



A CROSS SECTIONAL STUDY ON PATIENT SATISFACTION IN AN URBAN HEALTH TRAINING CENTRE AFFILIATED WITH INDIRA GANDHI GOVERNMENT MEDICAL COLLEGE, NAGPUR.

Community Medicine

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ABSTRACT

Background: Patient satisfaction survey is an efficient tool for measuring the health care delivery services in a particular area. The data gathered through measuring the patient satisfaction reflects care delivered by staffs and health care providers and can serve as a tool in decision-making. Thus the issues/aspects of satisfaction and dissatisfaction can be explored which may draw attention of the health care providers and administrators in order to monitor performance, determine patients' needs, plan the future development services. **Aim and Objectives:** To assess the level of satisfaction regarding health care in patients attending urban health training centre affiliated with Indira Gandhi Government Medical College, Nagpur. To study the socio demographic characteristics of the study population and to suggest recommendations based on the study findings. **Materials and Methods:** A cross-sectional survey on 100 patients with a Patient Satisfaction Questionnaire-18 was done. Universal Sampling method was adopted to select the participants for this study. **Results:** Overall satisfaction in urban health training center is 73.77% which is very much satisfactory. The lowest score was in domain of Time spent with doctor (mean:2.98) and the domain wise mean scores in elderly population (>60 years) are comparatively low. **Conclusion:** Mean score and percentage of the patient satisfaction was satisfactory in that Urban Health training centre. However, more Empathetic approach is needed towards elderly population in regard to health care delivery. There must also be efficient and skilled manpower utilization for basic checkup so that the doctor-patient quality time can be improved.

KEYWORDS

Patient Satisfaction, Health Care, Urban Health Training Centre, PSQ-18

INTRODUCTION:

One of the four principles of primary health care, community participation,¹ can be done by any means such as active participation in running health program, planning a program, implementation during various health activities, and giving feedback to health care providers. Patient satisfaction survey, an important tool to get feedback from the people, is a means of measuring the effectiveness of health care delivery in a particular area. It reveals the strengths and weaknesses regarding the services provided in the health sector. The data gathered through measuring the patient satisfaction reflects care delivered by staffs and health care providers and can serve as a tool in decision-making. Patient satisfaction surveys can be tools for learning; they can give proportion to problem areas and a reference point for making management decisions. They can also serve as a means of holding health care providers accountable — Health care providers can be compelled to show that they have acceptable levels of patient satisfaction.² Thus the issues/aspects of satisfaction and dissatisfaction can be explored which may draw attention of the health care providers and administrators in order to monitor performance, determine patients' needs, plan the development of services, and provide evidence to support applications for financial support and expenditure.

Various studies have been done in India including West Bengal, in an attempt to reveal facts or domains of satisfaction or dissatisfaction regarding various health services or utilities.³ Some of them were conducted in rural areas,⁴ some in urban; some revealed overall satisfaction,⁵ some regarding the improvement of patient satisfaction done by intervention.⁶

A hospital based study conducted by Ogunfowokan and Mora in 2012, on time, expectation and satisfaction: Patients' experience at National Hospital Abuja, Nigeria, revealed that the reduction in patient-clinic encounter time and meeting patients' previsit expectations could significantly improve the patient satisfaction after clinic visit encounters at the general outpatient department (OPD).⁷

As patient satisfaction regarding various health services or utilities varies from the tools of measurements, setting to setting, areas to areas, ethnic group to ethnic groups, this study will be conducted to reveal new facts regarding the patient satisfaction in Urban Health training Centre of Indira Gandhi Government Medical College, Nagpur, so

that it may improve or change or strengthen our current practice of providing health care or services.

The study was conducted to assess the level of satisfaction of patients regarding the different aspects of health care in an urban health training center of Indira Gandhi Government medical College, Nagpur and also to study the sociodemographic characteristics of study participants and to suggest suitable recommendations based on the study findings.

MATERIALS AND METHODS :

An observational cross-sectional study was carried out in month of January 2022 in Dr. Ambedkar Hospital and Research Centre, Indora, Nagpur. The study participants are patients attending different OPDs of UHTC and who are willing to give consent. Severely ill patients, patients who are illiterate and patients who are refuse to give consent are excluded from the study. In addition, staffs/health care provider/health workers of that urban health center were also not included.

Based on a study conducted by Kumari et al.⁵ in Lucknow district, India, it was seen that overall satisfaction regarding one outcome variable (doctor patient communication) is 60% and applying suitable formula⁹ for a cross-sectional study, sample size come out to be 92. However a total of 100 participants were included in the study. Visit was made to each of the OPDs in that urban health training centre and universally all participants who fulfill the inclusion criteria were selected till the sample size was achieved.

