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Dinesh Kumar
Professor, Department of
Community Medicine,
Government Medical College
and Hospital, Chandigarh,
India

Naveen Krishan Goel
Professor and Head,
Department of Community
Medicine, Government Medical
College and Hospital,
Chandigarh, India

Awadhesh K. Pandey
Professor and Head
Department of Radiation
Oncology, Government
Medical College and Hospital,
Chandigarh, India

Correspondence:
Dinesh Kumar
Professor, Department of
Community Medicine,
Government Medical College
and Hospital, Chandigarh,
India

“Perceptions Regarding Care and Satisfaction of Cancer Patients Attending a Radiation Oncology Clinic at Tertiary Care Hospital in Chandigarh, North India: A Longitudinal Survey”

Dinesh Kumar, Naveen Krishan Goel, Awadhesh K. Pandey

Abstract

Introduction: Patient satisfaction has an impact on quality of care and treatment compliance. It is the desired outcome of every health facility as it is simple and cost-effective way for evaluation of services. The poor patient satisfaction causes poor compliance to treatment which ultimately leads to poor health outcomes. Present study attempts to study perceived satisfaction of cancer patients regarding on health care and behavior of hospital staff for the purpose of quality care assessment. **Methods:** Present study is based on detailed findings under ICMR sponsored project “Complementary and Alternative Medicine (CAM) Use among Cancer Patients”. A mixed model approach consisting both qualitative as well as quantitative studies was adopted for exploring opinions of patients and their perceived satisfaction levels. Information was collected by conducting interviews among 1117 patients of different types of cancer at different stages attending allopathic treatment at the health facility. **Results:** Among all 1117 cancer patients including 501(44.9%) males and 616(55.1%) females, overall, 1006(90.0%) patients were satisfied with the services available at the current health facility. Satisfaction rate with the health facility was increased further from 90.0% to 93.9% at the end of follow-up. Satisfaction rates were increased from 98.3% to 96.4%, 96.2% to 95.3% and 97.4% to 95.6% for doctors’ nurses and MRD staff respectively. Overcrowding followed by long waiting time came out to be main reasons of dissatisfaction. Satisfaction of patient was not significantly associated with gender. There were statistically non-significant gaps in expectations of patients at the baseline and their fulfillments at the end indicating quality care provided at the health facility. **Conclusions:** Study has demonstrated high levels of perceived patient satisfaction with services available at the health facility which increased further during the course of follow-up. The study suggests the need of continued evaluation of quality of health care and behavior of staff and continuing efforts for consistency of satisfaction levels. More in-depth studies are desired to attain some logical conclusions on factors governing satisfaction of cancer patients.

Keywords: Health care facility; Longitudinal Study; Mixed approach; Patient satisfaction; Quality care

Introduction

Patient satisfaction is an important tool in health care settings providing an opportunity for improvement in services provided to patients. It has an impact on quality of care and treatment compliance. Patient satisfaction is referred as a reflection of patients’ emotions, feelings and their perception of delivered healthcare services.¹ It also affects clinical outcomes, patient retention, and medical malpractice claims. Patient satisfaction depends upon many factors such as quality of clinical services provided, availability of medicines, behaviour of doctors and other health staff, cost of services, hospital infrastructure, physical comfort, emotional support, and respect for patient preferences. It is very effective though proxy indicator to measure the success of doctors and hospitals.² A number of studies conducted in different settings reported overall patient satisfaction rates varying from 50 % to 95%.^{3,4,5,6,7} Varied tools of assessing patient satisfaction are available. A study conducted among patients attending a psychiatry outpatient clinic at a tertiary care centre used patient satisfaction questionnaire (PSQ-18) and 87.3 % satisfaction among patients was observed.⁸ A

