Patient's Expectations and Satisfaction with Nursing Care among Admitted Patients in Debra Tabor General Hospital, Northern Ethiopia: A Cross Sectional Study

**Mulu Demle Adane[1],
Berhane Megerssa Ereso[2]
and Tilahun Fufa Debela[2*]**

[1]Debre Tabor General Hospital, Southern Gonder of Amhara regional state, Debra Tabor, Ethiopia
[2]Department of Health Economics Management and Policy, Institute of Health, Jimma University, Jimma, Ethiopia

*Corresponding author:
Tilahun Fufa

✉ tilahunfufa@gmail.com

Department of Health Economics Management and Policy, Institute of Health, Jimma University, Jimma, Ethiopia

Abstract

Background: In the process of improving health care, patient point of view is becoming more important in today's health system. Ignoring input from the patient or client is not living with reality today. Hence, this study is helpful to identify voice of patients that can be used as a tool for improving the health care delivery in the study area and similar settings.

Methods: Facility based cross sectional study was conducted in Debre-Tabor General Hospital from March 01-April 30/2017. All randomly selected patients admitted in the wards were included into the study. Data were collected by face to face interview using structured questionnaires. Sample was allocated proportionally to all adult wards. Data were entered into EpiData v3.1, exported to SPSS version 21 and cleaned to check for completeness and missing values. Both descriptive and inferential statistics were done. Logistic regression analysis was carried out to identify factors associated with patients' satisfaction with their nursing care.

Result: A total of 398 respondents were interviewed making the response rate 94.5%. The overall adult inpatient satisfaction with nursing care was 66%. Patient expectation was 78%. Majority (71.6%) of respondents were satisfied with the way of nurses welcomed patients but, almost half (48.1%) of respondents were dissatisfied with the help/assistance given by the nurses. In this study sex of patients (AOR=2.22), residence (AOR=2.01), and duration of stay in the ward (AOR=14.04) as well as frequency of admission (AOR=1.87) were significantly associated with adult inpatient satisfaction.

Conclusion: The patients' satisfaction with nursing care was found to be moderate. The expectation was good. The satisfaction was influenced by Sex of patients, residence, and duration of stay in the ward as well as frequency of admission. Health administrators should often emphasize on nursing procedural competency throughout patient care.

Keywords: Satisfaction; Nursing care; Inpatient; Debre Tabor general hospital

Introduction

Patient satisfaction is defined as the combination of experience, expectations and needs perceived by patients' and their reaction toward that [1]. Analyzing the satisfaction of patients help the health institution managers to determine the level of health care delivery and identify areas to improve [2]. Patient satisfaction is used as an important indicator of quality of care [3]. It belongs to the service dimension of quality of care; it reports few problems related to technical quality of care in hospitals [4,5].

Patient satisfaction is influenced by patient's expectations, their

medical condition and health status, psychological variables and characteristics of the treatment [6]. Patients are the best and only source of information about the nurses' communication, health education, and pain management processes, and about dignity and respect during treatment [7].

Patient satisfaction studies require continuous analyses in relation to the changing standard of medical services. It allows the integration of the patients' view into the functioning of the hospitals and identifies difficulties of health services as well as gaps in the quality of care [8]. The interaction of patient and nursing staff is high in the hospital and the illness itself affects the attention of nurses [9].

Nursing care is one of the major health care services. It contributes a lot to the patient healing process. Even though there are competent physicians present in a given health Nursing care is one of the major health care services. It contributes a lot to the patient healing process. Even though there are competent physicians present in a given health Nursing care is one of the major health care services. It contributes a lot to the patient healing process. Even though there are competent physicians present in a given health Improving communication between admitted patients and nurses can improve the overall satisfaction of patient [10]. In order to build a culture of client service distinction in hospitals and achieve outstanding patient satisfaction, it is necessary to understand the intangible aspects of expectation that contribute to patient satisfaction [3]. Patients there by evaluate the health-care services as well as the providers from their own subjective point of view [11]. Even though patients may not be able to judge specific technical aspects, they are best source of accurate information regarding clarity of explanations, helpfulness of information patients are receiving, barriers to obtaining care or the physician's interpersonal behavior [4].

