

Patient Satisfaction Among the OPD Attendees of Preventive Health and Screening OPD in a Government Tertiary Care Hospital in Delhi

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Abstract

India's National Health Policy (NHP) 2017 emphasizes patient-centered and quality healthcare across preventive, curative, palliative, and rehabilitative services. Achieving high-quality care necessitates a multidisciplinary approach involving infrastructure, human resources, and service efficiency. Patient satisfaction, a crucial indicator of healthcare quality, reflects how well care aligns with patient expectations and is assessed using validated tools to identify strengths and improvement areas. This study aimed to evaluate patient satisfaction in the Preventive Health and Screening Outpatient Department (OPD) of a government tertiary hospital in Delhi. A cross-sectional study was conducted with 290 adult patients using the Patient Satisfaction Questionnaire (PSQ-18), which assesses seven care domains. Systematic random sampling was employed, and data were analyzed using Stata 17.0 with t-tests and ANOVA. The mean satisfaction score was 4.03 ± 0.54 , with 79% of patients reporting overall satisfaction. The highest scores were noted in Technical Quality, while Time Spent with Doctor and Accessibility received lower ratings. Significant differences were observed in Technical Quality based on education ($p = 0.049$) and in Financial Aspects by diagnosis ($p = 0.04$). While satisfaction levels are high, improvements in doctor-patient communication, resource allocation, and scheduling can further enhance patient-centered care.

Keywords: *patient satisfaction, preventive care, outpatient department, quality of care.*

Introduction

Patient-centered care and quality of care are critical elements of India's National Health Policy (NHP) 2017. NHP emphasizes providing preventive, promotive, curative, palliative, and rehabilitative services through the public health sector, focusing on quality [1]. The importance of quality stressed by policy to patients is growing and has now become the scale of the health care delivery assessments. Quality of care needs a multi-disciplinary approach, including human resources, infrastructure, and proper functioning in synchronized flow to deliver satisfactory and efficient service [2].

"Put simply, care cannot be high quality unless the patient is satisfied" [3,4]

Satisfaction is achieving the events as per expectation [5]. Patient Satisfaction matches the expectation of patients attending the health care setting. This can be achieved by providing quality care and being patient-oriented. It does not solely depend on the physician but it is everyone's responsibility irrespective of their nature of work in the healthcare [6]. Patient satisfaction constitutes a fundamental component of high-quality health care. It is recognized that patients

possess the ability to evaluate the standard of care they receive, and there are established methodologies and validated tools to measure patient satisfaction effectively [4]

Evaluating patient satisfaction in this context not only provides insights into the operational strengths and weaknesses of these services but also highlights areas needing improvement to enhance patient experiences and health outcomes [7,8]. This study aims to assess the level of patient satisfaction among attendees of the Preventive Health and Screening OPD in a government tertiary care hospital in Delhi. By identifying key factors that contribute to patient satisfaction or dissatisfaction, the findings can inform targeted interventions to improve service delivery, thereby advancing the overall quality of care provided in these essential healthcare settings.

Methodology

Study design: Cross-sectional study among patients attending OPD

Study Setting: The Preventive Health and Screening Outpatient Department (OPD) at Vardhman Mahavir Medical College and Safdarjung Hospital, Delhi, was established to advance health

promotion through primordial and primary prevention, screen for diseases, facilitate early diagnosis and treatment (secondary prevention), and providing counselling and referral services [9]. This OPD was initiated by the Department of Community Medicine and started functioning in September 2021 in the New OPD building. There are four rooms: one for registration and blood investigations, another for screening for NCDs, and the rest for patient consultation by residents and faculties, in addition to an adult vaccination booth and a counselling desk.

Sample Size: The sample size calculation was based on the study by Kumar *et al.*, which found that patient satisfaction while attending tertiary care hospitals was 78% [10]. Considering this proportion, with absolute precision of 5%, 95% confidence interval, and adding a 10% non-response rate, the total sample size calculated was 290.

Sampling Technique: Systematic Random sampling was followed to select the study participants. Every seventh patient attending OPD was enrolled in the study. The study was conducted among adult patients attending OPD.

Study Tool: The questionnaire for the study was adopted from the open-source Patient Satisfaction Questionnaire Short-Form (PSQ-18) [11]. The questionnaire domains were General satisfaction, technical quality, Interpersonal manner, Communication, Financial aspects, Time spent with the Doctor, and Accessibility and Convenience. Demographic information of the patients was also obtained. The above domain was assessed in both positive and negative ways. The total patient satisfaction score is divided into three equal divisions and labelled as Good, Moderate, and Poor Satisfaction. Trained residents and staff administered the questionnaire.