study conducted in health care facility of Uttarakhand used patient satisfaction questionnaire (PSQ-18).⁹ With increasing cost of treatment and use of alternative therapies, there is dissatisfaction with the traditional health care delivery among cancer patients is likely to increase. Patient satisfaction is the desired outcome of every health facility as it is simple and cost-effective way for evaluation of services. The poor patient satisfaction causes poor compliance to treatment which ultimately leads to poor health outcomes. There is paucity of literature on this particular topic. Some studies are available in literature in different parts of country. However, to the best of knowledge of authors, no earlier study is available in the studied patient population in on this particular topic. Present study attempts to investigate treatment pathways adopted by cancer patients and resulting delays in seeking treatment by them and other delays in a tertiary allopathic health care facility. Present study attempts to study perceived satisfaction of cancer patients regarding on health care and behavior of hospital staff for the purpose of quality care assessment.

Materials and Methods

Results of present study are based on detailed findings under ICMR sponsored project “**Complementary and Alternative Medicine (CAM) Use among Cancer Patients**”. A hospital based longitudinal study was undertaken among cancer patients attending Radiation Oncology Outpatient Department (OPD) at Government Medical College and Hospital (GMCH), a tertiary health care facility in Chandigarh (UT), North India. Primary data was collected through survey approach using systematic random sampling design selecting patients of different types of cancer at different stages attending allopathic treatment at the health facility. Only new patients were included in a systematic manner selecting every third patient with a random start every day. Patients revisiting the OPD were excluded while selecting the sample. A mixed model approach consisting both qualitative as well as quantitative studies was adopted for exploring opinions of patients and perceived satisfaction levels. A semi-structured questionnaire was used for collecting desired information.

Study variables

Information was collected from patients suffering from cancer and/or their closed family members. They were interviewed to collect information regarding personal and family characteristics, opinion regarding patients care at the health facility, perceived reasons of satisfaction, the most and the worst liked components of the health care delivery system, and some other relevant variables. Data variables concerning satisfaction rates of patients currently observed at the time of first contact were also collected and compared after one year of follow up. Domain of information collected in the study under the project undertaken was wider.

Optimum sample size

A total of 1,117 cancer patients participated in the study. Power analysis was done to calculate optimum sample size for the detailed project on with primary objective of the broad study under the project concerning complementary and alternative medicine (CAM) use by cancer patients.

Sample size was calculated by using the following formula with approximation for large population:

$$n_{opt.} = \frac{Z^2_{1-\alpha/2} (1-P)}{\epsilon^2 P}$$

Where,

P = anticipated population proportion

1- α = confidence coefficient

ϵ = relative precision, and

Z(.) is the value of standard normal variate

On the basis of 60% CAM use as primary outcome parameter anticipated on the basis of a pilot survey findings and assuming 95% confidence coefficient and 5% relative precision, sample size of 1,024 cancer patients was obtained. This study covered a sample of 1,117 cancer patients.

Ethical issues

Ethical Guidelines of ICMR on human participants were followed. A written informed consent was taken from the patients. Approval from Institutional Ethics Committee was taken for conducting the study.

Statistical methods

Statistical methods like normal test of proportions. Chi square test was used to test the significance of association between satisfaction of patients with gender and other qualitative characteristics. Satisfaction rates of patients observed at the time of first contact were compared after one year of follow up by using Normal test of proportions. Data analysis was carried out using Statistical Package for Social Sciences (SPSS)-16 software.

Results

Among all 1117 cancer patients of different stages surveyed, 501(44.9%) were males and 616(55.1%) were females and 946(84.7%) patients were married. Among all surveyed patients, 382(34.2%) were elderly aged 60 years and above. There were 721(64.5%) patients from rural area and 392(35.1%) from urban area. There were 350(31.3%) patients who were referred from private hospital and referred 258(23.1%) from Government hospitals and only 27 (2.4%) were referred from private clinics. There were 672(60.2%) vegetarian and 445(39.8%) non vegetarian. There were 662(59.3%) patients from joint families and 454(40.6%) from nuclear. There was significant difference between mean ages of male and female patients ($P < 0.01$). There were 1022(91.5%) patients who consulted first to allopathic doctors only. Treatments /therapies received by patients were chemotherapy: 711(63.7%), radiation: 571(51.1%) and surgery: 450(40.3%).

