ORIGINAL RESEARCH ARTICLE

Are Patients Satisfied with Government Health Care? A Study on Patient's Level of Satisfaction and Their Perception of Violence Against Doctors at A Government Hospital in North Karnataka, India

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ABSTRACT

Background: The level of patient satisfaction must be evaluated periodically to assess the quality of health care provided by the government and to improve health care delivery in developing nations. The purpose of the study is to determine the level of patient satisfaction and their perception of violence against doctors among in-patients attending government teaching hospital.

Methodology: It was a cross-sectional study among in-patients of government teaching hospital in North Karnataka. A predesigned structured Patient Satisfaction Questionnaire –18 (PSQ–18), along with self-framed violence questionnaire was used as study tools. Descriptive Statistics, ANOVA & Kruskal - Wallis tests were done using SPSS version 16.

Results: The mean score for overall satisfaction was 3.72± 0.387. The mean patient satisfaction was highest for interpersonal manner (4.00 ±0.72) & the least was accessibility and convenience (3.52±0.58). Among the study subjects47.5% had heard about the violence against the doctors, 33.5% said violence against doctors is on rise. Violence against doctors was unethical according to 57.5% and 60% said it must summon punishment.

Conclusions: The overall patient satisfaction was good; accessibility and convenience need to be improved. The study helps in understanding patient's needs in various dimensions of health care.

Key words: patient satisfaction, violence against doctors, PSQ, quality of care

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INTRODUCTION

Medical care caters improvement of health status, patient needs and also ensures their satisfaction with care. The current health care is scrutinized for the quality of care provided and patient satisfaction.[1] Pascoe in 1983 stated, Patient satisfaction as the extent of an individual's experience compared with his or her expectations of health care.[2]Patient satisfaction reflects subjective assessment of the quality of health care and it is not a measure of final outcome[3] but successful treatment outcome depends on understanding the patient's expectations by the doctors.[4] Research suggests that health care that is less satisfactory to the patients, is less effective, because patient dissatisfaction is associated with noncompliance with treatment, delay in seeking further care and poor understanding and retention of medical advice.[3]

With a shift from doctor-to-patient relationship to modern provider-client attitude, there is rising strength of consumerism and quality consciousness in the society.[5] Today's doctor are criticised for being dependent on technology and not understanding the emotions and perceptions of the patients, creating a gap between what the patients want and what doctors perceive as important.[6] Patient satisfaction is thought to be the perception and an attitude that a consumer have towards the total experience of health care, being multidimensional, it is an important key marker for the quality of health care delivery.[7] Apart from the socio-demographic and economic status of the patients, there are numerous dimensions, which significantly affect the patient satisfaction level, like admission & discharge process; waiting time to receive medical care; interpersonal communication; technical skills of health care provider and availability, quality & structural design of health facility.[8,9]

To measure the patient satisfaction levels various different instruments have been used. As very little information about patient satisfaction is available in India, researches pertaining to it are needed to ascertain the best technique for measuring quality of health care services and the find the various predictors of overall satisfaction.[10]

Workplace violence is defined by World Health Organization (WHO) as Incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well- being or health.[11] About one-fourth of the world's workplace violence occurs in Health care sector and health care workers stand as second on the list of risk group for work violence as reported by International Labour Organization (ILO).[12] In both developed and developing countries workplace violence has become an endemic problem for health care workers as shown by studies done across the globe.[13]

The British Crime Survey stated that doctors and nurses are among those who are at risk of threats and assaults in the workplace.[14] Due to gross under reporting, the exact frequency and rates of violence against health care staff remains, but studies show up to 90% of health care workers reporting exposure to violence at work place.[15]According to the Indian Medical Association up to 75% of doctors have faced some kind of violence at work, similar to the rates from other countries. [16]Violence included telephonic threats, intimidation, verbal abuse, physical assault which is non- injurious, simple or grievous, murder, vandalism, and arson. Depression, insomnia, post-traumatic stress, fear, and anxiety are common among medical professionals who face violence, leading to absenteeism.[17] Due to such violent incidents many doctors have lost their clinics, injured themselves and tarnished their reputation as a professional and even lost lives.[18, 19]

The significance of patient happiness and patient satisfaction has been underlined by the increase in violence against healthcare practitioners. Research from China by Hongzing Yu et al., has highlighted several instances of violence against medical staff, one of the causes of which was low service quality.[20] Madhok from India claims that patients have assaulted, beaten, and otherwise mistreated doctors for petty transgressions. They claimed that poor doctor-patient communication, a negative perception of the medical profession, along with inadequate protection for doctors, were the main reasons for violence.[21] An article from Bangladesh sheds light on the fact that violence in the healthcare industry has been rising alarmingly all around the nation. Patients who feel they have not been treated appropriately take matters into their own hands since there is a significant gap between their reality and expectations.[22]

A survey regarding patient's perception of violence committed against doctors, in light of the recent rise in such events, seems to be the need of the hour, not only in attempt to create a safe violence free hospital for doctors, but also to understand their views and response to the situation in the case of unexpected circumstances and to educate them on having realistic expectations from doctors. With this background the present study was conducted to assess patient's satisfaction with health care, patient's perception of violence against doctors and how patient satisfaction and perception of violence are related.

OBJECTIVE

The primary objective of this study was to determine patient satisfaction with the health care provided at a government teaching hospital with a help of PSQ18 questionnaire and factors associated with patient satisfaction. The secondary objective was to determine patient's perception of violence against doctors and asses its association with patient satisfaction.