A written Informed Consent was obtained from the participants before enrolling them in the study by explaining well in detail about the purpose of study. Participants were ensured about the confidentiality of their data. A Predesigned pre tested proforma will be used for collection of information regarding the socio demographic characteristics.

The questionnaire includes two parts and the more important one to mention is the second part. The first part consists of information regarding the patient's sociodemographic characteristics, OPD visited, information regarding any inconvenience faced and consultation time with doctor. The second part consists of 18 questions regarding the patient satisfaction, based on PSQ-18 developed by

Marshall and Hays¹⁰ which has been widely used in various studies.^{8,11,12}

The questionnaire comprehensively measures the patient satisfaction with the 18 items which yields seven domains of patient satisfaction, that were general satisfaction (2 items, that were item 3 and 17), interpersonal manner (2 items, that were item 10 and 11), communication (2 items, that were item 1 and 13), technical quality (4 items, that were item 2, 4, 6, and 14), financial aspects (2 items, that were item 5 and 7), time spent with doctor (2 items, that were item 12 and 15), and accessibility and convenience (4 items, that were item 8, 9, 16, and 18).

Those items were framed in such a way that they were statements of opinion, since each was accompanied by five response categories from strongly agree, agree, uncertain, and disagree to strongly disagree. Internal consistency of it is checked by Cronbach's alpha whose value is 0.688. The questionnaire is translated in patient's vernacular language with proper back translation and self administered to participants. After collecting all the data, data entry was done in MS EXCEL Version 2019. Data was organized and presented by applying principles of descriptive statistics.

Analysis of the data was done by IBM Statistical Package for Social Sciences version 20 (SPSS 20). Satisfaction was determined by mean scores. Continuous data was tested for significance by t-test and ANOVA. Linear regression analysis was done to find out the relationship between continuous dependent variable with other independent variables.

PSQ-18 yields for each of the seven different subscales; general satisfaction (2 items), interpersonal manner (2 items), technical quality (4 items), financial aspects (2 items), time spent with doctor (2 items), and accessibility and convenience (4 items). All items were scored from one to five so that high scores reflect satisfaction with health care. After item scoring, items within each scale was averaged together to create the 7 subscale scores.

All items were scored in such a way so that high scores reflected satisfaction with health care facility. After scoring, scale score was done, based on a study conducted by Holikatti et al.¹² on patient satisfaction with psychiatric services in Cuttack. Scale score represents the average for all items in the scale that was answered.

RESULTS :

Table no : 1 – Sociodemographic characteristics of study population

SOCIO DEMOGRAPHIC VARIABLES		NUMBER (n=100)	PERCENTAGE
AGE GROUP (IN YEARS)	≤ 20	9	9
	21-30	29	29
	31-40	22	22
	41-50	19	19
	51-60	12	12
	61-70	8	8
	71-80	1	1
SOCIO ECONOMIC STATUS	CLASS I	13	13
	CLASS II	28	28
	CLASS III	34	34
	CLASS IV	21	21
	CLASS V	4	4
TYPE OF FAMILY	NUCLEAR	68	68
	JOINT	13	13
	THREE GENERATION	14	14
	OTHERS	5	5

Out of 100 participants majority are male (62%) with mean age of 40.93± 14.59 years and with range of : 17-63 years. 38% were female participants with mean age of 34.71± 13.88 years and range of 13-67 years. Maximum number of participants are graduates 30(30%) and skilled workers 23(23%).

Majority of participants 67 (67%) were Buddhist and maximum number of participants are married 66(66%). The average consultation time in OPD is 14.85 minutes with a range of 1-30 minutes. From Table no : 1 it is also evident that maximum number of participants 29(29%) were in the age group of 21-30 years. 34(34%) of participants belong to socio economic class III (middle class) and majority of participants are married 68(68%).

Table 2 : Patient satisfaction score distribution in different domains of satisfaction :

DOMAINS OF PATIENT SATISFACTION*	STUDY PARTICIPANTS SCORE (N=100)	
	Mean ± SD	PERCENTAGE SATISFACTION
GENERAL SATISFACTION	3.61 ± 0.093	74.30
TECHNICAL QUALITY	3.81 ± 0.581	76.20
INTERPERSONAL MANNER	3.72± 0.805	75.50
COMMUNICATION	4.05 ± 0.619	83.40
FINANCIAL ASPECTS	3.51 ± 0.927	70.90
TIME SPENT WITH DOCTOR	2.98 ± 0.978	59.70
ACCESSIBILITY & CONVENIENCE	3.69 ± 0.654	73.90
OVERALL SATISFACTION	3.68 ± 0.470	73.77

Table 2 shows a mean score of each domains of patient satisfaction. Mean satisfaction is the highest for communication (4.05) and least is in time spent with doctor (2.98). Overall satisfaction was 73.77% with a mean value of 3.68.