There were 1006(90.0%) patients satisfied with the services available at the current health facility that is, GMCH and 628(56.2%) were motivated by doctors to approach the health facility. Among males 445 (88.8%) and among females 561 (91.1%) patients reported satisfaction with the services offered at the health facility. Satisfaction of patient was not significantly associated with gender at 5% level of significance as shown in Table-1. Among 77 respondents not satisfied with the GMCH services reported mainly lack of care by staff members: 17(22.1%), Overcrowding: 11(14.3%) and long waiting time: 8(10.4%) as main reasons of dissatisfaction. Satisfaction rates with different groups of health care providers were found to be quite high

and 1068(95.6%) respondents were satisfied with the MRD staff while 1077(96.4%) were satisfied with behaviour of doctors and 1065(95.3%) were satisfied with behaviour of nurses. Expectations from this hospital before coming were quality patient care by doctors: 733(65.6%), extremely good overall patient care services: 648(58.0%), affordable health facilities: 549(49.1%), highly equipped diagnosis facilities 137(12.3%). Services available at GMCH were

found to fulfill expectations of 1047(93.7%) respondents. Best services about GMCH were reportedly doctors behaviour: 907(81.2%), staff behaviour: 60(5.4%), diagnostic facilities: 36(3.2%), physical environment: 22(2.0%). Least preferred services were long waiting time: 235(21.0%), staff behaviour: 32(2.9%) and physical environment: 21(1.9%). Majority of patients wanted to continue their allopathic treatment at GMCH.

Table-1: Opinion of Respondents Regarding Patients Care at Gmch Health Facility with Gender.

Patient care services	Male N=501		Female N=616		Total N=1117	
	No	(%)	No	(%)	No	(%)
Motivation to approach GMCH						
Doctor/Health Staff	287	57.3	341	55.4	628	56.2
Friends	27	5.4	24	3.9	51	4.6
Relatives	52	10.4	78	12.7	130	11.6
Media	0	0	0	0	0	0
Any Other (Specify)	30	6.0	60	9.7	90	8.1
No Response	105	21.0	113	18.3	218	19.5
Satisfied with the services						
Yes	445	88.8	561	91.1	1006	90.0
No	37	7.4	40	6.5	77	6.8
No Response	19	3.8	15	2.4	34	3.0
	X²=2.14 (P=0.34)					
Reasons of Dissatisfaction	N=37		N=40		N=77	
Overcrowding	7	18.9	9	22.5	11	14.3
Lack of care by staff members	7	18.9	10	25.0	17	22.1
Lack of proper attention by doctor	3	8.1	3	7.5	06	7.8
Difficulty in purchasing medicines from chemist	2	5.4	5	12.5	07	9.1
Non-availability of medicine from hospital	1	2.7	4	10.0	05	6.5
Behavior of doctor/staff is not good	0	0	7	17.5	07	9.1
Waiting not comfortable	3	8.1	8	20.0	11	14.3
Long Waiting Time	3	8.1	6	15.0	08	10.4
Treatment is not affordable/ charges are high	2	5.4	0	0	02	2.6
Any Other	4	10.8	5	12.5	07	9.1
Satisfied with behavior of GMCH staff						
MRD Staff						
Yes	474	94.6	594	96.4	1068	95.6
No	2	0.4	6	1.0	08	0.7
NR	25	5.0	16	2.6	41	3.7
Doctors						
Yes	477	95.2	600	97.4	1077	96.4
No	3	0.6	2	.3	05	0.4
NR	21	4.2	14	2.3	35	3.1
Nurses						
Yes	474	94.6	591	95.9	1065	95.3
No	01	0.2	9	1.5	10	0.9
NR	26	5.2	16	2.6	42	3.8
Pharmacists						
Yes	471	94.0	588	95.5	1059	94.8
No	01	0.2	2	0.3	03	0.3
NR	29	5.8	26	4.2	55	4.9
Social workers						
Yes	467	93.2	580	94.2	1047	93.7
No	2	0.4	2	0.3	04	0.4
NR	32	6.4	34	5.5	66	5.9
Others staff (Specify)						
Yes	38	7.6	41	6.7	79	7.1
No	1	0.2	2	0.3	03	0.3
NR	462	92.2	573	93.0	1035	92.7
Expectations at the first visit						
Extremely good patient care services	282	56.3	366	59.4	648	58.0
Affordable health facilities	243	48.5	306	49.7	549	49.1
Quality patient care by doctors	326	65.1	407	66.1	733	65.6
Good physical environment	49	9.8	56	9.1	105	9.4
Good dietary services	52	10.4	65	10.6	117	10.5
Highly equipped diagnosis facilities	55	11.0	82	13.3	137	12.3

