pISSN 2394-6032 | eISSN 2394-6040

Research Article

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20151586

A study to assess patient satisfaction in out patient department of a tertiary care hospital in north India

Aanchal Jain¹, Neha Mishra²*, C. M. Pandey³

Received: 16 November 2015 **Accepted:** 18 December 2015

*Correspondence: Ms. Neha Mishra,

E-mail: nehamishra2605@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under

use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: OPD is very crucial department of any hospital services as huge number of patient's visits the OPD. Yet, the published information about patients' profile and utilization of OPD services in both developing and developed countries is scarce. The objective of our study was to study the socio-demographic profile, patient's satisfaction towards hospital services and pattern of referral of the outdoor patients visiting Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India.

the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial

Methods: It is a cross-sectional survey of patients visiting OPD in a tertiary care hospital in Lucknow. Data was collected by a structured questionnaire designed for the purpose.

Results: A total of 200 patients were included in the study with average age of 40 years. The majority of patients (40%) were graduate & above. No patient was found illiterate in our study. 74.5% of the patients are currently married. 25% of the total were employed in some service, 9% were doing business. 27.5% were unemployed or students. The main presentation was Cardiac disease (20%) and Gastric problems (18.5%), followed by kidney problems (13%). 69% patients were referred to a tertiary care hospital by a doctor as a first referral. Outcome of first treatment & distance of patient's usual place of residence from a tertiary care hospital was found to be significantly associated with referral pattern. Patient's satisfaction towards OPD services were found to be associated with Caste, occupation, outcome of first treatment & distance of patients usual place of residence from hospital. All of the patients are highly satisfied with doctors (97%) while they were least satisfied by canteen (31.6%), transport (31.1%) & pharmacy services (25.6%).

Conclusions: Overall the study showed a good level of satisfaction of patients with services obtained from this tertiary care centre. Appropriate and on-going data collection and analysis could help in optimizing utilization of outpatient services to achieve better outcomes.

Keywords: Patients profile, Satisfaction, Hospital services

INTRODUCTION

OPD is a very crucial department of any hospital being the first point of contact between the patient and the hospital staff.¹ It reflects the functioning of the hospital as OPD is visited by large section of community. OPD staff should be polite, cheerful, cooperative & efficient.¹ Thus, in recent times, health care quality has become a global issue. The health care industry is undergoing a rapid transformation to meet the ever-increasing needs and demands of its patient population.² Hospitals are shifting from viewing patients as uneducated and with little health care choice, to recognizing that the educated consumer has many service demands and health care choices

¹Tata Memorial Hospital, Mumbai, India

²Department of Community Medicine, MLN Medical College, Allahabad, UP, India ³Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, UP, India

available. Respect for patient's needs and wishes, is central to any humane health care system.3 Quality of health services was traditionally based on professional practice standards, however over the last decade; patient's perception about healthcare has been predominantly accepted as an important indicator for measuring quality of health care and a critical component of performance improvement and clinical effectiveness.⁴ Patient satisfaction has been defined as the degree of congruency between a patient's expectations of ideal care and his /her perception of the real care he/she receives.⁵ It is a multidimensional aspect, represents a vital key marker for the quality of health care delivery and is an internationally accepted factor which needs to be studied thoroughly and repeatedly for smooth functioning of the health care systems.⁶ Better appreciation of the factors pertaining to client satisfaction would result in implementation of custom made programs according to the requirements of the patients, as perceived by patients and service providers. Many previous studies have developed and applied patient satisfaction as a quality improvement tool for health care providers. Thus, patient satisfaction is an important issue both for evaluation and improvement of healthcare services.8

The public health care system must seek to reorganize itself to ensure the effective delivery of quality health care services to the poor. To ensure this, it is necessary to analyse the socio-economic profile of existing patients and the choice of health care service providers by households.

Keeping this in view, the present study was conducted to assess profile of patients coming to a tertiary care hospital situated in North India (Lucknow) and their perception level towards OPD services. We also attempted to draw a picture about referral pattern & its association with socio demographic & clinical factors.

METHODS

Setting and study design

This was a cross sectional study conducted in a tertiary care centre situated in north India. The Institute is rated amongst the top medical institutions in the country, delivering state-of-art tertiary medical care, superspecialty teaching, training and research.

