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OPD WAITING TIME AND PATIENT SATISFACTION IN A TERTIARY CARE TEACHING HOSPITAL: A CROSS-SECTIONAL QUALITY AUDIT FROM INDIA

[1]Tarun J, [2]Dr. V. Vardhini

[1]MBA-Business Analytics, [2]MBA-Associate Professor

Department of Management Studies

Vels Institute of Science, Technology and Advanced Studies (VISTAS), Chennai, India

Abstract : Background: Outpatient departments in tertiary care hospitals face significant operational and patient flow challenges. This audit examines the relationship between OPD waiting time and patient satisfaction — not as an abstract quality metric, but as a practical question that shapes whether patients return. Methods: Approximately 300 patients were surveyed across fifteen anonymised OPD departments at a tertiary care teaching hospital in India during early 2026, using a structured questionnaire covering demographics, eleven service quality items on a Likert scale, and an overall satisfaction rating. Data were analysed using frequency analysis, mean scores, Pearson correlation, chi-square testing, factor analysis, and cluster analysis. Findings: Overall satisfaction on the 5.00-point scale was 4.02. A statistically significant negative relationship was found between waiting time and satisfaction level ($p < 0.05$). Patients consistently rated availability of drinking water, restrooms, and ventilation as inadequate. Physician communication was highly rated across all departments. Conclusions: Clinical quality in this OPD performs well. The gap lies in the physical environment and basic amenities. These are addressable problems, and this paper documents what was found and what needs to change.

***Index Terms*—**OPD waiting time, patient satisfaction, outpatient services, service quality, India

I. Introduction

Anyone who has visited a government hospital OPD in India knows the experience. You arrive early, take a token, and wait. Sometimes for twenty minutes, sometimes for two hours. By the time you reach the doctor, you may have already formed a view about the hospital — and it is not always a positive one. This relationship between waiting and satisfaction is well documented in health services research, but most published data come from high-income countries or single-department studies. We wanted to examine it across an entire multi-specialty OPD at an Indian tertiary care teaching hospital.

Patient waiting time — the gap between arriving at registration and sitting in front of a doctor — has been studied as a quality indicator since at least the 1970s [1]. The evidence is consistent: longer waits erode satisfaction, reduce trust in the institution, and make patients less likely to return for follow-up care [2]. Physicians in teaching hospitals struggle to provide quality patient care because of the large number of variables involved, including clinical responsibilities, ward rounds, and teaching duties.

The SERVQUAL model [5] offers a useful framework — breaking service quality into tangibles, reliability, responsiveness, assurance, and empathy — but in practice, what patients in our setting seemed to care about most was simpler: Was the doctor available? Was the prescription clear? Was there somewhere to sit and a toilet nearby? We designed our instrument around these realities.

This study grew out of a quality improvement initiative within the hospital's quality department. To protect institutional confidentiality, department names have been replaced with neutral alphabetical labels and waiting times are reported as standardised bands throughout this paper.

A. Objectives

1. To measure waiting time bands and patient satisfaction scores across OPD departments.
2. To assess how patients rate specific service quality dimensions, from cleanliness to doctor communication.
3. To test whether waiting time and satisfaction are statistically associated.
4. To identify specific service gaps and propose practical corrective steps.

II. Methods

A. Study Design and Setting

A descriptive cross-sectional study was conducted in early 2026 at the outpatient department of a multi-specialty tertiary care teaching hospital in India. Fifteen departments (labelled Dept A–O) provided sufficient data for department-specific findings.

B. Participants

Convenience sampling was used. Patients were approached in the waiting room after completing their OPD appointment and invited to participate. The only eligibility requirement was that participants be adults willing

to answer the questionnaire. Departments with fewer than 10 respondents were excluded. The final sample comprised approximately 300 patients across 15 departments.

