

Measuring Service Quality as Customer Satisfaction through the lens of SERVQUAL

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ABSTRACT

Introduction: Healthcare sector as service provider offers numerous opportunities of development for both human and economy. In globally competitive market, well-being in socio-economic development context is still a high concern.

Objectives: The aim of this paper is to find out the service quality gap in the form of customer satisfaction by using the service quality measurement scale 'SERVQUAL' in healthcare sector specially in Apollo Hospitals of Assam. The study is descriptive in nature.

Methods: Data were collected from 200 respondents (sample size) through self-administered questionnaire by following SERVQUAL scale. Collected data were analysed using statistical technique like mean score.

Results: The result highlight that customers are satisfied with all four service quality dimensions except tangible for inpatient customers and responsiveness with out-patient customers. The study also highlights that the gap is very much minimal in nature as the gap with mean score is very less.

Conclusions: The value in the form of contribution is that this study is highlighting the gap in service quality between expectation and perceived in context of Apollo hospitals of Assam.

Keywords: Customer satisfaction, service quality, SERVQUAL, hospitals

1. INTRODUCTION

The importance of healthcare sector has been increasing as one of the service sectors with increasing population as increased population has numerous and multidimensional effect on economy, environment and society as well. With increasing awareness on quality of services through different social media platforms in this competitive edge, the healthcare sector as a service oriented business is facing huge challenges where 'quality' is the core concern (Javed and Ilyas, 2018; Tripathi and Siddiqui, 2020) and critical component for customer satisfaction (Meesala and Paul, 2018). This 'quality' is having two dimensions, first one is technical quality i.e., diagnosis accuracy to professional accuracy and the other 'functional quality' talks about the ways and manner of delivering/releasing the services to patients (Lam, 1997). For sustainable business along with growth and development, improving operational efficiency with core focus on effective customer services through high-quality services became very essential (Gogoi, 2020; Meesala and Paul, 2018). Country wise, the service delivery picture is found different, ranging from not giving priority to it to just making quality service at affordable cost and promoting to healthcare tourism, all depends on importance realization by the concerned economy (Javed and Ilyas, 2018). In service oriented business, making customer satisfaction through fulfilling customer expectations is the core agenda (Nunkoo et al., 2025). The importance of healthcare sector has been increasing as one of the service sectors with increasing population as increased population has numerous and multidimensional effect on economy, environment and society as well. With increasing awareness on quality of services through different social media platforms in this competitive edge, the healthcare sector as a

service oriented business is facing huge challenges where ‘quality’ is the core concern (Javed and Ilyas, 2018; Tripathi and Siddiqui, 2020) and critical component for customer satisfaction (Meesala and Paul, 2018). This ‘quality’ is having two dimensions, first one is technical quality i.e., diagnosis accuracy to professional accuracy and the other ‘functional quality’ talks about the ways and manner of delivering/releasing the services to patients (Lam, 1997). For sustainable business along with growth and development, improving operational efficiency with core focus on effective customer services through high-quality services became very essential (Gogoi, 2020; Meesala and Paul, 2018). Country wise, the service delivery picture is found different, ranging from not giving priority to it to just making quality service at affordable cost and promoting to healthcare tourism, all depends on importance realization by the concerned economy (Javed and Ilyas, 2018). In service oriented business, making customer satisfaction through fulfilling customer expectations is the core agenda (Nunkoo et al., 2025). So, for the service providers, measuring customers’ expectations and perceptions in constant manner became essential for greater interest of their growth and sustainability (Muhammad Butt and Cyril de Run, 2010). As the quality of service has direct influence on customer satisfaction (Tripathi and Siddiqui, 2020), so importance arises in identifying the multiple facets of quality of service that contributes towards customer satisfaction.

In India, the healthcare sector has emerged as one of the largest service sectors with great evolution in terms of wide ranges of facilities (Tripathi and Siddiqui, 2020). Although both public and private healthcare players exist in India, but the private players are contributing significantly and their visibilities are found more mostly in cities (Tripathi and Siddiqui, 2020). The growing cost of healthcare sector in India is allowing mostly the middle class and upper classes for the quality healthcare services and in recent times it is increasing more due to presence of high competitions amongst the private players (Meesala and Paul, 2018). In India as a developing country, only few cities like Delhi, Mumbai, Hyderabad, Chennai etc. are well equipped with good healthcare centres and some other emerging cities or states including Assam have recently getting attention of renowned private players to set up their healthcare centres. In Assam, the Guwahati city-the primary hub is the gateway to North East of India, many private players have entered along with ‘Apollo Hospitals’ brand. Total 6 major private hospitals are found and 2 hospitals i.e., Apollo hospitals and Apollo Excelcare hospital are operating under the banner of Apollo hospitals brand.

In search of quality service, the extensively accepted service quality tool ‘SERVQUAL’ can be used as effective tool to understand customers’ perception on service quality in the form of ‘satisfaction/dissatisfaction’. Through SERVQUAL, the gap between expectation and perceived also can be studied which will help the organisation or management to take care on those areas for further improvement to ensure better service quality.

In healthcare sector being the service sector business, customer/patient satisfaction is the key factor through effective and superior services and thereby exists a strong association between service quality and customer satisfaction. In Indian context, the dimensions of assurance and reliability have the greatest impact on patient satisfaction (Padma et al., 2010). Interestingly, by inclining with SERVQUAL, as one of the most famous measurement tools of service quality, HEALTHQUAL was developed, incorporated three dimensions like social responsibility, clinical care, and infrastructure as they are found to have impact in ensuring customer satisfaction (Duggirala et al., 2008). Being exceptional from other service sectors, in healthcare sector, the dimensions of empathy, assurance and responsiveness work strongly in satisfying customers along with service quality, also define customers’ revisit intension (Ali et al., 2018; Kitapei et al., 2014; Pakdil and Harwood, 2005; Ravichandran, 2015). In addition, way of communication and waiting time are also equally important for customers, also consider these as part of service quality (Lee et al., 2020; Mehra, 2016; Soremekun et al., 2011). When public and private hospitals are compared, ‘empathy’ was found absent in both but excellency exists with tangibles and responsiveness in private hospitals (Ramsaran-Fowdar, 2008). Moreover, reliability and assurance play significant role towards customer satisfaction (Jabnoun and Chaker, 2003; Meesala and Paul, 2018). Although the importance of empathy and responsiveness are quite understood as important for quality service in healthcare sector, but their weak presence still prevails in public healthcare service centres (Arasli et al., 2008).