Scoring System: The questionnaire was rated on a 5-point Likert scale, ranging from 1, indicating strongly agree to 5, indicating strongly disagree.

Data Analysis: Data were analyzed using Stata 17.0 (Stata Corp LP, College Station, Texas, USA). The scores for positively framed questions were reversed to create a composite score, and then final and domain-specific scores were calculated. The maximum score for all domains is 10, except for Technical Quality, Accessibility and Convenience, which have a maximum score of 15. Further, the means of all the domains was calculated. Means, standard deviations, and percentages were used to describe the demographic characteristics of the patients. The statistical tests employed included t-tests for comparing scores with sex and diagnosis and ANOVA for age categories and educational qualifications. A p-value of less than 0.05 was considered statistically significant.

Results

The study involved 290 patients, 114 males and 176 females, with an average age of 48.9 years. The largest age group was 46 and 60 years, accounting for 44%. Regarding educational qualifications, 34% of the patients were illiterate, while only 8% of the study participants studied till middle school. Regarding occupational distribution, most males were employed in service or labour roles, whereas most of the females were housewives. In terms of health diagnoses, diabetes mellitus (DM) was the most common condition, reported in 33%, followed by hypertension (17.5%) (Table 1).

Patient satisfaction was assessed in the seven domains. The mean scores for each domain are as follows: General Satisfaction at 4.06 ± 0.67 , Technical Quality at 4.22 ± 0.57 , Interpersonal Manner at 4.06 ± 0.68 , Communication at 4.1 ± 0.68 , Financial Aspects at 3.95 ± 0.75 , Time Spent with Doctor at 3.84 ± 0.79 , and Accessibility at 3.93 ± 0.77 . (Fig. 1) The overall mean satisfaction score was 4.03 ± 0.54 . Patient satisfaction with OPD services was highest for Technical Quality (87%), followed by Communication (84%) and Interpersonal Manner (82%), while the lowest satisfaction was reported for Time Spent with Doctor (72%), indicating a need for improved consultation duration (Fig 2). The Total mean satisfaction score of all domains was 4.03 with a standard deviation (SD) of 0.54. Approximately 79% of patients were satisfied with OPD services, while 21% reported moderate satisfaction indicating predominantly positive patient experience. None of the patient reported poor satisfaction (Fig. 3).

The study found no significant differences in healthcare satisfaction across gender and age groups. General satisfaction, technical quality, and communication scores were similar for males and females. Younger individuals rated financial aspects slightly higher, while older adults had marginally lower interpersonal manner and communication scores. Time spent with doctors and accessibility remained consistent across all age groups (Table 2). When analyzing scores by education level, graduates had the highest satisfaction in Technical Quality, with a significant difference ($p = 0.049$). Patients without non-communicable diseases (NCDs) reported significantly higher satisfaction in Financial Aspects than NCD patients ($p = 0.04$). Other domains, including Interpersonal Manner, Communication, and Accessibility, showed no significant variations across education and diagnosis groups. Time spent with doctors remained consistent, indicating similar patient experiences across categories. These findings suggest that education level and diagnosis type may influence specific aspects of healthcare service satisfaction (Table 3).

Table 1: Socio-demographic characteristics of patients (N = 290)

	Male (n = 114)	Female (n = 176)	Total (N = 290)
Age ^S	49.7 ± 13.4	48.5 ± 11.4	48.9 ± 12.2
Age Category*			
< 30 years	10 (47.6%)	11 (52.3%)	21
31 – 45 years	28 (31.5%)	61 (68.5%)	89
46 – 60 years	52 (40.9%)	75 (59.1%)	127
> 60 years	24 (45.3%)	29 (54.7%)	53
Education Qualification*			
Illiterate	21 (21.2%)	78 (78.8%)	99
Primary School	17 (30.9%)	38 (69.1%)	55
Middle School	10 (41.7%)	14 (58.3%)	24
High School	16 (43.2%)	21 (56.8%)	37
Intermediate	20 (55.6%)	16 (44.4%)	36