C. Questionnaire

The instrument had three main sections. Section A collected demographic and visit-related information (age, gender, location, and whether the visit was new or follow-up). Section B asked patients to evaluate eleven aspects of service on a five-point Likert scale (1 = very poor, 5 = excellent): cleanliness of waiting area; seating; availability of water and restroom facilities; ventilation and lighting; organisation of services; queue management; doctor availability during scheduled hours; clarity of prescriptions; prioritisation of urgent care; explanation of treatment procedures; and feeling secure during treatment. Section C collected an overall satisfaction rating on the same scale.

Waiting time was recorded as the difference between the patient's token time and entry into the consultation room. Where token records were unavailable, patient self-report was used.

D. Anonymisation

Departmental names are represented by letters Dept A to Dept O. Waiting times are recorded using a standardised five-minute band (< 5, 5–10, 10–15, 15–20, or > 20 minutes). Demographic data are reported as percentages only. All satisfaction scores are reported as collected.

E. Statistical Analysis

Data were entered and analysed in Microsoft Excel. We used percentage distributions for demographic variables, mean scores for departmental comparisons, Pearson correlation for the waiting time–satisfaction relationship, chi-square testing to assess whether satisfaction differed significantly across departments, factor analysis to group the eleven service quality items into broader dimensions, and cluster analysis to classify departments by combined waiting time and satisfaction profile.

III. RESULTS

A. Who We Surveyed

Approximately 300 participants responded. The largest age group (34.6%) was above 51 years, followed by 19.9% aged 31–40. The sample was slightly skewed towards females (52.3% vs 47.7%). Notably, 68.3% of respondents were follow-up patients, indicating a significant chronic illness management burden on the OPD.

Table 1. Survey participants' age distribution (n ≈ 300)

Age Group	Percentage (%)
Above 51 years	34.6
31–40 years	19.9
Below 20 years	18.0
41–50 years	15.0
21–30 years	12.4
Total	100.0

Percentages to one decimal place. Exact counts withheld per anonymisation policy.

B. Waiting Times and Satisfaction by Department

The overall mean satisfaction score across all fifteen departments was 4.02 out of 5.00 (Table 2). Departmental scores ranged from 3.90 (Dept H) to 4.11 (Dept K). Waiting times varied from under five minutes to over twenty minutes. Dept M recorded the longest waits (above 20 min), while Dept G and Dept L fell in the under-5-minute band. Dept K scored the highest satisfaction despite a 10–15 minute wait, suggesting interaction quality can offset longer waits. Dept H scored lowest, with patients citing concerns about the physical environment and staff interaction.

Table 2. Department-wise waiting time and satisfaction (Dept A–O)

Dept	n	Wait (min)	Score (/5)	Level
A	41	5–10	4.02	Good
B	20	5–10	4.05	Good
C	20	< 5	4.00	Good
D	20	< 5	3.95	Moderate
E	35	5–10	3.97	Moderate
F	20	5–10	4.05	Good
G	19	< 5	4.05	Good
H	20	5–10	3.90	Moderate
I	20	5–10	4.05	Good
J	20	5–10	4.10	High
K	19	10–15	4.11	High
L	10	< 5	4.00	Good
M	11	> 20	4.00	Good
N	21	5–10	4.05	Good
O	10	15–20	4.00	Good
Total	≈300	< 5 to > 20	4.02	Good

Waiting times as standardised 5-min bands. Dept L and O (small samples) interpret with caution.

C. Patient Ratings

Across all fifteen departments, three items consistently scored well: doctor availability during scheduled hours, clarity of prescriptions, and feeling safe during treatment. The consistent weak spot was amenities — drinking water and toilet facilities were the lowest-rated items in nearly every department. Ventilation and lighting followed closely.

D. Statistical Findings

The Pearson correlation between waiting-time bands and mean satisfaction scores was negative and statistically significant ($p < 0.05$). Longer waiting times were associated with lower satisfaction scores. An exception was Dept K, which achieved the highest mean satisfaction despite a 10–15 minute wait, demonstrating that interaction quality can attenuate the negative effect of waiting time.