With changing environment and competitions, customers’ expectations have been changing accordingly (Naidu, 2009). Accordingly, some studies highlighted that quality assessment should be done based on three components like structure, process and outcome of healthcare centres (Donabedian, 1988). In the entire process of customer

satisfaction, trust and loyalty contribute significantly for ensuring the positive perception on service quality (Suki et al., 2011). Another remarkable highlight was that staff courtesy and professional competence also have great impact in defining the service quality that influence perception regarding customer satisfaction (Chaniotakis and Lymperopoulos, 2009).

OBJECTIVES

Previous studies had focused mainly the big cities of India (George, 2008; Kaur et al., 2022) and their focus were the comparison between private and public healthcare centres (Ahmed et al., 2017; Al-Borie and Sheikh Damanhour, 2013; Tripathi and Siddiqui, 2020), impact of healthcare cost (Meesala and Paul, 2018), patient safety and medical professionalism (Ali et al., 2024) etc. But limited studies (Al-Balas, et al., 2025) had focused on certain service provider organisations like JRMS, MOH etc. in other countries like Jordan, Bangladesh etc. Considering this research gap i.e., there is no such impactful study on customer satisfaction with services of Apollo Hospitals in the state of Assam. So, this study has set the objective to examine the patient/customer satisfaction level with different services of Apollo Hospitals Guwahati based on SERVQUAL along with service quality gaps.

2. METHODS

The study was conducted in Apollo Hospitals of Guwahati, Assam. In entire Assam, only two Apollo hospitals are there and both are situated in Guwahati city of Assam itself. The reason of choosing only Apollo hospitals because in India including Assam, Apollo has very impactful brand image when it is healthcare sector (Chakravarthi, 2021) due to their valuable service to patients/customers. In addition, the Apollo hospitals of Guwahati is one of the largest hospitals in entire Northeast region of India.

This study is descriptive in nature, both primary and secondary data were used and applied statistical tools to analyse and find out the gap between expectation and perceived with service quality. Data was collected from patients (both in-patient and out-patient) through self-structured questionnaire based on SERVQUAL concept. Within the two months of period i.e., February -March, 2026, a total of 200 responses were able to collect by utilizing convenience sampling technique although 360 questionnaires were distributed (as 160 were found ineffective).

The extensive literature survey on the proposed theme has helped in outlining the research gap, based on which research objectives were set for this study. The identified research gap is that there are no such studies which have highlighted the service quality gap based on SERVQUAL of Apollo hospitals in context of Assam. Numerous studies had put their focus on perception of customers/patients on various dimensions like technology (Ganapathy and Reddy, 2020), use of artificial intelligence (Chettri, et al., 2025), telemedicine services (Dadlani, et al., 2014; Gokula, 2020), medical tourism (Reddy and Qadeer, 2010) etc. Therefore, the following objectives will be addressed by this study:

- To assess patient satisfaction level with different service of Apollo hospitals Guwahati based on SERVQUAL.
- To assess service quality gaps based on SERVQUAL.

The SERVQUAL based self-structured questionnaire were distributed to both types of customers i.e., in-patients and out-patients to know the gap in service quality in Apollo hospitals of Assam in the form of customer satisfaction. For collecting data in the two months of time frame, convenience sampling was used as patients/customers willingness in giving their response is important. In 200 total sample size, 100 were in-patients and another 100 were out-patients. In collecting data, 5-point Likert scale was used. As in SERVQUAL tool, 5 no. of components i.e., Tangible, Responsiveness, Reliability, Assurance and Empathy are there and all these 5 are considered in self-structured questionnaire as construct. Under each construct, total 6 statements are there except empathy where only 3 statements are there.

3. RESULTS

This section begins with analysis and discussion of demographic profile of respondents, gap in service quality on each construct for both in-patients and out-patients separately and subsequently.

3.1 Demographic profile of respondents

Table 1 highlight that around 63% and 37% respondents belong from male and female category respectively although Table 1 is clearly showing that a greater number of males are found as out-patients while a greater number of females are found as in-patients. In addition, the highest number of patients i.e., 42% belongs from the age group of 26-35 years of which maximum is out-patient in nature. Moreover, the highest number of patients i.e., 61% of the total respondents are having income more that 3 Lakhs per month of which maximum are in-patients' type. This indicates that higher income is allowing them to avail services from private sector as Apollo hospitals are under the banner of private corporate sector (Kamath et al., 2024). And the lowest number of patients from 'up-to 1 Lakh' income category as the services of private sector healthcare sector is costlier in comparison to public sector (Bhat and Jain, 2006; Kamath et al., 2024). Although in India, the cost of healthcare services is cheaper in comparison to other developed countries, still majority of population are not in stage of affording the private healthcare sectors' cost (Berman, 1998; Prinja et al., 2012).

Table 1: Demographic Profile of Customers

Category		Type of Patients/customer	No. of Respondents	Percentage (%) of Respondents
Sex	Male	In-patient	40	20%
		Out-patients	86	43%
	Female	In-patient	60	30%
		Out-patients	14	7%
Age Group	15-25years	In-patient	11	6%
		Out-patients	11	6%
	26-35years	In-patient	40	20%
		Out-patients	44	22%
	36-45years	In-patient	21	11%
		Out-patients	25	13%
	46-55years	In-patient	15	8%
		Out-patients	15	8%
	More than 55 years	In-patient	13	7%
		Out-patients	5	3%
Level of Income per month	Up-to 1L	In-patient	2	1%
		Out-patients	11	6%
	1+Lakhs-2L	In-patient	14	7%
		Out-patients	13	7%
	2+ Lakhs-3L	In-patient	19	10%
		Out-patients	20	10%
	More than 3 Lakhs	In-patient	65	33%
		Out-patients	56	28%

(Source: Authors' compilation)

3.2 Gap between Expected and Perceived service quality amongst in-patients

Here, the gap on service quality was analysed on all 5 constructs of SERVQUAL i.e., Tangible, Responsiveness, Reliability, Assurance and Empathy separately amongst in-patients and revealed significant insights which are shown in Table 2-6.