Sample size and data collection

A sample size of 200 was calculated with an expected level of patient's satisfaction as 85% & 5% level of significance. A pre- tested Interviewer administrated questionnaire was used to ensure complete response. Informed Consent was obtained before interviewing the patients.

Questionnaire

A structured questionnaire was designed to examine several aspects of OPD services. Questions to be included in the final instrument were ascertained on the basis of a literature review and a pilot study conducted by us. Questionnaire was divided in two different sections including information on socio demographic variables, current illness of the patient, reporting department, patient's satisfaction towards various services & Referral patterns. Patient satisfaction included satisfaction towards the staff of registration counter, cash counter, pharmacy, blood bank, waiting time etc. & also on services provided by these sections including canteen & transportation services. Satisfaction level was scored between 1 to10. More the score, higher the satisfaction of patients towards services. These scores were then converted into four categories namely; Least satisfied to most satisfied on the basis of quartiles. Patients were also asked if they had specific complaints or recommendations regarding their experience in the hospital.

The surveyed questionnaires were collected and coded in a MS Excel database and analysed by using the SPSS 17.0. Descriptive statistics were performed to obtain patients profile. Pearson's chi-square test was used to examine the association between patient's satisfaction and their socio demographic characteristics. Z -test was used for comparing average age, duration of problem & distance of patient's usual place of residence from hospital with respect to satisfaction level & referral pattern. A p-value of less than 0.05 was considered as significant.

RESULTS

A total of 200 patients visiting outpatient departments were included in the study. Majority of the patients visiting the OPD belonged to 15-59 age group followed by age group of 60 & above. The mean age of the respondents was found to be 40 years with standard deviation of 17.87. Out of total, 61.5% of the study population comprised of males.

Majority of the respondents (67.0%) belonged to general category and 23% of patients were OBC. Only 10% of patients reported caste other than these two categories. In our study, no illiterate patient was recorded; also percentage of patients having qualification of graduation & above was 40%. As average age of patients visiting the hospital was high, it's obvious that majority of the patients (74.5%) were married. Among male patients 35.8%, 14.6% & 13.8% were servicemen, farmers & businessmen respectively. Only 26.8% were either unemployed or students. Among female patients, percentage of unemployed & students were 28.6% & percentage of housewives was 62.3%. Income was categorized into five categories according to Shankar Reddy Dudala et al. 10 Per month Income of Rs. 5167 & above were reported by 21.1% of males while only 3.8%

of females. Similarly income of Rs 2578-5155 were reported by 14.6 % of males & only 1.3% of females. The scenario is reverse for our lower category of income; i.e. below Rs 777 per month, only 27.6% males was belonged to this category while percentage of female

patients was highest (87.1%) in this category (Table 1). In all the demographic variables we found education, occupation & income which were significant with respect to gender.

Table 1: Socio demographic profile of patients visiting a tertiary care hospital.

S. N.	Socio demographic factors	Male n = 123 (%)	Female n = 77 (%)	Total n = 200 (%)	p value			
Age C	Age Group							
1	0-14	6 (4.9)	8(10.4)	14(7.0)				
2	15-59	100(81.3)	63(81.8)	163(81.5)	0.169			
3	60+	17(13.8)	6(7.8)	23(11.5)				
Caste Category								
1	General	85(69.1)	49(63.6)	134 (67)				
2	OBC	27(21.9)	19(24.6)	46(23.0)	0.697			
3	SC/ST Others	11(8.9)	9(11.6)	20(10.0)				
Educa	ution							
1	Primary	11 (8.9)	22(28.5)	33(16.5)				
2	Secondary	10(8.1)	10(12.9)	20(10)				
3	High school	19(15.4)	10(12.9)	29(14.5)	0.002*			
4	Intermediate	26(21.1)	12(15.5)	38(19)				
5	Graduate & above	57(40.6)	23(29.8)	80(40.0)				
Marita	Marital Status							
1	Married	93(75.6)	56(72.7)	149(74.5)				
2	Unmarried	29(23.5)	18(23.3)	47(23.5)	0.316			
3	Separated	1(0.81)	3(3.8)	4(2.0)				
Occup	oation							
1	Unemployed & Student	33(26.8)	22(28.6)	55(27.5)	_			
2	Retired	9(7.3)	0(0.0)	9(4.5)				
3	Service	44(35.8)	6(7.8)	50(25.0)				
4	Business	17(13.8)	1(1.3)	18(9.0)	0.001*			
5	Agriculture	18(14.6)	0(0.0)	18(9.0)	-			
6	Housewife & Others	2(1.6)	48(62.3)	50(25.0)				
Incom	Income							
1	5156 & above	26(21.1)	3(3.8)	29(14.5)				
2	2578-5155	18(14.6)	1(1.3)	19 (9.5)				
3	1547-2577	27(21.9)	4(5.2)	31(15.5)	0.001*			
4	773-1546	18(14.6)	2(2.6)	20(10.0)				
5	Below 777	34(27.6)	67(87.1)	101(50.5)				

