Assessment of Patient Satisfaction in Outpatient Department of PHCs in a Surendranagar District: A Cross-Sectional Study

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Abstract:

Introduction: The Bhore Committee (1946) proposed the Primary Health Centre (PHC) as the fundamental unit of the public health system, providing comprehensive care to rural populations, focusing on preventive and promotive aspects. PHC services should be comprehensive, accessible, acceptable, community-driven, and affordable. Patient satisfaction reflects their experience and attitude toward the quality of services provided. **Objective:** To assess the level of patient satisfaction with various quality-related parameters of outpatient department (OPD) at PHCs and to identify factors influencing satisfaction. **Methods:** A cross-sectional survey was conducted from March to August 2023 among adult patients (aged 18 and above) attending the OPD of selected PHCs in Surendranagar District, Gujarat. Twenty PHCs were selected through simple random sampling (2 from each of the 10 talukas), and 10 patients per PHC were enrolled via convenience sampling. Patients with emergency conditions, chronic illnesses, or serious health issues were excluded. Data were collected using a pre-tested, semi-structured questionnaire, and analysed using Microsoft Excel and SPSS version 26. **Results:** Overall, 81% (162) of patients were satisfied with their PHC visit. Key issues reported included unavailability of doctors (68%, 22), essential medicines (74%, 20), and drinking water (89%, 9). About 16.5% (33) faced difficulty reaching the PHC. Suggestions included ensuring drug availability (47.5%, 95), posting specialist doctors (30.5%, 61), and providing ambulance services (23.5%, 47). **Conclusion:** The study indicates high patient satisfaction with PHC services but highlights gaps in transportation, availability of doctors and medicines, and access to drinking water and ambulance services.

Keywords: Outpatient Department; Patient Satisfaction; Primary Health Centre; Services

Introduction:

The concept of the Primary Health Centre (PHC) was introduced by the Bhore Committee (1946) as a basic health unit to provide integrated healthcare, focusing on rural populations and emphasising preventive and promotive aspects.[1] PHC services should be comprehensive, accessible, acceptable, community-driven, and economically viable.[2] Patients possess certain anticipations regarding the healthcare delivery they seek when they present themselves at healthcare facilities.[3]

Quick Response Code	Access this article online	How to cite this article :
	Website : www.healthlinejournal.org	Kadri SAS, Nimavat JH, Sochaliya KM, Padhiyar PR, Jasani PK, Vasava PJ. Assessment of Patient Satisfaction in Outpatient Department of PHCs in a Surendranagar District: A Cross-Sectional Study. Healthline. 2025;16(3): 221-230
	DOI : 10.51957/Healthline_734_2025	

Received : 22-05-2025 **Accepted** : 07-08-2025 **Published :** 30-09-2025

Patient satisfaction is defined as the attitude that reflects patients' preferences or aversions toward the services rendered, following their experiences with healthcare provisions.[4] Patients actively consume healthcare services, making their feedback essential for improving service quality. Patient satisfaction depends on factors like clinical service quality, facility cleanliness, access to clean water and medications, and staff behaviour.[5]

The PHC serves as the first contact between doctors and community in rural area.[6,7] Outpatient satisfaction, which reflects both the perceived quality and efficiency of services, has increasingly become a focal point for evaluating healthcare delivery and informing government strategies in resource-limited settings.[8] This study aimed to assess patient satisfaction with different quality-related aspects of outpatient services at Primary Health Centres (PHCs) and to analyse the factors influencing it.

Methods:

This cross-sectional study was conducted among adult patients (aged 18 years and above) visiting the Outpatient Department (OPD) of Primary Health Centres (PHCs) in Surendranagar District, Gujarat. The district has 48 PHCs distributed across 10 talukas (administrative divisions). To obtain a representative sample, 2 PHCs from each taluka were selected through simple random sampling. From each of the 20 selected PHCs, 10 patients were enrolled using a convenience sampling method based on the first-come, first-selection technique, resulting in a total sample size of 200 patients. Patients visiting for emergency or presenting with serious conditions or chronic illnesses were excluded from the study.

