



## ORIGINAL RESEARCH ARTICLE

### SATISFACTION WITH HEALTH CARE SERVICES OF OUT PATIENT DEPARTMENT AT CHITWAN MEDICAL COLLEGE TEACHING HOSPITAL, NEPAL

L Rajbanshi <sup>1\*</sup>, GP Dungana <sup>2</sup>, YK Gurung <sup>1</sup>, D Koirala <sup>1</sup>

<sup>1</sup> College of Nursing, Chitwan Medical College, Bharatur-10, Chitwan.

<sup>2</sup> School of Public Health, Chitwan Medical College, Bharatur-10, Chitwan.

\*Correspondence to: Ms Laxmi Rajbanshi, Chitwan Medical College, Bharatur-10, Chitwan, Nepal.  
Email: laxmiraj3@yahoo.com

#### ABSTRACT

Patient satisfaction is one of the most desired outcomes of health care and it is directly related with effective utilization of health service. The objective of the study was to find out the outpatients' satisfaction with health care services provided in the hospital. The cross sectional study was conducted on April 2013. Through stratified systematic random sampling technique, 776 patients were selected and interviewed at exit point using semi structure interview schedule. Out of the total patients, 63.9% were female and 36.1% were male. Majorities (45.5%) of them were of age group 20 to 39 years, 79.3% were married, and 15.2% were illiterate. Overall satisfaction level was 75.9% with mean score was  $24.19 \pm 2.92$ . Level of satisfaction was high: 764(98.5%) with access to care, 710(91.5%) with quality of care and 437(56.3%) with physical facility but low in 476(61.3%) with cost of healthcare and 394(50.8%) with courtesy of healthcare provider. Satisfaction level was significantly associated with availability of drugs and services in the hospital. It also had significant association with waiting time for showing report to doctor. Time taken for registration, consultation and investigations were not significantly associated with age, educational level, and socioeconomic status of the patients. Similarly sex, occupation and income of the patients had insignificant effect on the satisfaction. Thus, to make the service more responsive to the patient, the hospital management needs to improve the staff behavior, adequate supply of drugs and focus on reducing the waiting time.

**Key Words:** Health care service, Outpatient department, Patients' satisfaction.

#### INTRODUCTION

Quality assessment studies generally measure one of the three aspects of quality: structure, process and outcome. Measuring client satisfaction is one of the key component of both process and outcome evaluation of health care service provided to them.<sup>1</sup> Patients' satisfaction survey reflects the gap between the expected service and the experience of the service.<sup>2</sup> Donabedian states it as an important measure because it offers information on the providers success at meeting those expectations of most relevance to the client.<sup>3</sup> Patient satisfaction is also directly related to the utilization of health services. Satisfied patients show improved compliance, continuity of care and ultimately better health outcomes resulting from trustful and dependable contact with their physicians.<sup>4</sup> Lack of drugs and other supplies, poor information provision, long waiting time, poor cleanliness, lack of privacy and inadequate visiting hours were the major causes of dissatisfaction among the patients in Ethiopia<sup>2</sup> while doctors' treatment, services and behavior of nurses, boys/ayas were found to be powerful predictors of patients' satisfaction in Bangladesh.<sup>3</sup> Thus the aim of this study is to find out the patients' satisfaction with service provided at outpatient departments (OPD) and factors associated with satisfaction.

#### MATERIAL AND METHODS

This cross sectional study was carried out in Chitwan Medical College Teaching Hospital, Nepal in April 2013. Stratified systematic random sampling technique was used to select the samples. Altogether 776 patients of age 18 years and above were interviewed in exit point after receiving the services from the surgery, medicine, orthopedic, Gynaecology/obstretic, Dermatology and ENT OPDs. Data was collected by 3 nursing staffs, who were working in in-patients departments using pre-tested semi- structured interview schedule. They were oriented about the tool and technique of data collection. Written permission was obtained from the hospital authority and informed verbal consent was taken from every respondent. They were interviewed separately. Patients critically ill and those who had mental health problem were excluded from the study.