METHODOLOGY

A hospital based cross-sectional study was conducted in Gadag Institute of Medical Sciences (GIMS) teaching hospital, Gadag, Karnataka for a period of 3 months. Patients in the age group of 18 to 60 years, admitted for a minimum of 24 hours, well oriented to time, place and person and who gave consent were included in the study. Patients with psychiatric problems were excluded from the study. Sample size for the study was calculated using Epi Info software; assuming satisfaction level of 50% and taking confidence level 95% and error as 7%, sample size was calculated to be 196, rounded off to 200. (As sample size with 7% allowable error was larger than sample size with 10% allowable error, we chose 7% allowable error.) Purposive sampling was used to select study subjects. Ethical clearance was obtained from the Institutional Ethics Committee, Gadag Institute of Medical Sciences, Gadag (GIMS/IEC/32/20). Study subjects were interviewed in Kannada language by the principal investigator using the questionnaire, which consisted of socio-demographic details, Patient Satisfaction Questionnaire- 18 (PSQ-18) and self-constructed violence questionnaire. The English version of questionnaire was translated to Kannada language and re-translated to English by Language Expert.

The original PSQ was developed by Ware, Snyder and Wright in 1976. PSQ-18 is a brief version of PSQ-III and can be used in various settings with 18 questions. Patients choose one of the responses on a five-point Likert's scale of strongly agree, agree, uncertain, disagree and strongly disagree for each item. For some PSQ-18 item Agreement reflects satisfaction with medical care and for other dissatisfaction and are scored accordingly. The PSQ-18 estimates separate scores seven different subscales: General satisfaction (2 items), Technical quality (4 items), Interpersonal manner (2 items), Communication (2 items), Financial aspects (2 items), Time spent with doctor (2 items), Accessibility and convenience (4 items). After scoring item, items within each scale are averaged together to estimate 7 subscale scores using median& interquartile range (IQR) and mean ± standard deviation (SD).[23]

The overall score of satisfaction (18 items) was also estimated.

A self – made questionnaire to assess the perception of violence was made which consisted of a set of 18 questions, based on the commonly established norms, beliefs and expectations that people have from doctors[24-26] including the views patients have regarding the violence against doctors.

Data was coded and entered in Microsoft excel and imported and analysed by SPSS (version 17.0). Variables were Analysed using mean ± standard deviation (SD) and median (IQR) or percentage. The association of the various socio- demographic variables with overall patient satisfaction was analysed by Kruskal Wallis test, ANOVA was done for subscale satisfaction and the p-value of less than 0.05 was considered as significant.

RESULTS

This study primarily aimed at assessing patient satisfaction in medical care received at in-patient wards of various departments at GIMS teaching hospital, Gadag and assessing their perception of violence against doctors was the secondary objective. The study revealed overall good level of patient satisfaction. Table 1: The study participants comprised of slightly higher proportion of males (54%), and about 52% belonged to the age group of 18 to 32 years.

Table 1: Distribution of the study participants according to Socio – demographic profile

Socio – Demographic features	Participants (%)
Sex	
Male	108 (54)
Female	92 (46)
Age	
18-32	104 (52)
33-47	73 (36.5)
48-60	23 (11.5)
Religion	
Hindu	141 (70.5)
Muslim	53 (26.5)
Christian	6 (3)
Education	
Illiterate	53 (26.5)
Primary	73 (36.5)
High school	48 (24)
Secondary	23 (11.5)
Graduate	3 (1.5)
Occupation	
Unemployed	35 (17.5)
Agriculturist	40 (20)
Laborer	48 (24)
Housewife	57 (28.5)
Businessman	6 (3)
Student	8 (4)
Employee in service	6 (3)
Socio Economic Status (SES)	
Class 1	0 (0)
Class 2	7 (3.5)
Class 3	74 (37)
Class 4	79 (39.5)
Class 5	40 (20)
Department	
Medicine	74 (37)
Surgery	73 (36.5)
Obstetrics	20 (10)
Ophthalmology	4 (2)
ENT	6 (3)
Orthopedic	9 (4.5)
Chest & TB	5 (2.5)
Gynecology	9 (4.5)
Duration of admission	
1 day	47 (23.5)
3 days	62 (31)
5 days	44 (22)
>5 days	47 (23.5)

Table 2: Distribution of patient satisfaction level based on PSQ-18 questionnaire

Category	Patient Satisfaction Questionnaire (PSQ)	SA	A	UN	D	SD
General Satisfaction	PSQ3: The medical care I have been receiving is just about perfect	0 (0)	11 (5.5)	59 (29.5)	109(54.5)	21 (10.5)
	PSQ17: I am dissatisfied with some things about the medical care I receive	5 (2.5)	26 (13)	17 (8.5)	134 (67)	18 (9)
Technical Quality	PSQ2: I think my doctor's office has everything needed to provide medical care	2 (1)	18 (9)	48 (24)	106 (53)	26 (13)
	PSQ4: Sometimes doctors make me wonder if their diagnosis is correct	10 (5)	37 (18.5)	84 (42)	61 (30.5)	8 (4)
	PSQ6: When I go for medical care, they are careful to check for everything when treating and examining me	2 (1)	9 (4.5)	17 (8.5)	133(66.5)	39 (19.5)
	PSQ14: I have some doubts about the ability of the doctors who treat me	3 (1.5)	14 (7)	39 (19.5)	113(56.5)	31 (15.5)
Interpersonal Manner	PSQ10: Doctors act too business like and impersonal towards me	6 (3)	14 (7)	12 (6)	104 (52)	64 (32)
	PSQ11: My doctors treat me in a very friendly and courteous manner	3 (1.5)	18 (9)	7 (3.5)	125(62.5)	47 (23.5)
Communication	PSQ1: Doctors are good about explaining the reason for medical tests	1 (0.5)	22 (11)	22 (11)	114 (57)	41 (20.5)
	PSQ13: Doctors sometimes ignore what I tell them	3 (1.5)	24 (12)	8 (4)	117(58.5)	48 (24)
Financial Aspects	PSQ5: I feel confident that I can get the medical care whenever I need without being set back financially	4 (2)	36 (18)	10 (5)	101(50.5)	49 (24.5)
	PSQ7: I have to pay more for my medical care than I can afford	7 (3.5)	6 (3)	13 (6.5)	146 (73)	28 (14)
Time Spent with Doctor	PSQ12: Those who provide my medical care sometimes hurry too much when they treat me	5 (2.5)	27 (13.5)	7 (3.5)	146 (73)	15 (7.5)
	PSQ15: Doctors usually spend plenty of time	0 (0)	28 (14)	10 (5)	139(69.5)	23 (11.5)
Accessibility & Convenience	PSQ8: I have easy access to the medical specialist I need	4 (2)	40 (20)	87 (43.5)	63 (31.5)	6 (3)
	PSQ9: Where I get medical care people have to wait too long for emergency treatment	5 (2.5)	24 (12)	37 (18.5)	107(53.5)	27 (13.5)
	PSQ16: I find it hard to get an appointment for medical care right away	5 (2.5)	37 (18.5)	25 (12.5)	123(61.5)	10 (5)
	PSQ18: I am able to get medical care whenever I need	1 (0.5)	24 (12)	17 (8.5)	118 (59)	40 (20)