Data were collected using a pre-designed, pre-tested semi-structured questionnaire. The tool was translated into the local vernacular (Gujarati) by a language expert. Its validity was assessed through the Content Validity Index (CVI = 0.7), and pilot testing was conducted on 20 patients across two PHCs. The data collected during pilot testing were solely used for refining the tool and were not included in the final analysis. Informed consent was obtained from all participants prior to the interview. Data collection was conducted during different time slotsmorning hours at some PHCs and afternoon or evening hours at others.

The study also included a qualitative component in which patients were asked to provide suggestions for improving OPD services. These responses were analysed and presented both as percentages and as verbatim quotes, grouped under thematic categories.

Data were analysed using Microsoft Excel 2021 and SPSS version 26. Ethical approval was obtained from the Institutional Ethics Committee prior to the commencement of the study.

Results:

In this study, most of the patients (27.5%) belonged to the 30-39 years of age group, and 70% of the patients were male. The majority of participant had education up to secondary level (31.5%) and 30% were illiterate. About one-third of the patients (32.5%) were labourers. Additionally, 71.5% resided in the same village where the PHC was located, and approximately three-fourths (75.5%) had visited the PHC two or more times. The primary reason for most visits was routine check-ups. (Table 1)

Various levels of points of care were used to identify the burden of problems during the visit of patient. The main difficulties were reported in the doctors consultation room (19%), in reaching the PHC (16.5%), and at the pharmacy window (13.5%). (Figure 1)

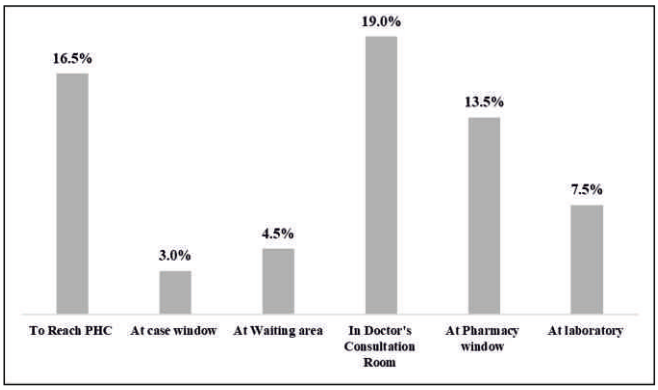
In detail, reasons for these difficulties felt by patients at each level were assessed. In the doctors consultation room, the main issues were the unavailability of the doctor (68%), the doctor was busy with other work (40%), and 26% of patients reported that the doctor had not given them enough time. The second major difficulty was in reaching the PHC, main problems were unavailability of a vehicle (90%), followed by poor road

Table 1: Socio-Demographic Profile of Study Participants (N=200)

Variable	n	%
Age (in years)		
<20	7	3.5
20-29	43	21.5
30-39	55	27.5
40-49	33	16.5
50-59	24	12
>60	38	19
Gender		
Male	140	70
Female	60	30
Education		
Illiterate	60	30
Primary	42	21
Secondary	63	31.5
Higher Secondary	16	8
Graduate	19	9.5
Occupation		
Business	33	16.5
Home maker	44	22
Job	15	7.5
Labour	65	32.5
Retired	26	13
Student	16	8
Unemployed	1	0.5
Locality		
Other Village	57	28.5
Village where PHC is situated	143	71.5
No. of time PHC is visited		
First Visit	49	24.5
Visited 2-4 Times	78	39
Visited e"5 Times	73	36.5
Purpose of visit		
Check up	153	76.5
Follow up	19	9.5
Lab test	22	11
Other reason*	6	3

Note: *Other reasons include visits for certification for administrative purposes (e.g., medical fitness or sick leave), health education, and contraceptive services.