A very important aspect on which patient satisfaction depends is 'nursing care' because nurses are involved in almost every aspect of client's care in hospital, that is nurses interact with patients more often than any other health care personnel in a hospital [12]. Nurses spend much time with the patients than other health care professionals and they have a unique position to influence and promote effective consumer relationships [6]. Nursing care is the major health care service in hospitals. It contributes a lot to the healing process of patients. Nurses have long contact time with patients. As they are frontline service providers, patients expect more from them and also more expected from them to fulfill the expectation of patients [10]. On this line assessing the satisfaction of patient with nursing care is crucial to identify areas of dissatisfaction. A hospital may be soundly organized, beautifully situated and well equipped, but if the health care lacks quality, the hospital will fail in its responsibility of providing care. Ignoring input from the patient or client is not living with reality today [13]. In today's health systems, patient perspective is becoming more important [10]. Therefore, patient satisfaction and expectations should be assessed continuously at each and every health care institutions to balance expectations and actual service quality.In our study area, there is no study conducted on the subject matter. Hence, this study is helpful to know voice of patients and can be used as a tool for improving the health care delivery in the study area and also in the similar settings.

Methods and Materials

Study design and setting

Institutional based cross sectional study design was conducted in Debra Tabor General Hospital from March 01 to April 30, 2017. Debra Tabor General Hospital is found South Gondar 666 km from Addis Ababa (capital city of Ethiopia) and 102 km from Bahir Dar (capital of Amhara regional state). Hospital was established by the Italian missionaries in 1941 and providing service for a total of 2.3 million population. There were around 434 workers in the hospital from these 296 were technical staff while 138 were supportive staff. Among technical staff 143 were nurses. The hospital has 120 beds and five admission wards (surgical, Medical, Gynecology & obstetric, pediatric and neonatal).

Study participants

All randomly selected patients, who were admitted in inpatient wards and stayed for two and more days in the ward, were included in to the study. The data were collected voluntarily and patients who were seriously ill or have mental health problems were excluded from the study.

Sampling method

The required sample size was determined using a single population proportion formula by considering the proportion of patients' satisfaction 52.8% with the inpatient nursing services, from study done in Dessie Referral Hospital [14], 95% confidence level and 0.05 margin of error were used. Hence, the calculated sample size was 383. By adding 10% non-respondents, the final sample size became 421.

Proportional allocation of sample was done for each adult wards. To have individual study subjects from each ward, systematic sampling method was employed during data collection with K value of 3 (N=1150 monthly patient load and n=421 that means every 3rd patients from the registration). The first patient was selected by lottery method. For patients who did not fulfill inclusion criteria the next patients were selected.

Data collection procedure

Data were collected by face to face interview using structured questionnaires. Instruments were developed after reviewing related literatures. The questionnaire was first prepared in English and then translated in to Amharic (local language) and re-translated into English by language experts to ensure its consistency. Using the one in Amharic questionnaire, 5% of sample size pretest was conducted in Nifasmewucha hospital outside the study area. The study participants were asked whether they are able to differentiate nursing staff from other health professionals. If not, the data collectors explained the nurses' uniform and the activities of nursing staffs to the participants, to help them differentiate the nursing staffs before the interview. Five diploma graduated health professionals those speak local language (Amharic) and working outside the study hospital collected the data with one BSc holder supervisor.

Measurements

The questionnaires had four parts; the first part was about Socio-

demographic characteristics of the participants, the second part was the questions about the satisfaction with nursing care, the third part was about the institution and the fourth part was about the patients' expectation from care providers as well as from the hospital. Each item was rated using a five-point Likert-scale type ranging from (1) very dissatisfied and (5) very satisfied. The prevalence of patient satisfaction was calculated by percent mean (which is the ratio of actual value minus potential minimum with the potential maximum minus potential minimum then multiplied with hundred) [15]. If the prevalence or percent (>80), we affirm that there were good satisfaction on overall aspect of the nursing care. Moderate (not too bad), when equals to 60 to 80 and considered as low satisfaction if less than 60 percent.

