

# The Study Of Perception Gap Towards Quality Services Between Hospital Employees And Patients: A Sustainability Perspective --With Special Reference To Govt. Hospitals In Vsp City



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## Abstract

This study observes gaps in service quality (SQ) and patient satisfaction in the government hospitals of Visakhapatnam, India, through the SERVQUAL model. The study also explains these gaps in the light of sustainable service innovation with the aim of determining the institutional improvement priorities within the public healthcare systems. A survey was conducted on 300 respondents with patients, doctors, nurses and administrative staff being the sample population. A questionnaire that was structured around the five dimension of SERVQUAL namely, Empathy, Responsiveness, Assurance, Reliability and Tangibility, was used. The analysis of data was done via SPSS in form of descriptive statistics, correlation analysis and gap analysis. The findings indicate that there are highly negative discrepancies in all dimensions of SQ with the patient expectations being higher than the perceptions. The greatest gap was observed in responsiveness whereas the strongest positive correlation with patient satisfaction was observed in Assurance. The level of expectation-perception gaps had a negative relationship with the level of fulfillment, which proved the importance of SQ in the performance of institutions. The results indicate that gaps in SQ may serve as sustainable and inclusive institutional innovation in governmental health services where populations with lower incomes are served. Long-term sustainability and trust in the institution can be reinforced by improving the competence of staff, efficiency of processes, and responsiveness of the institution. SERVQUAL is a strategic diagnostic tool because it can help government hospitals to implement reforms driven by innovation, enhance the efficiency of its operations, and foster inclusive and sustainable healthcare provision.

**Keywords:** Sustainable Service Innovation; Inclusive Healthcare Systems; Social Value Creation; SERVQUAL; Patient Satisfaction; Public Sector Sustainability

## 1. INTRODUCTION

In 1940's the people used to feel hospitals as, it is the place where their lives are safe and secure, but now the idea and concept of hospital has been changed to , as it is the institution or organization which is helping out the customers to extend their lives with the help of sophisticated equipment's , technology and well trained staff. In this modern era there is a paradigm shift in hospitals where they are trying to educate ,trainer the staff, patients and public regarding personal, health and hygiene practices .

### The Problem

Although there is a availability of number of health schemes ( Awaz health insurance scheme , Ayushman Bharat , Arogya Shree, AamAadmiBimayojana etc ) and good number of facilities to the public by the government hospitals but still the public was in dilemma to go whether to public or corporate hospitals . keeping all these schemes aside there are main challenges confronting a public hospital such as deficient

infrastructure , slack manpower , low quality of service, Hence quality service is missing. Where quality is assured cost is very high , which again a constraint.

Raising the proportion of the private sector in school education is another new trend. The public is becoming more and more persuaded that private hospitals offer higher-quality care than public hospitals. This seems to have produced a contradiction whereby financial affordability is a prerequisite for admission to private hospitals and, conversely, a prerequisite for admission to only government institutions.

Above all, factors may have an impact on the performance of Government and corporate hospitals.

### Aim

In light of this, the current research seeks to evaluate the effectiveness and performance of the hospital system in the Andhra Pradesh state's Visakhapatnam district.

**About Servqual**

SQ is measuring of delivering the services to meet expectations of the client. Service providers measure the quality of the service to determine if there are any lapses so that the SQ can be improved and customer satisfaction can be accessed.

**SQ Model**

One of the major concern of every service organization is to constantly improve upon their services to meet the potentials of the customers. There are many SQ models developed by service marketing researchers to improve the quality of service .one such model is SERVQUAL model, that was proposed by Parasuraman ,etal(1985). This model helps to measure the perception of the customers towards the performance of facility organization.(Zari.etal 2012, Lathari , 2011)

If a customer has positive perception of SQ this can lead to favourable of the customer. This inturn will have an impact on the interaction of customer purchase, repeat purchase and they may also recommend service to others. ( Parsuraman et.al 1988)

After taking a number of research projects Parsuraman (1985) came with SQ model SERVQUAL , Earlier they were ten dimensions in this model whereas now reduced to five dimensions of SQ later. The five dimensions of SQ are: 1. Assurance. , 2. Reliability 3. Responsiveness 4. Empathy 5. Tangibility.