3.2.1 Gap on the construct 'Tangible' of SERVQUAL

Table 2 and figure 1 both highlight that customers (in-patients) are almost satisfied with all services that are considered under 'tangible' construct except parking space. Surprisingly, it is seen that in certain cases like hospital's other physical facilities, equipment, insurance facilities, ambulance services and cleanliness and hygiene, mean score of perceived is more than the expected mean score which are very significant initiatives by Apollo hospitals in Assam. This ensures customer satisfaction.

Table 2: In-patient Customers' Opinion on 'Tangible' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
Visibility of the hospital ensures presence of enough physical facilities	33	45	22	0	0	4.11	58	42	0	0	0	4.58
The hospital provides ample parking space	69	18	8	5	0	4.51	3	15	1	57	24	2.16
Health insurance/ Government assurance (PMJAY) facilities are available	19	45	20	10	6	3.61	24	68	8	0	0	4.16
Hospital ensures the use of modern and up to date equipment	32	57	11	0	0	4.21	41	59	0	0	0	4.41
Ambulance services are available 24*7	7	20	73	0	0	3.34	31	61	0	0	0	3.99
Hospital upholds high standard of cleanliness and hygiene	83	17	0	0	0	4.83	91	9	0	0	0	4.91
Average						4.1						4.0

(Source: Authors' compilation)

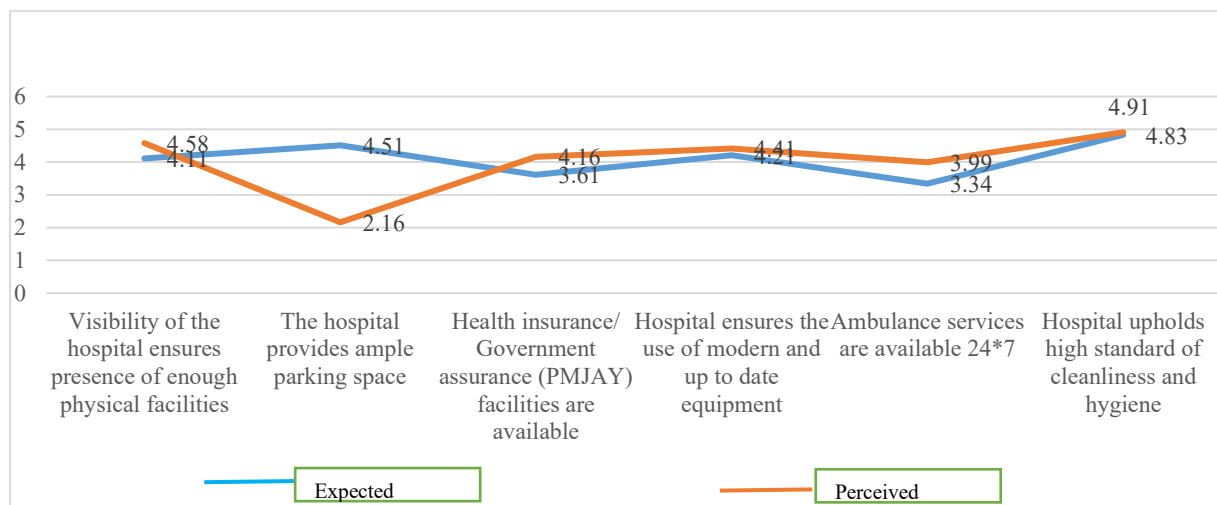


Figure 1: Mean scores on construct 'Tangible' amongst In-patients

3.2.2 Gap on the construct 'Responsiveness' of SERVQUAL

Like 'Tangible' with another construct 'Responsiveness' also, slight gap with certain service quality is observed i.e., on emergency service and help desk response on queries. With all other services, customers' satisfaction level was good as the perceived mean scores are high than the expected.

Table 3: In-patient Customers' Opinion on 'Responsiveness' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
The hospital manages emergencies efficiently.	73	25	2	0	0	4.71	62	38	0	0	0	4.62
Doctors conduct detailed evaluation to understand the patient's condition.	91	9	0	0	0	4.91	95	5	0	0	0	4.95
Hospital provides prompt provision for medical and non-medical services.	84	10	6	0	0	4.78	89	11	0	0	0	4.89
Hospital understands the specific needs of patients.	70	24	6	0	0	4.64	83	17	0	0	0	4.83
Hospital offers assistance through helpdesk to answer their queries about services.	92	2	6	0	0	4.86	80	19	1	0	0	4.79
Average						4.8						4.8

(Source: Authors' compilation)