SA- Strongly Agree, A- Agree, UN- Uncertain, D- Disagree, SD- Strongly Disagree

Table 3: Satisfaction of patients in each subscale of PSQ-18

Characteristics	Mean	SD
Overall satisfaction	3.7206	0.387
General satisfaction (GS)	3.685	0.583
Technical quality (TQ)	3.78	0.609
Interpersonal manner (IM)	4.002	0.716
Communication (COM)	3.88	0.68
Financial aspect (FA)	3.84	0.682
Time Spent with Doctor (TS)	3.74	0.643
Accessibility And Convenience (AC)	3.52	0.582

SD-Standard deviation

Among the study participants 26.5% were illiterates and 36.5% had primary level of education. The study population comprised mostly of persons involved in Agriculture, Labour while most of the female population comprised of housewives. Patients belonged to socio-economic status of class III (37%) and IV (39.5%) respectively. In this study 31% of patients were admitted for a period of 3 days.

According to PSQ 18, most patients (65%) disagreed with the item that medical care is just perfect, 15.5% were dissatisfied with some aspects of medical care they received. To the statement doctors act too business like & impersonal 84% of patients disagreed, while only 10% said doctors are very friendly and courteous. Only 13.5% agreed that doctors sometimes ignore what they tell them, but 87.5% were dissatisfied with the explanation given by doctors for medical tests. The financial setback for getting medical care was faced by 85% of patients, while 16.5% said they had to pay more than they can afford. On contrary to 16.5% patients said doctors hurry too much while treating, 81% disagreed that doctors spend plenty of time. With respect to accessibility and convenience, 22% agreed to easy accessibility, 21% said they had difficulty in getting appointments and only 12.5% were able to get medical care whenever they need (Table 2).

Table 3: The overall mean patient satisfaction level was 3.72± 0.387.

Table 4: Association of overall satisfaction with socio-demographic variables (Kruskal – Walli's Method)

Variables	Median	IQR	P value
Age			
18-32	3.72	0.5	0.012*
33-47	3.72	0.5	
48-60	3.89	0.39	
Religion			
Hindu	3.83	0.5	0.038*
Muslim	3.72	0.5	
Christian	3.61	0.16	
Socio Economic status			
Class 2	4.11	0.44	0.047*
Class 3	4.11	0.44	
Class 4	3.72	0.44	
Class 5	3.78	0.44	
Department			
Medicine	3.72	3.72	0.002*
Surgery	3.72	0.42	
Obstetrics	4	0.38	
Ophthalmology	3.94	0.65	
ENT	4	0.52	
Orthopaedics	3.89	0.72	
Tuberculosis	3.33	0.28	
Gynaecology	3.72	0.72	
Duration of Admission			
1 day	3.67	0.56	0.035*
3 days	3.72	0.51	
5 days	3.78	0.45	
>5 days	3.83	0.45	

*Significant

Table 4a: Post-hoc test

Variables	Test Statistic	Std Error	Std. Test Statistic	Adj. Sig
Age				
33-47 - 48-60	-40.43	13.82	-2.96	0.10*
18-32- 48-60	-34.54	13.31	-2.59	0.028*
SES				
Class 4- Class 2	63.79	22.79	2.79	0.31*
Department				
Chest & TB- OBG	108.95	28.89	3.77	0.005*
Chest & TB- ENT	113.30	39.99	3.23	0.034*

The patients were most satisfied with the aspect of interpersonal manner (4.002 ±0.72), followed by communication (3.88± 0.88) and financial aspect (3.84±0.68). The least satisfied area was accessibility and convenience (3.52±0.58).

The patient satisfaction on 4 subscales showed a median of 3.780 with an IQR of 0.44 for overall quality care. Accessibility and convenience of health services (median score = 3.75) was the least satisfied subscale. The median scores for Interpersonal manner, Communication and Time spent by the Doctor with patient was 4.00. The patients of the age group 48- 60 years, Hindus by religion and of socio-economic status II & III seemed to be most satisfied in terms of overall satisfaction (median value 3.89, 3.83, 4.11 respectively). The departments where patients were most satisfied were obstetrics and ENT. The least overall satisfaction was in Chest & TB department (median value3.33), the reason for which may be the small study population obtained from there and less faculty working there. (Table 4)

There was a statistically significant difference between age groups and overall patient satisfaction as determined by **Kruskal – Walli's** test (test value=8.774, df- 2, p=0.012). A post-hoc test revealed that the patient satisfaction score was lower in age group18-32 (p=0.028) and 33-47 group (p=0.010) compared to 48-60 age group. The study also found significant association between religion, duration of admission and overall patient satisfaction (p value 0.038, 0.035 respectively). But the post-hoc test showed no significant difference between religion groups and duration of admission.