1. Tangibility: this dimension talks about the physical existence of the service with the help of equipment, appearance and physical facilities .
2. Reliability: Is the capacity to provide the service accurately and ability to provide the service independently.
3. Responsiveness: it is the readiness to support the clients and to help them willingness to provide prompt service.
4. Empathy: Empathy is knowing the customer, sharing concern, and providing individualized attention.
5. Assurance :It is the ability and curiosity to show trust and confidence and express service provider knowledge

SERVQUAL model is used to do a gap examination of the facility providers, SQ performance against the expectations on SQ by customers. To measure the gap the perception of customer regarding service attribute is taken into account. In this serqual model there are five attributes or components on tangible, Reliability , Responsiveness, empathy and Assurance. They were four gaps identified by the SERVQUAL developer which is given in the gap analysis model.

SERVQUAL is a research instrument which is used by the service organization to measure the SQ by understanding customer expectation and perception among five dimension of

SERVQUAL(Reliability, Responsiveness, empathy , tangibility and Assurance) . The questions consists of mathematical paired of items to 22 expectation items and 22 perception items which are organized into five dimensions. This means both expectation and perception component of the questionnaire consists of total of 22 items each and perceptions component comprises of 4 tangible items, 5 reliability items , 4 responsiveness items, 4 assurance items and 5 empathy items.

**Gap Analysis Model**

The model helps to identify the gaps between perceived service and expected service. This model identify five types of gaps or deviation that occurs during the delivery of service to the customers.

**Gap-1:** Gap between customer expectation and management perception

**Gap-2:** Gap between SQ certification and management perception.

**Gap-3:** Gap between SQ certification and service delivery.

**Gap-4:** Gap between SQ certification and external communication.

**Gap-5:** Gap between expected services and experienced service.

**Conceptual Framework**

The main goal of the study is to measure the quality dimension, so as to assess the satisfaction of patient of government hospitals in Visakhapatnam city. The satisfaction level of the patients can help us to evaluate the performance of there hospitals. The satisfaction level of the patients can be determined items of SQ offered by doctors, nurses and the other staff of there government hospitals. The satisfaction levels of the patients can be determined on the basis of different SQ dimension namely (Assurance, Tangibility, Responsiveness, Empathy, and Reliability). The theoretical framework that shows the relationship between five dimensions of SQ, satidfaction of patients and performance of the organiation.

In addition to examining the relationship between SQ, satisfaction, and performance, the study further extends the framework by incorporating an institutional innovation perspective. SQ gaps identified through the SERVQUAL model are interpreted as indicators of institutional innovation needs within public healthcare systems. Greater expectation-perception differences indicate the need to improve processes, managerial capacity, and structure. On this basis, the theoretical association can be furthered as:

**SQ Gaps → Institutional Innovation Need → Sustainable Institutional Performance**

**OBJECTIVES:**

1. To measure the quality dimension so as to assess the satisfaction of patience of Government hosiptals in Visakhaptnam city.
2. To identify the SQ fctorsthat significantly influence the satisfaction of Patience.
3. To identify the gas between expectation and perception of patience on SQ of hosiptals.
4. To measure the performance of the Government hospitals based upon the satisfaction levels.
5. To provide suggessions to improve the satisfaction levels of patience in Government hosiptals.

### **Sustainable Service Innovation Perspective**

Within the framework of the emerging Asian economies, the role of the public healthcare systems in promoting sustainable development is critical in that they provide equal opportunities to access quality services. According to the literature on sustainable entrepreneurship, the effectiveness of long-term institutions requires the need to reconcile the social value creation models in conjunction with innovation-focused service delivery models (Ketprapakorn and Kantabutra, 2022; Vig, 2023). Gaps in the quality of services provided in the healthcare public system are not only operational shortcomings, but a sign of systemic issues of sustainability that demand creative and adjusted managerial solutions.

