regular training after recruitment. It will hone their skillsets and lead to satisfied and elated patients(Bhardwaj and Chawla,2013). The current study uses doctor and nurse skills, the patient's faith in the doctor's competence, and staff performance as the items under staff competence.

Coordination

This dimension pertains to the coordination among the hospital personnel, i.e., coordination among doctors working in various hospital branches, between nurses and doctors, and nurses and support staff; the staff response in emergencies. The synergy and teamwork of hospital staff directly impacts the hospital productivity. Meterko et al. (2004), in their work, examined the impact of hospital culture on the satisfaction levels of inpatients. Hospital culture comprised of four components, of which teamwork exerted the most potent effect on satisfaction. Teamwork results in better coordination among staff and strengthens their motivation levels. Padma et al. (2010) and Duggirala et al. (2008) demonstrated that teamwork displayed by doctors and nurses brings about positive changes in patient satisfaction.

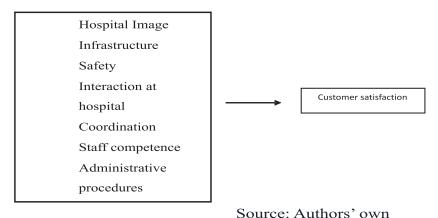
Administrative Procedures

The administrative procedures dimension used in the study consists of items related to hospital admission and discharge process, grievance handling by hospital staff, waiting time for bed allotment, and assistance in-hospital services. According to Akhtar et al. (2019), administrative services aid the production of core service and make the service more meaningful for a customer. Dagger et al. (2007) subdivided administrative service into support, timeliness, and operations. Kamra et al. (2015) found registration and administrative services crucial while determining patient satisfaction levels. Similarly, Chahal and Mehta(2013) found operational facilities like admissions, queue management, record maintenance, and billing procedure as significant predictors of patient satisfaction.

Conceptual Framework

The healthcare quality literature review explored seven service quality dimensions relevant to the patients. Figure 1 shows the conceptual framework of the study.

Figure1: Conceptual framework



Managerial Implications

The study imposes several practical and managerial implications. The conceptual framework provides the possible dimensions which patients keep in mind while evaluating hospital service quality. Health-care administrators should take patient and attendant feedback based on these quality dimensions to identify problems in service delivery and fix the necessary issues accordingly. All the eight dimensions proposed in the studyare crucial elements for augmentation of health care service. The health care managers need to understand the patient requirements on each of these eight dimensions and strive to match them. The study also helps the healthcare mangers to understand the effect of service quality dimensions on patient satisfaction. Thus, depending on the availability of physical, human and financial resources, the health-care administrators can manage the dimensions of quality to achieve high patient satisfaction

Conclusion

Research in quality and satisfaction in health care services has received considerable attention from academic researchers and hospital professionals. The overall productivity of a nation increases when its larger population is healthy and receives adequate medical attention. Service quality perceptions strongly influence the patient's will to use a service. (Bellou and Thanopoulos, 2006). If the health system is perceived as offering unsatisfactory services, it will either be bypassed or stay underutilized (Andaleeb et al., 2007). Patients are the beneficiaries of all health care programs, which makes their opinion about the services extremely important.

Several models are developed in both developing and developed countries to capture the perception of patients. Table 1 provides a comparison between the scale proposed in the study and the SERVQUAL scale. Studies conducted in the Indian context have identified critical dimensions of service quality relevant for patients visiting private and public hospitals(Jandavath and Byram,2016; Murti et al., .2013; Narang, 2011; Aagja and Garg, 2010; Chahal and Kumari, 2010; Rao et al. 2006).

Based on the literature review conducted, this study has developed an exhaustive model that shows seven hospital service quality dimensions. Table 2 presents the dimensions used in the current study and the typologies similar to these dimensions used in previous works. The model depicts a direct and positive relationship between the seven quality dimensions and the patient's satisfaction level. The model can provide meaningful insight to upgrade the quality of services in hospitals and understand the factors responsible for determining patient satisfaction.

Scope For Future Research

The framework developed in the study needs an empirical analysis and calls for studies to affirm the model using the proposed dimensions. Almost all the methods and scales used for healthcare service quality measurement have not included service provider's views like hospital personnel and hospital administrators. As the patient's perspective is not enough to assess the technical aspect quality, it is suggested to identify the service quality dimensions from the service provider's side.

