Original Article

Patient Satisfaction in the Outpatient Departments of Public Sector Tertiary Care Hospitals in Rawalpindi: A Cross-Sectional Study

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Abstract

Background: Patient satisfaction is a key measure of healthcare quality, particularly in outpatient departments (OPDs), which serve as the first point of contact for most patients. Identifying factors influencing satisfaction can help improve public hospital services in Pakistan.

Objectives: To assess patient satisfaction levels in the OPDs of two major public tertiary care hospitals in Rawalpindi—Holy Family Hospital and Benazir Bhutto Hospital—and to identify demographic and service-related factors affecting satisfaction.

Materials and Methods: A cross-sectional study was conducted from March to June 2025 involving 322 patients aged ≥18 years. Data were collected using the validated Patient Satisfaction Questionnaire (PSQ-18), covering seven domains: general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctors, and accessibility. Associations were analyzed using Chi-square and Mann-Whitney U tests, with $p < 0.05$ considered significant.

Results: Overall, 54% of participants expressed high general satisfaction, and 73% were satisfied with the doctors' interpersonal manner. Lower satisfaction was reported in technical quality (41%) and time spent with the doctor (44%). Significant associations were observed between age and accessibility ($p = 0.002$), gender ($p = 0.009$), and marital status with technical quality ($p = 0.009$). Females and rural patients reported higher satisfaction. Patients at Benazir Bhutto Hospital experienced longer waiting times ($p = 0.039$).

Conclusion: Patient satisfaction in Rawalpindi's tertiary hospitals is multidimensional, with strong interpersonal communication but deficiencies in technical quality and accessibility. Addressing these gaps and regularly monitoring satisfaction can enhance patient-centered care in public healthcare settings.

Keywords: Patient satisfaction, outpatient department, public sector hospitals, PSQ-18

Introduction

Patient satisfaction with breast care is defined by Wolters Kluwer as "the measure of how happy a patient is with their healthcare". It is widely recognized as a crucial indicator of healthcare quality and a key metric for evaluating the performance of healthcare organizations. Evaluating patient satisfaction provides insight into hospital management and helps improve health outcomes.

Outpatient departments serve as the primary point of contact for most patients, and their experiences significantly shape perceptions of healthcare quality. Factors influencing satisfaction include medical equipment quality, staff behavior, information provided, infrastructure, and accessibility.[2]

Globally, satisfaction levels vary due to differences in healthcare systems and resources. In Malaysia, 73.5% of patients reported satisfaction with public hospitals.[3] A review including studies from the United States of America (USA), the United Kingdom (UK), New Zealand, Ireland, and the Netherlands, concluded that the majority of patients are satisfied with physician assistant-led care.[4] In China, patients expressed high satisfaction with doctors and nurses, but lower satisfaction with hospital hygiene and long waiting times.[5]

Similarly, healthcare quality perceptions across South Asian countries vary, with inequality in access to health care being the dire.[6] In South India, studies indicate that 97.2% of patients are highly satisfied with the healthcare services provided in tertiary care hospitals.[7] These comparisons highlight the need for evaluating and improving patient satisfaction in Pakistan's public sector hospitals to meet global healthcare standards.

In Pakistan, determinants of satisfaction include equipment quality, infrastructure, and staff responsiveness.[2] Another study highlighted that laboratory and pharmacy services positively influence patient satisfaction.[8] In Rawalpindi, a study at the Combined Military Hospital found high satisfaction with doctors but dissatisfaction with nursing staff behavior, 9, emphasizing the role of interpersonal interactions. Despite the high patient load in outpatient departments of public sector hospitals in Pakistan, limited OPD-specific data are available regarding patient satisfaction and its determinants, particularly in Rawalpindi.

This study aims to evaluate patient satisfaction levels in the outpatient departments of public sector tertiary care hospitals in Rawalpindi and identify socio-demographic and service-related factors influencing satisfaction, to inform strategies for improving healthcare quality in public institutions.

