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Satisfaction levels of patients attending the outpatient department of a tertiary care center of India

Vijay Kumar [ID] [1], Ratnadeep Biswas [ID] [1], Vishnu S. Ojha [ID] [1], Kishore Kaushal [2]

[1] Department of General Medicine, All India Institute of Medical Sciences, Patna, Bihar, India
[2] Department of Medicine, Patna Medical College, Patna, Bihar, India

ABSTRACT

Introduction and aim. Any hospital's outpatient department (OPD) is regarded as the storefront of the facility, and patient satisfaction is an important measure of healthcare quality. Hence, this cross-sectional study was conducted in different OPDs at a tertiary care center.

Material and methods. Two hundred patients were recruited, and structured personal interviews were conducted with questions based on the Patient Satisfaction Questionnaire Short Form (PSQ-18). T-tests and analysis of variance (ANOVA) were used to compare satisfaction scores between variables.

Results. Upon analysis, 86% of the patients rated their overall experience as either 'very good' or 'good'. Interpersonal manners (mean score±SD; 4.60±0.55), communication (4.39±0.66), general satisfaction (4.03±0.79), and technical qualities (3.86±0.57) were the domains in which the patients were most satisfied, while time spent with the doctor (3.77±0.89), accessibility and convenience (3.77±0.67), and financial aspects (3.37±0.83) were the areas that lagged.

Conclusion. Satisfaction scores were found to vary significantly with gender, age, waiting times, and the number of visits per day. Regular patient satisfaction surveys should be conducted in all hospitals for devising interventions to provide patients with the best possible care.

Keywords. health care quality, patient care, patient satisfaction, PSQ-18, quality improvement research

Introduction

Any hospital's outpatient department (OPD) is regarded as the facility's storefront. Our institute is one of the oldest medical colleges in India, catering to the medical needs of three states as well as the neighboring country of Nepal. The OPDs of the institute are jam-packed with an average footfall of 2500 patients per day, a number that is increasing day by day.

Patient outcomes are dependent on the interplay of many different factors, including not just the medical or surgical management but also their mental states and perceptions. Alas, the latter aspect is often overlooked, especially in developing nations where resources are limited, and a relatively large population needs care.[1]

Patient satisfaction or dissatisfaction is a complicated phenomenon that is linked to patients' expectations, health status, personal characteristics, and health system.[2] Longer contact periods, appropriate privacy, confidentiality, and professional etiquette have all been linked to higher patient satisfaction rates, which ultimately enable a trustworthy, frank, and open connection with the doctor, improving patient care.[3–5] Studies from various Indian institutes report quite different levels of satisfaction, thus necessitating individual assessments.[6–8] Measuring patients' satisfaction has many purposes, in-

Corresponding author: Ratnadeep Biswas, e-mail: ratnadeepbis2404@gmail.com

cluding helping to evaluate healthcare services from the patient's point of view, facilitating the identification of problem areas, and helping in the generation of ideas towards resolving those problems.[9]

Aim

Hence, this study was carried out to evaluate the level of patients' satisfaction in terms of general satisfaction, time spent with the doctor, interpersonal manner, communication, technical quality, financial aspects, and accessibility and convenience among those attending various OPDs of our institute, to identify the problems of the patients and suggest measures for enhancement of service quality.

Material and methods

Study duration and setting

This was a cross-sectional observational study conducted over a period of three months (March to May 2022) at a tertiary-care hospital. Approval was taken from the institute's ethics committee of Patna Medical College (IEC/PMC/624/2022). The study was conducted in accordance with the Declaration of Helsinki after taking consent from all the participants.

Sample size and sampling technique

Considering a confidence level of 95%, a margin of error of 10%, and assuming maximum variability (i.e., taking the population proportion as 50%), the minimum sample size was calculated as 97 with the help of an online calculator. A total of 200 patients were recruited through convenient sampling.

Study population

Patients attending various OPDs (medicine, surgery, obstetrics & gynecology, orthopedics, ophthalmology, and otorhinolaryngology) who were willing to participate in the study were included in the study after taking verbal consent. Inclusion criteria: adult patients of either sex, aged 18 years or more. Exclusion criteria: patients not giving consent.