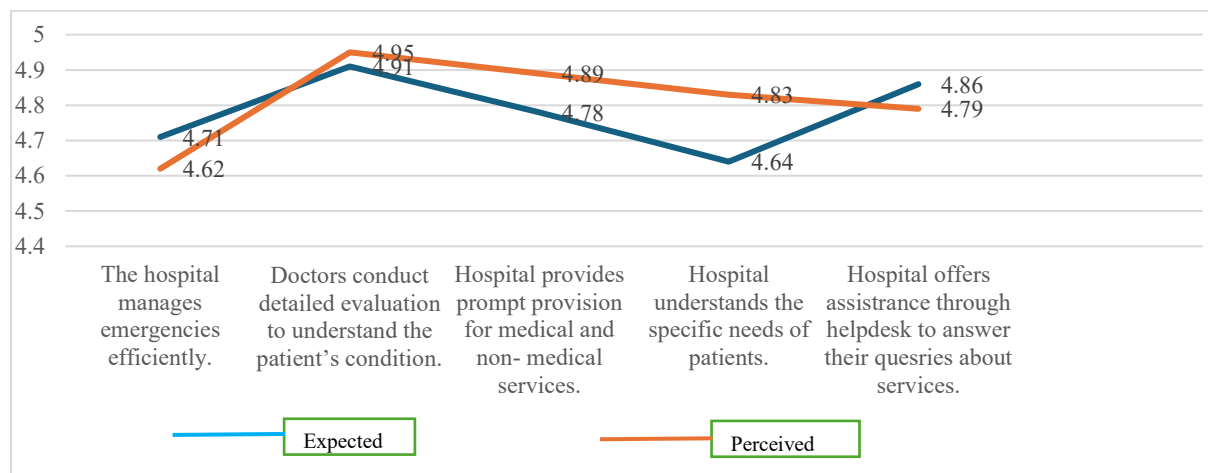


Figure 2: Mean scores on construct 'Responsiveness' amongst In-patients

3.2.3 Gap on the construct 'Reliability' of SERVQUAL

With the 'Reliability' construct, the customers are found to be more satisfied as the perceived mean scores of each and every item is more than the expected one.

Table 4: In-patient Customers' Opinion on 'Reliability' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
The hospital adheres to the timeline of any treatment processes.	15	72	13	0	0	4.02	21	79	0	0	0	4.21
The hospital implements standard operating procedures across all departments to ensure uniformity in care and service delivery.	12	50	38	0	0	3.74	86	14	0	0	0	4.86
The hospital creates a sense of trust in the patient by providing clear information about diagnosis and treatment option.	65	25	10	0	0	4.55	76	24	0	0	0	5
The hospital conducts the services right at the first time.	83	17	0	0	0	4.83	92	8	0	0	0	4.92
The hospital provides detailed itemized bills that clearly list all charges for services and treatments.	69	31	0	0	0	4.69	84	16	0	0	0	4.84
Average	4.4						4.8					

(Source: Authors' compilation)

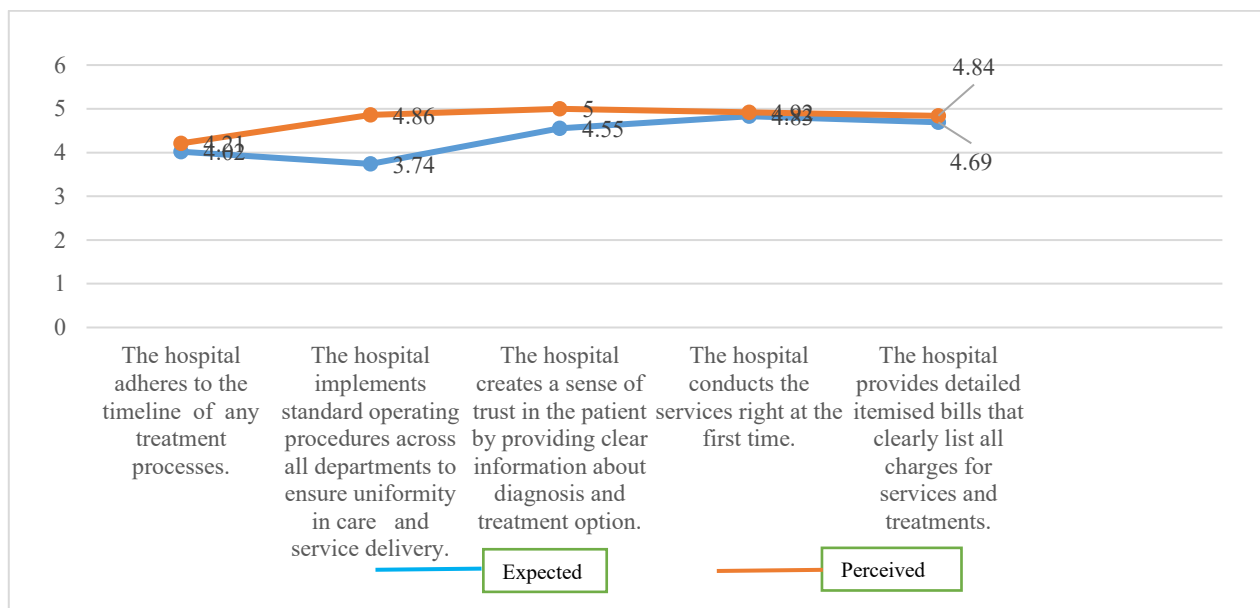


Figure 3: Mean scores on construct 'Reliability' amongst In-patients

3.2.4 Gap on the construct 'Assurance' of SERVQUAL

While discussing customer satisfaction with 'Assurance' construct of Apollo hospitals, it is observed that customers are not so satisfied with cost of services which was not matching with quality of services. Otherwise, with other services like doctors' service, staffs' service, affordable cost and operating hours, customers were satisfied and are highlighted in Table 5 and Figure 4.

Table 5: In-patient Customers' Opinion on 'Assurance' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
Doctors/Nurses offer counselling based on each patient's specific medical condition and needs.	66	34	0	0	0	4.66	93	7	0	0	0	4.93
The hospital staff handle sensitive situation with care and discretion.	30	61	9	0	0	3.94	79	21	0	0	0	4.79
The cost of the services complements the quality of the services.	21	79	0	0	0	4.21	7	50	43	0	0	3.64
Hospital ensures the cost of the services is affordable.	0	20	71	9	0	3.11	15	44	2	31	8	3.27
The hospital's operating hours are designed as per patients' convenience.	7	85	8	0	0	3.99	74	26	0	0	0	4.74
Average												
	4.0						4.3					

(Source: Authors' compilation)