The concept of sustainable service innovation is the creation and introduction of better service procedures, organizational conduct, and stakeholder interaction structures, which boost social incorporation, operational efficiency, and institutional durability (Jayawardhana et al., 2022). Innovation in healthcare institutions can take the form of workflow redesign, online booking systems, systematic patient feedback systems, capacity-building projects and joint projects with small and medium enterprises (SMEs) and social enterprises. This type of innovation-driven strategies helps to build a stronger healthcare company without sacrificing the productivity and quality performance (Ketprapakorn & Kantabutra, 2022).

### **Proposed Sample Distribution**

| <b>Respondent Category</b>     | <b>Sample Size</b> |
|--------------------------------|--------------------|
| Patients                       | 200                |
| Doctors                        | 40                 |
| Nurses                         | 40                 |
| Administrative & Support staff | 20                 |
| <b>Total</b>                   | <b>300</b>         |

The questionnaire will have two parts. Part-A will include personnel, social & economic data of the respondents . Part -B will include the questions on the expectations and erceptions of SQ of the Government. Hosiptals based on the five dimensions

The perception gaps determined using SERVQUAL model can be then viewed as indicators of innovation requirements within service delivery system. Greater differences in responsiveness or reliability dimensions can be a sign of a process innovation or managerial capability or governance shortcoming. The recent studies in healthcare confirm that institutional measurement of SQ offers a strategic foundation of institutional improvement and sustainable performance increase (Chew et al., 2023; Darzi et al., 2023).

The culture and institutional factors play a huge role in the adoption of service innovation in Asian public systems. The level of resource limitation, bureaucratic systems, and the dynamics of trust between the public influence the service delivery as well as the perception of the patients. Social enterprise and sustainability research highlights that institutional ecosystems and governance support are critical for enabling sustainable and inclusive service models (Jayawardhana et al., 2022; Vig, 2023). Therefore, strengthening SQ in government hospitals requires entrepreneurial thinking within public management frameworks, encouraging innovation-driven solutions while maintaining social accountability.

Thus, the present study extends beyond measuring SQ gaps and positions SERVQUAL as a diagnostic tool for identifying sustainable service innovation opportunities in public healthcare institutions. By linking perception gaps to institutional innovation needs, this study contributes to the broader discourse on sustainable entrepreneurship, healthcare enterprise development, and inclusive service innovation in emerging economies.

### **2. METHODOLOGY OF THE STUDY**

The emphrical study will be based on primary and secondary data.

The primary data will be collected from the doctors, nurses, other hospital staff and the patientsvisting the Government hosiptals in Visakhapatnam City. By administrating a structured questionnaire.

namely Assurance, Tangibility, Responsiveness, Empathy, and Reliability.

Secondary data will be gathered by interacting with doctors, patients , nurses and staff. It can also be gathered from hospital records , websites, published and unpublished works of an reserchers etc.

**Questionnaire Design****Part- A:**

A structured questionnaire with five likert scale will be developed for the items related to the five dimensions of SQ mentioned. This five pointlikert scale will be used to collect the data from the respondents that range from 1. Strongly disagree to 5. Strongly agree. Cronbach alpha test will be done to test reliability of the data. Data will be collected with the help of field investigators they would be given the training on the dimension of SQ to give the indepthknowledge of the questionnaire and to interact with respondents to the quality and reliable data. The collected data will be analysed through descriptive statistics and inferial statistics techniques by using SPSS(Statistical Package For Social Science).

**Sustainability and Innovation Perspective**

In addition to measuring SQ gaps using the SERVQUAL model, this study interprets the identified gaps from a sustainable service innovation perspective. The perception differences across dimensions such as responsiveness, reliability, and empathy are considered as indicators of institutional improvement and innovation needs within public healthcare systems. The findings are therefore analyzed not only in terms of SQ performance but also as potential areas for process innovation, managerial enhancement, and sustainable institutional development. This approach enables the study to contribute to sustainable service innovation and entrepreneurship research in emerging healthcare contexts.