Table 3 : Patient satisfaction association with respect to age of study participants :

PATIENT SATISFACTION DOMAIN	≤20 YEARS	21-30 YEARS	31-40 YEARS	41-50 YEARS	51-60 YEARS	61-70 YEARS	71-80 YEARS	P-VALUE
	Mean ±SD	Mean±SD	Mean ±SD	Mean ±SD	Mean ±SD	Mean ±SD		
GENERAL	3.78±1.09	4.00±0.46	3.27±1.03	3.53±1.07	3.75±0.96	3.00±0.92	3.00	0.045
TECHNICAL	3.78±0.44	3.86±0.35	3.82±0.50	3.58±0.83	3.92±0.66	4.00±0.75	4.00	0.601
INTERPERSONAL	3.78±0.83	3.86±0.51	3.73±0.98	3.53±0.69	3.75±1.05	3.50±1.06	4.00	0.844
COMMUNICATION	4.33±0.70	4.10±0.55	3.95±0.72	3.89±0.65	4.00±0.60	3.88±0.35	4.00	0.646
FINANCIAL	3.78±0.66	3.69±0.80	3.36±0.84	3.21±0.85	3.33±1.37	4.00±1.06	3.00	0.291
TIME SPENT WITH DOCTOR	2.72±1.06	3.12±0.95	3.02±0.99	3.00±0.95	2.79±1.01	2.93±1.20	3.00	0.947
ACCESSIBILITY & CONVENIENCE	3.52±0.84	3.99±0.51	3.81±0.55	3.46±0.54	3.37±0.61	3.50±1.05	3.75	0.033
OVERALL	3.70±0.50	3.89±0.37	3.68±0.44	3.47±0.44	3.62±0.62	3.56±0.49	3.55	0.100

ONE WAY ANOVA TEST APPLIED
LEVEN'S TEST FOR HOMOGENEITY OF VARIANCES TESTED
POST HOC TEST NOT PERFORMED AS ONE GROUP HAS FEWER THAN TWO CASES

Table 3 shows significant association between age and patient satisfaction in domain of general satisfaction and accessibility and convenience . It can also be seen that the mean scores of participants aged > 60 years are comparatively slightly low when compared with the younger population.

TABLE 4 : Predictor analysis showing relation of Technical quality satisfaction with sociodemographic variables :

VARIABLES	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENT B	SIGNIFICANCE	R VALUE
	B	SE			
CONSTANT	4.54	0.55	-	0.00	R=0.301 R ² =0.090 Adj. R ² =0.000
AGE GROUP	0.06	0.05	0.15	0.25	
SEX	-0.33	0.15	-0.27	0.03	
EDUCATION	0.04	0.04	0.11	0.34	
OCCUPATION	-0.03	0.02	-0.18	0.15	
SOCIOECONOMIC STATUS	0.00	0.05	0.001	0.99	
FAMILY TYPE	0.04	0.06	0.06	0.54	
RELIGION	-0.15	0.08	-0.18	0.07	
MARITAL STATUS	-0.06	0.13	-0.05	0.63	
OPD VISITED	-0.01	0.06	-0.02	0.79	

From table 4 its is evident that Sex is a significant predictor for the domain of Technical quality satisfaction but the model could not explain the overall variation in satisfaction.

TABLE 5 : Predictor analysis showing relation of time spent with doctor with sociodemographic variables :

VARIABLES	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENT B	SIGNIFICANCE	R VALUE
	B	SE			
CONSTANT	1.27	0.92	-	0.17	R=0.333 R ² =0.111 Adj. R ² =0.022
AGE GROUP	-0.14	0.08	-0.21	0.12	
SEX	0.50	0.25	0.25	0.04	
EDUCATION	-0.02	0.08	-0.03	0.79	
OCCUPATION	-0.00	0.03	-0.01	0.92	
SOCIOECONOMIC STATUS	0.14	0.08	0.17	0.10	
FAMILY TYPE	0.08	0.10	0.07	0.44	
RELIGION	0.20	0.14	0.14	0.15	
MARITAL STATUS	0.41	0.21	0.23	0.05	
OPD VISITED	-0.08	0.10	0.08	0.40	

From table 5 it is evident that Sex and marital status are significant predictors for the domain Time spent with doctor but the model could

explain only 2.2% of overall variation in satisfaction in the domain of Time spent with doctor.