Figure 1: Proportion of Patients Reporting Difficulties at Various Service Points in PHCs (N=200)



conditions (51%). The third major problem was at the pharmacy level, where the primary issue was the unavailability of medicine (74%). (Figure 2)

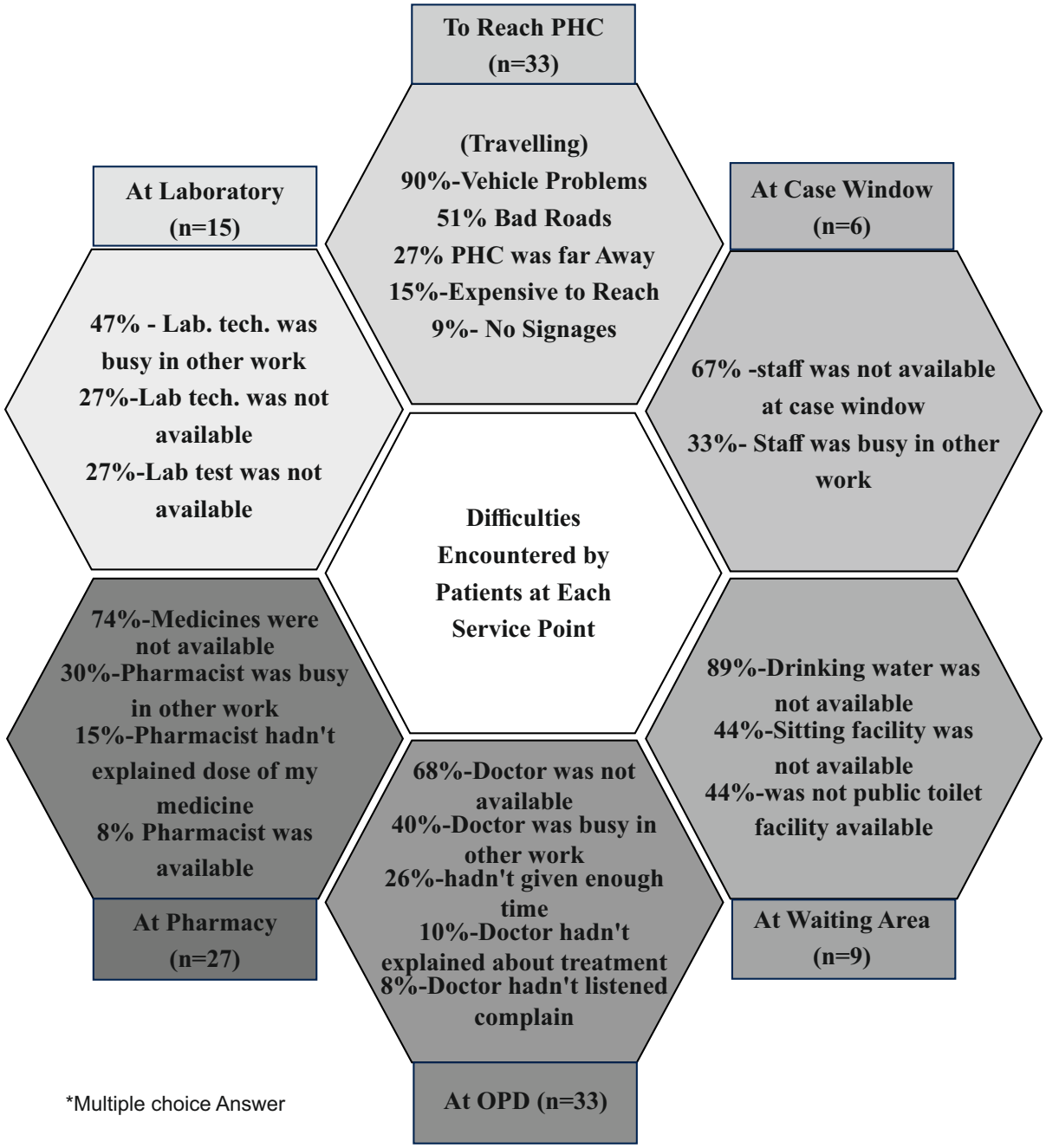
In addition to the above-mentioned problems, 3-7% of patients experienced difficulties at the case window, in the waiting area, and at the laboratory (Figure 1). For these issues staff was unavailable or busy in other work which was a problem at the case window and laboratory while unavailability of basic amenities was many issues in the waiting area. (Figure 2)

Approximately 13% of patients visited the PHC despite not preferring it, mainly due to the non-availability of nearby hospital (92.31%), followed by the free availability of treatment (38.46%) and free medicine (34.52%). (Figure 3)