Study tool

A standard, pre-validated questionnaire, the Patient Satisfaction Questionnaire Short Form (PSQ-18), was administered to the subjects as structured personal interviews along with demographic and basic details (including sex, age, department visited, waiting time before consultation, and number of visits per day). The patients were also asked to rate their overall experience on a four-point Likert scale from 'very good' to 'bad'. The PSQ-18 is an 18-item tool with good internal consistency and reliability and is divided into seven subscales: general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with the doctor, and accessibility and convenience.[10]

The PSQ-18 gives scores separately for each of the seven subscales: general satisfaction (items 3 and 17); technical quality (items 2, 4, 6, and 14); interpersonal manner (items 10 and 11); communication (items 1 and 13); financial aspects (items 5 and 7); time spent with the doctor (items 12 and 15); accessibility and convenience (items 8, 9, 16, and 18).[11] All items were rated by the subjects on a five-point Likert scale ranging from 'strongly agree' to 'strongly disagree'. Certain PSQ-18 items are formulated to indicate agreement when expressing satisfaction with medical care, while others are structured to indicate agreement when expressing dissatisfaction with medical care, but the scores were assigned for each item from one to five in such a manner that higher scores meant better satisfaction, as recommended. The score for each individual subscale was then calculated by averaging all the item scores in that subscale.[11]

Care was taken to conduct the interviews in a structured and objective manner as much as possible, so as to minimize the risk of confirmation bias, interviewer bias, bias due to leading questions, and the question order effect.

Statistical analysis

The data was cleaned and coded in Microsoft Excel and then analyzed using IBM SPSS version 20.0 (IBM Corp., Armonk, NY, USA). Various parameters of descriptive statistics, such as proportion, mean, and standard deviation (SD), were calculated. After checking for normality, t-tests were used to compare satisfaction scores between variables with two groups (like gender and number of visits per day), and analysis of variance (ANOVA) tests were used when comparing scores between variables with three or more groups (like age group, waiting time, and overall experience). A p-value of less than 0.05 was considered significant.

Results

A total of 200 patients participated in the study. 142 (71%) of them were male, and 46 (23%) were older than 60 years. 52 patients (26%) came to the medicine OPD and 38 patients (19%) came to the surgery OPD. 148 (74%) patients reported that they had to wait less than an hour before their consultations. When asked to rate their overall experience, 116 (58%) patients rated it as 'good' while only 6 (3%) rated their experience 'bad'. 110 (55%) patients visited the OPD twice in one day, and the rest visited only once a day (Table 1).

The (mean±SD) satisfaction scores for different subscales (arranged from highest to lowest scores) were: interpersonal manner (4.60±0.55), communication (4.39±0.66), general satisfaction (4.03±0.79), technical quality (3.86±0.57), time spent with the doctor (3.77±0.89), accessibility and convenience (3.77±0.67), and financial aspects (3.37±0.83) (Fig. 1).

Table 1. Demographic characteristics of the study subjects (n=200)

Variable	Categories	n (%)
Gender	Male	142 (71%)
	Female	58 (29%)
Age (in years)	18-30	40 (20%)
	31-40	28 (14%)
	41-50	46 (23%)
	51-60	40 (20%)
	>60	46 (23%)
Department	Medicine	52 (26%)
	Surgery	38 (19%)
	Gynecology & Obstetrics	34 (17%)
	Orthopedics	28 (14%)
	Ophthalmology	25 (12.5%)
	Otorhinolaryngology	23 (11.5%)
Waiting time	<1 hour	148 (74%)
	1-2 hours	32 (16%)
	>2 hours	20 (10%)
Number of visits per day	Once a day	90 (45%)
	Twice in one day	110 (55%)
Overall experience	Very Good	56 (28%)
	Good	116 (58%)
	Fair	22 (11%)
	Bad	6 (3%)
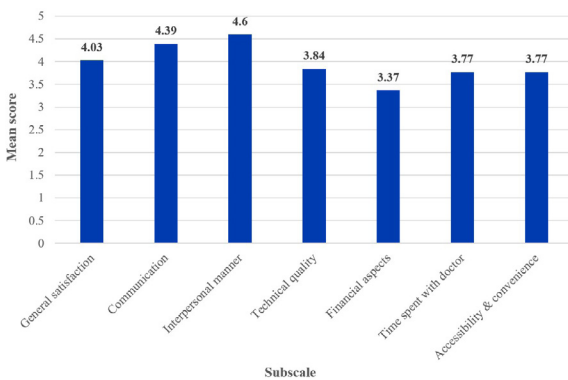
Fig. 1. Mean satisfaction scores for different subscales (n=200)