TABLE 6 : Predictor analysis showing relation of overall satisfaction with sociodemographic variables:

VARIABLES	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENT β	SIGNIFICANCE	R VALUE
	B	SE			
CONSTANT	3.93	0.43	-	0.000	R=0.331 R ² =0.110 Adj. R ² =0.031
AGE GROUP	-0.07	0.04	-0.22	0.09	
SEX	-0.14	0.11	-0.15	0.21	
EDUCATION	0.01	0.03	0.05	0.63	
OCCUPATION	-0.02	0.01	-0.16	0.18	
SOCIOECONOMIC STATUS	0.03	0.04	0.09	0.34	
FAMILY TYPE	0.05	0.05	0.10	0.31	
RELIGION	0.00	0.06	0.007	0.94	
MARITAL STATUS	0.07	0.10	0.086	0.47	

Table 6 shows linear regression analysis between the overall satisfaction as the dependent variable and independent variables such as age, sex, religion, occupation, education, SE class, religion, and family type. Linear regression equation was, overall satisfaction = $3.93 - 0.007 \times \text{age} - 0.14 \times \text{sex} + 0.01 \times \text{education} - 0.02 \times \text{occupation} + 0.03 \times \text{socioeconomic class} + 0.05 \times \text{family type} + 0.00 \times \text{religion} + 0.07 \times \text{marital status}$. However, the model could explain the variation of overall satisfaction in only 3.1% of the study participants. Predictor analysis has not shown any significant associations between socio demographic variables and other domains of patient satisfaction except the ones mentioned above.

DISCUSSION :

The need to improve quality of healthcare delivery is increasing, and a major component of quality of health care is patient satisfaction. Furthermore, the patient satisfaction is critical to how well patients do; research has identified a clear link between patient outcomes and patient satisfaction scores. Patient satisfaction was calculated with the help of PSQ-18. It was found that the overall satisfaction regarding the Urban Health training Centre was 73.77% with the mean score of 3.68. The level of satisfaction in the current study was much higher than in many studies such as Holikatti et al.[12] (55.3%), Moemen¹³ (mean 2.96), and Asraf et al.¹⁴ (satisfaction 61%); however, the mean satisfaction level was low in comparison to study by Ziaei et al.⁸ (mean 4.0).

The mean score of communication was 4.05, highest among seven domains of patient satisfaction. When compared with the studies conducted by Holikatti et al.¹² and Moemen,¹³ it was found that in the present study, all the domains (general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, accessibility, and convenience) had higher score.

The study population comprised of more males (62%) than females (38%). However this finding was inconsistent with a similar type of study conducted by Ogunfowokan and Mora⁷ in a general OPD of Nigeria which showed majority of the study population comprises of females (54.1%). . It was seen that in 21-30 years of age group the study population was maximally distributed (29%), which was totally unrelated with a study conducted by Moemen¹³ in 2008 in Alexandria University which showed maximum (32.6%) study population among 40-60 years age group. As illiterates are excluded in this study we may find lesser older population in this study.

Regarding distribution of the study population according to other sociodemographic variables, it was seen that majority of study participants were Buddhist (67%), graduates (30%), and belonged to socioeconomic Class III (34%) according to modified BG Prasad scale. Since the Indora area where the urban health training centre is situated has lot of Buddhist colonies we are seeing a majority of buddhist population in our study.

While studying different OPD visit made by the patients it was found that most of the them had visited Medicine OPD (73%), followed by surgery (11%) and OBGY (8%), Orthopaedics(8%) OPD, respectively.

Sex is a significant predictor for Technical quality satisfaction while Sex and Marital status are significant predictors for domain of time

spent with doctor. The pattern of satisfaction in different domains according to different sociodemographic variables does not show any particular trend in our study also the different socio deographic variables donot show significant association in other domains. This is quite opposite to the findings of a study done by Quintana et al. in Spain where age, gender, the level of education, and marital status were found to be the predictors of patient satisfaction with hospital health care.¹⁶

Linear regression with overall satisfaction with sociodemographic variables showed no significant association and this study finding was consistent with studies conducted by Hall and Dornan,¹⁷ Crow et al.¹⁸ which revealed that there was no significant association between the patient satisfactions with sociodemographic variables.

The main limitation of the present study is pertaining to its self administered questionnaire and its observational nature. Also the reason for dissatisfaction was not assessed by this study.