One of the goals of the study was to determine the patient's satisfaction towards OPD services. To achieve this, we calculated average satisfaction score of various services provided in the OPD and then their association with patient characteristics was studied. Patients were found to be highly satisfied with doctors with average score of 10 out of 10 followed by appointment process scored 9 out of 10 which was followed by other services such as registration process, behavior of registration staff, seating facility, cash counter staff, account staff & sample collection staff with an average score of 8 out of 10. The services by which patients are least satisfied were canteen, pharmacy & transport facilities, which scored 4,

5 & 6 out of 10 respectively. It is also important to note that only 37% & 43% patients utilized transport & pharmacy services provided in the hospital campus respectively. Regarding overall satisfaction 72% of patients were satisfied with hospital OPD services. Caste (p= 0.009), occupation (p = 0.026), average duration of problem (p <.001) & distance of patient's usual place of residence from hospital (p <0.001) were found to be significantly associated with satisfaction level. The details of overall satisfaction and patients' characteristics are provided in (Table 2).

Similarly an attempt was made to identify the association between referral pattern & patients characteristics (Table 3). The referral pattern was classified on the basis of the first visit to a doctor regarding current health problem & visit to this hospital OPD regarding the same problem. For example, if a patient visited only one doctor before visiting to this tertiary care hospital, the patient referred here was classified as first degree referral & so on. In our study, apart from average duration of problem (p=0.003) & distance of patient's usual place of residence from hospital (p=0.001), none of the other characteristic were found to be associated with referral pattern.

Table 2: Overall satisfaction & its association with characteristics of patients.

Overall Satisfaction (% or Inter Quartile Range)								
	Category	Least Satisfied n (%)	Moderately Satisfied n (%)	Satisfied n (%)	Most Satisfied n (%)	Total n (%)	Significance	
1	Patients	54(27%)	48(24%)	45(22%)	53(26%)	200(100%)		
2	Age	36 Y (IQR23)	40 Y (IQR31)	42 Y (IQR27)	43 Y (IQR23)		< 0.001*	
Αg	Age Group							
1	0-14	5(9.3)	4(8.3)	2(4.4)	3(7.0)	14(7.0)	0.947	
2	15-59	42(77.8)	38(79.2)	38(84.4)	45(84.9)	163(81.5)		
3	60 & above	7(13.0)	6(22.5)	5(11.1)	5(9.4)	23(11.5)		
Ge	ender							
1	Male	35(64.8)	27(56.3)	27(60.0)	34(64.2)	123(61.5)	0.366	
2	Female	19(35.2)	21(43.8)	18(40.1)	19(35.8)	77(38.5)		
Ca	ste		· · ·					
1	General	33(61.1)	38(79.2)	24(53.3)	39(73.6)	134(67.0)	0.009*	
2	OBC	12(22.2)	9(18.8)	12(26.7)	13(24.5)	46(23.0)		
3	SC/ST & Others	9(16.7)	1(2.1)	9(16.7)	1(1.9)	20(10.0)		
Ed	Education Education							
1	Primary	8(14.8)	8(16.7)	11(24.4)	6(11.3)	33(16.5)	0.681	
2	Secondary	7(13.0)	5(10.4)	4(8.9)	4(7.5)	20(10.0)		
3	High school	7(13.0)	4(8.3)	7(15.6)	11(20.8)	29(14.5)		
4	Intermediate	11(20.4)	9(18.8)	10(22.2)	8(15.1)	38(19.1)		
5	Graduate & above	21(38.9)	22(45.8)	13(28.9)	24(45.3)	80(40.0)		
	cupation	(5 5 11 7	()		(2 12)			
1	Unemployed & Student	22(40.7)	16(33.3)	10(22.2)	7(13.2)	55(27.5)	0.026*	
2	Retired	2(3.7)	0(0.0)	4(8.9)	3(5.7)	9(4.5)		
3	Service	8(14.8)	13(27.1)	10(22.2)	19(35.8)	50(25.0)		
4	Business	4(7.4)	7(14.6)	2(4.4)	5(9.4)	18(9.0)		
5	Agriculture	4(7.4)	1(2.1)	8(17.8)	5(9.4)	18(9.0)		
6	Housewife & Others	14(25.9)	11(22.9)	11(24.4)	14(26.4)	50(25.0)		
_	come	11(23.5)	11(22.)	11(21.1)	11(20.1)	30(23.0)		
1	5156 & above	4(7.4)	6(12.5)	6(13.3)	11(20.7)	27(13.5)	0.381	
2	2578-5155	4(7.4)	6(12.5)	2(4.4)	8(15.1)	20(10.0)	0.501	
3	1547-2577	5(9.3)	9(18.8)	9(20.0)	8(15.1)	31(15.5)		
4	773-1546	7(13.0)	4(8.3)	4(8.9)	4(7.5)	19(9.5)		
5	Below 777	34(63.0)	23(47.9)	24(53.3)	22(41.5)	103(51.5)		
Others								
1	Average duration of problem	49 M (IQR 57)	41 M (IQR44)	45 M (IQR60)	45 M (IQR49)		<0.001*	
2	Distance of patient's usu residence from a tertiary care hospital (Km)	al 249 Km (IQR255)	199 Km (IQR287)	204 Km (IQR274)	230 Km		<0.001*	