When the subscale scores were compared between the two genders, it was observed that the scores (mean±SD) for only one subscale, i.e., general satisfaction, were significantly higher in females (4.22±0.65) than males (3.96±0.83) with a p of 0.02.

When comparison was done considering the different age groups, it was seen that the mean (±SD) subscale scores for interpersonal manner were significantly different among various age groups, ranging from 4.78 (±0.41) in the 31–40 years group to 4.40 (±0.70) in the 18–30 years age group (p=0.04). The subscale scores for time spent with doctor also differed significantly from 4.11 (±0.75) among 18- to 30-year-olds to 3.58 (±0.93) among 51- to 60-year-olds (p=0.02) (Table 2).

Table 2. Distribution of patient satisfaction scores by gender and age group (n=200)

Subscale	Sex (Mean score±SD)			Age groups (in years) (Mean score±SD)					
	Male (n=142)	Female (n=58)	p	18-30 (n=40)	31-40 (n=28)	41-50 (n=46)	51-60 (n=40)	>60 (n=46)	p
General satisfaction	3.96 ±0.83	4.22 ±0.65	0.02	3.89 ±0.77	4.19 ±0.51	4.13 ±0.71	3.98 ±0.85	4.03 ±0.96	0.5
Communication	4.36 ±0.68	4.48 ±0.58	0.23	4.40 ±0.64	4.41 ±0.52	4.44 ±0.68	4.23 ±0.78	4.48 ±0.64	0.46
Interpersonal manner	4.56 ±0.57	4.68 ±0.48	0.16	4.40 ±0.7	4.78 ±0.41	4.69 ±0.41	4.59 ±0.58	4.58 ±0.56	0.04
Technical quality	3.82 ±0.54	3.89 ±0.63	0.7	3.79 ±0.54	3.76 ±0.47	3.89 ±0.56	3.79 ±0.64	3.92 ±0.59	0.64
Financial aspects	3.41 ±0.74	3.27 ±0.01	0.32	3.40 ±0.69	3.50 ±0.78	3.42 ±0.87	3.38 ±0.88	3.24 ±0.91	0.73
Time spent with doctor	3.79 ±0.91	3.71 ±0.85	0.53	4.11 ±0.75	3.97 ±0.72	3.71 ±0.86	3.58 ±0.93	3.59 ±1.02	0.02
Accessibility and convenience	3.78 ±0.67	3.74 ±0.65	0.76	3.82 ±0.65	3.71 ±0.41	3.83 ±0.77	3.71 ±0.69	3.79 ±0.71	0.88

When the scores were compared between the waiting times, it was observed that the mean (±SD) subscale scores for interpersonal manner varied significantly with different waiting times, ranging from 4.65 (±0.45) in patients who had to wait less than an hour before their consultations to 4.42 (±0.76) in patients who had to wait more than 2 hours (p=0.04). However, it was observed that there was a statistically significant difference for financial aspects as well, with the scores ranging from 3.50 (±1.01) in patients with wait times of more than 2 hours to 3.43 (±0.78) in patients with wait times less than an hour (p=0.02).

On comparison of scores among the number of visits per day, the subscale score for time spent with the doctor was found to be significantly higher among patients who visited the OPD only once in a day (mean±SD; 3.96±0.87) compared to patients who visited twice in a day (3.61±0.88) with a p=0.01 (Table 3).

