



RESEARCH ARTICLE

SERVICE QUALITY AND PATIENT SATISFACTION IN PUBLIC HEALTHCARE: A SERVPERF ANALYSIS OF OUTPATIENT SERVICES

Anna Abraham Pachayil¹, Ambili Madhu Thampi² and Safna Samad³

1. Associate Professor, Department of Economics, Maharaja's College, Ernakulam.
2. Associate Professor, Department of Economics, K.P.B Hinduja College of Commerce, Mumbai.
3. Post-graduate student, Department of Economics, Maharaja's College, Ernakulam.

Manuscript Info

Manuscript History

Received: 15 February 2026
Final Accepted: 18 March 2026
Published: April 2026

Key words: -

Service quality, RATER dimensions of SERVPERF, Outpatient department, Patient satisfaction.

Abstract

Kerala is a top-ranking state in India in terms of overall health performance and outcomes. It has a well-established public healthcare system compared to other states, and its focus on the quality of healthcare services is commendable. However, the health landscape of Kerala remains challenging as the health requirements of the people of Kerala are multifaceted. In this context, the patient satisfaction assumes great significance. Measuring patient satisfaction helps assess patients' perceptions of healthcare services. Moreover, it can serve as the parameter of policy efficacy in the regard. The present paper discusses service quality and patient satisfaction in public health care with an emphasis on outpatient services in a prominent government hospital in Kerala. The SERVPERF (Performance-only) framework is used here for the analysis. The five dimensions of tangibility, reliability, responsiveness, assurance, and empathy (RATER dimensions) under the model is employed. The assessment of level of service quality and the level of patient satisfaction on outpatient services in the general hospital, the impact of service quality dimensions on patient satisfaction and a discussion on the problems of the patients in the department in the light of patient satisfaction analysis. The results of the study indicates that the patients perceive the service quality as moderate even after the adoption of various patient friendly transformation measures in the hospitals. Stronger and strategic policy measures are required in the case of all the RATER dimensions to improve the overall patient satisfaction.

"© 2026 by the Author(s). Published by IJAR under CC BY 4.0. Unrestricted use allowed with credit to the author."

Introduction: -

Health is an economic good that is different from standard normal goods. The health sector often gets failed by market imperfections such as information asymmetry and uncertainty. A health system is a collective buildup of health care producers and consumers wherein the efficiency and effectiveness largely rely on the value and integrity of the interactions. And a healthy population is a critical determinant of economic development. Article 21 of the

Corresponding Author: -Ambili Madhu Thampi

Address: -Associate Professor, Department of Economics, K.P.B Hinduja College of Commerce, Mumbai.

constitution guarantees the right to life through which accessibility, affordability and adequateness of health care are to be ensured. Hence, public health is primarily a state subject in India. Government hospitals play an important role in delivering affordable healthcare services to economically disadvantaged populations.

Kerala is a top-ranking state in overall health performance and outcomes among the states in India. The impressive performance of the state in terms of health parameters such as life expectancy, gender ratio, infant and maternal mortality rates point to the comprehensiveness of the three-tier healthcare network that ensures accessibility to services. Now, our focus gets shifted to medical care, which is a subject of normative economics. The causal factors in health are many and provision of medical care is only one among them. The subject of medical care is adaptations to uncertainty in incidence of diseases and efficacy of treatment. A competitive medical care model can be seen as a system where the flow of services is offered and purchased at going prices, given the offers and purchase of others as if individual action has no influence and such that the total available service equals the amount others are willing to purchase with no imposed restrictions on supply and demand. But the uncertainty in the model makes the health and medical care market to deviate from the competitiveness and it makes the separation between allocative and distributional procedures impossible (Arrow, 1963). When the market fails to achieve an optimal state, society will recognize the gap to some extent and nonmarket social institutions will rise and attempt to bridge the gap, though it may not be completely successful. Government medical institutions are playing the role of social institutions though there is some reinforcement from usual profit concerns. The social adjustment towards optimality in medical care is hindered by the characteristics of the medical care market itself.