Participants were also interviewed about their satisfaction with the current visit, with 81% reporting that they were satisfied. Satisfaction was assessed across four categories: doctor, staff, services, and infrastructure/amenities. A major gap in satisfaction and non-satisfaction was found in relation to doctors, staff and infrastructure/amenities. (Figure 4)

Among the four categories examined, satisfaction with staff and infrastructure showed a statistically significant association with overall satisfaction. [x^2=5.328, p = 0.021 and x^2=4.376, p=0.039, respectively]. (Table 2) In contrast, satisfaction with

Figure 2: Difficulties Encountered by Patients at Each Service Point



doctors and services**,** though frequently reported, did not show a significant statistical relationship with overall satisfaction.

Further association between socio-demographic factors and satisfaction with staff (n=86) and infrastructure (n=71) was analysed among participants who cited staff or infrastructure as a reason for their satisfaction or dissatisfaction**.** In satisfaction with staff, a significant association was found with education (p=0.025), indicating that satisfaction levels varied across different educational backgrounds. (Table 3) In terms of infrastructure, a significant association was observed with village of residence (p = 0.016), suggesting that participants from the same village were more likely to report satisfaction. (Table 4)

Figure 3: Reasons for Repeat Visits to Primary Health Centre (PHC) Despite Patient Dissatisfaction (N=26)

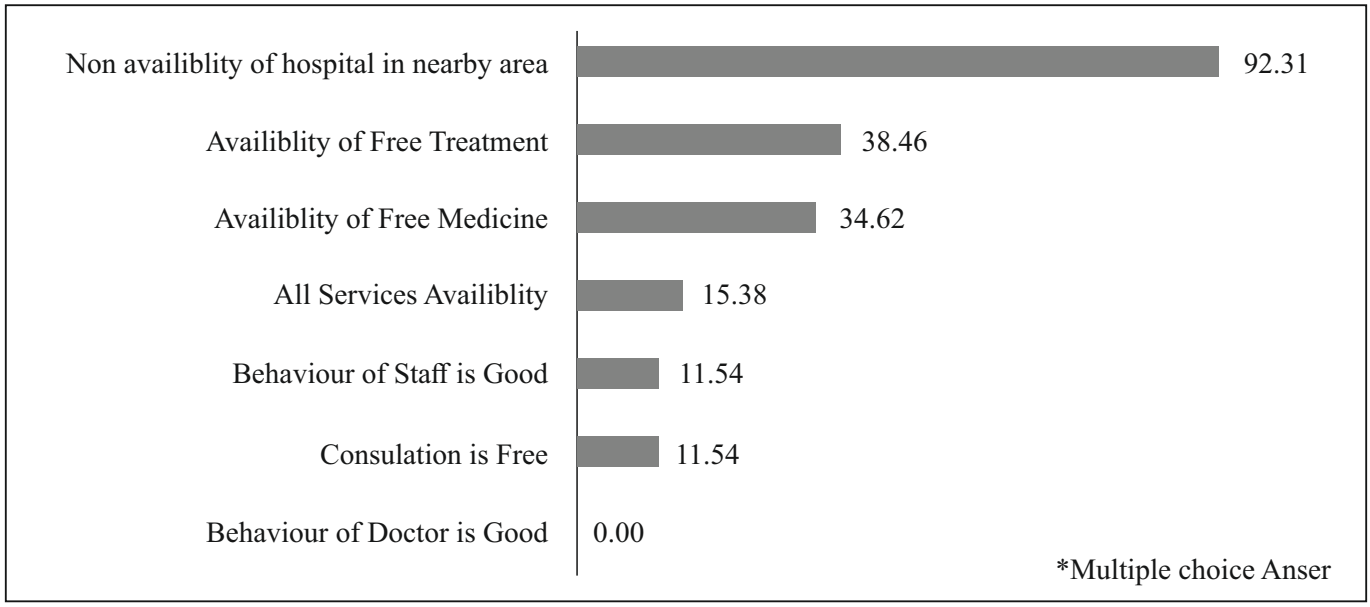
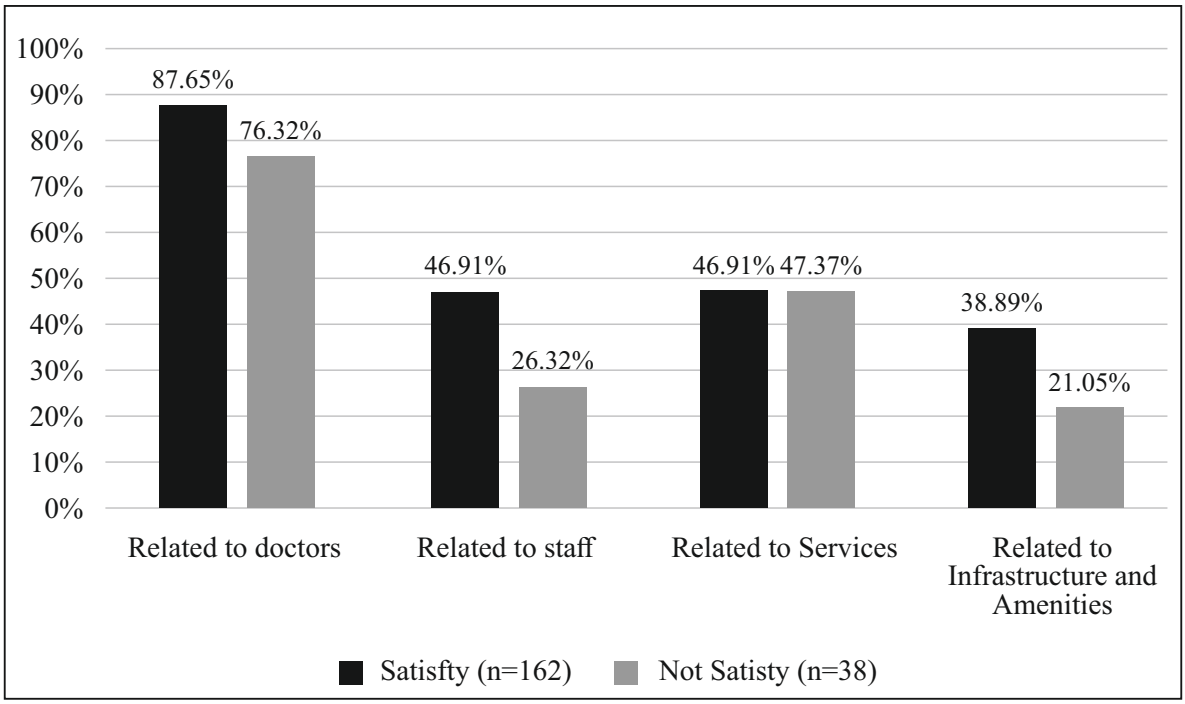