Table 3. Distribution of patient satisfaction scores by waiting time and number of visits per day (n=200)

Subscale	Waiting Time (Mean score±SD)				Number of visits per day (Mean score±SD)		
	<1 hour (n=151)	1-2 hours (n=31)	>2 hours (n=18)	p	Once a day (n=90)	Twice in one day (n=110)	p
General satisfaction	4.03±0.78	3.86±0.84	4.27±0.71	0.18	3.92±0.78	4.12±0.78	0.08
Communication	4.41±0.64	4.39±0.64	4.27±0.8	0.69	4.35±0.72	4.42±0.6	0.48
Interpersonal manner	4.65±0.45	4.43±0.75	4.42±0.76	0.04	4.53±0.58	4.65±0.52	0.15
Technical quality	3.86±0.68	3.85±0.75	3.85±0.52	0.1	3.82±0.77	3.88±0.59	0.51
Financial aspects	3.43±0.78	3.01±0.87	3.50±1.01	0.02	3.33±0.69	3.40±0.93	0.54
Time spent with doctor	3.77±0.89	3.65±0.96	4.00±0.77	0.39	3.96±0.87	3.61±0.88	0.01
Accessibility and convenience	3.77±0.66	3.73±0.64	3.82±0.77	0.89	3.75±0.63	3.79±0.70	0.64

It was observed that the mean (±SD) subscale scores for general satisfaction were significantly different among the categories of the overall experience ratings, ranging from 4.24 (±0.81) in patients who rated their overall experience as 'very good' to 3.12 (±0.94) in those who categorized their experience as 'bad' (p<0.01). Similarly, the scores for communication varied significantly from 4.44 (±0.56) in patients whose overall opinion was 'good' to 3.25 (±1.50) in patients with a 'bad' opinion about the provided care (p=0.01) (Table 4).

Table 4. Distribution of patient satisfaction scores by overall experience rating (n=200)

Subscale	Overall experience (Mean±SD)				
	Very good (n=56)	good (n=116)	Fair (n=22)	Bad (n=6)	p
General satisfaction	4.24±0.81	4.05±0.71	3.60±0.86	3.12±0.94	0.01
Communication	4.36±0.75	4.44±0.56	4.41±0.59	3.25±1.50	0.01
Interpersonal manner	4.54±0.7	4.62±0.44	4.65±0.61	4.12±0.75	0.34
Technical quality	3.87±0.63	3.90±0.70	3.64±0.62	3.56±0.65	0.45
Financial aspects	3.34±0.98	3.40±0.79	3.28±0.59	3.25±1.04	0.88
Time spent with doctor	3.73±0.98	3.89±0.82	3.30±0.77	3.50±1.47	0.06
Accessibility and convenience	3.86±0.76	3.77±0.56	3.60±0.82	3.18±0.94	0.15

Discussion

The level of satisfaction with the care received by two hundred OPD patients at a tertiary care center was measured, and it was observed that 86% of the patients rated their overall experience as either 'very good' or 'good'. In terms of the PSQ-18 scores, we found that out of a maximum score of 5, the mean subscale scores for interpersonal manners, communication, and general satisfaction were quite high (4.60, 4.39, and 4.03, respectively), followed by technical qualities with a mean score of 3.84. The areas that lagged were time spent with the doctor, accessibility and convenience, and financial aspects (3.77, 3.77, and 3.37, respectively). In line with findings of many previous studies, this study corroborated that interpersonal manners and communication were consistently rated highly by the patients, while the financial aspect was often the most unsatisfactory domain for many patients.[12-16]

Ours is a tertiary care specialty center where most patients come via referrals from faraway places after having exhausted all other local options, with many requiring advanced (and thus generally expensive) investigations or procedures. It caters to a large population with an ever-growing daily patient footfall that far exceeds the rate of increase in the number of healthcare providers available to treat them. Furthermore, our hospital (a government-funded public hospital where the cost of treatment is much lower than in private settings) attracts many patients who belong to the economically weakest sections of society and who often find it extremely difficult to pay their medical bills. In their study conducted at a similar tertiary care center in the neigh-

boring state of Odisha, Kshatri et al. also found that 80% of the patients thought that the amount paid by them was unreasonable.[15] These may be the reasons behind the relatively lower scores in the areas of time spent with the doctor, accessibility and convenience, and financial aspects observed in our study.