Kerala has a well-established public healthcare system compared with other Indian states. The DHS (Directorate of Health Services) has identified a total of 1,288 government health institutions across the state, of which 849 are Primary Health Centres, 226 are Community Health Centres, 48 are Taluk Hospitals, 18 are District Hospitals, and 18 are General Hospitals, in addition to the many specialized health care institutions. This physical infrastructure has facilitated an extended reach and high accessibility to public health care services across the rural and urban regions of the state. The state policy towards health care seems to address not only the accessibility but its focus on quality of the services is also commendable. The Ardrum Mission started during the 13th five-year plan period is a classic example of the initiatives of the state in the health sector. The mission aims at patient friendly quality care services and operational excellence at the outpatient wings of government hospitals via impact on cost, time and satisfaction carefully under process in two phases. There was a massive allocation of ₹2828.33 crore towards the medical and public health sector ₹2828.33 crore in the 2024–25 Kerala State Budget.

Despite the concerted efforts, the health landscape of Kerala is challenging. Kerala is witnessing the burden of morbidity and ageing issues along with a number of other reasons such as prevalence of non-communicable diseases, other infectious diseases like chikungunya, nipah etc., substance abuse, mental health issues and others. The health requirements of the people of Kerala are multifaceted and it is increasing day by day. In this juncture, funds and efficient service delivery are not the only earmarks of a perfect system, but the way in which patients in a hospital perceive the services too is important. Outpatient departments or OPDs are the entry points for patients to public hospitals. Medical colleges and district level government hospitals provide outpatient care for a larger number of patients every day. Hence, a patient-friendly transformation of the outpatient wings of the hospitals are prioritized under Ardrum mission. Measuring outpatient satisfaction thus becomes one of the benchmarks for assessing efficiency, accessibility and responsiveness of public hospitals. In order to evaluate the quality of healthcare services provided to patients, patient satisfaction has become an important outcome measure. Unlike traditional health care evaluation approaches that mainly focused on clinical outcomes and professional performance, health care evaluation frameworks have included patient satisfaction standards too in recent years. Measuring patient satisfaction indicates the satisfaction of the patients about the healthcare services. Moreover, it can serve as a true parameter of policy efficacy in this regard.

The present paper discusses service quality and patient satisfaction in public health care with an emphasis on outpatient services in a prominent government hospital in Kerala. The SERVPERF (Performance-only) framework is used here for the analysis. The five dimensions of tangibility, reliability, responsiveness, assurance, and empathy (RATER dimensions) under the model are employed. The perception-based approach helps to measure the service quality solely through the actual experiences of outpatients. This allows for a direct assessment of the variations in the overall satisfaction of the patients in a public healthcare institution without the conceptual complexity of measuring prior expectations. The attempt is expected to be significant for the policy makers and hospital administrators as this helps better service delivery and enhanced patient satisfaction. The objectives attempted in the

paper are the following. The assessment of level of service quality and the level of patient satisfaction on outpatient services in the general hospital, the impact of service quality dimensions on patient satisfaction and a discussion on the problems of the patients in the department in the light of patient satisfaction analysis. The discussion is based on the details collected from eighty sample units in a prominent government hospital in Kochi, Kerala.

Literature: -

Being patient satisfaction a key health care objective, dissatisfaction arises when healthcare services fail to meet patients' expectations and perceptions (Upreti et.al, 2025). Avedis Donabedian (1988) expanded the perspective of assessing healthcare quality primarily on professional standards and clinical outcomes by introducing the structure–process–outcome framework. In the model, patient satisfaction is treated as an important outcome indicator reflecting the effectiveness and responsiveness of healthcare delivery systems. The relationship between non-profit status of an institution and economic efficiency are shaped by a maximand for the decision maker with quantity and quality of services as the two elements of maximand. (Newhouse, 1970) From society's point of view, the best health institution is the one that caters to the needs of the maximum number. But, as we know, quality and quantity cannot be maximized without limit as public institutions also face budget constraints and deficits. Thus, maximization will be constrained. Hence, patient satisfaction must be seen and tried to be enhanced, given the frame of the constraints.

Arrow (1963) has discussed the uniqueness of the healthcare market from competitive market conditions and it is considered as a foundational work of modern health economics. The trust between patient and provider is highlighted by him as an important feature of healthcare which becomes central to patient satisfaction. This points to the significance of perception and evaluation of patients on care quality. Though Arrow had not used the term 'patient satisfaction', the core components in patient satisfaction studies within health economics and public health research can be traced from here. The literature reveals the significance of satisfaction of the seekers of the health services as an important aspect that is to be taken care of in the field of public health.

