International Journal of Enhanced Research in Management & Computer Applications,
ISSN: 2319-7471, Volume 15 Issue 3, March 2026

Assessing Patient Expectations and Perceptions of Service Quality in Public-Sector Hospitals: Empirical Evidence from Punjab and Chandigarh

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ABSTRACT

Purpose: The study examines the difference between patients' expectations and their perceptions of service quality in selected public-sector hospitals in Punjab and Chandigarh. It evaluates service quality across five dimensions: tangibility, reliability, responsiveness, assurance and empathy.

Design/methodology/approach: The study is empirical and is based on primary data collected in 2023 from 300 patients, comprising 50 respondents from each of six selected public healthcare institutions: Civil Hospitals at Bathinda, Ludhiana, Jalandhar, Amritsar and Mohali, and PGI Chandigarh. During the data-collection period, patients who were present at the selected hospitals, were receiving treatment and met the study's eligibility criteria were randomly approached for participation. A structured questionnaire containing 44 statements and based on the SERVQUAL framework was administered using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Descriptive mean scores and paired-samples t-tests were reported to examine expectation–perception differences.

Findings: Across all six institutions, the reported mean perception scores were lower than the corresponding expectation scores for each of the five service-quality dimensions. The original statistical output reports statistically significant expectation–perception differences for all five dimensions in each institution (reported significance .000; appropriately expressed as $p < .001$). The results indicate a consistent service-quality gap in the selected institutions.

Practical implications: The findings point to the need for sustained attention to hospital infrastructure, dependable service processes, timely assistance, professional assurance and patient-centred communication. Hospital administrators may use patient feedback to identify service-delivery weaknesses and prioritise improvements.

Originality/value: The paper provides a comparative assessment of expectation–perception gaps across six public healthcare institutions using the five-dimensional SERVQUAL framework. Its value lies in presenting patient-reported evidence that can inform service-quality improvement in public healthcare settings.

Keywords: Patient expectations; patient perceptions; service quality; SERVQUAL; public hospitals; healthcare services; Punjab.

Article type: Empirical research paper.

INTRODUCTION

Public healthcare institutions perform an important social and economic function in India by providing medical services to populations with different levels of income and access to private healthcare. For many households, government hospitals remain an essential point of access to consultation, diagnosis, treatment and referral services. The quality of services delivered by these institutions therefore has implications not only for patient experience but also for equity, public confidence and the effective use of healthcare resources.

The quality of healthcare cannot be assessed solely through the availability of clinical treatment. Patients also encounter administrative procedures, waiting periods, staff behaviour, communication practices, physical facilities and the reliability of service processes. These experiences shape how patients evaluate the services they receive. A hospital may provide technically appropriate treatment, yet shortcomings in communication, responsiveness or the physical environment may adversely affect the overall patient experience.

Service quality is commonly understood in terms of the extent to which service performance meets or falls short of customer expectations. In healthcare, this comparison is particularly relevant because patients often approach hospitals during periods of uncertainty and vulnerability. They may expect accurate information, timely attention, respectful treatment, dependable procedures and a safe, hygienic environment. When actual experiences do not match these expectations, a service-quality gap may arise.

The SERVQUAL framework developed by Parasuraman, Zeithaml and Berry provides a widely used approach to examining service quality through five dimensions: tangibility, reliability, responsiveness, assurance and empathy. The framework compares expectations with perceptions of delivered service and can help service organisations identify areas requiring managerial attention. In the present study, this framework is applied to patients attending selected public-sector hospitals in Punjab and Chandigarh.

The study focuses on six institutions and examines whether patients' expectations differ significantly from their perceptions across the five SERVQUAL dimensions. By retaining a comparative institutional perspective, the analysis seeks to identify the broad pattern of service-quality gaps reported by respondents and to draw implications for the management of public healthcare services.

CONCEPTUAL BACKGROUND: SERVQUAL AND HEALTHCARE SERVICE QUALITY

Service quality is a multidimensional concept. Grönroos (1984) discussed service quality in relation to customers' evaluations of the service they receive, while Parasuraman, Zeithaml and Berry (1985) proposed a gap-based conceptualisation of service quality. Their framework identifies discrepancies that may occur between customer expectations, management understanding, service specifications, actual delivery and external communication.