Figure 4: Reasons for Patient Satisfaction and Dissatisfaction on the Day of Visit (N = 200)



Note: Out of 200 patients, 162 reported being satisfied and 38 not satisfied with their visit on the day of data collection. Patients could select multiple reasons for their satisfaction or dissatisfaction from the following categories: doctor, staff, services, and infrastructure & amenities.

The participants were also asked for suggestions to improve OPD services. Nearly half of the participants (47.5%) recommended that all essential medicines should be available, while 30.5% expressed the need for specialist services, from doctors. This was followed by the demand for an ambulance (23.5%) and advanced laboratory services (22.5%). A small proportion of patients (14.15%) highlighted the need for proper

Table 2: Association of Reason for Satisfaction with Overall Satisfaction (N=200)

Reason for satisfaction	Overall Satisfaction		Chi-square (p value)
	Satisfied	Non-Satisfied	
Doctor			
Yes	142 (83.0%)	29 (17.0%)	3.192 (0.074)
No	20 (69.0%)	9 (31.0%)	
Staff			
Yes	76 (88.4%)	10 (11.6%)	5.328 (0.021)
No	86 (75.4%)	28 (24.6%)	
Services			
Yes	72 (80.0%)	18 (20.0%)	0.106 (0.74)
No	90 (81.8%)	20 (18.2%)	
Infrastructure			
Yes	63 (88.7%)	8 (11.3%)	4.376 (0.039)
No	99 (76.7%)	30 (23.3%)	

Table 3: Association of Socio-Demographic Factors with Staff Satisfaction (N=86)