Framework: -

Services are different from goods and hence measurement of service quality under discussion is different from that of goods quality. Services are intangible, heterogenous and inseparable between production and consumption (Parasuraman and others, 1988). Service quality assessment under SERVPERF methodology is employed in the paper. The initial development is the SERVQUAL which is a scale developed on the basis of meaning and aims of a service wherein both expectations and perceptions are taken for quality measurement. Perception is perceived quality and perception is a form of attitude. Perceived quality is the overall judgement of the consumer regarding the overall excellence of an entity's performance. The quality judgement under SERVQUAL results from a comparison of expectations with the perceptions regarding the performance. It is the difference between humanistic and mechanistic quality. In the service quality literature, expectations are viewed as desires or wants of consumers, i.e., what they feel a service provider should offer rather than would offer which is highly subjective and difficult to be measured. SERVPERF helps a methodological simplification by concentrating on perception only for performance measures.

Results and Discussion: -

The gender composition of the samples is that a major share of the OP patients constitutes females. Transgender representation also is there in the analysis. A reasonable coverage of patients from all age groups happened in the selection of samples. The number of patients belonging to less than 20 years of age is less. The study gives an indication that people approach government hospitals irrespective of educational qualifications. It is interesting to note that thirty percent of the respondents possess graduation degree or higher qualification. People from different occupational backgrounds are visiting government hospitals for treatment. To understand the nature of patients, frequency of hospital visits is used as an indicator. Forty percent of the respondents are regular visitors to the hospital that can be an indication to the morbidity issues of the state. Another forty four percent are occasional visitors.

Service Quality: -

The mean scores of the service quality dimensions are presented below.

Table 1: Service Quality Dimensions and Mean Scores

Dimension	Mean score
Tangibility	3.37
Reliability	3.05
Responsiveness	2.93
Assurance	3.57
Empathy	3.29

Source: Primary Survey/Computed, 2026

Regarding the service quality and dimensions, the mean scores of tangibility, reliability, responsiveness, assurance and empathy are calculated as 3.37, 3.05, 2.93, 3.57 and 3.29 respectively. The present study takes into account tangibility in terms of physical facilities such as cleanliness, adequacy of basic amenities (such as seating capacity, drinking water), staff appearance and comfort of the waiting area. Reliability is defined as the timely availability of medicines, test reports along with dependability of services provided. Responsiveness is reflected in prompt attention to patients, reasonable waiting time for consultation and the provision of proper guidance to patients in need of assistance. Assurance, in this study, refers to the knowledge of the practitioners, the confidence they instill in patients and proper explanation of procedures and health conditions. Finally, empathy is considered as the behavioural competence of staff and doctors in terms of care, attention and a willingness to listen.

Assurance is the dimension that has the highest mean score indicating that patients have a relatively higher level of trust and confidence in the knowledge, competence, and behaviour of healthcare providers. The finding is in alignment with the existing literature, which says that professional competence and trust are critical determinants of perceived service quality in healthcare settings. But a mean score of 3.57 can be considered only as just above the average which is indicative of need for improvement. In the case of other dimensions such as tangibility, empathy and reliability, the service quality perception of the patients is moderate. The mean scores are indicative of rooms for efficiency enhancement. The physical facilities in the hospital are an inevitable part of the patient friendly transformation of the hospitals even though literature suggests that tangibility concerns usually stand secondary to interpersonal and functional aspects of service delivery. Empathy matters with personalised care for patients which again is crucial for patient satisfaction. The mean score of reliability suggests that the hospital demonstrates only an average level of consistency and dependability in service delivery. Timely service and availability of medicines constitutes yet another integral part of patient satisfaction. A disquieting figure is the mean score of the responsiveness dimension. The weaker response to promptness in patient care and willingness to assist patients resulted in a lower score. Overall, the results indicate that service quality in the hospital is at a moderate level. The analysis of service quality using the dimensions clearly says about the inefficacy of the initiatives towards patient friendly transformation of the outpatient departments. Even though the measures are believed to have made things better, the analysis suggests that much more is needed to be done.