**3. REVIEW OF LITERATURE :**

1. **SaswatBarpandaand NeenaSreekumar(2020)** they throwed a light on underastanding the current state of performance by the hosiptals and thereby improving the overall efficiency and status by analysing and understanding the performance of the hosiptals. Sample of 20 hospitals for measuring technical efficiency is taken by using data envelopment analysis. Variables such as input variables( beds , trained members , staff and services offered) and output variables( outpatient rate, motality rate and number of surgical operations ina month)are identified and selected to measure the hospital performance that includes both technical efficiency and quality. These were selected to have a commonness in measurement and ease of data availability for the purpose of measurement. DEA is taken as a benchmark for measuring the performance and which is a leading model based on linear programming technique .Finally they have measured the performance of hosiptals and showed the relation between the input and output variables.

2. AsmitaChitnis, et.al(2019)The study is based on the two techniques such as usage of data envelopment analysis(DEA) and super-efficiency DEA for measuring the level of efficiency in terms of performance of the Indian private hosiptals . The study also stated that the scale and scope for delivering the quality healthcare services usually demands for high levels of performance to provide effective an efficient services to patients .

They have taken sample of 25 private hosiptals for evaluation using DEA at first stage . In the second stage , the same sample is used to analyse using super efficiency DEA for discriminating and measuring the performance of efficient hosiptals.

3. MoghaSL , et.al(2012) they stated that role of health care sector in India's is expanding after independence by building a strong infrastructure at primary, secondary and tertiary levels . They also clearly defined that services of the government hosiptals are shrinking day by day due to many reasons where on the other hand the private hosiptals are increasing in number due many benefits provided by the government ( concessional land allotment , relaxation in custom duties on importing of medical equipments etc). There fore private hosiptals has paved a path for medical tourism destination for treating patients form other countries.

4. V.Ramankutty(2000) , Concluded that expansion in private facilities in health has been linked to developments in the government health sector. The public institutions play a vital role in updating their personnel, they also encourage people to the need for timely health interventions. This study also highlights the quality maintenance and setting of standards that is maintained by the governement. The objective is to describe the growth of health care facilities with the increase in the number of public institutions and beds ,expenditure on health, the current pattern of distribution of health care facilities in the public and private sectors etc. His paper is divided into four parts such as a summary report , health sector growth in kerala after formation of the stste in 1956 , current patters of distribution of health care facilities and private sectors and the policy concerns arising out of study.

5. Cohen and Muñoz (2015) developed the concept of purpose-driven entrepreneurship, emphasizing that enterprises operating within institutional systems must integrate social responsibility with long-term sustainability objectives. Their study highlights that organizations addressing societal challenges through innovation contribute to sustainable development by aligning institutional goals with community needs.

6. Tsai and Liao (2017) examined the relationship between sustainability strategy and eco-innovation and found that organizations adopting sustainability-oriented strategies are more

likely to implement innovative practices that enhance overall performance. Their moderation model describes the effect of strategic orientation on the results of innovation, which proves to be pertinent when it comes to the way in which healthcare institutions can consider sustainability along with service improvement.

7. Ostrom et al. (2015) established the priority areas of research in service systems and noted the role of innovation to enhance service delivery in the dynamic and complex institutional settings. Their article highlights the importance of service organizations being able to evolve continuously by innovation, stakeholder interactions, and value co-creation processes.

8. Al-Borie and Sheikh Damanhour (2013) used the SERVQUAL model to determine the patient satisfaction level at Saudi hospitals and discovered that there were major discrepancies in the SQ dimensions. Their research established that SERVQUAL is a valid tool to assess the performance of healthcare service and the area that needs to be improved.

9. Seixas (2017) wrote about the significance of the democratic participation and priority-setting in the healthcare systems and stated that transparency of the institutions and the involvement of stakeholders is essential in achieving equitable and sustainable healthcare delivery. The paper identifies governance and accountability to be the key elements of institutional sustainability.

10. Fatima et al. (2018) examined the correlation between the SQ, satisfaction, and loyalty of patients in the private healthcare systems. Their results showed that the dimensions of SQ play a major role in patient satisfaction and behavioral

intentions, which validates the strategic relevance of service performance measurement.

11. George et al. (2021) reviewed the concept of digital sustainability and entrepreneurship, as they show how digital innovations can resolve the societal issues and provide a more stable institutional environment. As it is emphasized in their research, innovation-driven approaches can facilitate sustainable development in all spheres of service, including healthcare.