Data Quality Control

Data collectors were trained for one day to be familiar with data collection tool. Pretest was conducted outside the study area. After pretest, the questionnaire was reviewed for appropriateness of wording; clarity of both contents and checked whether instructions elicited be going with responses. Crombach's alpha was calculated to test internal consistency (reliability) of items. If only Crombach's alphas>0.7 were incorporated to the main research questionnaire. Editing and sorting of the questionnaires were done to determine the completeness and consistency of data every day during the data collection. The completed questionnaires were cross checked and made correction on daily basis.

Data Analysis

Data were entered into EpiData v3.1, exported to SPSS version 21 and cleaned to check for completeness and missing values. Both descriptive and inferential statistics were done. For socio demographic characteristics and patient expectation descriptive statistical analysis was employed. Logistic regression with binary and multiple analyses were done to identify factors associated with dependent variable. Those explanatory variables with a p-value<0.25 in crude analysis were entered into multivariate analysis. A significance level of 0.05 was used in multivariate analysis to identify the predictors of adult inpatients' satisfaction with nursing care. The final model was checked by hosmer-lemeshow goodness of fit test. Confounders and multi co-linearity was checked to reduce bias.

Results

Socio demographic characteristics of the respondents

From a total of 421 sample sizes, only 398 respondents were interviewed; yielding the response rate of 94.5%. Out of the total study participants, about three fourth (75.4%) of the respondents were female. Two hundred seventy four (68.8%) of respondents were rural residents. One hundred forty three (36%) of respondents were farmer in occupation while 108 (27%) and 67 (16.8%) of respondents were housewife and government workers respectively. One hundred ninety one (48%) of respondents can't read and write. One third (33.4%) of the respondents were in the age group of 25-29 with the mean age of 31.4 ± 11.09. Two

hundred eighty five (71.6%) of the respondents earn monthly income greater than 925 Ethiopian birr (27 Ethiopian Birr=1 USD). Majority 331 (83.2%) of respondents were married while two third (66.6%) of respondents were orthodox Christianity in religion **(Table 1).**

Admission characteristics

Among the respondents included in the study 173 (43.5%) were from gynecology department while 137 (34.4%) were from medical ward. Two hundred thirty six (59.3%) of respondents were admitted for the first time while 162 (40.7%) of them admitter more than two times. Three hundred seventy eight (95.1%) of the respondents were stayed 2-5 days in the ward **(Table 2)**.

Satisfaction of patients with hospital structure

Out of the study participants, 209 (52.6%) of respondents were satisfied on the adequacy and maintenance of ward. Two hundred ninety three (73.7%) of the respondents were satisfied on the cleanliness of the admission ward. One hundred ninety five (49.1%) of the study participants were satisfied with the adequacy of ward's space while 299 (75.1%) were satisfied with ward room light and ventilation system. More than half (54.7%) of the respondents were satisfied with the condition of bed while only 166 (41.8%) of the study participants were satisfied on condition of food. One hundred fifty one (37.9%) of the respondents were dissatisfied on access to water and 179 (44.9%) of them were also dissatisfied on access to latrine and 167 (42.1%) of them were very dissatisfied on access to hand washing facility **(Table 3)**.

Patients expectations of nursing care

From all the respondents 370 (93%) were satisfied with empathy of nurses and 362 (91%) of respondents were satisfied with the way of nurses explain and listen the patients. Two hundred seventy three (96%) were satisfied with the way the respectful treat and the behavior of the nurses. The overall patients expectation was 78% i.e. majority of the respondents got the nursing service as they expected **(Figure 1)**.