Any other	10	2.0	17	2.8	27	2.4
Services available as expected						
Yes	470	93.8	577	93.7	1047	93.7
No	4	0.8	6	1.0	10	0.9
NR	27	5.4	33	5.4	60	5.4
	X²=0.09 (P=0.95)					
Best preferred service at GMCH						
Doctors Behavior	389	77.6	518	84.1	907	81.2
Staff Behavior	32	6.4	28	4.5	60	5.4
Physical Environment	14	2.8	8	1.3	22	2.0
Diagnostic Facilities	16	3.2	20	3.2	36	3.2
Any Other	50	10.0	42	6.8	92	8.2
Least preferred service at GMCH						
Doctors behavior	5	1.0	3	0.5	08	0.7
Staff behavior	17	3.4	15	2.4	32	2.9
Physical Environment	7	1.4	14	2.3	21	1.9
Long waiting time	97	19.4	138	22.4	235	21.0
Others	375	74.9	446	72.4	821	73.5

Satisfaction rates of patients currently observed at the time of first contact were also compared with respective rates after one year of follow up and results are presented in Table-2. Only 344 of 1117 patients could be followed due to a number of reported reasons of lost to follow-up. At the end of follow-up, respondents said that approach to GMCH for treatment was motivated by doctors: 208(60.5%) as compared to 628 (56.2%) at the baseline survey. Overall satisfaction rate with the health facility was increased from 90.0 % at the baseline to 93.9% at the end of follow-up. Among 16 respondents who were not satisfied with the GMCH services at the end of follow-up reported mainly lack of care by staff members: 05(%), Overcrowding: (04%) came out to be main reasons of dissatisfaction. Satisfaction rates with different groups of health care providers were also improved considerably during the course of follow-up. It was found that satisfaction rates with MRD staff, doctors and nurses were increased from 95.6% to 97.4%, from 96.4% to 98.3% and from 95.3% to 96.2% respectively.

Expectations from this hospital before coming were quality patient care by doctors: 249(72.4%), extremely good overall patient care services: 180(52.3%), affordable health facilities: 185(53.8%), highly equipped diagnosis facilities 48(14.0%). Expectation from doctors for providing quality patient care was increased considerably from 65.6% to 72.4% during the course of follow-up. Services available at GMCH were found to fulfil expectations of 333(96.8%) respondents. Best services about GMCH were reportedly doctors behaviour: 284(82.6%) followed by staff behaviour: 23(6.7%), diagnostic facilities: 14 (4.1%), physical environment: 08(2.3%). There were statistically non-significant gaps in expectations at the baseline and those fulfilled at the end indicating quality care being provided at the health facility. Least preferred services were long waiting time: 55(16.0%), staff behaviour: 09(2.6%) and physical environment: 04(1.2%) whereas 276(80.2%) had not reported the services they disliked.