The major component of questionnaire included sociodemographic characteristics of the respondents and measurement of patients' satisfaction related to access to care, courtesy of health care providers, technical quality of care and physical environment of the health care setting. Waiting time for getting services, availability of drugs and services (laboratory and radiology) in the hospital and patient's socio-demographic

characteristic were the independent variables of the study. All data were analyzed by using SPSS version 17.0. For analysis, descriptive statistics and Chi-Square test were used. Level of significance was set at 0.05.

## Results

Of the total of 776 outpatients, 182(23.5%) patients were of below 20 years, 353(45.5%) were of age group of 20 to 39 years and 241(31%) of them were between 40-59 years of age and mean age was  $39.54 \pm 16$ . There were 496(63.9%) female and 280(36.1%) male. About 615(79.3%) were married, 119(15.3%) unmarried, 38(4.9%) widow/widower, and 4(0.1%) was divorced/separated. Majority (54.5%) of them belonged to joint family and remaining belonged to nuclear family. Similarly, 118(15.2%) were illiterate, 223(28.7%) had completed 5<sup>th</sup> grade and only 2(0.3%) had got M. Phil and above. Majority 178(22.9%) of patients had an income of NRs 22851 to 45750 per month and only 5(0.6%) had NRs<2300 per month. Most 555(71.5%) of the respondents belonged to middle class family.

There were 29 questions in the tool that measured the patients' satisfaction and each question was equal to a score of 1(one) mark. For the purpose of this study, score 80% is taken as the cut off point for measuring satisfaction level. Thus score of 80% and above is categorized as high level of satisfaction and < 80% as low/poor satisfaction.

In total, 589(75.9%) were highly satisfied and 187(24.1 %) were poorly satisfied (Table 1).

**Table 1: Patients' Satisfaction Level with Health Care Service (n=776)**

Satisfaction Level	Frequency	Percent
High (>80 %)	589	75.9
Low (<80%)	187	24.1

Level of satisfaction was high with access to care 764(98.5%) followed by 710(91.5%) with quality of care and 437(56.3%) with physical facility. However 476(61.3%) of patients were poorly satisfied with cost of health care and 394(50.8%) of patients had poor satisfaction with courtesy of health care providers. Overall mean score of satisfaction was  $24.19 \pm 2.12$  (table 2).

The percentage of patients satisfied with health services increased progressively with age (85.8% among the patients aged  $\geq 60$  years) table 3 but decreased with an increased level of education and socioeconomic status (table 4). Satisfaction level decreased with the increased length of waiting time (table 5) and increased with the availability of drugs and health services in the hospital (Table 6).

Patients' satisfaction level was significantly associated with their age ( $p=0.002$ ), educational level ( $p=0.001$ ), marital status ( $p=0.001$ ) and socio economic status ( $p=0.021$ ) table 3 & 4. Similarly availability of laboratory service ( $p\leq 0.001$ ), and drugs in the pharmacy ( $p\leq 0.001$ ) of the hospital was significantly associated with patients' satisfaction level. Patients' satisfaction level is statistically insignificant with their occupation ( $p=0.078$ ) and income level ( $p=0.125$ ), availability of radiology service, waiting time for registration, consultation and investigations, but significant with waiting time for showing reports to the doctors ( $p<0.001$ ).

**Table 2: Patients' Satisfaction Level with Different dimensions of Health Care Services**

Variables	Mean $\pm$ SD	Satisfaction Level		
		Low	High	Total
Courtesy	4.61 $\pm$ 0.89	394 (50.8%)	382 (49.2%)	776 (100%)
Access to care	3.93 $\pm$ 0.32	12 (1.5%)	764 (98.5%)	776 (100%)
Quality of care	2.29 $\pm$ 0.94	66 (8.5%)	710 (91.5%)	776 (100%)
Physical facility	8.44 $\pm$ 1.38	340 (43.8%)	436 (56.2%)	776 (100%)
Cost of care	4.92 $\pm$ 1.19	300 (38.7%)	476 (61.3%)	776 (100%)
<b>Total</b>	<b>24.19 <math>\pm</math> 2.92</b>			