Sociodemographic Factor	Satisfaction with Staff		p value*
	Satisfied	Non-Satisfied	
Village			
Same	58 (92.1%)	5 (7.9%)	0.123
Other	18 (78.3%)	5 (21.7%)	
Education			
Illiterate	19 (90.5%)	2 (9.5%)	0.025
Primary	18 (81.8%)	4 (18.2%)	
Secondary	27 (96.4%)	1 (3.6%)	
High School	3 (50.0%)	3 (50.0%)	
Graduate	9 (100.0%)	0 (0.0%)	
Occupation			
Labour	22 (84.6%)	4 (15.4%)	0.438
Home maker	19 (90.5%)	2 (9.5%)	
Student	3 (60.0%)	2 (40.0%)	
Job	6 (100.0%)	0 (0.0%)	
Business	15 (93.8%)	1 (6.3%)	
Retired	11 (91.7%)	1 (8.3%)	
No. of visit			
1 Visit	23 (95.8%)	1 (4.2%)	0.47
2-4 Visit	22 (84.6%)	4 (15.4%)	
≥5 Visit	31 (86.1%)	5 (13.9%)	
Purpose of visit			
Check up	58 (87.9%)	8 (12.1%)	0.349
Follow up	5 (83.3%)	1 (16.7%)	
Lab	10 (100.0%)	0 (0.0%)	
Other	3 (75.0%)	1 (25.0%)	

*Fisher's Exact Test

Table 4: Association of Socio-Demographic Factors with Infrastructure Satisfaction (N=71)

Sociodemographic Factor	Satisfaction with Infrastructure		p value*
	Satisfied	Non-Satisfied	
Village			
Same	51 (94.4%)	3 (5.6%)	0.016
Other	12 (70.6%)	5 (29.4%)	
Education			
Illiterate	16 (94.1%)	1 (5.9%)	0.463
Primary	17 (81.0%)	4 (19.0%)	
Secondary	23 (92.0%)	2 (8.0%)	
High School	3 (75.0%)	1 (25.0%)	
Graduate	4 (100.0%)	0 (0.0%)	
Occupation			
Labour	20 (87.0%)	3 (13.0%)	0.878
Home maker	19 (90.5%)	2 (9.5%)	
Student	1 (100.0%)	0 (0.0%)	
Job	5 (100.0%)	0 (0.0%)	
Business	8 (88.9%)	1 (11.1%)	
Retired	8 (80.0%)	2 (20.0%)	
No of visit			
1 Visit	18 (94.7%)	1 (5.3%)	0.639
2-4 Visit	19 (90.5%)	2 (9.5%)	
≥5 Visit	26 (83.9%)	5 (16.1%)	
Purpose of visit			
Check up	49 (89.1%)	6 (10.9%)	0.809
Follow up	4 (80.0%)	1 (20.0%)	
Lab	9 (90.0%)	1 (10.0%)	
Other	1 (100.0%)	0 (0.0%)	

*Fisher's Exact Test

referral services, while 8.5% stressed the provision of delivery services.

Some of the suggestions are mentioned here as verbatim. (Thematic analysis)

Suggestions regarding medicine availability:

1. "Jaroori davao hoti nathi."
   (Essential medicines are not available)
2. "Badhi davao ahi malti nathi."
   (All medicines are not available here.)
3. "Ghani var dava hoti j nathi."
   (Many times, medicines are simply not available.)

Suggestions regarding the doctor and staff:

4. "Mota doctors ave to saru rahe."
   (It would be better if senior doctors are available.)
5. "Vadhare saravar mate bahar javu pade chhe."
   (We have to go outside for better treatment.)
6. "MD doctor ave to vadhare saru re."
   (It would be better if an MD doctor is available.)

Suggestion regarding laboratory service:

7. "Private laboratory jevi tapas ahi thavi joiye."

   (The Investigations here should be like those in private laboratories.)

Suggestions regarding other services:

8. "Ambulance ni jaroor che."

   (There is a need for an ambulance.)

9. "Ahi thi mota davakhana java davakhana nu vahan hovu joie."

   (The health centre should have a vehicle to transport patients to bigger hospitals.)