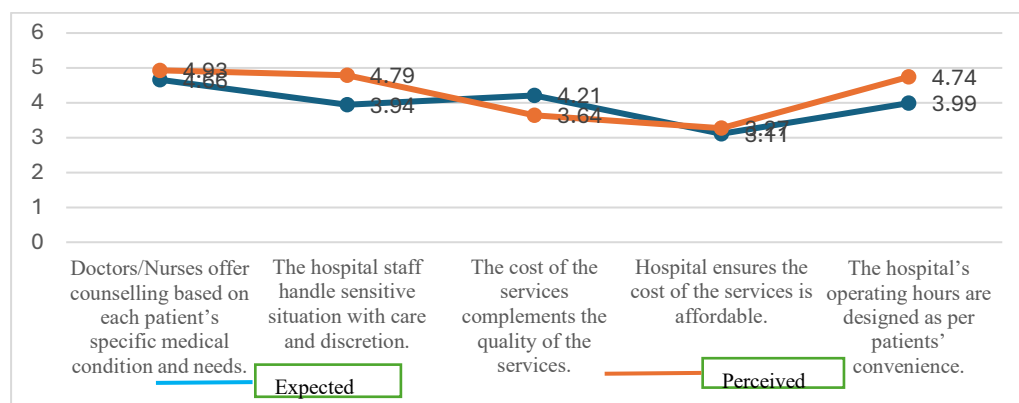


Figure 4: Mean scores on construct 'Assurance' amongst In-patients

3.2.5 Gap on the construct 'Empathy' of SERVQUAL

In healthcare sector, along with service quality, feeling of 'empathy' is equally important, so an important component in SERVQUAL. The customers realise that the hospital understands their health issues and delivers equal treatment to all patients irrespective their social and economic background.

Moreover, with all items of empathy, customers are quite happy as the perceived mean score is high than the expected mean score.

Table 6: In-patient Customers' Opinion on 'Empathy' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
The hospital provides equal care to all patients regardless of their social status.	93	7	0	0	0	4.93	100	0	0	0	0	5
The hospital provides services in according to the interest of the patients.	95	5	0	0	0	4.95	100	0	0	0	0	5
Patient have positive relationship with the hospital.	97	3	0	0	0	4.97	100	0	0	0	0	5
Average						4.95						5

(Source: Authors' compilation)

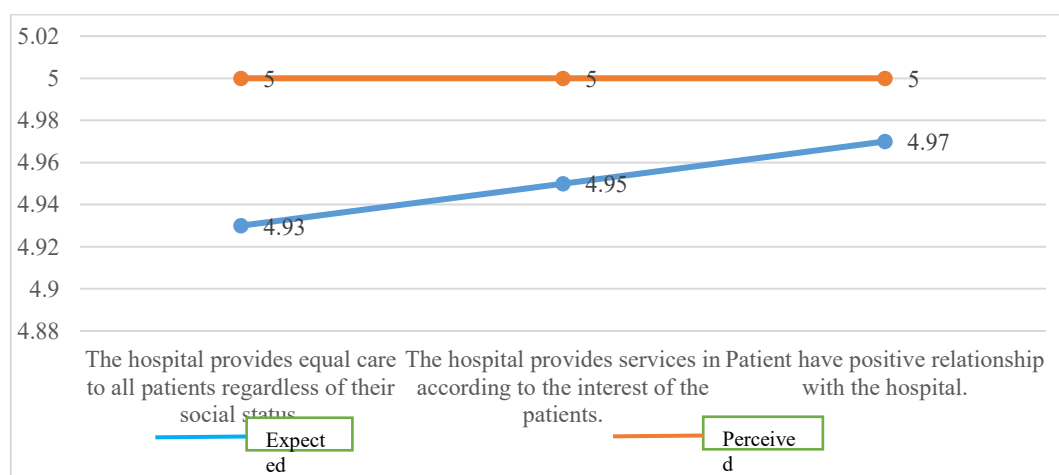


Figure 5: Mean scores on construct 'Empathy' amongst In-patients

3.3 Gap between Expected and Perceived on service quality amongst out-patients

Here, the gap on service quality was analysed on all 5 constructs of SERVQUAL separately amongst in-patients and revealed significant insights which are shown in Table 7-11.

3.3.1 Gap on the construct 'Tangible' of SERVQUAL

Data from out-patient customers on 'Tangible' construct reveals that except parking space, with other items satisfaction is observed and significant findings for organisation as they will knowing that their services can satisfy their customers.

Table 7: Out-patient Customers' Opinion on 'Tangible' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
Visibility of the hospital ensures presence of enough physical facilities.	37	40	23	0	0	4.14	69	31	0	0	0	4.69
The signage and directional information in the OPD are clearly marked and easy to understand.	72	18	4	6	0	4.56	93	6	0	1	0	4.91
The hospital provides ample parking space.	2	5	75	10	8	2.83	0	14	2	60	24	2.06
Pathology and radiology services are available.	85	15	0	0	0	4.85	97	3	0	0	0	4.97
Patients are contented with the availability and condition of equipment and facilities (e.g., restrooms, waiting areas etc.)	35	45	0	0	0	3.55	40	56	4	0	0	4.36
Average						4.0						4.2

(Source: Authors' compilation)

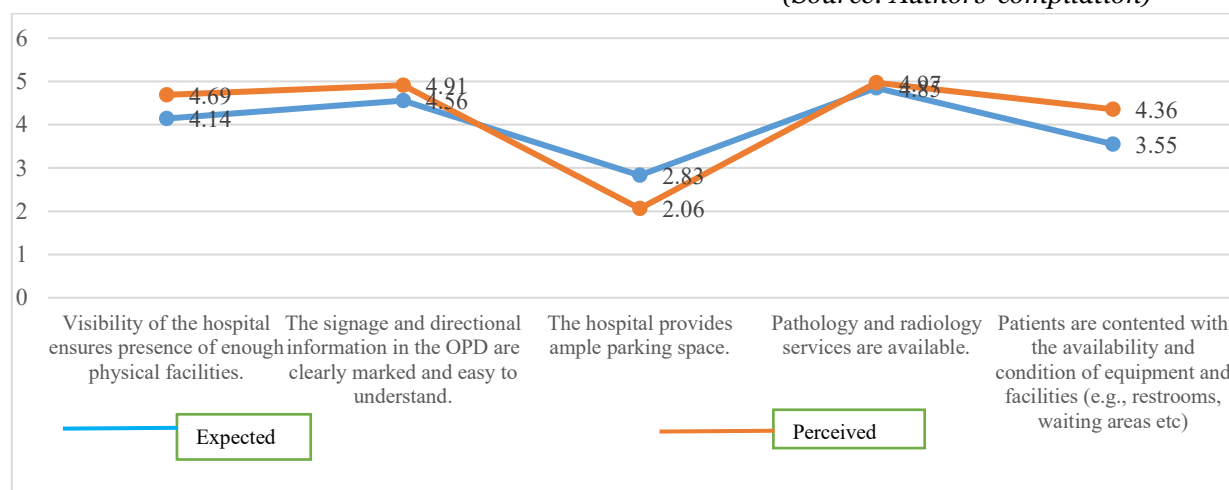


Figure 6: Mean scores on construct 'Tangible' amongst Out-patients

3.3.2 Gap on the construct 'Responsiveness' of SERVQUAL

Table 8 and Figure 7 both indicate that customers are satisfied with all items of responsiveness except appointment distribution. Although appointments are done as per patients' request but there use to be huge gap in between allotted

time of appointment booking and the actual time of service getting by the customers. This makes the customers very much disappointed.