Materials and Methods

This cross-sectional study was conducted from March 2025 to June 2025 in Allied hospitals of Rawalpindi Medical University, including Holy Family Hospital and Benazir Bhutto Hospital. The population included patients who received treatment in the Outpatient Department of these hospitals. A sample size of 290 was calculated

using OpenEpi, based on a 74.78% prevalence[10] (patients being highly satisfied), 95% confidence interval, a 5% margin of error, and an assumed infinite population size. Adding 10% buffer sample increased the estimate to 319. Participants were selected through convenience non-probability sampling. Patients aged 18 years or older receiving treatment at any of the allied hospitals of RMU were included. Those with cognitive or hearing impairments, and patients discharged against medical advice or providing incomplete data, were excluded.

Data were collected through face-to-face interviews using a Patient Satisfaction Questionnaire (PSQ-18), which is available for free in the public domain.[11] The PSQ-18 is a previously validated instrument developed by RAND Health and has been widely used across different healthcare settings. In the parent study conducted in Nepal using PSQ-18, the questionnaire demonstrated good internal consistency with a reported Cronbach's alpha of 0.79, which is considered acceptable. (10) To maintain consistency with the validated methodology of the parent study, internal reliability analysis was not recalculated for the present study. Interviews were conducted in the Urdu language to ensure that patients could easily understand and answer the questions. The team members were not involved in the delivery of care to reduce interviewer bias. The questionnaire was back-translated at the time of data entry.

Ethical approval was obtained from the Institutional Review Board of Rawalpindi Medical University. Written informed consent was obtained from all participants before data collection. Privacy and confidentiality of participants were duly maintained.

The questionnaire consisted of 18 items probing seven dimensions of patient satisfaction: General Satisfaction, Technical Quality, Interpersonal Manner, Communication, Financial Aspects, Time Spent with Doctor, and Accessibility and Convenience. Each question was rated on a 5-point Likert Scale ranging from "Strongly Disagree" to "Strongly Agree". Socio-demographic information of the participants, including age, gender, marital status, educational status, referral status, frequency of hospital visits, and the hospital visited, was collected to explore associations with satisfaction levels.

Data were analyzed using IBM SPSS version 27. Socio-demographic variables were described in frequencies and percentages. The mean and standard deviation were calculated for each PSQ-18 item. Participants were categorized as satisfied, neutral, or dissatisfied based on the guidelines of PSQ-18 [11]. For items 1, 2, 3, 6, 8, 10, 11, 13, 16, and 17, responses of "Strongly Disagree" or "Disagree" indicated satisfaction. Each item was scored from 1 (strongly dissatisfied) to 5 (strongly satisfied), with higher scores representing greater satisfaction. Domain-specific mean scores were computed as follows: General Satisfaction (items 3, 17), Technical Quality (2, 4, 6, 14), Interpersonal Manner (10, 11), Communication (1, 13), Financial Aspects (5, 7, 9), Time Spent with Doctor (12, 15), and Accessibility and Convenience (8, 16, 18). Each domain score was categorized into satisfied, neutral, and dissatisfied

groups. Statistical tests were applied to identify associations between socio-demographic variables and satisfaction levels. A p-value of less than 0.05 was considered statistically significant. The results were summarized and presented in the form of tables, charts, and graphs.

Results

The socio-demographic details of 322 participants are presented in Table 1. Nearly half of the participants (47.8%) were aged 12-34 years, 42.5% were 35-56 years, and 9.6% were 57-78 years. More than half of the participants were female. The majority of the patients were married, and most participants resided in urban areas. Regarding education, 23.0% had completed secondary school, 12.4% had finished primary school, and 9.9% had no formal education. 5.0% had finished postgraduate studies, while higher secondary and graduate-level education were equally prevalent (24.8% each).