10. "Davakhana ma chokhai ni jaroor chhe."

    (There is a need for cleanliness in the hospital.)

When asked about their willingness to recommend the PHC to others, 81.5% responded positively, 15.5% said they would not recommend it, and 3% were unsure.

Discussion:

Approximately one-fourth of patients belonged to the 3039-year age group, consistent with the findings of Krupal et al.[9] Around 30% of participants were either illiterate or had education only up to the secondary level, whereas Krupal et al.[9] reported a higher proportion (70%) with education limited to the primary level. Nearly one-third (32%) were labourers and 33% were housewives, closely mirroring the proportions reported by the same study.

A majority of patients (76%) visited PHCs for general check-ups, highlighting the preventive orientation of services provided at this level, in line with observations by Mohammed et al.[10]

Difficulties experienced during doctor consultations, reported by approximately 20% of participants, included long waiting times and inadequate communication, also cited as barriers by Mohammed et al.[10]

Transportation and geographical barriers were evident, with 16.5% of patients reporting challenges in reaching the PHC. Similar concerns were highlighted by Samina et al. (2013).[11] and in WHO's 2019 review of 40 years of PHC implementation.[12] Short consultation time was identified as a dissatisfaction factor by 24% of patients, aligning with findings from Zhang et al.[13] in China.

Only 15% of patients reported that the pharmacist adequately explained medication usage. In contrast, higher satisfaction levels with pharmacy services were reported in the study by Al Zaidan et al.[14] Furthermore, 44% of patients noted inadequate seating facilities, a finding comparable to the study by Abdullah et al. (2023).[15]

A significant proportion (92.31%) of participants visited the PHC due to the lack of nearby health facilities. Similar trends were documented by Khalid et al. (2020).[16] Overall patient satisfaction was 81%, slightly below the 92% reported by Krupal et al.[9] Satisfaction with doctors was relatively high (87.65%) and aligned with the levels reported by Fatima et al.[17] However, satisfaction with infrastructure was reported by only 40% of patients, in agreement with WHOs 2020 report on challenges in rural health systems.[18]

A statistically significant association was observed between overall satisfaction and two key factors: staff behaviour ($\div^2 = 5.328$, $p = 0.021$) and infrastructure ($\div^2 = 4.376$, $p = 0.039$). Comparable statistical associations were not identified in the reviewed literature. Satisfaction with staff was also significantly associated with education level ($p = 0.025$). A study conducted in Majmaah[19] similarly found higher satisfaction among those with primary education (95.6%), with a decreasing trend as education level increased, possibly due to differing expectations.

Availability of essential medicines was a prominent concern, as nearly 47.5% of participants suggested its improvement. This underscores its critical role in shaping patient satisfaction, a view supported by Dinesh et al. (2021).[20] Additionally, 30.5% of participants emphasized the need for specialist doctor services, consistent with the findings of Krupal et al. (2013) [9],

which linked improved accessibility to specialist consultations with enhanced satisfaction. About 22% of patients recommended improvements in diagnostic laboratory services, reflecting diagnostic limitations previously highlighted by WHO [18].

Limitation:

This study has certain limitations. The use of convenience sampling at the PHC level may introduce sampling bias, limiting the generalizability of the findings. Only 10 patients were interviewed per PHC, which may not fully capture the diversity of patient experiences. Responses were self-reported and subject to recall bias.

Conclusion:

In this study, the majority of OPD patients were from the village where the PHC is located, with a higher proportion of male patients. A smaller proportion of patients came from other villages, mainly reporting transportation difficulties.

At the OPD, patients mainly felt difficulties during doctors consultation, at the pharmacy window, and in the laboratory- primarily due to issues related to human resources. These challenges closely reflected the reasons patients gave for their satisfaction or dissatisfaction with the care received during their current visit.

The main reason patients visited the PHC despite dissatisfaction was non-availability of hospital in nearby area and availability of free treatments and free medicine in PHC.

Recommendations:

In depth analysis of issues regarding human resources can be carried out by government or non-government agency. Regular assessment of patients satisfaction on particular interval related to the quality of care at different level should be done. This will improve planning of health care service at the facility level.

Declaration:

Funding: Nil

Conflict of Interest: Nil

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