It was observed that the general satisfaction scores were significantly higher among women than men. We also observed that, even though all age groups rated the interpersonal manner subscale quite highly, the 31- to 40-year-olds seemed to be the most satisfied with interpersonal manner. It was also interesting to see that the younger age groups were considerably more satisfied with the time they spent with the doctor as compared to the older patients. It may be possible that the younger people (who often have limited time themselves due to studies, work, and other social engagements) may value the limited amount of time they spent with the doctor more than the older patients (who generally have relatively more time and often have multiple co-morbidities that require lengthier discussions).

For patients who had to wait less than an hour before their consultations, the scores of interpersonal manners were higher compared to those who had to wait more. But surprisingly, patients were more satisfied with the financial aspects of their care when they had to wait for more than two hours before their consultations. It could point to the possibility that doctors, when informed about a patient's long wait time, may handle that patient more efficiently, leading to an overall more satisfying consultation and ultimately giving the sense of money well spent. This finding is similar to that of Chandra et al., who reported that patients considered satisfying consultations worth the wait.[17]

The patients who visited the OPD only once a day appreciated the time spent with the doctor significantly more compared to the patients who visited twice in one day (i.e., once for the initial consultation and the subsequent visit for showing the investigation reports). The reason behind this may be that when doctors call the patients for a subsequent visit along with the investigation reports without having in-depth conversations first, it may be perceived as dismissive.

Based on the findings of this study, we recommend that the following measures be taken to increase patient satisfaction levels: efforts should be made to reduce the patient load at referral-level facilities so that the healthcare providers can devote more of their time and attention to each patient; such improvements should be made that aim to reduce the wait times, like the implementation of an appointment-based system for OPDs in which the patients are only required to arrive for their consultations just before their assigned times; the overall quality of care should be improved; all healthcare workers should undergo regular training courses on attitude, be-

havior, and communication skills required during patient care; reducing the financial burden on patients; and spreading awareness about the various health schemes launched by the government.

There are certain limitations to the study. Since this was a single-center study conducted at a tertiary care hospital in a limited number of OPDs, the findings of the study are difficult to generalize. The convenient sampling technique could have led to selection bias. OPD samples were collected only in the morning hours, which could have influenced the selection of the patients as well as the care provided.

Conclusion
Four out of five patients described their overall experience as 'very good' or 'good'. Interpersonal manners, communication, general satisfaction, and technical qualities were the domains in which the patients were most satisfied, while time spent with the doctor, accessibility and convenience, and financial aspects were the areas that lagged. Satisfaction scores were found to vary significantly with gender, age, waiting times, and the number of visits per day.

There is always scope for further improvement, and proper steps should be taken to increase patient satisfaction levels, especially by focusing on the domains that lag. Such patient satisfaction surveys should be conducted periodically in all hospitals for continuous monitoring and identification of issues, which will help in the formulation of policies and interventions with the goal of providing patients with the best possible care.

Declarations

Author contributions
Conceptualization, V.K. and K.K.; Methodology, V.K.; Software, V.K. and R.B.; Validation, V.K., R.B., V.S.O. and K.K.; Formal Analysis, V.K.; Investigation, V.K., R.B., V.S.O. and K.K.; Resources, K.K.; Data Curation, V.K. and K.K.; Writing – Original Draft Preparation, V.K., R.B. and V.S.O.; Writing – Review & Editing, V.K. and K.K.; Visualization, R.B.; Supervision, K.K.; Project Administration, V.K.

Conflicts of interest
The authors declare no competing interests.

Data availability
The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Ethics approval
Approval was taken from the institute's ethics committee of Patna Medical College (IEC/PMC/624/2022). The study was conducted in accordance with the Declaration of Helsinki after taking consent from all the participants.

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