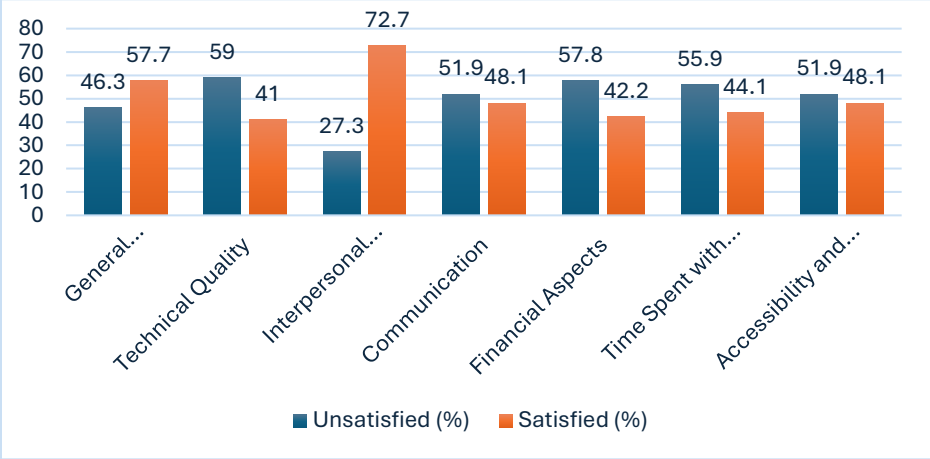
Table 1 *Socio-demographic Details of Study Participants (N=322)*

Socio-demographic Variable	Category	Frequency (n)	Percentage (%)
Age (years)	12-34	154	47.8
	35-56	137	42.5
	57-78	31	9.6
Gender	Male	148	46.0
	Female	174	54.0
Marital Status	Single	83	25.8
	Married	216	67.1
	Divorced	5	1.6
	Widowed	18	5.6
Residence	Urban	240	74.5
	Rural	82	25.5
Education level	No formal Education	32	9.9
	Primary (up to grade 5)	40	12.4
	Secondary (up to grade 10)	74	23.0

Higher Secondary (up to grade 12)	80	24.8
Graduate (Bachelor's Degree)	80	24.8

Figure 1 depicts that in the domain of general satisfaction, more than half of the participants reported that the medical care they have been receiving is just about perfect. Regarding the items of the technical quality domain, 41% of participants reported that their doctors were careful to check everything when treating and examining them. In an interpersonal manner, more than half of the participants responded that their doctor behaved with them in a very friendly and courteous manner. In the communication domain, about half of the patients responded that the doctors were good at explaining the reason for medical tests. About 42% of patients disagreed that they had to pay for more of their medical care than they could afford. In the domain of time spent with doctors, about half of the patients said that their doctors usually spent plenty of time with them. In terms of accessibility and convenience, half of the patients agreed that they were able to get medical care whenever they needed it.

Figure 1 *depicts the percentage of satisfied and unsatisfied patients across seven domains of PSQ-18.*



A significant association was also observed between occupation and awareness, as shown in Table 4. Retired participants demonstrated the highest level of awareness regarding nipple changes (33.3% strongly agreed, $p<0.001$), whereas students reported the lowest recognition (3.7%). Retired individuals were also more likely to identify nipple pulling, breast pain, puckering/dimpling, and shape changes as warning signs compared to employed participants and students. In contrast, students were more likely to report discharge or bleeding

from the nipple and breast lumps as cancer warning signs. Table 2 summarizes the satisfaction level of the participants with each item of PSQ-18. The mean score for each item was calculated in a manner that the higher the score more the satisfaction level for all the items in the PSQ-18.

Table 2: *Satisfaction of Patients segregated by each item of the seven domains of the Patient Satisfaction Questionnaire (PSQ-18)*

Questions	**No** **n (%)**	**Uncertain** **n (%)**	**Yes** **n (%)**
Doctors are good about explaining the reason for medical tests	39 (12.1)	17 (5.3)	266 (82.6)
I think my doctor's office has everything required to provide complete medical care	40 (12.4)	43 (13.4)	239 (74.2)
The medical care I have been receiving is just about perfect	34 (10.6)	44 (13.7)	244 (75.7)
Sometimes doctors make me wonder if their diagnosis is correct	198 (61.5)	30 (9.3)	94 (29.2)
I feel confident that I can get the medical care I need without getting a setback financially	59 (18.3)	25 (7.8)	238 (73.9)
When I go for medical care, they are careful about everything while treating and examining me	33 (10.2)	29 (9.0)	260 (80.8)
I have to pay more for my medical care than I can afford	234 (72.7)	21 (6.5)	77 (20.8)
I have easy access to the medical specialist I need	67 (20.8)	54 (16.8)	201 (62.4)
Where I get medical care, people have to wait too long for emergency treatment	131 (40.7)	45 (14.0)	146 (45.4)
Doctors act too businesslike and impersonal toward	222 (68.9)	39 (12.1)	61 (18.9)
My doctors treat me in a very friendly and courteous manner	52 (16.1)	36 (11.2)	234 (72.6)
Those who provide my medical care sometimes hurry too much when they treat me	161 (50.0)	39 (12.1)	122 (37.9)
Doctors usually spend plenty of time with me	113 (35.1)	56 (17.4)	153 (47.5)
I find it hard to get an appointment for medical care right away	132 (41.0)	34 (10.6)	156 (48.4)