^{*}Significant at 5% level of significance

DISCUSSION

The present study attempted to assess the satisfaction of the patients with regards to various aspects of health care services provided in a tertiary care hospital in Lucknow district. The results of the study indicate that most of the respondents interviewed were satisfied with the services they received. Very few similar studies have been done and therefore there is lack of data for comparison. Measuring patient satisfaction has many purposes. Such interviews help to evaluate health care services from the patient's point of view, facilitate the identification of problematic areas and help generate ideas towards resolving these problems. Despite a good level of patient satisfaction, a small, but by no means insignificant, proportion of patients expressed least satisfaction towards certain OPD services. The fact that patients expressed least satisfaction with the services indicates that hospital administration needs to do more in the drive towards improving services.

Table 3: Referral pattern of patients visiting to a tertiary care hospital.

S. N.	Referral Pattern	1 st degree	2 nd degree	3 rd degree & above	Total	Significance
1	Patients	138(69%)	40(20%)	22(11%)	200(100%)	
2	Mean age	40yrs (IQR 13)	35 yrs (IQR10.25)	45 yrs (IQR 14)		0.002*
	Age group					
1	0-14	12(8.7)	2(5.0)	0(0.0)	14(7.0)	0.555
2	15-59	109(79.0)	34(85)	20(90.9)	163(81.5)	
3	60+	17(12.3)	4(10)	2(9.1)	23(11.5)	
	Gender					
1	Male	82(59.4)	27(67.5)	14(63.6)	123(61.5)	0.62
2	Female	56(40.6)	13(32.5)	8(36.4)	77(38.5)	0.63
	Caste					
1	General	97(70.3)	26(65)	11(50)	134(67.0)	
2	OBC	27(19.6)	9(22.5)	10(45.5)	46(23.0)	0.105
3	SC/ST, Others	13(9.4)	5(12.5)	1(4.5)	20(10.0)	_
	Education					
1	Primary	26(18.8)	7(17.5)	0(0.0)	33(16.5)	
2	Secondary	13(9.4)	4(10.0)	3(13.6)	20(10.0)	
3	High school	18(13.0)	8(20.0)	3(13.6)	29(14.5)	0.552
4	Intermediate	26(18.8)	6(15.0)	6(27.3)	38(19.0)	
5	Graduate & above	55(39.9)	15(37.5)	10(45.5)	80(40.0)	_
	Occupation					
1	Unemployed & Student	39(28.3)	9(22.5)	7(31.8)	55(27.5)	
2	Retired	4(2.9)	4(10.0)	1(4.5)	9(4.5)	
3	Service	36(26.1)	9(22.5)	5(22.7)	50(25.0)	0.010
4	Business	12(8.7)	3(7.5)	3(13.6)	18(9.0)	0.818
5	Agriculture	12(8.7)	5(12.5)	1(4.5)	18(9.0)	_
6	Housewife & Others	35(25.4)	10(25.0)	5(22.7)	50(25.0)	
	Income					
1	5156 & above	20(14.49)	2(5.0)	5(22.7)	27(13.5)	0.689
2	2578-5155	14(10.1)	4(10)	2(9.09)	20(10.0)	
3	1547-2577	20(14.4)	9(22.5)	2(9.09)	31(15.5)	
4	773-1546	13(9.4)	4(10.0)	2(9.09)	19(9.5)	
5	Below 777	71(51.4)	21(52.5)	11(50.0)	103(51.5)	<u> </u>
	Others					
1	Average duration of problem	45 M(54)	44M (62)	52 M (69)		0.003*
2	Distance of patient's usual residence from tertiary care hospital(km)	225km (281)	241km (272)	253km (183)		0.001*