The fifth gap concerns the difference between expected service and perceived service. Parasuraman, Zeithaml and Berry (1988) operationalised this comparison through the SERVQUAL instrument. The original service-quality dimensions were subsequently consolidated into five broad dimensions:

- **Tangibility:** the condition and appearance of physical facilities, equipment, personnel and communication materials.
- **Reliability:** the ability to provide the promised service accurately and dependably.
- **Responsiveness:** the willingness and readiness of employees to assist customers and provide prompt service.
- **Assurance:** employees' knowledge, courtesy and ability to inspire trust and confidence.
- **Empathy:** the provision of caring, respectful and individualised attention.

These dimensions offer a structured basis for examining non-clinical and patient-facing aspects of healthcare service delivery. Their application should, however, be interpreted in the context of the institution, patient population and service setting. The use of SERVQUAL in the present study is intended to assess the expectation–perception gap reported by patients; it does not independently measure clinical effectiveness or treatment outcomes.

REVIEW OF LITERATURE

Chahal (2008), in a study of indoor patients at Civil Hospital, Ahmedabad, examined the relationship between service quality and patient loyalty. The study considered aspects such as physician and nursing performance, operational facilities, cleanliness, administration and the hospital environment. Its reported findings highlighted the importance of professional performance and operational service quality in shaping patient loyalty.

Akter (2008) examined patients' perceptions of service quality in sub-urban public hospitals in Bangladesh using a modified SERVQUAL-based instrument. The study reported gaps between patient expectations and perceptions across the dimensions considered and connected these gaps with patient satisfaction. It recommended improvements in hospital management practices and service delivery.

Sodani and Sharma (2011) assessed patient satisfaction with diagnostic services in public health facilities in Madhya Pradesh. Their study covered laboratory, X-ray, ultrasonography and ECG services. The findings reported differing levels of satisfaction across diagnostic facilities, while overcrowding was identified as a concern by a substantial proportion of patients using certain services.

Raman et al. (2011) studied patient satisfaction in a tertiary-care hospital setting at PGIMER, Chandigarh. Their work considered patient experiences of doctors, nursing and paramedical staff, communication and basic amenities. Although several aspects of care received favourable ratings, the study also reported concerns relating to the time and attention given by doctors, the use of technical language and affordability.

Irfan, Ijaz and Farooq (2012) assessed service quality in public hospitals in Lahore, Pakistan, using a modified SERVQUAL framework. Their study considered reliability, responsiveness, empathy, tangibility and assurance. The findings reported weaknesses in the perceived quality of public hospital services and indicated the importance of assurance in relation to patient satisfaction.

Taken together, the studies reviewed indicate that patient evaluations of public healthcare services are influenced by several interconnected dimensions, including professional behaviour, communication, physical facilities, operational processes and responsiveness. They also demonstrate the relevance of expectation–perception comparisons in identifying areas of service delivery that require attention.

RESEARCH GAP AND RATIONALE

The reviewed studies examine service quality and patient satisfaction in different healthcare settings and geographical contexts. However, the studies cited in the source manuscript do not provide a single comparative assessment of expectation–perception differences across the five SERVQUAL dimensions for the six institutions covered in the present research. The current study addresses this specific empirical focus by examining patient responses from five civil hospitals in Punjab and PGI Chandigarh. The geographical and institutional coverage should be understood as the selected sample of this study and not as representative of all public hospitals in the region.

OBJECTIVE OF THE STUDY

To examine the differences between patients' expectations and perceptions regarding the quality of healthcare services in selected public-sector hospitals in Punjab and Chandigarh across the five SERVQUAL dimensions.

RESEARCH HYPOTHESES

The following null hypotheses were formulated for the five dimensions of service quality:

- **H01:** There is no significant difference between patients' expectations and perceptions regarding the tangibility dimension.
- **H02:** There is no significant difference between patients' expectations and perceptions regarding the reliability dimension.
- **H03:** There is no significant difference between patients' expectations and perceptions regarding the responsiveness dimension.
- **H04:** There is no significant difference between patients' expectations and perceptions regarding the assurance dimension.
- **H05:** There is no significant difference between patients' expectations and perceptions regarding the empathy dimension.