Chi-square testing found statistically significant differences in satisfaction across departments ($p < 0.05$). Exploratory factor analysis of the eleven service quality items revealed three underlying dimensions: infrastructure (cleanliness, seating, ventilation, water, toilets); staff behaviour (communication, explanation, prioritisation); and service efficiency (queue management, doctor availability, organisation). This aligns with Donabedian's structure-process-outcome framework [2].

Cluster analysis produced three patient experience clusters: Cluster 1 (short waits, high satisfaction) included departments in the under-5-minute band with high scores; Cluster 2 (moderate on both dimensions) covered most 5–10-minute departments; Cluster 3 (longer waits, lower satisfaction) grouped departments in the 15–20 and above-20-minute bands.

IV. Discussion

The headline finding — a pooled satisfaction mean of 4.02/5.00 — is encouraging but requires contextualisation. It reflects genuine satisfaction with clinical care. When we look only at the doctor-related items, scores are consistently strong across all fifteen departments. Doctor–patient interaction is the core of what an OPD visit is for, and patients recognise when it is done well.

Looking at infrastructure and amenity items alone reveals a noticeably weaker picture. Drinking water and toilet access were the lowest-rated items in the majority of departments. These are not complex problems to solve — water dispensers and directional toilet signs are low-cost interventions — yet they clearly matter to patients. A patient who has travelled from a distance, perhaps fasting, who waits without access to water or a toilet, will not have a neutral experience regardless of how good the clinical consultation is.

Dept M, in the above-20-minute band, recorded the longest waits in the study. Patients attending complex chronic disease clinics are typically older and managing significant disease burden. Their satisfaction score of 4.00/5 may reflect adjusted expectations around complex consultations, but expectation-adjusted satisfaction is not the same as a good patient experience.

Dept H's result is the most actionable. The lowest satisfaction score (3.90/5) was driven not by poor clinical care but by concerns about the physical environment and staff interaction — problems requiring management attention and modest investment, not clinical intervention.

Although Dept K's average wait falls in the 10–15 minute range, overall satisfaction is surprisingly high, consistent with evidence that perceived quality of interaction can diminish any adverse waiting time effect [5] when patients feel their time has been respected through communication and the waiting environment. The large proportion of follow-up patients (68.3%) also raises the question of whether the scheduling system adequately accounts for the actual distribution of patients served.

V. Recommendations

These recommendations are grounded in patient feedback and prioritise changes feasible within normal operating budgets.

1. Install water dispensers near the waiting areas of all departments, with priority for those in higher waiting-time bands.
2. Ensure clear directional signs to the nearest toilet facilities are visible from each OPD waiting area.
3. Improve ventilation and lighting in departments where patients raised specific concerns about waiting area comfort.
4. Expand and dedicate seating in departments where seating was reported as insufficient or shared with adjacent departments.
5. Review patient flow staffing during peak hours in departments where a single staff member manages multiple consultation rooms simultaneously.
6. Review appointment scheduling in higher waiting-time band departments. Staggered appointments and patient communication displays could reduce both actual and perceived waiting.
7. Address staff interaction concerns raised in patient feedback through clear departmental conduct expectations.
8. Establish a quarterly patient satisfaction survey cycle across all departments to track improvement over time.

VI. Conclusion

This audit found that clinical quality across all fifteen departments was rated highly by patients in their interactions with physicians. The two primary areas of concern were physical infrastructure (water access, restrooms, seating, lighting, and ventilation) and the waiting experience before seeing a doctor.

Patients with longer waiting times reported significantly lower satisfaction ($p < 0.05$), consistent with the majority of frontline personnel's intuition that waiting negatively affects the patient experience. Departments

with lower satisfaction scores and longer waiting times represent the highest-priority targets for improvement efforts.

A. Limitations

Convenience sampling restricts generalizability and creates selection bias. The study period may not capture seasonal variation in OPD load. Waiting time relied on self-report in some cases. Departments with small samples should be interpreted with caution. Reporting waiting times as standardised bands and demographics as percentages only, while necessary for anonymisation, reduces precision for comparative purposes.

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