Graduate	30 (76.9%)	9 (23.1%)	39
Occupation^{*,^}			
Professionals	12 (85.7%)	2 (14.3%)	14
Associate Professionals	5 (83.3%)	1 (16.7%)	6
Clerks	9 (100%)	0	9
Service workers/ shop and market sales workers	25 (80.6%)	6 (19.4%)	31
Skilled agricultural and fishery workers	6 (100%)	0	6
Craft and related trade workers	16 (57.1%)	12 (42.9%)	28
Plant, machine operators and assemblers	7 (77.8%)	2 (22.2%)	9
Elementary occupation	17 (85%)	3 (15%)	20
Unemployed/Housewife/Student	17 (10.2%)	150 (89.8%)	167
Diagnosis[*]			
DM	36 (37.9%)	59 (62.1%)	95
HTN	20 (39.2%)	31 (60.8%)	51
DM + HTN	21 (45.7%)	25 (54.3%)	46
Miscellaneous	37 (37.8%)	61 (62.2%)	98

\$These variable is presented as Mean and Standard Deviation

*These variables are presented in proportion

^Occupation is classified according to the National Classification of Occupation 2015. There is no classification for unemployed, housewife or student so they clubbed and presented together.

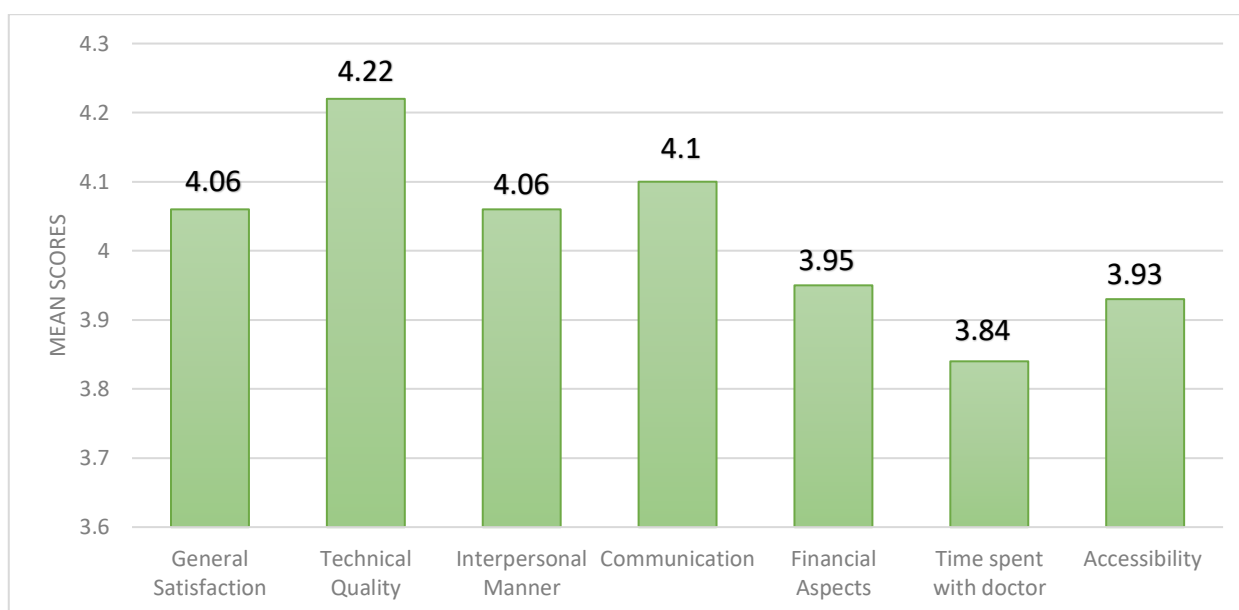


Figure 1: Bar chart depicting Domain-wise total mean score and percent of Patient Satisfaction