For each hypothesis, the alternative hypothesis states that a statistically significant difference exists between patients' expectations and perceptions for the relevant service-quality dimension.

RESEARCH METHODOLOGY

7.1 Research design

The study follows an empirical, quantitative research design and is based on primary data obtained from patients attending selected public healthcare institutions. The analysis compares expectation and perception scores for the same service-quality dimensions.

7.2 Study setting and sample

The study collected primary data during 2023 from a total sample of 300 patients, with 50 respondents from each of the following institutions: Civil Hospital, Bathinda; Civil Hospital, Ludhiana; Civil Hospital, Jalandhar; Civil Hospital, Amritsar; Civil Hospital, Mohali; and PGI, Chandigarh. Thus, the study covers five civil hospitals in Punjab and one tertiary-care institution in Chandigarh. Patients who were receiving treatment at these institutions during the data-collection period were considered for selection.

7.3 Sampling procedure

During the 2023 data-collection period, patients who were present at the selected hospitals, were receiving treatment and met the study's eligibility criteria were randomly approached for participation. The final sample comprised 300 patients, with 50 respondents from each of the six selected institutions.

7.4 Research instrument and measurement

Data were collected using a structured questionnaire comprising 44 statements based on the SERVQUAL framework. Responses were recorded on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The instrument covered the five service-quality dimensions: tangibility, reliability, responsiveness, assurance and empathy.

7.5 Data analysis

The source manuscript reports the use of mean scores to summarise patient expectations and perceptions for each dimension and institution. Paired-samples t-tests were used to test whether the mean difference between expectation and perception scores was statistically significant. The reported degrees of freedom were 49 for each institutional comparison, consistent with 50 paired observations per hospital. Significance values displayed as .000 in raw outputs are expressed as $p < .001$.

RESULTS AND DATA ANALYSIS

The results are organised around the five SERVQUAL dimensions. The expectation–perception gap is calculated as expectation mean minus perception mean; a positive value therefore indicates that perceived service quality falls below the level expected by respondents.

8.1 Respondent profile by gender

Hospital	Male n (%)	Female n (%)	Total
Civil Hospital, Bathinda	38 (76%)	12 (24%)	50
Civil Hospital, Ludhiana	27 (54%)	23 (46%)	50
Civil Hospital, Jalandhar	27 (54%)	23 (46%)	50
Civil Hospital, Amritsar	34 (68%)	16 (32%)	50
Civil Hospital, Mohali	23 (46%)	27 (54%)	50
PGI, Chandigarh	21 (42%)	29 (58%)	50
Total	**170 (56.7%)**	**130 (43.3%)**	**300**

As reported in the dataset, the sample comprised 170 male respondents (56.7%) and 130 female respondents (43.3%). The gender composition varied across the six institutions.

8.2 Descriptive comparison of expectation and perception scores

Dimension	Institution	Expectation mean	Perception mean	Gap (E−P)
Tangibility	Bathinda	3.91	2.27	1.64
Tangibility	Ludhiana	3.80	1.87	1.93
Tangibility	Jalandhar	3.94	1.90	2.04
Tangibility	Amritsar	3.75	1.99	1.76
Tangibility	Mohali	3.68	2.07	1.61
Tangibility	PGI Chandigarh	3.79	2.39	1.40
Reliability	Bathinda	3.95	2.14	1.81
Reliability	Ludhiana	3.96	2.23	1.73
Reliability	Jalandhar	4.01	2.19	1.82
Reliability	Amritsar	3.91	2.10	1.81
Reliability	Mohali	3.86	1.90	1.96
Reliability	PGI Chandigarh	3.99	2.28	1.71
Responsiveness	Bathinda	3.96	2.13	1.83
Responsiveness	Ludhiana	4.05	2.17	1.88
Responsiveness	Jalandhar	4.05	2.06	1.99
Responsiveness	Amritsar	3.97	2.09	1.88
Responsiveness	Mohali	4.01	1.89	2.12
Responsiveness	PGI Chandigarh	3.99	2.30	1.69
Assurance	Bathinda	3.97	2.15	1.82
Assurance	Ludhiana	4.00	2.35	1.65
Assurance	Jalandhar	4.00	2.01	1.99
Assurance	Amritsar	3.91	2.15	1.76
Assurance	Mohali	4.07	2.03	2.04
Assurance	PGI Chandigarh	4.06	2.66	1.40
Empathy	Bathinda	4.01	2.20	1.81
Empathy	Ludhiana	4.03	2.25	1.78
Empathy	Jalandhar	3.99	2.08	1.91
Empathy	Amritsar	3.96	2.09	1.87
Empathy	Mohali	4.06	1.86	2.20
Empathy	PGI Chandigarh	3.94	2.40	1.54