Patient Satisfaction: -

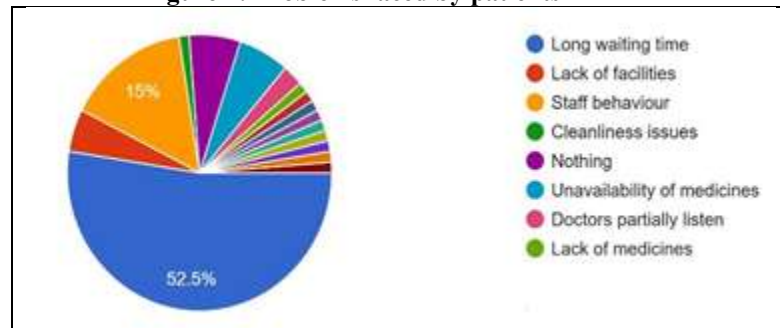
Patient satisfaction can be considered an outcome of service quality. In this study, patient satisfaction is assessed using key indicators such as overall satisfaction, willingness to revisit, and willingness to recommend the hospital. Mean scores are calculated for each of these indicators. The analysis reveals that the overall satisfaction level is 3.46, indicating a moderate level of satisfaction among respondents. The willingness to revisit the hospital, with a mean score of 3.45, suggests that a considerable proportion of patients are likely to return for future healthcare needs. Similarly, the willingness to recommend the hospital to others has a mean score of 3.29, reflecting a moderate level of patient loyalty.

Problems Faced by the Patients: -

Despite the patient-friendly transformation measures undertaken by the hospital, it is evident that much more needs to be done to enhance patient satisfaction. The overall satisfaction score of the hospital also reflects this concern. The mean scores for all dimensions are below 3.5 out of 5, clearly indicating deficiencies in these areas. An examination of the difficulties experienced by patients forms the basis of this part of the discussion

The following figure shows the cited problems in public health institutions connected with service quality.

Figure 1: Problems faced by patients



Source: Primary Survey, 2026

Operational inefficiencies in terms of five dimensions remain as a primary blockade in the hospitals for maximizing patient satisfaction. Operational efficiency happens when there is maximization of output (patient satisfaction) given the inputs (service quality and facilities) which will result in boosting up profitability and comparative advantage in terms of economic efficiency. Long waiting in the outpatient department is the foremost difficulty cited. Delays represent a substantial non-monetary cost in terms of 'time tax' paid by the patients which in turn increases the opportunity cost of the process. The finding is fundamentally in alignment with the lower mean score recorded for the promptness and speed of service. Though assurance is the dimension that got higher mean score, it is to be noted that the score is just 3.57 out of 5. The knowledge and professional competence of health practitioners in government hospitals are believed to be the best. But the overwhelming crowd in the outpatient departments might be stressing the practitioners from giving a perfect attention to the need of the patients. Extending hours of OP or increasing the OP counters or engaging the patients in such a way that they feel their time is not wasted could be some of the ways that can be adopted.

Interpersonal interactions including staff behaviour is also cited as an issue that amounts to dissatisfaction among patients. The comparatively low empathy dimension score suggests that the staff interaction frictions in the front end which lacks individual care and politeness may be outweighing the trust in medical competence of the doctors in government hospitals. This highlights a critical gap in the patient-centred care model where technical expertise is present, but the delivery of that care is perceived as less compassionate or respectful. Other issues found in the analysis are resource-based constraints such as unavailability of medicines and lack of physical facilities. When essential medicines are not available in the hospital pharmacy, patients are forced to buy them from private providers, leading to an increased out-of-pocket expenditure. People are approaching government health care institutions that can negate the affordability of public outpatient services. These combined issues explain why the overall satisfaction score is 3.40 that remains moderate. Patients appreciate the low cost and expert medical knowledge, yet their experience is diminished by the cumulative burden of long waits, interpersonal friction, and occasional resource gaps. Addressing these specific operational hurdles is essential for moving patient perceptions from mere "satisfaction" to genuine "loyalty".