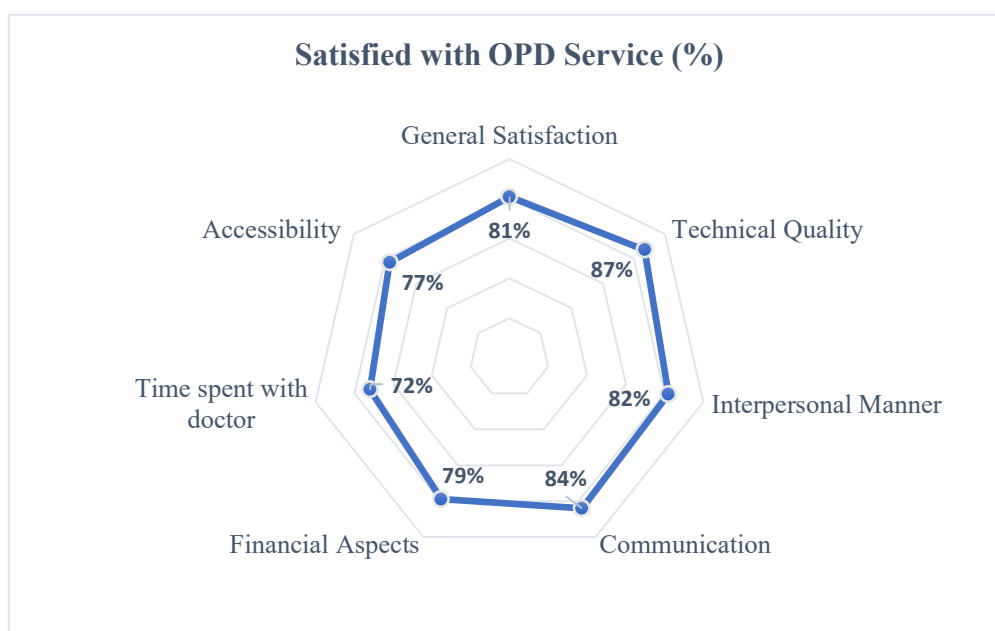


Figure 2: Spider chart shows Domain-wise percent satisfaction (Satisfied = Strongly agree and Agree)

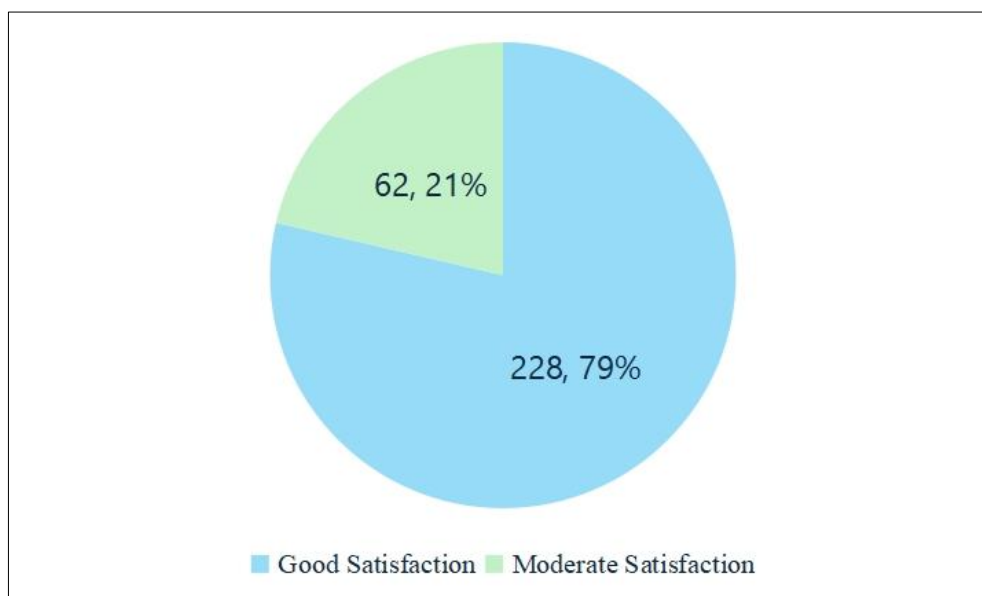


Figure 3: Pie chart representing overall Patient Satisfaction based on the composite score

Table 2: Distribution of Total Patient Satisfaction based on Sex and Age Category (N = 290)

Domains	Sex (Mean Score (SD))				Age groups in years (Mean Score (SD))					
	Male (n=114)	Female (n=176)	t-value*	p-value	<30 (n=21)	31 - 45 (n=89)	46 – 60 (n=127)	>60 (n=53)	F-value#	p-value
General Satisfaction	7.99 ± 1.46	8.22 ± 1.24	-1.40	0.16	8.19 ± 1.25	8.18 ± 1.36	8.13 ± 1.23	8.02 ± 1.56	0.18	0.91
Technical Quality	12.58 ± 1.85	12.70 ± 1.64	-0.60	0.54	12.81 ± 1.78	12.66 ± 1.76	12.674 ± 1.72	12.62 ± 1.68	0.07	0.98
Interpersonal Manner	8.11 ± 1.42	8.13 ± 1.31	-0.16	0.88	8.05 ± 1.24	8.19 ± 1.20	8.22 ± 1.29	7.79 ± 1.74	1.37	0.25
Communication	8.25 ± 1.44	8.19 ± 1.31	0.37	0.71	8.33 ± 1.02	8.16 ± 1.46	8.26 ± 1.26	8.17 ± 1.57	0.17	0.92
Financial Aspects	7.89 ± 1.56	7.91 ± 1.46	-0.13	0.90	8.24 ± 1.34	7.69 ± 1.59	8.09 ± 1.27	7.68 ± 1.83	2.04	0.11
Time spent with Doctors	7.80 ± 1.60	7.59 ± 1.56	1.09	0.28	8.05 ± 1.50	7.58 ± 1.60	7.71 ± 1.41	7.58 ± 1.93	0.56	0.64
Accessibility and Convenience	11.70 ± 2.37	11.87 ± 2.29	-0.60	0.55	11.76 ± 2.32	11.82 ± 2.43	11.85 ± 2.20	11.68 ± 2.48	0.07	0.98