Socio-economic status and overall patient satisfaction were significantly associated. (p=0.047). Post hoc analysis revealed that Class 2 had higher overall patient satisfaction scores compared to class 4 (p=0.031). Statistically significant difference between department and overall patient Satisfaction was found and post hoc revealed that patient satisfaction was lower in Tuberculosis department compared to ENT (p=0.034) and OBG department (p=0.005).

Table 5: Age group of 48-60 years accounted for most satisfied on overall (3.93**± 0.23**) and 6 other subscales, in terms of communication age group of 33- 47 (3.93±0.60) were most satisfied and age group of 18-32 were least satisfied. Age of the patient had significant association with overall satisfaction, general satisfaction and financial aspect with p value of 0.018, 0.002 & 0.001 respectively. The study participants following Hindu religion accounted for higher mean scores in four of the subscales, while significant association was found between religion and time spent with doctor & AC subscales with Hindus being more satisfied with TS (3.78±0.64) and Christian more satisfied with AC (3.75±0.52) with p value of 0.014, 0.008 respectively.

Patient satisfaction level varied among various departments, those admitted under ENT were most satisfied in terms of overall satisfaction (3.95±0.21) & communication (4.25±0.52); Ophthalmology patients with general satisfaction (4.12±0.47), financial aspect (4.75±0.28) and time spent with doctor (4.12±0.25), patients from Obstetrics wards in terms of technical quality (4.27±0.61) and accessibility and convenience (3.98±0.26), and orthopaedics for Interpersonal manner (4.33±0.43). The association between department and overall satisfaction, general satisfaction, technical quality and accessibility & convenience was significant with p value of 0.002, 0.029, and 0.003 & 0.000 respectively. Patients admitted for 5 or more days were most satisfied on all 7 subscales, with duration of admission being significantly associated with overall satisfaction, Interpersonal manner and financial aspect with p value of 0.03, 0.028 & 0.017 respectively. (Table 6)

Table 5: Association of patient satisfaction on various subscales with socio-demographic variables.

Variable		Overall	GS	TQ	IM	COM	FA	TS	AC
Age									
18-32	Mean	3.69	3.69	3.75	3.93	3.89	3.77	3.68	3.56
	SD	0.43	0.61	0.64	0.75	0.69	0.69	0.71	0.61
33-47	Mean	3.68	3.55	3.75	4	3.93	3.79	3.77	3.45
	SD	0.33	0.53	0.59	0.69	0.60	0.58	0.58	0.58
48-60	Mean	3.93	4.04	3.96	4.3	3.74	4.33	3.91	3.60
	SD	0.24	0.39	0.43	0.51	0.89	0.76	0.47	0.46
df=2	F value	4.128	6.534	1.216	2.574	0.693	6.937	1.423	0.995
	p value	0.018*	0.002*	0.29	0.07	0.501	0.001*	0.24	0.37
Religion									
Hindu	Mean	3.75	3.69	3.82	4.04	3.95	3.83	3.78	3.60
	SD	0.4	0.59	0.62	0.69	0.67	0.71	0.64	0.57
Muslim	Mean	3.64	3.64	3.63	3.94	3.77	3.91	3.73	3.32
	SD	0.35	0.55	0.56	0.77	0.68	0.63	0.60	0.58
Christians	Mean	3.62	3.83	4.12	3.58	3.50	3.50	3.00	3.75
	SD	0.16	0.4	0.2	0.58	0.84	0.45	0.84	0.52
df=2	F value	1.866	0.36	2.793	1.432	2.266	0.994	4.344	4.935
	p value	0.15	0.69	0.06	0.24	0.11	0.37	0.014*	0.008*
Socio-economic status									
II	Mean	4.06	3.85	4.21	4.57	4.00	4.21	4.29	3.71
	SD	0.26	0.85	0.69	0.44	0.41	0.27	0.27	0.55
III	Mean	3.7	3.68	3.8	3.93	3.89	3.78	3.72	3.55
	SD	0.4	0.54	0.58	0.78	0.69	0.65	0.63	0.63
IV	Mean	3.68	3.63	3.73	3.96	3.86	3.84	3.74	3.48
	SD	0.38	0.62	0.61	0.65	0.70	0.74	0.61	0.57
V	Mean	3.746	3.75	3.75	4.1	3.93	3.91	3.69	3.56
	SD	0.35	0.51	0.61	0.7	0.69	0.68	0.76	0.51
df=3	F value	2.138	0.577	1.435	2.04	0.142	1.062	1.821	0.489
	p value	0.09	0.61	0.23	0.1	0.93	0.37	0.15	0.69
Total	Mean	3.72	3.68	3.78	4	3.89	3.84	3.74	3.53
	SD	0.387	0.58	0.6	0.71	0.68	0.68	0.64	0.58

*Significant; (GS- General Satisfaction, TQ- Technical Quality, IM- Interpersonal Manner, COMM- Communication, FA- Financial Aspects, TS- Time Spent with Doctor AC- Accessibility & convenience)

Table 6: Association of patient satisfaction on various subscales with department and duration of admission