12. Sustainable Growth as a Strategic Management Perspective: SQ can be conceptualized in a strategic management perspective beyond a conventional assessment of the operations. According to the Resource-Based View (RBV), sustainable growth is a result of the creation of valuable and hard-to-copy assets like skilled individuals, effective processes, institutional trust, and the governmental systems (Ferlie et al., 2015). The literature on sustainable business models also focuses more on the alignment of organizational systems and the long-term sustainability goals (Schaltegger et al., 2016). Institutional performance and credibility is also increased by strategic governance reforms in the institutions (Greer and Bullock, 2018). Operationally, traceability and transparency of processes enhance competitiveness and efficiency of resources (Agrawal and Pal, 2019). Accordingly, systematic SQ evaluation has not only a diagnostic nature but also a strategic feature in favor of sustainable institutional development.

#### 4. DISCUSSIONS

1. To measure the quality dimension so as to assess the satisfaction of patients of Government hospitals in Visakhapatnam city.

**TABLE 1: Sample Profile of Respondents (Visakhapatnam District)**

| Category            | Description      | Frequency (n=0) | Percentage (%) |
|---------------------|------------------|-----------------|----------------|
| Gender              | Male             | 162             | 54.0           |
|                     | Female           | 138             | 46.0           |
| Age Group           | Below 30 years   | 78              | 26.0           |
|                     | 31-45 years      | 96              | 32.0           |
|                     | 46-60 years      | 84              | 28.0           |
|                     | Above 60 years   | 42              | 14.0           |
| Education           | Illiterate       | 54              | 18.0           |
|                     | School Level     | 102             | 34.0           |
|                     | Graduate & above | 144             | 48.0           |
| Monthly Income (rs) | Below 15,000     | 138             | 46.0           |
|                     | 15,001-30,000    | 96              | 32.0           |
|                     | Above 30,000     | 66              | 22.0           |

Table 1 represents the demographic profile of surveyed patients in Government hospitals of Visakhapatnam District. The percentage of gender distribution is relatively equal wherein 54 percent are males and 46 percent are females which guarantees a sufficient representation of both genders in measuring patient satisfaction.

The age classification indicates that most of the respondents are in the 31-45 (32%) and 46-60 (28%) age brackets then in the patients below 30 (26%) years category. The percentage of the users of government healthcare services who are aged over 60 only constitute 14% and this means that the middle age and the

economically productive sections of the population are the main consumers of the government healthcare services.

In regard to education, almost half of the respondents (48%) are graduates or higher and 34% have school education with 18% being illiterate. This pedagogical combination implies that the awareness of the respondents is likely to be different, and this fact can affect their perception of the quality of healthcare services.

Relating to monthly earnings, 46% of interviewees have less than 15,000 monthly earnings, which points out to the fact that governmental hospitals are predominantly frequented by low-income earners. This highlights the significance of the dimensions of SQ including accessibility, affordability and basic care in patient satisfaction.

Generally, the demographic structures of the sample are diverse enough to offer a good foundation on the analysis of dimension's quality and their effects on patient fulfilment in the Government hospitals in the city of Visakhapatnam.

**Table 2: Sample Profile of Respondents (Visakhapatnam District)**

(5-point Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree)

**SERVQUAL Dimension Expectation Mean (E) Perception Mean (P) Gap Score (P – E)**

| Dimension      | Expectation Mean (E) | Perception Mean (P) | Gap Store (P-E) |
|----------------|----------------------|---------------------|-----------------|
| Tangibility    | 4.12                 | 3.01                | -1.11           |
| Reliability    | 4.28                 | 3.22                | -1.06           |
| Responsiveness | 4.35                 | 3.05                | -1.30           |
| Assurance      | 4.40                 | 3.48                | -0.92           |
| Empathy        | 4.18                 | 3.10                | -1.08           |
| <b>Total</b>   | <b>4.27</b>          | <b>3.17</b>         | <b>-1.10</b>    |

**Interpretation:**

The comparison between expectations of the patients (E) and their perceptions of the SQ (P) of the Government hospitals is presented in the table. On all the five dimensions, the perception scores are lower than those of expectation scores giving negative gap scores. This shows that the expectations of patients are not met to the fullest.