*Anova test applied, #t-test applied

Table 3: Distribution of Total Patient Satisfaction based on Education and Diagnosis (N = 290)

Domains	Education (Mean Score (SD))								Diagnosis (Mean Score (SD))			
	Illiterate (n=99)	Primary School (n=55)	Middle School (n=24)	High School (n=37)	Inter mediate (n=36)	Graduate (n=39)	F-value^	p-value	NCD patients* (n=192)	Non-NCD patients (n=98)	t-value	p-value
General Satisfaction	8.12 ± 1.28	8.28 ± 1.28	8.29 ± 1.27	7.89 ± 1.63	8.11 ± 1.45	8.08 ± 1.20	0.44	0.82	8.13 ± 1.29	8.12 ± 1.42	0.05	0.96
Technical Quality	12.57 ± 1.65	12.96 ± 1.56	12.38 ± 1.29	11.97 ± 2.19	12.89 ± 1.74	13.05 ± 1.38	2.29	0.05	12.57 ± 1.70	12.83 ± 1.75	-1.21	0.23
Interpersonal Manner	8.05 ± 1.35	8.44 ± 1.48	8.25 ± 1.36	7.62 ± 1.32	8.14 ± 1.33	8.23 ± 1.16	1.77	0.12	8.03 ± 1.39	8.31 ± 1.29	-1.67	0.10
Communication	8.16 ± 1.22	8.36 ± 1.37	8.42 ± 1.32	7.84 ± 1.59	8.11 ± 1.60	8.49 ± 1.21	1.19	0.31	8.16 ± 1.40	8.33 ± 1.31	-0.98	0.33
Financial Aspects	8 ± 1.45	7.8 ± 1.67	7.71 ± 1.57	7.59 ± 1.66	7.97 ± 1.34	8.13 ± 1.28	0.72	0.61	7.78 ± 1.46	8.15 ± 1.53	-2.07	0.04
Time spent with Doctor	7.56 ± 1.56	7.75 ± 1.66	7.96 ± 1.43	7.76 ± 1.42	7.28 ± 1.89	7.97 ± 1.40	1.05	0.39	7.56 ± 1.63	7.90 ± 1.45	-1.74	0.08
Accessibility and Convenience	11.78 ± 2.20	11.71 ± 2.48	12.04 ± 2.14	11.70 ± 2.52	11.89 ± 2.59	11.87 ± 2.18	0.10	0.99	11.78 ± 2.26	11.85 ± 2.45	-0.23	0.82

*NCD – Non-Communicable Disease, ^Anova test applied, #t-test applied

Discussion

Our study assessed the patient satisfaction of OPD service of Preventive Health and Screening OPD in a Government Tertiary Hospital. The OPD was started 3 years ago and provides services regarding Non-Communicable Disease screening and management along with counselling regarding lifestyle modification and diet, and adult vaccination. The study concludes that most patients were satisfied with the OPD service's technical qualities, which covers patients' complete care and examination.

In the present study, the general satisfaction had a mean score of 4.06 ± 0.67 and 81% reported to be satisfied. This closely aligns with the studies by Gokul *et al.*^[12], Chakraborty *et al.*^[13] and Kumar *et al.*^[14] Further, technical quality received a mean score of 4.22 ± 0.57 and 87% of the study participants were satisfied. This again is similar to the findings of Gokul *et al.*^[12], Ahmad *et al.*^[15] and Iqbal *et al.*^[16] But, Dabaghian *et al.*^[17] and Bhatt *et al.*^[18], reported a lower level of satisfaction in the same. These findings suggest the importance of technical quality regarding patient satisfaction. This also highlights the superior technical quality in our OPD, which led to more satisfaction among patients.