Character	Category		Overall	GS	TQ	IM	COM	FA	TS	AC
Department	**Medicine**	Mean	3.65	3.61	3.79	3.93	3.84	3.72	3.66	3.44
		SD	0.43	0.62	0.57	0.80	0.67	0.72	0.73	0.63
	Surgery	Mean	3.74	3.72	3.71	4.08	3.90	3.93	3.80	3.52
		SD	0.34	0.50	0.60	0.59	0.69	0.71	0.61	0.53
	Obstetrics	Mean	3.92	3.93	4.28	4.00	4.00	3.88	3.83	3.99
		SD	0.30	0.65	0.61	0.89	0.46	0.36	0.52	0.26
	Ophthalmology	Mean	3.93	4.13	3.63	4.13	3.38	4.75	4.13	3.50
		SD	0.35	0.48	0.72	0.25	0.95	0.29	0.25	0.35
	ENT	Mean	3.96	3.92	3.96	4.08	4.25	3.92	3.92	3.75
		SD	0.22	0.20	0.60	0.66	0.52	0.80	0.49	0.50
	Orthopedics	Mean	3.86	3.72	3.69	4.33	4.22	3.83	3.78	3.83
		SD	0.30	0.51	0.60	0.43	0.71	0.66	0.62	0.48
	Chest & TB	Mean	3.27	3.10	3.20	3.40	3.40	3.90	3.20	2.85
		SD	0.16	0.42	0.41	0.89	0.65	0.55	0.57	0.45
	Gynecology	Mean	3.54	3.39	3.58	3.83	3.78	3.61	3.67	3.25
	df=7	SD	0.50	0.74	0.52	0.71	0.97	0.60	0.61	0.71
		F value	3.381	2.289	3.172	1.112	1.417	1.417	1.095	4.193
Duration		p value	0.002*	0.029*	0.003*	0.357	0.201	0.201	0.368	0
of admission	**1day**	Mean	3.61	3.59	3.74	3.76	3.82	3.62	3.57	3.49
		SD	0.41	0.56	0.62	0.83	0.69	0.75	0.60	0.55
	3day	Mean	3.68	3.65	3.71	3.99	3.85	3.84	3.72	3.42
		SD	0.40	0.60	0.56	0.73	0.67	0.68	0.81	0.66
	5day	Mean	3.78	3.80	3.83	4.10	3.92	3.85	3.89	3.60
		SD	0.36	0.60	0.64	0.61	0.73	0.59	0.53	0.51
	>5days	Mean	3.83	3.73	3.86	4.17	3.97	4.06	3.80	3.63
		SD	0.34	0.56	0.65	0.61	0.66	0.64	0.50	0.56
	df=3	F value	3.04	1.197	0.672	3.105	0.453	3.484	1.974	1.425
		p value	0.03*	0.312	0.57	0.028*	0.715	0.017*	0.119	0.237
Total		Mean	3.72	3.69	3.78	4.00	3.89	3.84	3.74	3.53
		SD	0.39	0.58	0.61	0.72	0.68	0.68	0.64	0.58

*Significant; (GS- General Satisfaction, TQ- Technical Quality, IM- Interpersonal Manner, COMM- Communication, FA- Financial Aspects, TS- Time Spent with Doctor AC- Accessibility & convenience)

Table 7: Distribution of patients based on their perception of violence against doctors.

Patients' perception based on self-farmed questionnaire	Yes (%)	No (%)	Uncertain (%)
V1: Do you think doctors are superior to human beings?	58(29.0)	142(71)	0(0)
V2: Do you think doctors are next to God?	113(56.5)	70(35.0)	17(8.5)
V3: Are Doctor's mistakes forgivable?	124(62.0)	44(22.0)	32(16.0)
V4: Have you seen any doctor neglecting the patient?	29(14.5)	171(85.5)	0(0)
V5: Have you ever felt that doctors should change their attitude towards patients?	37(18.5)	157(78.5)	6(3.0)
V6: Have you been on the receiving end of a doctors shouting when you asked him or her about your problem?	23(11.5)	173(86.4)	4(2.0)
V7: Did you feel like the doctors' behavior towards you was rude and unnecessary?	23(11.5)	176(88.0)	1(0.5)
V8: Did you feel like the Doctor requires more patience?	114(57.0)	80(40.0)	6(3.0)
V9: Do you feel that sometimes the patient might be wrong in perceiving what the doctor meant?	93(46.5)	91(45.5)	16(8.0)
V10: Do you feel that when the doctor is occupied with an emergency or surgery and is unable to attend you immediately, it is a fault?	34(17.0)	164(82.0)	2(1.0)
V11: Have you heard about the violence committee against the Doctors?	95(47.5)	64(32.0)	41(20.5)
V12: Do you think this violence against the doctors is on the rise?	67(33.5)	40(20.0)	93(46.5)
V13: Have you ever seen a patient or his/her attendees committing verbal violence against the doctors?	42(21.0)	156(78.0)	2(1.0)
V14: Have you ever seen a patient or his/her attendees committing physical violence against doctors?	17(8.5)	181(90.5)	2(1.0)
V15: Do you think that violence against doctors was justified?	15(7.5)	115(57.5)	70(35.0)
V16: If you are ever in the situation where your family member is in an emergency and requires medical assistance and the doctor delays to attend him or her, will you get involve in some form of violence against the doctor?	71(35.5)	73(36.5)	56(28.0)
V17: Do you feel that the patients who commit such violence must be punished?	120(60.0)	36(18.0)	44(22.0)
V18: If you are ever involved in such a situation where the doctor is being abuse, would you try to stand up for him/her?	132(66.0)	23(11.5)	45(22.5)

Table 7 shows among the study patients 47.5% had heard about the violence committee against the doctors, 33.5% said violence against doctors is on rise. About 57% of patients felt doctors require more patience, 21% and 8.5% of patients had witnessed a patient or their attendees committing verbal and physical violence against the doctors respectively. A large proportion of study population was in agreement that violence against doctors is unethical (57.5%) and should entail punishment (60%). However, being questioned on the course of their own action if such a situation, wherein they had a family member in a situation where they felt they doctor was delaying to act, the views were split, 33.5% thought about resorting to violence. Most of the interviewees saying yes to this statement said they would mostly resort to verbal violence, but chance of them going for physical violence could be a possibility.