Table 8: Out-patient Customers' Opinion on 'Responsiveness' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
Hospital provides a simple interface for patients to register, book and manage appointment.	12	47	41	0	0	3.71	40	58	2	0	0	4.38
Doctors conduct detailed evaluation to understand the patient's condition.	90	10	0	0	0	4.9	98	2	0	0	0	4.98
Hospital ensures patients are seen promptly by distributing appointments evenly throughout the day.	55	36	9	0	0	4.46	11	29	7	43	10	2.88
The hospital staff displays a polite and friendly attitude when interacting with patient.	22	49	29	0	0	3.93	18	82	0	0	0	4.18
Average						4.25						4.10

(Source: Authors' compilation)

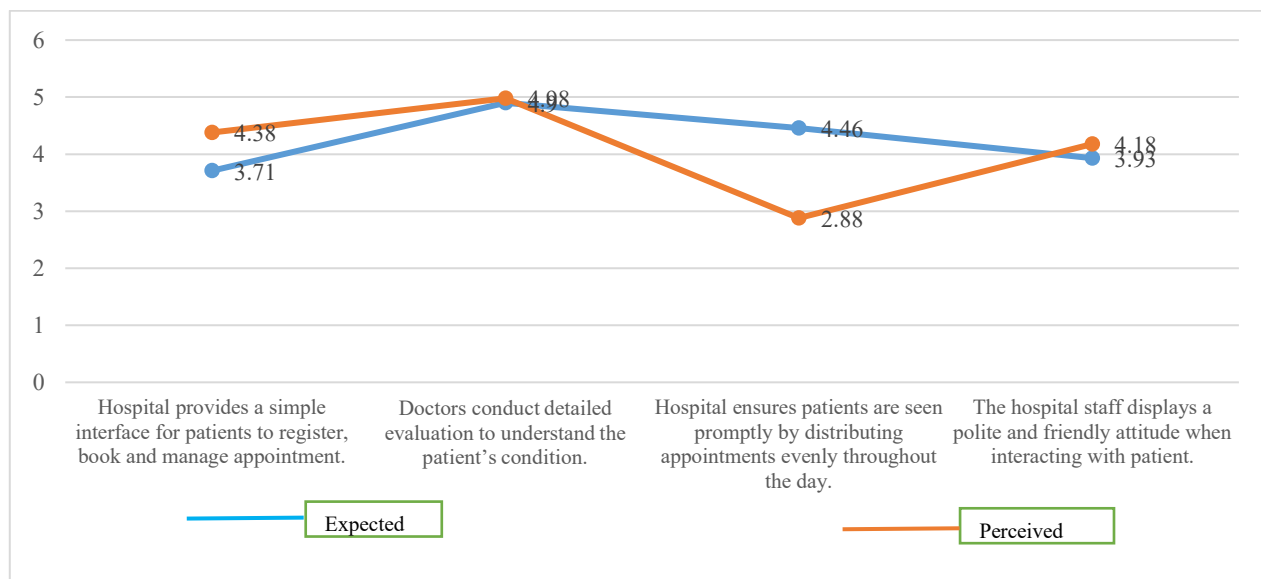


Figure 7: Mean scores on construct 'Responsiveness' amongst Out-patients

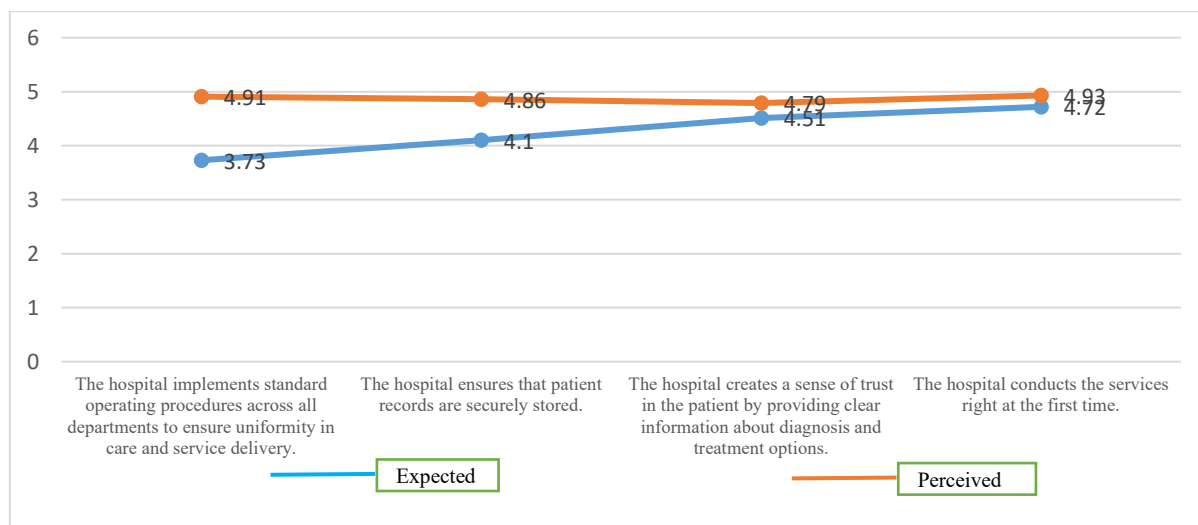
3.3.3 Gap on the construct 'Reliability' of SERVQUAL

On reliability construct of SERVQUAL, data highlights that with all items, customers are satisfied as all the perceived mean score value are more than the expected mean score value. This signifies that this category of customers (out-patients) is satisfied with services that comes under reliability construct.