Conclusion:-

The discussion brings out some of the critical determinants of efficiency in service delivery of public healthcare services which is beyond the conventional dimensions of service delivery. Time management is one important aspect among them. Sometimes, it is seen that the revisit to hospitals and recommendations regarding hospitals are done out of necessity or lack of alternatives rather than out of complete satisfaction. This behavioural pattern is also beyond the SERVPERF, indicating that external factors such as accessibility and affordability also influence patient decisions and satisfaction. On these grounds, there is the need to incorporate operational efficiency and behavioural factors into service quality assessment models for a more comprehensive understanding of patient satisfaction. Some of the suggestions that are proposed to improve service quality and patient satisfaction in the outpatient department are the following. Patient flow management and improved staff efficiency can help the situation. A structured token system or digital time allotment for patients helps to manage patient load effectively avoiding overcrowding. The hospital administration should conduct regular training programmes for staff to improve communication skills and patient handling, as staff behaviour was identified as a key concern. Responsiveness enhances patient experience

and efforts should be put in the direction. Prompt attention and assistance from the hospital side and follow ups from the patient side as well matters in this regard. A good feedback mechanism through digital mode will help easy regular assessment of patient satisfaction and identification of issues for improvement. In addition to the above, the improvement in infrastructure and basic facilities such as seating arrangements, cleanliness, the availability of medicines and essential equipment within the hospital will avoid inconvenience and additional costs for patients.

The discussion offers important indications for policy measures and hospital management towards patient satisfaction in healthcare institutions. The study indicates that the patients in the hospital perceives the service quality as moderate even after the adoption of various patient friendly transformation measures in the hospitals. Hence, we are not in a position to say that the patients have perceived the services favourably. Stronger and strategic policy measures are required in the case of all the RATER dimensions to improve the overall patient satisfaction. The present findings are even more important in the case of Kerala economy now as it records highest patient spending in government hospitals (NSS 80th round Survey, 2025). Heavy reliance on private hospitals leaving government hospitals with a smaller share is an important reason cited for this phenomenon. This suggests that the public health system in Kerala fails to keep people attracted to public health institutions and patient satisfaction assumes greater significance here. The state of Kerala, which is widely reputed as a 'state of health consciousness' and as 'India's health model' is undoubtedly facing an unpleasant reality that warrants immediate attention.

References: -

1. Abdullah Al Fraihi, & Abdul Latif. (2016). Evaluation of service quality and patient satisfaction in public hospitals, *Journal of Healthcare Management*.
2. Andaleeb, S. S. (2001). Service quality perceptions and patient satisfaction: A study of hospitals in a developing country. *Social Science & Medicine*, 52(9), 1359–1370.
3. Arrow, K. J. (1963). Uncertainty and the welfare economics of medical care. *American Economic Review*, 53(5), 941–973.
4. Babakus, G., & Mangold, W. G. (1992). Adapting the SERVQUAL scale to hospital services: An empirical investigation. *Health Services Research*, 26(6), 767–786.
5. Cronin, J. J., Jr., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, 56(3), 55–68.
6. Cronin, J. J., Jr., & Taylor, S. A. (1994). SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of Marketing*, 58(1), 125–131.
7. Dagger, T. S., Sweeney, J. C., & Johnson, L. W. (2007). A hierarchical model of health service quality: Scale development and investigation of an adoption model. *Journal of Service Research*, 10(2), 123–142.
8. Department of Health Services (DHS), Government of Kerala. (2024). Report on Government Health Institutions and Physical Infrastructure.
9. Donabedian, A. (1988). The quality of care: How can it be assessed? *Journal of the American Medical Association (JAMA)*, 260(12), 1743–1748.
11. Gupta, A., & Rokade, V. (2016). Patient satisfaction and service quality in public hospitals: A performance-based approach. *International Journal of Health Management*.
12. Kumar, R., et al. (2018). Determinants of patient satisfaction in public health facilities in India. *Indian Journal of Public Health*.
13. Mekoth, N., et al. (2012). Service quality, patient satisfaction and behavioural intentions: A study of public hospitals in India. *International Journal of Business and Social Science*.
14. Mohanty, S. (2024). Comparative analysis of service quality in public and private hospitals. *Journal of Health Economics and Management*.
15. Newhouse, J. P. (1970). Toward a Theory of Nonprofit Institutions: An Economic Model of a Hospital. *American Economic Review*, 60(1), 64–74.
16. 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.
17. The Times of India. (2026). State records higher patient spending in govt hospitals: NSS data shows costs well above national average.
18. Uprety, V., Paudel, B. K., Shrestha, M., Kharel, S., Neupane, S., Neupane, H., Sigdel, M., & Pandey, B. (2025). Assessing patient satisfaction by measuring service quality in outpatient service of a public hospital in Bagmati Province, Nepal. *Public Health Challenges*, 4(4), e70143. <https://doi.org/10.1002/puh2.70143>
19. 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.