8.3 Tangibility

The expectation mean scores for tangibility ranged from 3.68 at Civil Hospital, Mohali, to 3.94 at Civil Hospital, Jalandhar. Perception means ranged from 1.87 at Civil Hospital, Ludhiana, to 2.39 at PGI Chandigarh. The reported paired-samples t-test results indicate a statistically significant difference between expectation and perception scores at all six institutions ($p < .001$). The pattern suggests that patients' assessments of physical facilities, equipment, personnel presentation and related tangible aspects were below their stated expectations.

8.4 Reliability

For reliability, expectation means ranged from 3.86 at Civil Hospital, Mohali, to 4.01 at Civil Hospital, Jalandhar. Perception means ranged from 1.90 at Civil Hospital, Mohali, to 2.28 at PGI Chandigarh. The paired-samples tests reported statistically significant expectation–perception differences across all six institutions ($p < .001$). These findings point to a perceived shortfall in the dependable and accurate delivery of promised services.

8.5 Responsiveness

The expectation scores for responsiveness ranged from 3.96 to 4.05, while perception scores ranged from 1.89 to 2.30 across the selected institutions. The original paired-samples test outputs indicate statistically significant differences in all six institutional samples ($p < .001$). The results highlight the importance of timely assistance, staff availability and prompt responses to patients' needs.

8.6 Assurance

Expectation means for assurance ranged from 3.91 at Civil Hospital, Amritsar, to 4.07 at Civil Hospital, Mohali. Perception means ranged from 2.01 at Civil Hospital, Jalandhar, to 2.66 at PGI Chandigarh. Statistically significant differences were reported for all six institutions ($p < .001$). The results indicate that patients' perceptions of staff knowledge, courtesy and ability to inspire confidence did not reach their expectations.

8.7 Empathy

The expectation means for empathy ranged from 3.94 to 4.06, whereas perception means ranged from 1.86 at Civil Hospital, Mohali, to 2.40 at PGI Chandigarh. The reported paired-samples tests show statistically significant differences across all six institutions ($p < .001$). The findings suggest a gap between the level of individualised attention patients expect and the care and understanding they perceive during service encounters.

DISCUSSION

The results show a consistent pattern across the six selected institutions: expectation scores exceed perception scores for each of the five SERVQUAL dimensions. The paired-samples tests reported in the source manuscript indicate that these differences are statistically significant. This pattern suggests that the service-quality concerns identified by respondents are not restricted to a single aspect of the hospital experience.

The tangible dimension draws attention to the physical environment and supporting facilities through which patients experience healthcare services. Although infrastructure alone cannot determine clinical quality, the condition of facilities, equipment and other visible elements can influence patients' confidence in the institution. The gap observed in this dimension supports the need for regular facility assessment and maintenance.

The reliability and responsiveness dimensions relate closely to the consistency and timeliness of service processes. Patients may experience uncertainty when appointments, diagnostic procedures, information or other promised services are delayed or delivered inconsistently. Hospital administrators may therefore need to review patient-flow arrangements, communication of service timelines and systems for responding to requests.

Assurance and empathy reflect the interpersonal aspects of healthcare delivery. Professional knowledge and courteous conduct can help patients feel secure, while attentive listening and respectful communication can make services more responsive to individual needs. The observed gaps indicate that service-quality improvement should address staff–patient interactions alongside infrastructure and operational processes.

The present results are consistent with the broad concern in earlier studies that patient satisfaction is influenced by multiple dimensions of service delivery. Nevertheless, the current analysis is limited to the variables and statistics

reported in the original dataset. It does not establish the causes of the gaps, compare clinical outcomes or demonstrate that one hospital performs significantly better than another. Such conclusions would require additional analyses and, where appropriate, further data.