Table-2: Opinions of Respondents Regarding Patient Care at Gmch Health Facility During the Course of Follow-Up

Opinion regarding patient care services	No.	%	No.	%
Motivation to approach GMCH	N=1117		N=344	
Doctor/health staff	628	56.2	208	60.5
Friends	51	4.6	18	5.2
Relatives	130	11.6	59	17.2
Any other	90	8.1	35	10.2
No response	218	19.5	24	7.0
Satisfied with the services available at GMCH				
Yes	1006	90.0	323	93.9
No	77	6.8	16	4.7
No response	34	3.0	05	1.5
If not satisfied or less satisfied, give reasons	N=77		N=16	
Overcrowding	11	14.3	04	25.0
Lack of care by staff members	17	22.1	05	31.3
Lack of proper attention by doctor	06	7.8	03	18.2
Difficulty in purchasing medicines from chemist	07	9.1	01	62.5
Non-availability of medicine from hospital	05	6.5	0	0.0
Behavior of doctor/staff is not good	07	9.1	03	18.2
Waiting not comfortable	11	14.3	03	18.2
Long Waiting Time	08	10.4	01	62.5
Treatment is not affordable/ charges are high	02	2.6	0	0.0
Any Other	07	9.1	03	18.2
Satisfied with the overall behavior of the following health care providers in this hospital	N=1117		N=344	
MRD Staff				
Yes	1068	95.6	335	97.4

No	08	0.7	02	0.6
NR	41	3.7	07	2.0
Doctors				
Yes	1077	96.4	338	98.3
No	05	0.4	01	0.3
NR	35	3.1	05	1.5
Nurses				
Yes	1065	95.3	331	96.2
No	10	0.9	05	1.5
NR	42	3.8	08	2.3
Pharmacists				
Yes	1059	94.8	336	97.7
No	03	0.3	0	0
NR	55	4.9	08	2.3
Social workers				
Yes	1047	93.7	335	97.4
No	04	0.4	01	0.3
NR	66	5.9	08	2.3
Others staff				
Yes	79	7.1	09	2.6
No	03	0.3	01	0.3
NR	1035	92.7	334	97.1
Expectations from this hospital before coming				
Extremely good overall patient care services	648	58.0	180	52.3
Affordable health facilities	549	49.1	185	53.8
Quality patient care by doctors	733	65.6	249	72.4
Good physical environment	105	9.4	45	13.1
Good dietary services	117	10.5	54	15.7
Highly equipped diagnosis facilities	137	12.3	48	14.0
Any other	27	2.4	04	1.2
Services available at GMCH, are according to your expectation				
Yes	1047	93.7	333	96.8
No	10	0.9	02	0.6
NR	60	5.4	09	2.6
Best services about GMCH				
Doctors behavior	907	81.2	284	82.6
Staff behavior	60	5.4	23	6.7
Physical Environment	22	2.0	08	2.3
Diagnostic Facilities	36	3.2	14	4.1
Any other	92	8.2	15	4.4
Least services you liked about GMCH				
Doctors behavior	08	0.7	0	0
Staff behavior	32	2.9	09	2.6
Physical Environment	21	1.9	04	1.2
Long waiting time	235	21.0	55	16.0
Others	821	73.5	276	80.2

Discussion

Present study conducted among 1117 cancer patients and 90.0% of them felt satisfied initially with the services available at the first visit to the current health facility and satisfaction rate with the health facility was increased further to 93.9% at the end of follow-up. Satisfaction of patient was not significantly associated with gender. Satisfaction rates with doctors, nurses, and MRD staff were found to be quite high and 96.4%, 95.3% and 95.6% respectively. Satisfaction rates with different groups of health care providers were also improved considerably during the course of follow-up. It was found that satisfaction rates were increased from 98.3% to 96.4%, 96.2% to 95.3% and 97.4% to 95.6% for doctors' nurses and MRD staff respectively. Satisfaction of patient may be result of various positive steps taken by health administration like priority for cancer patients in investigations, maintaining proper records, concessional user charges and above all sympathetic and supporting behavior of all category of staff. Regular counseling,

dietary advice and empathetic attitude of consultants and health staff in Radiation and Oncology Department of the hospital observed during survey by team of project staff might have contributed significantly in attaining consistent encouraging patient satisfaction levels of cancer patients. Results on satisfaction rates obtained in our study agree with results of several studies.