**Table 3: Association between Patient's Satisfaction Level and Their Demographic Characteristics (n=776)**

Variables	Satisfaction Level		Total	P value of $\chi^2$ test
	Low	High		
<b>Age group (Year)</b>				
<20	16 (23.2%)	53 (76.8%)	69 (100.0%)	
20-39	106 (30.0%)	247 (70.0%)	353 (100.0%)	0.002*
40-59	49 (20.3%)	192 (79.7%)	241 (100.0%)	
$\geq 60$	16 (14.2%)	97 (85.8%)	113 (100.0%)	
<b>Sex of Patients</b>				
Male	78 (27.9%)	202 (72.1%)	280 (100.0%)	0.66*
Female	109 (22.0%)	387 (78.0%)	496 (100.0%)	
<b>Marital Status</b>				
Unmarried	44 (37.0%)	75 (63.0%)	119 (100.0%)	0.001*
Married	138 (22.4%)	477 (77.6%)	615 (100.0%)	
Divorce/widow/separated	5 (11.9%)	37 (88.1%)	42 (100%)	
<b>Education level</b>				
Cannot read and write or illiterate	19 (16.1%)	99 (83.9%)	118 (100.0%)	0.001*
Can read and write or primary (1-5)	40 (17.9%)	183 (82.1%)	223 (100.0%)	
Middle class (6-7)	9 (31.0%)	20 (69.0%)	29 (100.0%)	
Secondary (8-10 or SLC)	40 (23.7%)	129 (76.3%)	169 (100.0%)	
Intermediate (11-12)	33 (25.2%)	98 (74.8%)	131 (100.0%)	
Bachelor and above	46 (43.4%)	60 (56.6%)	106 (100%)	
<b>Total</b>	187 (24.1%)	589 (75.9%)	776 (100.0%)	

\*Chi-Square Test ( $\chi^2$ ); significance level at 0.05

**Table 4: Association between Patients' Satisfaction level with Health Service and their Occupation, Family Income and Socio-economic Status (n=776)**

Variables	Satisfaction Level		Total	P value of $\chi^2$ Test
	Low	High		
<b>Socioeconomic Status</b>				
Lower	38 (17.9%)	174 (82.1%)	212 (100.0%)	0.021†
Middle	145 (26.1%)	410 (73.9%)	555 (100.0%)	
Upper	4 (44.4%)	5 (55.6%)	9 (100.0%)	
Total	187 (24.1%)	589 (75.9%)	776 (100.0%)	
<b>Occupation</b>				
Profession	6 (37.5%)	10 (62.5%)	16 (100.0%)	0.078
Semi profession	30 (32.3%)	63 (67.7%)	93 (100.0%)	
Clerical/Shop-owner/Farmer	67 (19.4%)	278 (80.6%)	345 (100.0%)	
Skill Worker	10 (25.6%)	29 (74.4%)	39 (100.0%)	
Unskilled Worker	15 (24.6%)	46 (75.4%)	61 (100.0%)	
Unemployment	59 (26.6%)	163 (73.4%)	222 (100.0%)	
<b>Monthly Family Income (NRS)</b>				
<2300	1 (20.0%)	4 (80.0%)	5 (100.0%)	
2301-6850	11 (17.7%)	51 (82.3%)	62 (100.0%)	0.125
6851-11450	17 (16.2%)	88 (83.8%)	105 (100.0%)	
1451-17150	39 (22.2%)	137 (77.8%)	176 (100.0%)	
17151-22850	38 (26.4%)	106 (73.6%)	144 (100.0%)	
22851-45750	47 (26.4%)	131 (73.6%)	178 (100.0%)	
>45751	34 (32.1%)	72 (67.9%)	106 (100.0%)	
<b>Total</b>	187 (24.1%)	589 (75.9%)	776 (100.0%)	