MANAGERIAL AND POLICY IMPLICATIONS

- Hospital infrastructure and visible facilities should be reviewed periodically, with attention to cleanliness, signage, waiting areas, equipment availability and accessibility.
- Service processes should be mapped to identify avoidable delays, repeated administrative steps and gaps in the communication of information to patients.
- Staff development initiatives may focus on patient communication, respectful conduct, listening skills, responsiveness and handling of service complaints.
- Hospital administrators may establish accessible patient-feedback mechanisms and review the feedback regularly at department and institutional levels.
- Service-quality monitoring should use clearly defined indicators and repeat patient surveys over time to assess whether improvement initiatives are producing measurable changes.
- Policy-level interventions should consider the resource constraints and differing service responsibilities of district hospitals and tertiary-care institutions.

These implications are derived from the dimensions examined in the study. Their prioritisation and implementation should be informed by local operational assessments, available resources and further consultation with patients and healthcare personnel.

CONCLUSION

This study examined patient expectations and perceptions of service quality in six selected public healthcare institutions in Punjab and Chandigarh. Using the five dimensions of the SERVQUAL framework, the analysis found that mean perception scores were lower than mean expectation scores for tangibility, reliability, responsiveness, assurance and empathy in every institution included in the study. The reported paired-samples t-tests also indicated statistically significant differences between expectations and perceptions across all five dimensions.

The findings point to the need for a patient-centred approach to service improvement in public hospitals. Improvements should extend beyond physical infrastructure to include dependable processes, timely assistance, professional communication, trust-building and individualised attention. Since the sample is limited to six institutions and the supplied manuscript does not provide a complete account of sampling and field procedures, the findings should be interpreted within the boundaries of the study rather than generalised to all public healthcare institutions.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The study is subject to several limitations. First, the sample covers six selected institutions and 300 respondents; it cannot automatically represent the experiences of patients across all public hospitals in Punjab, Chandigarh or India. Second, although the study reports that eligible patients receiving treatment at the hospitals were randomly approached, the manuscript does not provide further details of the operational selection procedure or sampling frame.

It also does not report questionnaire validation and reliability statistics. These details are necessary for evaluating the robustness and reproducibility of the findings. Third, the analysis focuses on expectation–perception gaps and does not examine their relationship with overall patient satisfaction, trust, revisit intention, clinical outcomes or other patient-level variables.

Future research may extend the sample to primary health centres, community health centres and additional district and tertiary-care hospitals. Comparative studies involving public and private healthcare institutions may also be useful. Researchers could further examine whether service-quality dimensions differ by demographic characteristics, type of service used or hospital category. Longitudinal studies and intervention-based evaluations may help determine whether specific managerial changes reduce patient-reported service gaps over time.

REFERENCES

1. Akter, S., Upal, M., & Hani, U. (2008). Service quality perception and satisfaction: A study over sub-urban public hospitals in Bangladesh. Journal of Science Research.
2. Chahal, H. (2008). Predicting patient loyalty and service quality relationship: A case study of civil hospital, Ahmedabad, India. Vision: The Journal of Business Perspective, 12(4), 46–55.
3. Grönroos, C. (1984). A service quality model and its marketing implications. European Journal of Marketing, 18(4), 36–44.
4. Irfan, S. M., Ijaz, A., & Farooq, M. M. (2012). Patient satisfaction and service quality of public hospitals in Pakistan: An empirical assessment. Middle-East Journal of Scientific Research, 12(6), 70–77.
5. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. Journal of Marketing, 49(4), 41–50.
6. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. Journal of Retailing, 64(1), 12–40.
7. Raman, S., Sharma, M., & Sharma, R. K. (2011). The patient satisfaction study in a multispecialty tertiary level hospital, PGIMER Chandigarh, India. Leadership in Health Services, 24(1), 64–73.
8. Sodani, R. P., & Sharma, K. (2011). Assessing patient satisfaction for investigating services at public hospitals to improve quality of services. National Journal of Community Medicine, 2(3), 55–62.