I am dissatisfied with some things about the medical care I receive	180 (55.9)	36 (11.2)	106 (32.9)
I can get medical care whenever I need it	47 (14.6)	36 (11.2)	239 (74.2)
The office hours when I get medical care are convenient for me	80 (24.8)	40 (12.4)	202 (62.8)
I think the fees for medical care are too high	213 (66.1)	30 (9.3)	79 (24.5)

Note. No = Strongly Disagree + Disagree; Yes = Agree + Strongly Agree

Table 3 summarizes that age was significantly associated with accessibility and convenience (χ^2 = 12.39, df = 2, p = 0.002), with older patients aged 57-78 years reporting higher levels of satisfaction than younger groups.

Gender differences were observed in general satisfaction (χ^2 = 4.55, df = 1, p = 0.033) and interpersonal manner (χ^2 = 6.87, df = 1, p = 0.009), with females reporting more positive interpersonal experiences and higher levels of overall satisfaction. Satisfaction with financial aspects showed a borderline association with gender (p = 0.054).

Significant associations were found between educational status and both time spent with the doctor (χ^2 = 11.91, df = 5, p = 0.036) and accessibility and convenience (χ^2 = 15.45, df = 5, p = 0.009). While patients with higher secondary and graduate education expressed relatively lower satisfaction with accessibility and convenience, postgraduate patients expressed greater satisfaction with the time spent with the doctor.

Residence was significantly associated with general satisfaction (χ^2 = 7.88, df = 1, p = 0.005), interpersonal manner (χ^2 = 5.83, df= 1, p = 0.016), and communication (χ^2 = 5.88, df = 1, p = 0.015). Rural respondents reported higher satisfaction levels across these domains compared with urban patients.

Marital status was significantly associated with technical quality (χ^2 = 11.57, df = 3, p = 0.009), communication (χ^2 = 9.96, df = 3, p = 0.019), and time spent with doctor (χ^2 = 12.79, df = 3, p = 0.005). Patients who were married or widowed reported feeling more satisfied than those who were single.

Table 3 *Association between independent variables and seven domains of patient satisfaction using the Chi-square test*

Satisfaction Domain	**Socio-demographic Variable**	**χ^2 (df)**	**p-value**
General Satisfaction	Gender	4.55 (1)	0.033
	Residence	7.88 (1)	0.005
Technical Quality	Marital Status	11.57 (3)	0.009

Interpersonal Manner	Gender	6.87 (1)	0.009
	Residence	5.83 (1)	0.016
Communication	Marital Status	9.96 (3)	0.019
	Residence	5.88 (1)	0.015
Financial Aspects	Gender	3.71 (1)	0.054
Time Spent with the Doctor	Education	11.91 (5)	0.036
	Marital Status	12.79 (3)	0.005
Accessibility and Convenience	Age	12.39 (2)	0.002
	Education	15.45 (5)	0.009

Note. χ^2 = Chi-square test statistic; df = degrees of freedom

The distribution of waiting time data was assessed for normality and determined to be non-normal. Thus, waiting times at two hospitals were compared using the non-parametric Mann-Whitney U test. The analysis indicated that the waiting times were not distributed uniformly across the hospitals (U = 10011.5, Z = -2.07, p = 0.039). Patients attending Benazir Bhutto Hospital reported longer waiting times compared to those at Holy Family Hospital.

Discussion

Our study assessed patient satisfaction across several domains of care in two tertiary care public hospitals in Rawalpindi. General satisfaction (54%) and interpersonal manner (73%) were rated highest, while time spent with doctors (44%) and technical quality (41%) received comparatively lower ratings, highlighting areas needing improvement.