Significance level set at 0.05

**Table 5: Association between Patients' Satisfaction Level and Waiting Time for Healthcare Services**

Waiting Time for Service (minutes)	Satisfaction Level		Total	P value
	Low	High		
<b>Registration time (776)</b>				
≤15	171 (23.4%)	559 (76.6%)	730 (100.0%)	0.081*
>15	16 (34.8%)	30 (65.2%)	46 (100.0%)	
<b>Waiting time for Consultation (776)</b>				
≤60	165 (23.4%)	541 (76.6%)	706 (100.0%)	0.135*
>60	22 (31.4%)	48 (68.6%)	70 (100.0%)	
<b>Total</b>	187 (24.1%)	589 (75.9%)	776 (100.0%)	
<b>Waiting time for Giving Sample (270)</b>				
≤15	25 (10.0%)	225 (90.0%)	250 (100.0%)	
>15	4 (20.0%)	16 (80.0%)	20 (100.0%)	0.310**
<b>Total</b>	29 (10.7%)	241 (89.3%)	270 (100.0%)	
<b>Waiting time: X-ray procedure (312)</b>				
≤15 minutes	14(9.6%)	132 (90.4%)	146 (100.0%)	
>15 minutes	18 (10.8%)	148 (89.2%)	166 (100.0%)	0.716*
<b>Total</b>	32(10.3%)	280 (89.7%)	312 (100.0%)	
<b>Waiting time: X-ray report (n=312)</b>				
≤15 minutes	15(9.1%)	149 (90.9%)	164 (100.0%)	
>15 minutes	17(11.5%)	131 (88.5%)	148 (100.0%)	0.496*
<b>Total</b>	32(10.3%)	280 (89.7%)	312 (100.0%)	
<b>Waiting time for Sowing Reports to Doctor</b>				
≤15 minutes	10 (4.7%)	203 (95.3%)	213 (100%)	
>15 minutes	47 (21.6%)	171 (78.4%)	218 (100%)	<0.001*
<b>Total</b>	57 (13.2%)	374 (86.8%)	431 (100%)	

\* Pearson Chi-Square test

\*\* Yate's correction test at 0.05 level of significance

**Table 6: Association between Patients' Satisfaction and Availability of Services**

Service Availability	Satisfaction Level		Total	P value
	Low	High		
<b>Radiology (n=318)</b>				
All	32 (10.3%)	280 (89.7%)	312 (100.0%)	
None	2 (33.3%)	4 (66.7%)	6 (100.0%)	0.127*** F test
Total	34 (10.7%)	284 (89.3%)	318 (100.0%)	
<b>Laboratory (n=273)</b>				
All	28 (11.0%)	226 (89.0%)	254 (100.0%)	
Some and none	1 (5.3%)	18 (94.7%)	19 (100.0%)	<0.001** Yates
Total	29 (10.6%)	244 (89.4%)	273 (100.0%)	
<b>Drugs(n=678)</b>				
All	132 (21.0%)	498 (79.0%)	630 (100.0%)	<0.001* $\chi^2$ test
Some	10 (25.6%)	29 (74.4%)	39 (100.0%)	
None	8 (88.9%)	1 (11.1%)	9 (100.0%)	
Total	150 (22.1%)	528 (77.9%)	678 (100.0%)	

\*\*\*Fisher's Exact Test P value is 0.127, level of significance 0.05,

\*\* Yate's correction test,

\*Chi square Test

## DISCUSSION

This study found that 75.9% of patients had high level of satisfaction whereas similar type of study conducted in Ethiopia reported that it was 77% in Jimma University Specialized Hospital<sup>2</sup> and 57.1% in Jimma hospital<sup>5</sup> but study conducted in government health facilities in rural Bangladesh found, a total of 68% patients expressed satisfaction with health services.<sup>6</sup> Mean satisfaction score was higher in our study 24.19 (82.75%) compared to the study conducted in UCMB health institution, Uganda 13.97(58.20%).<sup>7</sup> This difference might be because of difference in measurement tool or data collection method.

Doctor's behavior has the greatest effect on patient's satisfaction.<sup>8</sup> This study shows that only 49.2 % patients were highly satisfied with courtesy and respect of care providers (doctors, nurse, other technical and non-technical staff) which is low in comparison to the study findings of Aldana and associates (2001) which shows 68.9%. Moreover they explored that provider's behavior towards the patient, particularly respect and politeness was the most powerful predictor for client satisfaction with government health services.<sup>7</sup>

Satisfaction with cost may depend on purchasing capacity of patients. This study shows, 61.3% patients are poorly satisfied

with overall cost of care (registration, medicine, laboratory and X- ray/USG cost). Study conducted in India showed 80% of respondents satisfied with the cost of medicine and 100% with registration<sup>9</sup> whereas this study found 91.3% with medicine and 90.7% with registration cost.