Patient' satisfaction with the service given by nursing care providers

From all the respondents 285 (71.6%) of them were satisfied with the way of nurses welcomed patients. Two hundred fifty four (63.9%) of the respondents were satisfied with the approach of nurses and 212 (53.3%) of the respondents were satisfied with the way nurses communicate with them. One hundred ninety one (48.1%) of respondents were dissatisfied with the help/assistance given by the nurses. Two hundred twenty four (56.5%) of respondents were satisfied with the confidentiality **(Table 4)**.

Overall satisfaction of patients

The overall magnitude of patients' satisfaction towards the nursing care of Debra tabor general hospital was 66% (95% CI: 60.4%. 71.2%). About 34% of them were dissatisfied with the overall service given by nurses at inpatient departments **(Figure 2)**.

Table 1: Socio-demographic characteristics of adult patients admitted in Debra Tabor General Hospital, Northwest Ethiopia 2017 (n=398).

| Variables		Frequency	Percent (%)
Sex	Female	300	75.4
	Male	98	24.4
Residence	Urban	124	31.2
	Rural	274	68.8
Occupation	Housewife	108	27
	Farmer	143	36
	Merchant	28	7.0
	Government workers	67	16.8
	NGO	15	3.8
	Daily laborer	15	3.8
	Student	22	5.6
Educational status	Unable to read and write	191	48.1
	Read and write	52	13.0
	Primary school	52	13.0
	Secondary school	35	8.8
	Diploma and above	68	17.2
Age	20-24	48	12
	25-29	133	33.4
	30-34	96	24
	35-39	72	18.1
	40-44	25	6.3
	45-49	13	3.3
	Greater than 49	11	2.7
Monthly income in (ETB) (1US$=27.4ETB)	Less than 401	33	8.4
	401-500	21	5.3
	501-925	59	14.7
	Greater than 925	285	71.6
Marital Status	Married	331	83.2
	Single	33	8.4
	Divorced	16	3.9
Religion	Orthodox Christianity	265	66.6
	Muslim	109	27.4
	Protestant Christianity	24	6

Table 2: Patient admission characteristics of inpatients who were admitted in Debra Tabor General Hospital, Northwest Ethiopia 2017 (n=398).

Variables		Frequency	Percent (%)
Type of ward	Gynecology	173	43.5
	Surgical	88	22.1
	Medical	137	34.4
Frequency of admission	First time	236	59.3
	More than two times	162	40.7
Duration of stay in the ward	2-5 d ays	378	95.1
	>5 days	20	4.9

Table 3: The adult patients' satisfaction status toward hospital characteristics; at Debra Tabor General Hospital, Northwest Ethiopia 2017.

Variables	Reponses				
	Very dissatisfied n (%)	Dissatisfied n (%)	Neutral n (%)	Satisfied n (%)	Very satisfiedn (%)
Adequacy and maintenance of infrastructures	2 (0.4)	4 (1.1)	99 (24.9)	209 (52.6)	84 (21.1)
Cleanliness of ward	0	2 (0.4)	10 (2.5)	293 (73.7)	93 (23.5)
Adequacy of ward space	5 (1.1)	14 (3.5)	87 (21.8)	195 (49.1)	98 (24.6)
On light and ventilation	0	3 (0.7)	24 (6.0)	299 (75.1)	72 (18.2)
Condition of bed	0	5 (1.1)	38 (9.5)	217 (54.7)	138 (34.7)