CONCLUSION & RECOMMENDATIONS :

Overall satisfaction in urban health training center is 73.77% which is very much satisfactory. Among the different domains of measurements of patient satisfaction, only time spent with doctor was low and mean scores were lower in elderly population (>60 years). Hence more Empathetic approach is needed towards elderly population in regard to health care delivery. There must also be efficient and skilled manpower utilization for basic checkup so that the doctor-patient quality time can be improved. The study findings can aid in the development of targeted, objectively prioritized programs for the improvement of health care delivery in such health centres.

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REFERENCES :

- Suryakantha AH. Community Medicine with Recent Advances. 2nd ed. Bengaluru (India): Jaypee Brothers Medical Publishers (P) Ltd.; 2010. p. 591.
- Powell L, editor. Patient satisfaction surveys for critical access hospitals. In: Patient Satisfaction Surveys. Why Evaluate Patients' Satisfaction. Idaho: Mountain States Group, Inc.; 2001. p. 2-4.
- Sivalenka S. Patient Satisfaction Surveys in Public Hospitals in India. Available from: <http://www.rand.org>. [Last accessed on 2014 Nov 24].
- Das P, Basu M, Tikadar T, Biswas G, Mridha P, Pal R. Client satisfaction on maternal and child health services in rural Bengal. Indian J Community Med 2010;35:478-81.
- Kumari R, Idris M, Bhushan V, Khanna A, Agarwal M, Singh S. Study on patient satisfaction in the government allopathic health facilities of Lucknow district, India. Indian J Community Med 2009;34:35-42.
- Privatisation of Hospital Cleaning Services, West Bengal; 2004. Available from: <http://www.google.co.in/> url?sa=t&rect=j&q=patient%20satisfaction%20survey%20west%20bengal&source=web&cd=1&cad=rja&ved=0CCoQFjAA&url=http%3A%2F%2Fwww.hsprodindia.nic.in%2Ftreetopt2.asp%3FSD%3D1%26SI%3D10%26ROT%3D3&ei=Ej p j U J T t M e u 8 i A f R m o G A B A & u s g = A F Q J C N F V s Y si7BpO5_m9ZDqVOH8kvGW3Bg. [Last accessed on 2014 Nov 24].
- Ogunfowokan O, Mora M. Time, expectation and satisfaction. Patients' experience at National Hospital Abuja, Nigeria. Afr J Prim Health Care Fam Med 2012;4:6. Available from: <http://www.dx.doi.org/10.4102/phcfm.v4i1.398>. [Last accessed on 2014 Nov 17].
- Ziaei H, Katibeh M, Eskandari A, Mirzadeh M, Rabbanikhah Z, Javadi MA. Determinants of patient satisfaction with ophthalmic services. BMC Res Notes 2011;4:7.
- Lwanga SK, Lemeshow S. Sample Size Determination in Health Studies: A Practical Manual. Geneva: World Health Organization; 1991. p. 25.
- Marshall GN, Hays RD. The Patient Satisfaction Questionnaire Short-form (PSQ-18). Santa Monica, California: RAND; 1994.
- Chander V, Bhardwaj AK, Raina SK, Bansal P, Agnihotri RK. Scoring the medical outcomes among HIV/AIDS patients attending antiretroviral therapy center at Zonal Hospital, Hamirpur, using Patient Satisfaction Questionnaire (PSQ-18). Indian J Sex Transm Dis 2011;32:19-22.
- Holikatti PC, Kar N, Mishra A, Shukla R, Swain SP, Kar S. A study on patient satisfaction with psychiatric services. Indian J Psychiatry 2012;54:327-32.
- Moemen MM. Patient satisfaction among attendance of outpatient clinics of different clinical departments at Alexandria main university. Bull Alex Fac Med 2008;44:229-40.
- Asraf M, Asraf F, Rahman A, Khan R. Assessing women's satisfaction level with maternity services: Evidence from Pakistan. Int J Collab Res Intern Med Public Health 2012;4: 1821-51.
- Tucker JL 3rd, Kelley VA. The influence of patient sociodemographic characteristics on patient satisfaction. Mil Med 2000;165:72-6.
- Quintana JM, González N, Bilbao A, Aizpuru F, Escobar A, Esteban C, et al. Predictors of patient satisfaction with hospital health care. BMC Health Serv Res 2006;6:102.
- Hall JA, Dornan MC. Patient sociodemographic characteristics as predictors of satisfaction with medical care: A meta-analysis. Soc Sci Med 1990;30:811-8.
- Crow R, Gage H, Hampson S, Hart J, Kimber A, Storey L, et al. The measurement of satisfaction with healthcare: Implications for practice from a systematic review of the literature. Health Technol Assess 2002;6:1-244.