The total satisfaction score was associated with questions V4, V7 & V10 ($p \leq 0.5$). Majority 85.5% of patients who had not seen a doctor neglecting a patient had higher satisfaction score. Similarly, patients who said doctors were rude; it was doctor's fault if he/she wouldn't attend a patient immediately when occupied with an emergency had lower scores.

Discussion

In India, Government is spending huge budget to provide quality health care services in public sector. But due many factors, only poor or rural population utilize the government health care services. Patient satisfaction with service delivery is crucial in assessing the performance of the health system.

The distribution, accessibility, communication skills of health care professionals and consumption of health care, reflect satisfaction. Patient' perception of care received at hospitals compared to the care they expect is patient satisfaction. Patient who are satisfied with health service tend to follow the treatment protocols and have good prognosis. A dissatisfied patient may have poor prognosis and can indulge in violence against health care professionals. [27-28] This study was conducted with the primary objective of assessing level of patient satisfaction among inpatients of government teaching hospital. The overall mean patient satisfaction which was combined assessment of 7 subscales was good with a mean satisfaction level of 3.72± 0.387 among inpatients of GIMS hospital, which was more than mean overall satisfaction of 3.17 ± 0.21 as estimated by Gaur *et al.*[29]

With rising awareness among patients, patient's expectation from health care providers is much more than effective treatment. The seven subscales studied were general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, accessibility & convenience. A study done in primary health centre of Delhi using different questionnaire reported about 60% of patients were satisfied with time given by doctors and 96% satisfied with the doctor's explanation about the need for medical test.[30] In contrast in the present study even though only 16.5% patients said doctors hurry too much while treating, majority 87.5% were dissatisfied with explanation given by doctors for medical tests.

Table 7a: ANOVA for overall satisfaction and perception of violence against doctors

Perception of violence questions			Sum of Squares	df	Mean Square	F	Sig.
V1* total	Between Groups	(Combined)	11.035	32	.345	1.106	.339
	Within Groups		36.465	117	.312		
	Total		47.500	149			
V2* total	Between Groups	(Combined)	6.929	32	.217	.884	.646
	Within Groups		28.644	117	.245		
	Total		35.573	149			
V3* total	Between Groups	(Combined)	15.618	32	.488	.682	.894
	Within Groups		83.722	117	.716		
	Total		99.340	149			
V4* total	Between Groups	(Combined)	4.440	32	.139	1.967	.005*
	Within Groups		8.253	117	.071		
	Total		12.693	149			
V5* total	Between Groups	(Combined)	35.918	32	1.122	.330	1.000
	Within Groups		397.655	117	3.399		
	Total		433.573	149			
V6* total	Between Groups	(Combined)	4.400	32	.137	1.269	.180
	Within Groups		12.674	117	.108		
	Total		17.073	149			
V7* total	Between Groups	(Combined)	5.070	32	.158	1.544	.050*
	Within Groups		12.004	117	.103		
	Total		17.073	149			
V8* total	Between Groups	(Combined)	7.177	32	.224	.921	.592
	Within Groups		28.483	117	.243		
	Total		35.660	149			
V9* total	Between Groups	(Combined)	10.513	32	.329	.714	.864
	Within Groups		53.860	117	.460		
	Total		64.373	149			
V10* total	Between Groups	(Combined)	9.462	32	.296	1.929	.006*
	Within Groups		17.931	117	.153		
	Total		27.393	149			
V11* total	Between Groups	(Combined)	16.752	32	.523	1.000	.478
	Within Groups		61.222	117	.523		
	Total		77.973	149			
V12* total	Between Groups	(Combined)	34.584	32	1.081	1.455	.077
	Within Groups		86.889	117	.743		
	Total		121.473	149			
V13* total	Between Groups	(Combined)	5.195	32	.162	.900	.623
	Within Groups		21.098	117	.180		
	Total		26.293	149			
V14* total	Between Groups	(Combined)	.882	32	.028	.425	.997
	Within Groups		7.578	117	.065		
	Total		8.460	149			
V15* total	Between Groups	(Combined)	20.901	32	.653	1.265	.184
	Within Groups		60.433	117	.517		
	Total		81.333	149			
V16* total	Between Groups	(Combined)	18.980	32	.593	1.051	.409
	Within Groups		66.013	117	.564		
	Total		84.993	149			
V17* total	Between Groups	(Combined)	25.334	32	.792	1.106	.340
	Within Groups		83.759	117	.716		
	Total		109.093	149			
V18* total	Between Groups	(Combined)	28.561	32	.893	1.269	.180
	Within Groups		82.272	117	.703		
	Total		110.833	149			

This could be because the Government health facilities are over burden with patient load and hence, they might have not explained the need of investigations as per patient's comprehension levels.

In a study done at Pakistan overall satisfaction was high (4.0237+0.19)[31] compared to the overall mean patient satisfaction level for our teaching hospital at Gadag, Karnataka, India (3.72± 0.387). It was appreciable to see that doctors working in government sector were empathic towards their patients and listened to their problem, as patients were most satisfied with the aspect of interpersonal manner (4.002 ±0.72), followed by communication (3.88± 0.88). The mean score for financial aspect was (3.84±0.68), as this was a government hospital all patients were given available services and treatment free of cost. The least satisfied area was accessibility and convenience (3.52±0.58) may be because the hospital is located on the outskirts of the town with limited transport facilities. Similar findings were noted by Gaur *et al* with overall mean satisfaction score of 3.17 ± 0.21, satisfaction was the highest for communication (3.94

out of 5), followed by general satisfaction (3.69), technical quality (3.46), time spent with doctor (3.41), interpersonal manner (3.35), and least in accessibility and convenience (2.96).[30]

Our study findings of patient satisfaction on 7 subscales were similar to study done by Avinash *et al*, where overall quality of care was (median 3.80 with an interquartile range (IQR) of 0.43); in our study median was 3.780 with an IQR of 0.44. The least satisfied subscale in both studies was accessibility and convenience of health services (median score = 3.75). The median scores for interpersonal manner, communication and time spent by the doctor with patient was 4.00 which is similar to study done by Avinash *et al.* [32]

Quintana *et al* and Asamrew *et al* also reported statistically significant association between age and satisfaction[33, 34] which was similar to our study where patients of 48-66 years were more satisfied probably because they are more mature with their expectations. Gender had no significant association with satisfaction in this study and also in a study done in Nellore.[3]Significantly higher satisfaction level among patients attending to surgery department was noted in a North - East India study,[35] in the present study patients were most satisfied with ENT departments and Obstetrics may be because pregnancy and child birth bring happiness to the patients and their family.