High degree of satisfaction of indoor patients from health staff and infrastructure in Government set-up has also been reported.¹⁰ In a study conducted in Punjab reported 86% of respondent satisfied with the behaviour and time devoted by doctors in OPDs. Whereas this percentages were found to be 91%.¹¹ Patient satisfaction rates reported were varying from 90-95% in a study conducted among patients attending a hospital in a private sector.¹² In a study conducted in G.M.E.R.S. Hospital-Valsad, 98.5% patients were satisfied with treatment cost and behavior of staff respectively.¹³ Satisfaction rates with behavior of different health providers in our study were higher as compared to those obtained in a study conducted in West Bengal, 69.3%

of the patients were satisfied with the services offered by the hospital.⁷ Also, in a study conducted among patients attending a health facility in Assam, 68 % patients were satisfied with doctors and 70% respondents were satisfied with basic facilities and overall satisfaction level was reported to be 64%.¹⁴In a study conducted among OPD patients attending Rural Medical Institute of Central Uttar Pradesh, OPD timings were rated good by majority of clients (64.67%) and 72.8% were satisfied with the of waiting area of the OPD.¹⁵In a study conducted among patients attending a tertiary care hospital, Jabalpur, Madhya Pradesh, 80% respondents reported that they were satisfied with finding of consultant. Also, 78% of patients were satisfied with doctor's behavior, 64% were satisfied with behavior of nurses and paramedical staff and 94% told that they preferred to recommend the same hospital to their relatives and friend also.¹⁶ A study by Nandkeshav AR et, total satisfaction of patients with OPD services was observed in 65.3% respondents.¹⁷ Ibrahim A et al showed only 10% overall satisfaction in their study which was low in comparison to other studies.¹⁸ Follow-up Survey in our study indicated that health care services available at GMCH were found to fulfil expectations of 333(96.8%) cancer patients. There were statistically non- significant gaps in expectations at the baseline and fulfilled at the end indicating quality care being provided at the health facility. This mixed study has several merits. Efforts have been made for incorporating opinions of patients regarding health care facilities and level of satisfaction for cancer patients suffering from different types and stages of cancer based on a large sample data set. Longitudinal approach has been applied for assessing sustainability of satisfaction levels over time during the course of follow-up. As there is likelihood of dissatisfaction among cancer patients with duration of treatment due to adverse events occurring associated with side effects of conventional therapies. This study has several implications for health policy and its practice to meet challenges for cancer management and research. Findings of present study may be useful for remodelling/ restructuring of patients care services for better satisfaction levels of cancer patients coping with increasing patient load. Finding of the present study may also be helpful for health care providers in establishing and maintaining good patient-health care provider communication suggesting best strategies for quality care for cancer patients.

Limitations of Study

In spite of several strength of the present study, the study suffered several limitations. There is possibility of biased attitudes of patients as they approached for treatment giving opinions favoring towards health facility. Also patient population in the presents study does not represent true spectrum of all cancers prevalent in the general population. Hematological malignancies, gynecological malignancies, and some subspecialty areas were under-represented due to constraints in terms of facility available in the teaching hospital studied. Main drawback of the study is that it presents only perceived satisfaction and no tool validated for measuring satisfaction levels of cancer patients could be used.

These limitations may serve as guidelines for future research work designing more scientific studies overcoming these issues. Detailed studies on satisfaction of

cancer patients should be conducted for better understanding and evaluation of quality of health care available for cancer patients in Indian set-up.

Conclusions and Suggestions

Present survey explored opinions of cancer patients regarding satisfaction with health staff and facilities available in a tertiary health care facility. Study has demonstrated high levels of perceived satisfaction with services available at the health facility which increased further during the course of follow-up. Satisfaction of patients may be outcome of various positive steps taken by health administration. The study suggests the need of continued evaluation of quality of health care and behavior of staff and continuing efforts for consistency of satisfaction levels. More in -depth studies are desired to attain some logical conclusions on factors governing satisfaction of cancer patients.

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Conflict of interest: None declared

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