The relatively higher general satisfaction compared to Nepal (39%)[12] may reflect better institutional capacity or service access, though still lower than developed settings reporting >70% satisfaction.[13] This gap likely reflects disparities in infrastructure, workforce, and health system responsiveness between low- and high-income countries.

Satisfaction with interpersonal manner (73%) was a relative strength in our study, aligning with evidence that courteous doctor behavior strongly influences positive experiences.[14,15] Although slightly lower than the 92% reported in a similar Nepali study[12], suggesting that interpersonal skills remain an important facilitator of satisfaction even within resource-constrained settings. However, lower ratings for technical quality (41%) echo South Asian evidence of concerns about diagnostic thoroughness[16,17], suggesting a

gap between communication and clinical competence.

Our results align with a study at Sheikh Zayed Hospital, Lahore, which reported that approximately 68% of patients expressed satisfaction with doctor behavior, although prolonged waiting times were noted.[18] Another study at a tertiary care hospital in Karachi found that around half of OPD patients rated services as satisfactory.[19] Furthermore, PSQ-18 evaluated in the teaching hospital of Peshawar showed that more than half of the patients had satisfaction above the mean score.[20] These findings suggest that while interpersonal care is often perceived positively by patients in Pakistani OPDs, systemic factors such as workflow and resource constraints continue to influence overall satisfaction.

Female patients reported higher satisfaction in general satisfaction and interpersonal manner, consistent with other studies. [21,22,] though contrary to studies in Malaysia and Nigeria, where males reported higher satisfaction.[23,24] This difference may be attributable to cultural dynamics and the presence of more female providers in our study hospitals. Similarly, rural respondents consistently reported greater satisfaction than urban participants, possibly reflecting lower expectations of care or stronger appreciation for tertiary-level services.[12]

Age emerged as a significant determinant, with older patients reporting greater satisfaction in accessibility and convenience, consistent with global trends of higher satisfaction among older populations.[25] Education also influenced satisfaction: postgraduate patients were more satisfied with time spent with doctors, while those with higher secondary and graduate education reported lower accessibility satisfaction, reflecting higher expectations as seen in studies from Iran and Qatar, where better-educated patients are sometimes less satisfied. [26]

Marital status was associated with satisfaction in technical quality, communication, and time spent with the doctor. Married and widowed patients reported higher satisfaction, a pattern also observed in other South Asian studies.[12,27] Longer waiting times at Benazir Bhutto Hospital compared to Holy Family Hospital mirrored prior findings identifying delays as major sources of dissatisfaction in public hospitals.[28]

Although the prevalence of satisfaction does not directly prescribe interventions, it identifies priority domains requiring targeted quality improvement. Low satisfaction with technical quality and waiting time highlights system-level inefficiencies that can be addressed through staff redistribution, appointment system, and diagnostic workflow optimization.

The findings of this study have important implications for OPD service delivery in public sector hospitals. Lower satisfaction with technical quality and time spent with doctors reflects the impact of high patient load, inadequate staffing, and lack of structured appointment systems. Incorporation of triage desks, appointment-based scheduling, redistribution of workload, and periodic staff training in OPD management can significantly improve patient flow and perceived quality of care. Patient satisfaction indicators should be integrated into hospital performance evaluation frameworks at the provincial health department level.

The study's strengths include its focus on the OPD setting, use of a validated instrument (PSQ-18), and a sizeable sample providing insights into multiple satisfaction domains. However, several limitations warrant consideration. The use of convenience sampling may limit generalizability, and the cross-sectional design precludes causal inferences. Disease severity, provider workload, and specific appointment schedules were not assessed, which may influence satisfaction responses.

The authors declared no conflict of interest, and the study was fully self-funded.

Conclusion

The study highlights that patient satisfaction in tertiary care hospitals is multidimensional, with varying levels across domains. Enhancing technical quality, reducing waiting times, and improving accessibility are key to strengthening patient-centered care. Tailored strategies for different demographic groups and regular monitoring with patient feedback should be integrated into quality improvement efforts to advance healthcare delivery in resource-limited settings.

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