Assurance is the least gap score dimension (-0.92) which implies that the patients are more or less content with the knowledge, behavior and confidence of the physicians and personnel. One other gap is reliability, which has a moderate gap (-1.06), meaning that there is trust to some extent in the services of the hospital.

The biggest difference is seen in Responsiveness (-1.30) that indicates dissatisfaction with timely service, waits, and employee willingness to assist. There is also a visible gap in Tangibility (-1.11) and Empathy (-1.08) which is associated with the issues of hospital facilities, cleanliness, personal attention, and care given to the patients.

On the whole, the cumulative gap of -1.10 describes that the patient perceptions are fairly lower than the expectations and all the SQ dimensions are to be improved, in particular, responsiveness and tangibility. Table 3: Patient Satisfaction Levels in Government Hospitals

**Satisfaction Level Score Range Frequency Percentage (%)**

|                     |           |            |            |
|---------------------|-----------|------------|------------|
| Highly Dissatisfied | 1.00–1.99 | 36         | 12.0       |
| Dissatisfied        | 2.00–2.99 | 96         | 32.0       |
| Neutral             | 3.00–3.49 | 78         | 26.0       |
| Satisfied           | 3.50–4.49 | 66         | 22.0       |
| Highly Satisfied    | 4.50–5.00 | 24         | 8.0        |
| <b>Total</b>        |           | <b>300</b> | <b>100</b> |

Table 3 presents the way the patients are distributed in terms of their satisfaction with the services delivered by Government hospitals. It is seen that most of the respondents are in the dissatisfied group (32) and neutral (26) groups. This means that a good number of patients are not satisfied or even uncertain of the quality of services they have received.

The level of dissatisfaction is approximately 12 percent of the total patients, indicating severe issues with the services of the hospitals. The positive aspect is that only 22 percent of the respondents are

satisfied, only 8 percent are highly satisfied meaning that a comparatively small number of patients have a very positive perception of the services.

On the whole, the findings show that the level of satisfaction is moderate and low as over 70 percent of patients are dissatisfied, highly dissatisfied, or are neutral. This underscores the fact that much is necessary in terms of SQ in order to create better patient satisfaction in Government hospitals.

2. To identify the SQ factors that significantly influence the satisfaction of Patients.

**Table 4: Correlation between SERVQUAL Dimensions and Patient Satisfaction**

| Dimension      | Patient Satisfaction |
|----------------|----------------------|
| Tangibility    | 0.61**               |
| Reliability    | 0.67**               |
| Responsiveness | 0.63**               |
| Assurance      | 0.72**               |
| Empathy        | 0.60**               |

\*\*significant at 0.01

Table 4 presents the correlation between SERVQUAL dimensions and patient satisfaction in Government hospitals. The dimension of all the dimensions is positively and significantly correlated with patient satisfaction meaning that there is an upward correlation between the increase in SQ and the increase in the level of satisfaction.

Out of the dimensions, the Assurance (0.72) is the most correlated with patient satisfaction, which implies that patients attach more significance to the knowledge, competence, and confidence of hospital employees. There are also strong relationships between Reliability (0.67) and Responsiveness

(0.63) which demonstrate the relevance of reliable services and timely care.

The correlations with Tangibility (0.61) and Empathy (0.60) are also positive but slightly less positive, thus proving that the physical facilities, equipment, and personal care also have a significant impact on patient satisfaction.

In general the results prove that every dimension of SERVQUAL is critical in achieving patient satisfaction in Government hospitals, with the most important dimensions being assurance and reliability.