Table 1: Comparision of proposed scale and the established SERVQUAL scale

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Dimensions	SERVQUAL dimensions
Safety	Assurance, Reliability
Infrastructure	Tangibles
Hospital image	Assurance
Staff competence	Assurance
Interaction at hospital	Empathy, Responsiveness
Coordination	-
Administrative procedures	Responsiveness

Source: Authors' own

Table 2: Dimensions used in the study and the analogies used in previous works

	s used in the study and the analogies used in previous works
Dimensions	Typologies in past studies
Safety	Safety and Privacy(Fatima et al.,2018);Safety(Lee,2016;Neyadi et
	al.,2016);Patient safety(Itumalla et al.,2014);Safety measures(Murti et
	al.,2013);Safety indicators(Duggirala et al.,2008;Padma et al.,2010)
Infrastructure	Environment relationship(Akhtar et al.,2019);Physical environment(Fatima
	et al.,2018;Kondasani and Panda,2015;Mitropoulos et al.,2018;Physical
	environment quality(Chahal and Kumari,2010);Quality of
	infrastructure(Itumalla et al.,2014; Zineldin,2006); Tangibles (Akdere et
	al.,2018; Butt and Run, 2010; Choi et al.,2004; Lee, 2005; Li et al., 2015;
	Mahapatra, 2013; Mecev and Goles, 2015; Naidu, 2009; Neyadi et al., 2016;
	Papanikolaou and Zygiaris, 2012; Peprah and Atarah, 2014; Le and
	Fitzgerald, 2014; A. & Iyer, 2018; Purcarea et al., 2013; Ramanujam, 2011;
	Sohail, 2003; Shafiq et al., 2017; Turan and Bozaykut-Bük,2016; Vinagre
	and Neves,2008); Healthscape(Pai et al.,2018); Service facilities(Haddad et
	al.,1998;Zinn et al.,2016);Hospital premises(Shafei et
	al.,2015);Ambience(Bhardwaj and Chawla,2013);hospital
	tangibles(Andaleeb,2007);Infrastructure amenities(Duggirala et
	al.,2008);Physical maintenance(Chahal and Mehta,2013)
Hospital Image	Hospital image(Pai et al.,2018);Social factor(Chahal and
_	Kumari,2010);Social responsibility(Aagja and garg,2010; Amin and
	Nasharuddin,2013;Duggirala et a.,2008;Padma et al.,2010)
Interaction at	Interaction(Mohamed and Azizan, 2015); Interpersonal relationship(Akhtar
hospital	et al.,2019);Doctor communication(Mitropoulos et al.,2018;Yavas et
nospitai	al.,2016); Nurse communication(Mitropoulos et al.,2018; Yavas et
	al.,2016);Quality of interaction(Zineldin,2006); Interaction
	quality(Chahaland Kumari,2010);Personnel(Pai et al.,2018);Interpersonal
	care(Batbaatar et al.,2017);Quality of interaction(Zineldin,2006);
	Communication(Andaleeb,1998;Andaleeb,2001;Fatima et al.,2018;Pai et
	al.,2018; Peprah and Atarah,2014); Communication about medicines (Yavas
	et al.,2016); Doctor's care(Zinn et al.,2016); Nursing care(Chahal and
	Mehta,2013;Zinn et al.,2016);Doctor's service attitude(Zhang et
	al.,2016); Nurses service attitude(Zhang et al.,2016); Medical
	service(Itumalla et al.,2014);Nursing service(Itumalla et al.,2014);Attitude
	of hospital personnel(Cong and Mai,2014);
	Courtesy(Abiodun,2010);Interaction(Wu et al.,2008);Doctor's service
	orientation(Andaleeb et al.,2007); Nurse's service orientation(Andaleeb et
	al.,2007);Physician's concern(Choi et al.,2004);Healthcare provider's
	concern(Choi et al.,2004);Personnel care(Haddad et al.,1998); Customer
	friendly staff(Kondasani and Panda,2015);Personnel quality(Duggirala et
	al.,2008;Padma et al.,2010)
Staff competence	Efficiency(Eubank et.,2019);Personnel(Pai et al.,2018); Technical
	care(Batbaatar et al.,2017);Doctor's care(Zinn et al.,2016);Nursing
	care(Zinn et al.,2016);Doctor medical service(Shafei et al.,2015);
	Andaleeb,1998;Bhardwaj and Chawla,2013);Medical service(Aagja and
	Garg, 2010; Amin and Nasharuddin, 2013); Doctor's service
	orientation(Andaleeb et al.,2007); Nurse's service orientation(Andaleeb et
	al.,2007);Physician's assurance(Vinagre and Neves,2008)
Coordination	Personnel quality(Padma et al.,2009);doctor's care(Duggirala et
Coordination	
	al.,2008);teamwork culture(Meterko et al.,2004)