On assessing socio-demographic factors associated with satisfaction on 7 subscales, there was no much variation in patient satisfaction with their education status and hence no statistically significance was found, as majority of the patients were illiterate or had primary education. Even though Class II socio-economic status patients appeared to be more satisfied on all 7 subscales, but the association between socio-economic status and satisfaction level was not significant as only 3.5% of patients belonged to class II socio-economic status. Avinash *et al* found age to be significantly associated with accessibility and convenience.[31] In other study socio-economic status had significant association with technical quality of care.[32]

Our secondary objective was to assess perception of violence against doctors and its association with perception of violence; very few researches have been conducted on this issue. In a study from tertiary hospital in North India, 62% of patient attendants were aware about increasing violence against doctors.[25] In the present study a little less than 50% of patients had heard about violence against doctors. Majority 85.5% said they had not seen a doctor neglecting a patient. Only 21% patients had witnessed verbal violence and 8.5% had seen physical violence against doctors. Interpersonal manner satisfaction was high in our study as around 85-90% patients said doctors were not rude to them.

Few of the perception of violence question had statistically significant association with patient satisfaction. The total satisfaction score was significantly associated with questions V4, V7 & V10 ($p \leq 0.5$). Patients who had seen a doctor neglecting a patient, who said doctors were rude, it was doctor's fault if he/she wouldn't attend a patient immediately even when occupied with an emergency had lower satisfaction scores, suggesting patients who are less satisfied may turn to be violent against doctors. Hence improving patient satisfaction may prevent violence against doctors in some instances. Governments, policymakers, and healthcare organizations must act quickly to prevent, monitor, and manage violence against healthcare personnel around the world.[22]

Conclusion

The study revealed a good level of patient satisfaction with the services rendered by government teaching hospital. Among the different subscales of patient satisfaction, interpersonal manner had the highest score and accessibility and convenience score were low. Evaluation of patient satisfaction in this study serves as a baseline data and to understand the area of lacunae for improving the quality of services which can improve clinical and functional outcomes.

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References

1. Thayaparan AJ, Mahdi E. The Patient Satisfaction Questionnaire Short Form (PSQ-18) as an adaptable, reliable, and validated tool for use in various settings. Med Educ Online. 2013; 18: 21747. doi:10.3402/meo.v18i0.21747.
2. Pascoe GC. Patient satisfaction in primary health care: a literature review and analysis. EvalProgram Plann. 1983; 6(3-4):185-210. doi: 10.1016/0149-7189(83)90002-2.
3. Mohan R, SaiKumar K. A study on the satisfaction of patients with reference to hospital services. *International Journal of Business Economics & Management Research*2011; 1:3. Available at: http://zenithresearch.org.in/ accessed on 15/4/18.
4. Farooqi JH. Patient expectation of general practitioner care, focus group discussion and questionnaire survey in an urban primary health centre, Abu Dhabi-UAE (A pilot study). Middle East J Family Med 2005; 3:6-9.
5. Danish KF, Khan UA, Chaudhry T, Naseer M. Patient satisfaction: An experience at IIMC-T railway hospital. Rawal Med J 2008; 33:245-8. Available from: https://www.researchgate.net/publication/288800794accessed on 19/5/18.
6. Kumari R, Idris MZ, Bhushan V, Khanna A, Agarwal M, Singh SK. Study on patient satisfaction in the government allopathic health facilities of Lucknow district, India. Indian journal of Community Medicine 2009; 34:35-42.
7. Al-Abri R, Al-Balushi A. Patient satisfaction survey as a tool towards quality improvement. Oman Med J. 2014; 29(1):3-7. doi:10.5001/omj.2014.02. Available from:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3910415/accessed on 18/3/18.