^{*}Significant at 5% level of significance

For studying overall satisfaction level we recorded the score from 1 to 10. Then add up the scores recorded for each OPD facility. Then on the basis of quartiles we divide total scores in to four categories moving from least satisfied to most satisfied.9 For the purpose of reporting patient's satisfaction, percentage of patients in three categories: moderately satisfied, satisfied & most satisfied were added up. The overall satisfaction of patients with services received from this tertiary care institute came out to be 73% which is very close to the figures reported by SA Deva et al. in Kashmir 80%, Kumari et al. 11,12 in Lucknow, 81.6% and Qureshi et al in Kashmir 72% whereas it is lower than as 88% reported by Bhattacharya et al, SK Jawhar et al in India (90-95%) and Ofili and colleagues 83% in Benin city. 13-16 This is higher than those reported from Mahapatra et al. in Andra Pradesh 63%.¹⁷ Apart from variations in the way services are delivered, differences in study population and patient's expectations could affect satisfaction levels. In addition, variation in methodology and timing of the study could explain some of the differences. This calls for caution for comparing our findings with previous studies. The satisfaction level regarding doctor consultation was around 97% which is much higher than as reported by kersnik et al, (55.3%); Kumari et al, (73%); Syed Shuja Qadri et al, (66.8%), Sultana et al, Tasneem A et al, Pakistan, (95.5%). 2,12,19,20

Our study shows a low level of satisfaction (31.6%) regarding canteen/food facilities, (25.6%) pharmacy services and (31.1%) transport facility. Proportion of patients satisfied with canteen services found in our study is still a higher as compare to studies reported earlier by Aleena et al (18%). While proportion of patients satisfied with pharmacy are low as reported earlier. [19, 20] As our sample size was very small, we merged the departments into three broader categories; namely surgery, medicine & others. Both referral pattern & patients satisfaction were not found to be associated with the department where patients reported.(Table 3 & 4) The main presentation was Cardiac disease (20%) and Gastric problems (18.5%), followed by kidney problems (13%). For comparison of our findings for referral pattern with other studies, we have not found any study associated with study of referral pattern of OPDs as a whole, especially in Northern India.

Strengths & limitations

Present study was based on limited sample size. Studies based on larger sample size are required to portray better picture of the satisfaction level & referral pattern. Also, the study was conducted at a tertiary care hospital only but the level of patient satisfaction with different types of health providers could have given more insight into various aspects of factors related to patient satisfaction. This is difficult to conduct due to paucity of the resources. Also we have not taken certain important variables into consideration like waiting time and toilet facilities with regard to patient satisfaction. Also no

information was obtained from patient about the health care facility from where he/ she had referred.

Although having some limitation, strength of the study lies in the fact that there are very few published studies on patient's profile, satisfaction & referral pattern; especially in northern India. This study was an attempt to do so.