In the present study, 91.5% of patients had high level of satisfaction with quality of care which included doctor's treatment skill, examination technique, consultation time, and privacy of patient, information about disease and care provided by other technical staff and equipment used for examination. This study revealed 91.5% of patients satisfaction with information about health problem given by doctor and 96.3% with doctors treatment skill, which is consistent with study done in Mangalore, India that i.e., 97% of them found doctors efficient and same percentage were satisfied with explanation of disease by the doctors but only 88% were with service of nursing staff<sup>9</sup> where as in this study 98.2% were satisfied with service of other technical staff. Similarly, other study conducted by Jawaher (2007) reported that 97.5% were satisfied with maintaining privacy and 96.5% with consultation time which is similar with present findings i.e., 94.5% with consultation time and 91.2% with privacy measures.<sup>10</sup>

With regard to satisfaction level with access to care, this study found 98.5% of patient had high level of satisfaction. Study conducted in a hospital in Kerala, India, showed 94% of patients were satisfied with signage boards displayed at OPDs.<sup>10</sup> In our study 97.9% of patients are satisfied with signage.

Overall 43.7% patient had poorly satisfied with physical facilities of this hospital. Of the 5 headings under physical facilities, placement of the toilet and its cleanliness score the least. Study conducted in a hospital, Kerala, which showed 50% of the patients were highly satisfied with cleanliness of the OPDs.<sup>10</sup>

In present study, female were more satisfied than male but statistically satisfaction level was not associated with sex of the respondent. However a study conducted in Pakistan among the inpatient showed female were significantly more satisfied with treatment ( $p=0.003$ ) and management ( $p=0.000$ )<sup>11</sup> than male. The same result was found among the outpatients in Dhaka Medical College Hospital i.e., female were significantly more satisfied than male.<sup>12</sup>

Satisfaction score was directly related to the age of the patients i.e., increase in age, increased in satisfaction score but it showed an inverse relation with educational level of respondents i.e., high educational level were associated with lower satisfaction score. This findings has consistent with a study conducted in Jimma hospital, which showed that the percentage of satisfied patients decreased with increasing level of education and increased with the advancing age.<sup>5</sup> The reason may be due to high expectation by those who are more educated than those who are not. As well elderly patients may have lower expectation and hesitation to communicate.

This study showed, patient's satisfaction level was significantly associated with their age, educational level, marital status and socio economic status, this finding is similar with a study conducted in Jima University Specialized Hospital, which showed, satisfaction was significantly associated with age and educational level of respondents.<sup>2</sup>

Short waiting time (<30 minutes on an average) is second powerful predictor of client satisfaction. Study conducted in rural Bangladesh government hospital showed, 28.2% health service users who waited for on an average of  $57.1 \pm 4.2$  minutes were not satisfied but who spent  $21.4 \pm 1.6$  minutes for waiting were satisfied. Similarly the patient's expected waiting time to get services is less than 11 minutes on an average.<sup>6</sup> This study revealed patients who got services in <15 minutes were more satisfied than those who waited more than 15 minutes. This study also revealed, satisfaction level was significantly associated with the time waited to show the reports to the doctor which is consistent with a study carried out in Ethiopia by the Assefa et.al. (2011) it was  $p=0.000$  and also with the Abdosh (2006). i.e. satisfaction level decreased with increase in perceived length of waiting time.<sup>13</sup> However satisfaction level was statistically not associated with the time spent to get other health services including the wait for consultation up to an hour after registration.

Present study revealed that patient's satisfaction level is statistically significant with the availability of laboratory service and drugs in the hospital. This finding is similar to a study, conducted in Mulago hospital, Uganda, which showed accessibility, convenience and availability of service especially prescribed drugs was the strongest predictor of general satisfaction.<sup>14</sup>

## CONCLUSION

Since the satisfaction level was associated with length of waiting time, availability of drugs and services and the behavior of health care providers, hospital management needs to work on improving staffs' behavior, shorten waiting time for getting service and fulfill the shortage of drugs and make all the services available in the hospital to improve the quality of service and patients' satisfaction level.

## ACKNOWLEDGEMENT

We are indebted to all participants of the study and all data collectors (Ms Radhika Adhikari, Ms Srijana Shrestha, Ms Kripa Kandel and Ms Anupa Adhikari) for their efforts. We are grateful to Prof Muniraj Chhetri for their invaluable inputs in instrument development and Dr Bijaya Raj Acharya for his suggestions.

We are also thankful to Chitwan Medical College for funding this study.

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