8. Sran MS, Pyra T, Chen L, Holroyd BR, McCabe C. P116: A scoping review of factors affecting patient satisfaction with care in North American adult emergency departments. CJEM. Cambridge University Press; 2017; 19(S1):S117–S117. Available from: https://doi.org/10.1017/cem.2017.318 accessed on 25/4/19.
9. S. S. Andaleeb. Service quality perceptions and patient satisfaction: a study of hospitals in a developing country. Social Science & Medicine.2001;52:9:1359–1370.Available from: https://www.researchgate.net/publication/12048172 accessed on 25/4/19
10. Ziaei, H *et al.* Determinants of patient satisfaction with ophthalmic services. BMC Res Notes 4**,** 7 (2011). Available from: https://doi.org/10.1186/1756-0500-4-7 accessed on 21/7/2020
11. World Health Organization (WHO). Workplace violence in the health sector. Country case studies 2002, Geneva. Available from: http://www.who.int/violence_injury_prevention/injury/en/WVsynthesisreport.pdf accessed on 25/4/19
12. Chappell D, Di Martino V. Violence at work: International Labour Organization.2006. Available from: https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_publ_9221108406_en.pd accessed on 22/4/20.
13. Mishra S, Chopra D, Jauhari N, Ahmad A, Kidwai NA. Violence against health care workers: a provider's (staff nurse) perspective. Int J Community Med Public Health 2018; 5:4140-8.
14. Budd, T. Violence at Work: Findings from the British Crime Survey (1999). London: Home Office. Available from: http://library.college.police.uk/docs/homisc/occ-violencework.pdfaccessed on 11/7/20.
15. Merecz D, Rymaszewska J, Moscicka A, Kiejna A, Jarosz-Nowak J. Violence at the workplace-a questionnaire survey of nurses. Eur Psychiatry. 2006; 21(7):442-450. doi:10.1016/j.eurpsy.2006.01.001
16. Reddy IR, Ukrani J, Indla V, Ukrani V. Violence against doctors: A viral epidemic? Indian J Psychiatry. 2019; 61(Suppl 4):S782-S785. doi:10.4103/psychiatry.IndianJPsychiatry_120_19.
17. Hobbs FD. Fear of aggression at work among general practitioners who have suffered a previous episode of aggression. Br J Gen Pract. 1994; 44(386):390-394.
18. Husband of Dead Patient Kills Doctor. The Hindu; 4 January, 2012. Available from: https://www.thehindu.com/news/cities/chennai/husband-of-dead-patient-kills-doctor/article2774115.ece accessed on 22/4/18.
19. Boy Dies During Treatment; Irate Relatives Ransack Clinic, Residence. Times of India; 15 May, 2014. Available from: https://timesofindia.indiatimes.com/city/chandigarh/Boy-dies-during-treatment-irate-relatives-ransack-clinic-residence/articleshow/35135683.cmsaccessed on 22/4/18
20. Hongxing YU, Zhenglu Hu, Xifan Zhang, Bin Li, Shangcheng Zhou. How to overcome violence against Healthcare professionals, reduce medical disputes and ensure patient safety. Pak J Med Sci. 2015;31(1):4–8.
21. Madhok P. Violence against doctors. Bombay *Hospital Journal.* 2009;51(2):301–302.
22. HAM Nazmul Ahasan, Aparna Das. Violence against doctors. *J Medicine.* 2014;15:106–108.
23. Marshall GN, Hays RD; Patient Satisfaction Questionnaire – 18 (PSQ-18). Available from: http://www.prgs.edu/content/dam/rand/pubs/papers/2006/P7865.pdf
24. Sharma S, Gautam PL, Sharma S, Kaur A, Bhatia N, Singh G, et al. Questionnaire-based Evaluation of Factors Leading to Patient-physician Distrust and Violence against Healthcare Workers. Indian J Crit Care Med 2019; 23(7):302-309. Available from: https://www.ijccm.org/doi/IJCCM/pdf/10.5005/jp-journals-10071-23203accessed on 22/8/20.
25. Lateef F. Patient expectations and the paradigm shift of care in emergency medicine. J Emerg Trauma Shock. 2011; 4(2):163-167. doi:10.4103/0974-2700.82199. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3132352/ accessed on 22/4/19.
26. Lee M.A., Yom Y.-H. A comparative study of patients' and nurses' perceptions of the quality of nursing services, satisfaction and intent to revisit the hospital: A questionnaire survey. *Int. J. Nurs. Stud.* 2007;44:545–555. doi: 10.1016/j.ijnurstu.2006.03.006.
27. Sun J., Hu G., Ma J., Chen Y., Wu L., Liu Q., Hu J., Livoti C., Jiang Y., Liu Y. Consumer satisfaction with tertiary healthcare in China: Findings from the 2015 China National Patient Survey. *Int. J. Qual. Health Care.* 2017;29:213–221. doi: 10.1093/intqhc/mzw160
28. Gill V, Bridges S, Nicholls CM. The standards expected of doctors Patient & public attitudes. National Centre for Social Research.2012. Available from: https://www.gmc-uk.org/-/media/gmc-site images/about/gmcstandardsexpectedofdoctorsfinalreportv2pdf51766111.pdf?la=en&hash=50219AF7B9FFC88A173AE4DB14334F9 accessed on 22/6/20
29. Gaur BP, Jahnavi G, Thatkar PV. Patient satisfaction about services obtained from a teaching hospital, Port Blair: A cross-sectional study. J Family Med Prim Care 2020; 9:93-8.
30. Ardey R, Ardey R. Patient Perceptions and Expectations from Primary Health-care Providers in India. J Family Med Prim Care. 2015; 4(1):53-63. doi:10.4103/2249-4863.152254.
31. Ahmad I, Nawaz A, Khan S, Khan H, Rashid M A, Khan MH. Predictors of patient satisfaction. *Gomal Journal of Medical Sciences.2011;*9:2:183-188. Available from: http://www.gjms.com.pk/ojs24/index.php/gjms/article/view/463accessed on 22/4/19.
32. Avinash P, Mayur SS, Chowti JV. Patient Satisfaction Regarding Quality of Primary Health Care Services in an Urban Community: A Medical Outcome Survey. Scholars Journal of Applied Medical Sciences (SJAMS) Sch. J. App. Med. Sci., 2015; 3(3A):1051-1059.
33. Quintana, J.M., Gonzalez, N., Bilbao, A. *et al.* Predictors of patient satisfaction with hospital health care. BMC Health Serv Res. 2006; 6**:**102 Available from: https://doi.org/10.1186/1472-6963-6-102
34. Asmarew N, Endris AA, Tadasse M. Level of Patient Satisfaction with In-patient Services and Its Determinants. A Study of Specialised Hospital InEthopia. Journal of Environmental and Public Health 2020. Available from: https://doi.org/10.1155/2020/2473467.
35. Rajkumari B, Nula P. Patient's satisfaction with care in a government health facility in North East India: A cross-sectional study. J Med Soc 2017; 31:94-8.