Table 9: Out-patient Customers' Opinion on 'Reliability' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
The hospital implements standard operating procedures across all departments to ensure uniformity in care and service delivery.	11	51	38	0	0	3.73	91	9	0	0	0	4.91
The hospital ensures that patient records are securely stored.	15	80	5	0	0	4.1	86	14	0	0	0	4.86
The hospital creates a sense of trust in the patient by providing clear information about diagnosis and treatment options.	60	31	9	0	0	4.51	79	21	0	0	0	4.79
The hospital conducts the services right at the first time.	80	12	8	0	0	4.72	93	7	0	0	0	4.93
Average						4.2						4.8

(Source: Authors' compilation)

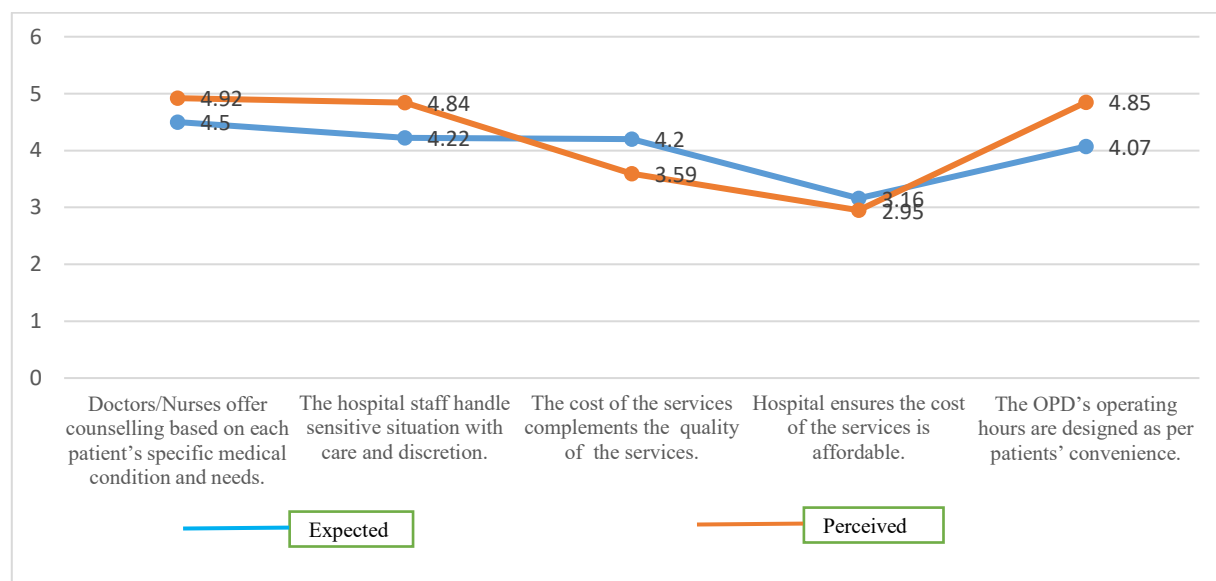
**Figure 8: Mean scores on construct 'Reliability' amongst Out-patients****3.3.4 Gap on the construct 'Assurance' of SERVQUAL**

Here customers are found dissatisfied with two items of 'assurance' construct of SERVQUAL and they are cost of service and affordability. That means, the cost and affordability make dissatisfied out-patient customers. But with other three items i.e., doctor and staff service along with OPD operating hours, out-patient customers are satisfied.

Table 10: Out-patient Customers' Opinion on 'Assurance' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
Doctors/Nurses offer counselling based on each patient's specific medical condition and needs.	54	42	4	0	0	4.5	92	8	0	0	0	4.92
The hospital staff handle sensitive situation with care and discretion.	30	62	8	0	0	4.22	84	16	0	0	0	4.84
The cost of the services complements the quality of the services.	25	70	5	0	0	4.2	4	51	45	0	0	3.59
Hospital ensures the cost of the services is affordable.	0	23	70	7	0	3.16	10	33	7	42	8	2.95
The OPD's operating hours are designed as per patients' convenience.	17	73	10	0	0	4.07	83	17	0	0	0	4.85
Average						4.03						4.23

(Source: Authors' compilation)

**Figure 9: Mean scores on construct 'Assurance' amongst Out-patients****3.3.5 Gap on the construct 'Empathy' of SERVQUAL**

The out-patient customers are very much satisfied with 'empathy' construct as they are satisfied with all items that are covered under this particular construct. In many studies, it was highlighted that customers get satisfied service quality but empathy is found missing specially in private sector, but here that is a very significant finding for Apollo hospitals (Javed and Ilyas, 2018; Lam, 1997).

Table 11: Out-patient Customers' Opinion on 'Empathy' construct of SERVQUAL

Statements	Expected						Perceived					
	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score	SA (5)	A (4)	N (3)	DA (2)	SDA (1)	Mean Score
The hospital provides equal care to all patients regardless of their social status.	93	7	0	0	0	4.93	100	0	0	0	0	5
The hospital provides services in according to the interest of the patients.	95	5	0	0	0	4.95	100	0	0	0	0	5
Patient have positive relationship with the hospital.	97	3	0	0	0	4.97	100	0	0	0	0	5
Average						4.95						5

(Source: Authors' compilation)