**Table 5: Correlation Summary for Regression Analysis**

| Variable       | Tangibility | Reliability | Responsiveness | Assurance | Empathy | Patient Satisfaction |
|----------------|-------------|-------------|----------------|-----------|---------|----------------------|
| Tangibility    | 1           | 0.62**      | 0.57**         | 0.65**    | 0.54**  | 0.61**               |
| Reliability    | 0.62**      | 1           | 0.68**         | 0.70**    | 0.61**  | 0.67**               |
| Responsiveness | 0.57**      | 0.68**      | 1              | 0.63**    | 0.66**  | 0.63**               |
| Assurance      | 0.65**      | 0.70**      | 0.63**         | 1         | 0.69**  | 0.72**               |
| Empathy        | 0.54**      | 0.61**      | 0.66**         | 0.69**    | 1       | 0.60**               |

### **Interpretation :**

Table 4 provides the correlation coefficient between dimensions of SERVQUAL and patient satisfaction. There are positive and significant correlations among all the variables, which means that there is a strong relationship between SQ dimensions and patient satisfaction.

The inter-correlations of SERVQUAL dimensions are between 0.54 and 0.70 indicating that the dimensions are correlated yet not too high implying that it is not a serious case of multicollinearity to analyze the regression analysis.

Regarding patient satisfaction, the most correlated ones are Reliability (0.67) and Responsiveness

(0.63), and Assurance (0.72). The relationship with Tangibility (0.61) and Empathy (0.60) is also found to be meaningful in the positive sense.

In general, the findings suggest that the dimensions of SQ are significant predictors of patient satisfaction, and the correlation structure allows them to be included in additional regression analysis to determine the effect of all these dimensions on patient satisfaction in Government hospitals.

3. To identify the gap between expectation and perception of patience on SQ of hospitals.

**Table 6: Correlation between Expectation-Perception Gaps and Patient Satisfaction**

| Dimension Gap (E - P) | Patient Satisfaction |
|-----------------------|----------------------|
| Tangibility Gap       | -0.55**              |
| Reliability Gap       | -0.60**              |
| Responsiveness Gap    | -0.57**              |
| Assurance Gap         | -0.65**              |
| Empathy Gap           | -0.53**              |

Note:  $p < 0.01$  (2-tailed)

### **Interpretation:**

The table:6 presents a correlation between the gaps in quality of services (Expectation - Perception) and

patient satisfaction. The negative and significant correlation between all the dimensions and patient satisfaction indicates that the wider the difference

between expectations and perceptions, the lower the patient satisfaction is.

The strongest negative correlation with patient satisfaction is with the Assurance gap (-0.65) meaning that the most significant effects on dissatisfaction are the expectations not met concerning the competence, confidence, and trustworthiness of staff. It is then succeeded by Reliability (-0.60) and Responsiveness (-0.57) emphasizing on the need to have reliable and timely services.

Tangibility (-0.55) and Empathy (-0.53) gaps are also considerably negatively correlated, which means that a lack of physical facilities and personal care leads to lower patient satisfaction.

In sum, the results prove that the reduction of the expectation-perception gap in all dimensions of SQ is a necessary step towards the enhancement of patient satisfaction in Government hospitals.

### ***Sustainable Service Innovation Implications of Findings***

The empirical results of the research are useful insights in a sustainable service innovation perspective. The fact that the gap scores are negative throughout all dimensions of SERVQUAL points to a systematic lack of performance that needs to be addressed by introducing systematic interventions to enhance performance through the application of innovation in government hospitals.

The biggest gap in responsiveness indicates that there are operational inefficiencies in place in terms of delays in service delivery, problems in the management of waiting time, and staff shortages. In terms of sustainability, these gaps are pointing to the process innovation opportunities, the digital queue system, redesigning of the workflow, and better task allocation mechanisms, which can make the institutions more efficient without necessarily raising the cost of the operations.

Likewise, the positive relationship between assurance and patient satisfaction is very high showing the value of competence of staff, trust, and confidence to evaluate the overall service. Continuous training, development of skills and governance mechanisms can be invested in to make the institution more reliable and sustainable in the long run.

The antagonistic correlation between the expectation-perception gaps and the patient satisfaction validates the idea that the lightness of the SQ differences is of paramount importance to the institutional credibility and public trust. Sustainable healthcare delivery in the emerging economies involves a trade-off between affordability and quality especially where the government hospitals mainly assume the service of lower-income earners.

Therefore, the results of the current research not only present the patient satisfaction rates but

provide a selection of the priorities to be set on sustainable service development and institutional reinforcement in the context of the public healthcare system.