Administrative	Administrative quality(Akhtar et al.,2019);Appropriateness(Eubank et
procedures	al.,2019);Administrative procedures(Duggirala et al.,2008;Padma et
	al.,2010);Accessibility(Bhardwaj and Chawla,2013;Cong and
	Mai,2014; Eubank et al.,2019); Access (Andaleeb, 2007; Batbaatar et
	al.,2017;Naidu,2009); Discharge information(Aagja and Garg,2010;
	Mitropoulos et al.,2018; Yavas et al.,2016;); Admissions (Aagja and
	Garg,2010;Amin and Nasharuddin,2013;Shafei et
	al.,2015);Discharge(Amin and Nasharuddin,2013;Shafei et al.,2015);
	Administrative services(Itumalla et al.,2014);Administrative procedures(Le
	and Fitzgerald,2014);Convenience of care process(Choi et al.,2004)

Source: Authors' own

Appendix1: Perceived Healthcare Service Quality Dimensions

Safety

- 1. The hospital premises are comfortable and safe.
- 2. The environment provided by the hospital is infection free.
- 3. Hospital takes adequate security measures for patients and their belongings.
- 4. The hospital staff follows hygienic care and procedures like wearing gloves, using clean instruments etc
- 5. There is presence of safety measures like handrails in aisles, ramps for wheelchairs, elevators, spacious corridors etc in hospital

Infrastructure

- 1. Wards are clean
- 2. Hospital maintains good housekeeping facilities like dressing material, bed and pillow covers, buckets.
- 3. Hospital room is well-ventilated
- 4. Clean drinking facilities provided by the hospital.
- 5. Toilets are regularly cleaned in the hospital.
- 6. Furniture, doors windows etc are in good condition
- 7. Hospital provides hygienic food facilities, well in time.
- 8. Hospital maintains adequate stock of blood in blood bank.
- 9. The medical equipment of hospital are in good conditions.
- 10. The hospital maintains required stock of medicines.
- 11. There are adequate facilities like sleeping rooms and waiting areas for the attendants

- 12.It is easy to find care facilities in the hospital like blood bank, lab, rehab centre etc
- 13. There is uninterrupted power supply in the hospital
- 14. All lab tests are performed at the hospital

Interaction

- 1. Doctors give complete information about patient's illness
- 2. Doctors answer the queries patiently.
- 3. Doctors have caring and warm attitude.
- 4. Doctors are readily available.
- 5. Doctors explain the treatment procedures to the patients.
- 6. Nurses are readily available for help.
- 7. Nurses have a warm and caring attitude.
- 8. Nurses explain the medical procedure which they perform
- 9. The staff show genuine concern towards you
- 11. Adequate explanation of tests and medication

Staff competence

- 1.Doctors are skilled and competent.
- 2. Nurses are skilled and competent
- 3. Faith in the treatment provided at the hospital
- 4. The staff performs their duties properly

Coordination

- 1.Doctors of different branches have good coordination with regard to patient's treatment
- 2. Nurses and support staff have good coordination among them.
- 3. Doctors and nursing staff show good team work.

- 4. The overall coordination among staff is good.
- 5. Hospital staff coordinates well in emergency situation.

Administrative Procedure

- 1. Admission process is easy and fast
- 2. Clear instructions are provided by the hospital staff at the time of admission.
- 3. Time between admission and bed allotment is not long
- 4. The waiting time to see the doctor after admission is less
- 5. Hospital staff assists in extra services like wheelchair access, physiotherapy sessions etc.
- 6. Discharge process is simple and easy
- 7.At the time of discharge clear instructions on medical care are given to patient
- 8. Hospital staff attends patient grievances and complaints.
- 9. Tests done in the hospitals do not require much time.
- 10. Hospital staff gives you adequate information about your health and treatment

Hospital Image

- 1. Good doctors are readily available at the hospital
- 2. The hospital has a good reputation
- 3. Hospital provides medical care facilities with sincerity
- 4. Hospital treats all patients equally.
- 5. Hospital has an impartial attitude towards all patients
- 6. Hospital staff expects tips.
- 7. Correct treatment is provided at the hospital.
- 8. You are confident about the medical treatment provided

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