CONCLUSION

Overall the study showed a good level of satisfaction of patients with OPD services obtained from this tertiary care centre. We have studied a number of potential barriers and facilitators that may influence patient's satisfaction. As in our study we have found that patients were least satisfied by transport, pharmacy & canteen services. These least satisfied services should be considered as point for improvement of overall satisfaction level. These findings can be explained by the fact that increasing modern era demands and awareness of the health care seekers push the medical care providers to deliver quality medical care in package with quality hospitality and related facilities to succor them. Accessibility could be improved by increasing the frequency of running buses on paid basis. Appropriate and on-going data collection and analysis could guide more efficient utilization of outpatient services to achieve better outcomes.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

REFERENCES

- Sharma SK, Chowhan SS. Patient Waiting Time: It's Impact on Hospital Outpatient Department. International Journal of Scientific Research March 2013;2(3).
- Qadri SS, Pathak R, Singh M, Ahluwalia SK. An Assessment of Patients Satisfaction with Services Obtained From a Tertiary Care Hospital in Rural Haryana. International Journal of Collaborative Research on Internal Medicine & Public Health 2012;4(8):1524-37.
- 3. Nguyen Thi PL, Briançon S, Empereur F, Guillemin F. Factors determining inpatient satisfaction with care.. Soc Sci Med. 2002;54(4):493-504.
- Woodring S, Polomano RC, Haagen BF, Haack MM, Nunn RR, Miller GL, et al. Development and testing of patient satisfaction measure for inpatient psychiatry care. Journal of Nursing Care Quality. 2004;19(2):137-48.
- Aragon SJ, Gesell SB. A Patient Satisfaction Theory and Its Robustness across Gender in Emergency Departments: A Multigroup Structural Equation Modeling Investigation. American Journal of Medical Quality, 2003.

- 6. Ahmad I, Din SU. Patients' satisfaction from the health care services. Gomal Journal of Medical Science. 2010;8(1):95-7.
- 7. Guadagnino C. Role of Patient Satisfaction. Http://www.physiciansnews.com/cover/1203.
- 8. Al-Eisa IS, Al-Mutar MS, Radwan MM, Al-Terkit AM. Patients' satisfaction with primary health care services at capital health region, Kuwait. Middle East J Fam Med. 2005;3:277-300.
- Fenton JJ, Jerant AF, Bertakis KD, Franks P. The Cost of Satisfaction A National Study of Patient Satisfaction, Health Care Utilization, Expenditures, and Mortality. Arch Intern Med. 2012;172(5):405-11.
- Dudala SR, Arlappa N. An Updated Prasad's Socio Economic Status Classification. International Journal Research Dev & Health. 2013;1(2):27-8.
- 11. Deva SA, Haamid M, Naqishbandi JI, Kadri SM, Khalid S, Thakur N. Patient satisfaction survey in outpatient department of a tertiary care institute. Journal of Community Medicine. 2010;6(1).
- 12. 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 Community Medicine. 2009;34(1):35-42.
- 13. Qureshi W, Naikoo GM, Baba AA, Jan F, Wani NA, Hassan G, et al. Patient Satisfaction at Tertiary Care Hospitals in Kashmir: A Study from the Lala Ded Hospital Kashmir, India. The Internet Journal of Health. 2009;8(2):1-2.

- 14. Bhattacharya A, Menon P, Koushal V, Rao KLN. Study of patient satisfaction in a tertiary referral hospital. Journal of the academy of hospital administration. 2003-01-2003-06);15(1).
- 15. Jawahar SK. A Study on Out Patient Satisfaction at a Super Specialty Hospital in India. Internet Journal of Medical Update. 2007;2(2):13-7.
- 16. Ofili AN, Ofovwe CE, Ofili AN, Ofovwe CE. Patients' assessment of efficiency services at a teaching hospital in a developing country. Annals of African Medicine. 2005;4(4):150-3.
- Mahapatra P, Srilatha S, Sridhar P. A Patient Satisfaction survey in public hospitals. Journal of Academy of Hospital Administration. 2001;13(2).
- 18. Kersnika J, Ropretb T. An evaluation of patient satisfaction amongst family practice patients with diverse ethnic backgrounds. Swiss Med Wkly 2002;132:121-4.
- 19. Sultana A, Riaz A, Hameed S, Sabir SA, Tehseen I, Bilal A, et al. Patient satisfaction in emergency department of District Head Quarters Hospital, Rawalpindi. RMJ. 2010;35(1):85-90.
- Tasneem A, Shaukat S, Amin F, Mahmood KT. Patient satisfaction; a comparative study at teaching versus DHQ level hospital in Lahore, Pakistan. Journal Pharmacy Science & Research. 2010;2(11):767-74.

Cite this article as: Jain A, Mishra N, Pandey CM. A study to assess patient satisfaction in out patient department of a tertiary care hospital in north India. Int J Community Med Public Health 2016;3:328-34.