In the interpersonal domain, our study had a satisfaction of 82% with a mean score of 4.06 ± 0.68 . This aligns with the findings of Gomes *et al.*^[19], but is higher than reported by and Gokul *et al.*^[12]. This could be attributed to the regular sensitisation of the doctors in the OPD regarding empathetic care and doctor patient relationship.

Regarding the communication domain, 84% of the patients were satisfied, with a mean score of 4.1 ± 0.68 . This aligns with the studies conducted by Gokul *et al.*^[12] and Adhikari *et al.*^[20].

In the financial aspect, 79% of the patients were satisfied. The services provided in the OPD (consultation, investigations, and medications) are provided free of cost. Despite being a public health facility, small user charges are imposed for a few laboratory investigations and radiological procedures. Additionally, the average daily OPD footfall of above 7000 and limited timings of OPD's laboratory may make it harder for patients to find the slot for laboratory tests on the same day, thereby increasing financial expense due to repeated visits or use of private owned laboratory services to save time.

The lowest patient satisfaction was reported to be in time spent with the doctor, with 72% of the patients reporting to be satisfied. But, this is higher than reported by Sultan *et al.*^[21] and Gokul *et al.*^[12]. The quality time spent with doctor increases the overall satisfaction of service^[22,23]. When the difference between the expected and actual Time spent with the Doctor is significant, it results in dissatisfaction with the service^[24]. To enhance patient satisfaction during visits, physicians might consider dedicating a small portion of their time to engaging in conversations about non-medical topics. Furthermore, allowing ample time for meaningful exchanges with patients can be beneficial^[23].

Furthermore, 77% of the patients were satisfied by the accessibility of the hospital with a mean score of 3.93 ± 0.77 . This is higher than reported in Gokul *et al.*^[12] and Poudel *et al.*^[25] Our hospital is located in the south part of the capital, with frequent buses and other modes of transport connecting it to the other parts of the city. Further, the patient has to wait in a long queue for an appointment in the general OPD, which takes around one or two hours. There exists an online OPD registration system in our Preventive OPD to avoid this process that should reach the patients through awareness, increasing the convenience of health care.

The Technical quality of the service was well appreciated by patients who are graduates, which was reflected in the mean scores. The study done at the tertiary public health facility in Nepal also

reported similar findings^[25]. Similar findings were reported in a Qatar in Psychiatry Hospital study^[26]. A higher level of education gives a better understanding of the health system, but dissatisfaction may also happen due to high expectations^[27,28].

Overall, 79% of patients attending the OPD were satisfied with the service, with a mean score of 4.03 ($SD \pm 0.54$). Our study surpassed the satisfaction level of similar studies at various public hospitals^[12,13,21]. The study explored patients' age and demographics with satisfaction domains. The areas to improve are doctors' soft skills to communicate effectively with patients, improve human resources and material in the laboratory, and efficient online OPD scheduling. The limitations of this study include its limited generalizability, as data were collected from a single center, and the potential influence of social desirability bias cannot be ruled out.

Conclusion

This study presents evidence of high patient satisfaction, with 79% of individuals expressing contentment with the Preventive Health and Screening Outpatient Department (OPD) at a government hospital in Delhi. Notably, the department received strong ratings for its Technical Quality. However, there are identifiable areas for improvement, specifically concerning the time allocated for consultations with doctors and the overall accessibility of services. The variation in satisfaction levels based on patients' educational backgrounds and diagnoses suggests that targeted interventions could enhance the patient experience. Key areas for enhancement include fostering effective doctor-patient communication, optimizing resource allocation, and streamlining OPD scheduling processes.

Declarations

Ethical Approval and Consent to Participate

The ethical committee clearance was obtained from Institute Ethics Committee of VMMC and SJH (IEC/VMMC/SJH/Project/November/2017/1012). All participants provided informed consent before participating in the study. Written informed consent was obtained from all participants after explaining the purpose of the research, the procedures to be undertaken, their rights as participants, and the potential risks and benefits involved. All methods in this study were carried out in accordance with relevant guidelines and regulations for research involving human participants.

Consent for Publication

Not Applicable as no identifiable personal information (such as images, names, or personal histories) is included in this manuscript.

Availability of Data and Materials

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

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Competing Interests

The authors declare that they have no competing interests.

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