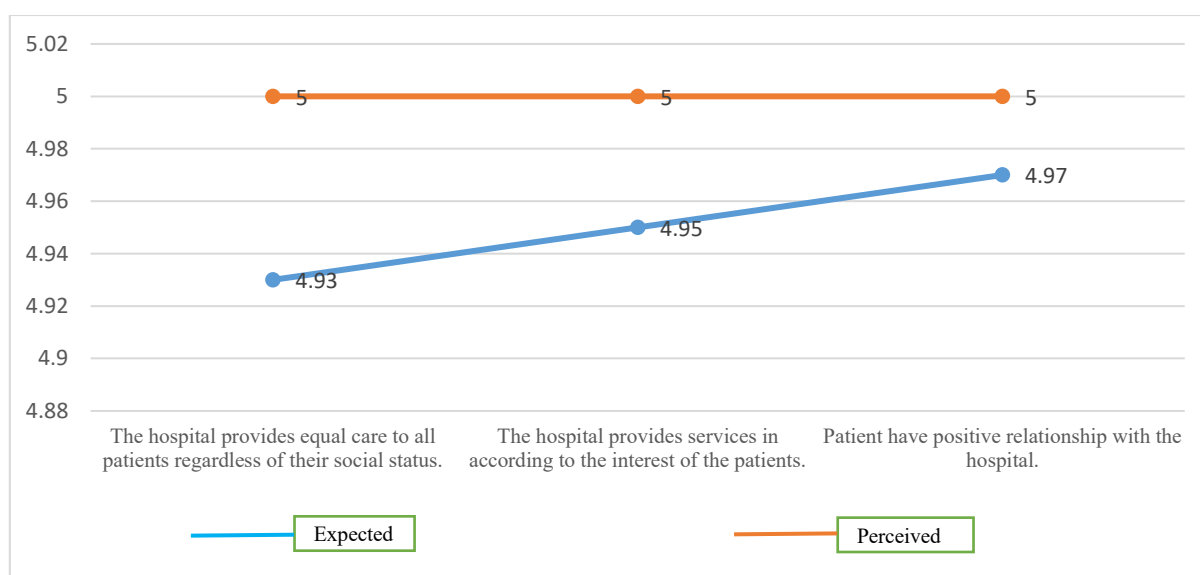
**Figure 10: Mean scores on construct 'Empathy' amongst Out-patients**

Table 12 reveals certain things on all 5 constructs of SERVQUAL with Apollo hospitals of Assam that the in-patient customers are found to be satisfied as they have received better services on all constructs except 'Tangible' than their expected services. Whatever service gap has been observed, that is very much minor one. Almost similar findings have been observed amongst out-patient customers also but that minor gap is with 'Responsiveness'. With all other 4 constructs, perceived mean score values were higher than the expected mean score values. This signifies that both types of customers i.e., in and out patients were satisfied with minor gap with tangible and responsiveness of Apollo hospitals that provides healthcare services to customers. If rank is assigned to all the 5 constructs of SERVQUAL, then 'Empathy' will get the highest rank in both cases (i.e., amongst both types of customers). Then immediately 'Reliability' will occupy the 2nd rank and 'Responsiveness', 'Assurance' and 'Tangible' will come respectively in the rank of 3rd, 4th and 5th.

Table 12: SERVQUAL based Service quality gap of Apollo Hospitals, Guwahati

Construct	In-patient		Out-patient	
	Expected	Perceived	Expected	Perceived
Tangible	4.1	4.0	4.0	4.2
Responsiveness	4.8	4.8	4.3	4.1
Reliability	4.4	4.8	4.2	4.8
Assurance	4.0	4.3	4.0	4.2
Empathy	4.95	5.0	4.95	5.0

(Source: Authors' compilation)

4. DISCUSSION

4.1 Theoretical support

This study provides further support to SERVQUAL tool to illustrate and measure the service quality and the gap in services in hospital sector. In addition to the items that were considered for this study, some additional items can be added based on the targeted hospital and geographical location as it varies organisation and geographical region wise. The greatest impactful finding of this study is the customers' feeling towards 'Empathy' which normally found to be customers' dissatisfaction in most of the healthcare sectors. This study is bringing another clear understanding is that opinion varies between in-patient and out-patient customers and service qualities also vary based on nature of customer i.e., whether they are in-patient or out-patient. In most of the studies it is seen that to both types of customers i.e., in and out patients, they only term as 'customer'.

4.2 Discussion of Results

The best service that Apollo hospitals of Guwahati offers to their customer is 'empathy', which is very much essential specially in hospital sector (Cadet and Sainfort, 2023). The immediate position is taken by 'reliability' construct which gives the meaning that customers have reliable on the services that Apollo hospitals provide to their customers. The next construct where customers have satisfaction with the quality of service is the 'responsiveness'. If rank wise, all the constructs are seen in this study, then it is like empathy > reliability > responsiveness > assurance > tangible. This is very essential specially for healthcare service provider. Service sector wise, this rank may vary and that cannot be same for all service sectors.

CONCLUSION, IMPLICATIONS, LIMITATIONS AND FUTURE DIRECTIONS

This paper has used SERVQUAL tool which have focus on five dimensions/constructs to study service quality gap in the form of customer satisfaction (both types of customers i.e., in and out patients) with Apollo hospitals of Guwahati for which data were collected from 200 respondents within two months of period in 2026. Amongst all the five service quality dimensions, empathy got the highest mean score (in-patient=5, out-patient=5). Other service quality dimensions like 'reliability', 'responsiveness', 'assurance' and 'tangible' comes accordingly. This study supports the concept of SERVQUAL as this tool is for service sector although priority of the five service quality dimensions may vary sector to sector. Otherwise in satisfying customers, the five dimensions are really very much important and have significant role.

The results of this study indicate that the five dimensions of SERVQUAL are the key service dimensions to measure customer satisfaction level as service quality gap and this has been explored with Apollo hospitals of Guwahati, Assam. The results have indicated one major thing that the same type of service may impact differently which depends on type of customer. So, the service type and quality should be designed based on type of customer specially in healthcare sector.

Some limitations exist with this study and those became directions for future research. First, the findings of this study are based on the responses who have participated in the data collection process based on their convenience, so these respondents do not represent the whole/ full customers of Apollo hospitals of Guwahati. The future research should

include all those customers also who are not comfortable with English language, by introducing multilingual option in questionnaire. Secondly, this study is considering only those hospitals which are operated under Apollo hospitals brand, has not considered other diagnostic centres and clinics that are operated under Apollo brand. The future research can consider the diagnostic and clinics also to get customer insights towards service quality of Apollo in Assam, being the main hub of Northeastern region of India.

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