### ***Institutional Innovation Readiness***

The gap analysis in SERVQUAL can also be understood as a readiness of institutional innovation in the government hospitals. Wider cross dimensional gaps reflect less preparation and redesigning of processes and effective responsiveness to patient expectations. As an example, the high difference in Responsiveness may indicate the possibility of the shortage of process innovation, workflow management, and service coordination mechanisms. According to the innovation capability theory, institutional adaptability and dynamic capabilities are the keys to the continuity of improvement in performance (Teece, 2018). On the other hand, the gap and the correlation are relatively smaller in Assurance, which implies relatively good human capital capability and professional competence in the institutional structure. Thus, the minimization of the expectation-perception gaps may be regarded not just as a quality improvement initiative but also as an innovation-based approach to improving institutional resilience and sustainable performance in the healthcare systems of the state (George et al., 2021).

### ***Social and Inclusive Enterprise Perspective***

Government hospitals in developing countries can be thought of as social enterprises which are inclusive and social value generating, as opposed to profit-based. The inclusion aspect of public healthcare institutions is supported by the demographic portrait of the given study, especially the high percentage of low-income patients. In this type of enterprises, quality of service is the key to long-term sustainability and institutional legitimacy. The negative expectations-perceptions differences revealed in SERVQUAL dimensions point to a lack of performance areas that could undermine trust in stakeholders. In the case of inclusive enterprises, long-term community trust and a sense of fairness is key to the continuation of social impact. Thus, minimizing the gaps in SQ is not only an operation requirement but a strategic need to sustain the institution.

The fact that the assurance, reliability and the patient satisfaction levels are highly correlated also underscores the role of staff competence and reliable service systems in enhancing inclusive enterprise performance. The level of stakeholder trust and long-term viability can be improved by increasing responsiveness, transparency, and service alignment. Therefore, government hospitals can be considered as an inclusive service business

whose sustainability is pegged on the ability to deliver on the expectations of the stakeholders.

## 5. CONCLUSION

The current research assessed the quality of services and patient satisfaction at government hospitals in Visakhapatnam through SERVQUAL model. The results obtained by the analysis of 300 respondents indicated that all five dimensions of SQ Tangibility, Reliability, Responsiveness, Assurance and Empathy one demonstrated gaps between patient expectations and perceptions, which illustrates that government hospitals are not entirely satisfying their patients.

Assurance and Reliability turned out to be the biggest predictors of patient satisfaction, which means that knowledgeable and competent staff and reliable service turn out to be the most important factor in patient satisfaction. On the other hand, the biggest negative gaps were between Tangibility and Responsiveness, which indicate the lack of hospital infrastructure, cleanliness, equipment, and timeliness of service. Correlation analysis also supported the fact that the wider the discrepancy between the expectation and perception, the lower the satisfaction and emphasized the need to make specific improvements in the service delivery.

The research also found that even with the existence of health schemes like Ayushman Bharat, Arogya Shree, etc, patients are increasingly choosing to prefer the care offered in the private hospitals thus creating a conflict between the cost and the quality of the care. This underscores the importance of government hospitals to be more proactive in terms of tangible infrastructure and the responsiveness of human resources to enable them to stay competitive and provide patient-centered care.

Another aspect of the findings which has been brought out is the value of sustainable service innovation within the public healthcare institutions. The specified SQ gaps reveal the spheres that should be improved structurally and with the help of innovations. Training, monitoring, and process improvement can help to build responsiveness, reliability, and assurance and, therefore, a long-term institutional sustainability and increased public trust. Therefore, SERVQUAL has not only been used to evaluate patient satisfaction but is also a sustainable healthcare development instrument.

Generally, the results indicate that the strategic interventions to be adopted in improving SQ- especially in Assurance, Reliability, and Responsiveness- will be crucial towards improving patient satisfaction and the performance of the hospital overall. The evidence-based decision-making and the development of the institution can be facilitated by constant monitoring, staff training, building of the infrastructure, and systematic analysis of gaps with the help of the SERVQUAL

framework. These specific actions are not only beneficial to the service delivery, but also the long-term sustainability and efficiency of the government healthcare institutions.

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