Condition of food	0	3 (0.7)	81 (20.4)	166 (41.8)	148 (37.2)
Access to water facility	0	151 (37.9)	100 (25.3)	141 (35.4)	6 (1.4)
Access to latrine facility	43 (10.9)	179 (44.9)	0	61 (15.4)	115 (28.8)
Access to hand washing facility	167 (42.1)	7 (1.7)	87 (21.8)	137 (34.4)	0
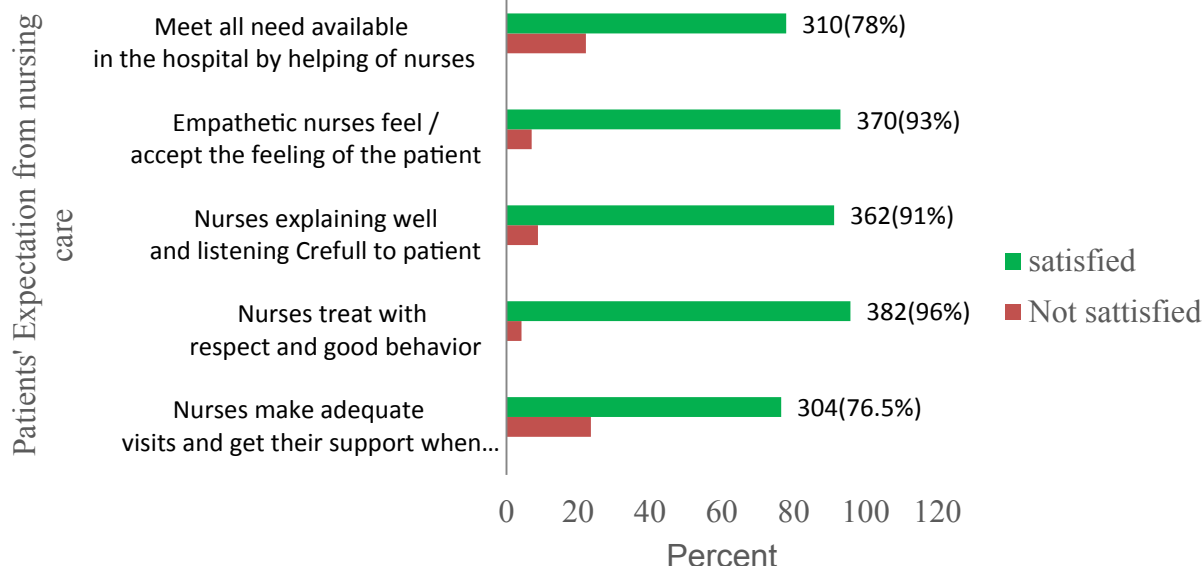
Figure 1 Adult inpatients' expectation of satisfaction by nursing care at Debra Tabor General Hospital, Northwest Ethiopia 2017.

Table 4: Adult inpatients' satisfaction with nursing care at Debra Tabor General Hospital, Northwest Ethiopia 2017.

| Variables	Very dissatisfied n(%)	Dissatisfied n (%)	Neutral n (%)	Satisfied n (%) ti(%)	Very satisfied n (%)
The way nurses welcomed me on my admission to this ward.	0	6 (1.4)	63 (15.8)	285 (71.6)	44 (11.2)
The nurses' approach when they were examining me	0	14 (3.5)	50 (12.6)	254 (63.9)	80 (20)
The way nurses were talking /communicate with me.	0	22 (5.6)	66 (16.5)	212 (53.3)	98 (24.6)
How nurses were willing to respond to my concerns/ requests	0	32 (8.1)	126 (31.6)	184 (46.3)	56 (14)
How nurses helped me with my pain	0	47 (11.9)	59 (14.7)	144 (36.1)	148 (37.2)
How nurses helped/assisted me with bed making	2 (0.4)	191 (48.1)	50 (12.6)	39 (9.8)	116 (29.1)
My anxiety and stress was alleviated by nursing care	0	31 (7.7)	47 (11.9)	211 (53)	109 (27.4)
The amount of time nurses spent with you	2 (0.4)	43 (10.9)	96 (24.2)	148 (37.2)	109 (27.4)
How quickly nurses came when you need them	2 (0.4)	19(4.9)	50 (12.6)	187 (47)	140 (35.1)
The way nurses made you feel at home	3 (0.7)	27 (6.7)	53 (13.3)	184 (46.3)	131 (33)
The information given to you about your condition and treatment	10 (3.5)	43 (15.1)	76 (26.7)	67 (23.5)	89 (31.2)
How often nurses checked to see if you were okay	2 (0.4)	41 (10.2)	65 (16.5)	176 (44.2)	114 (28.8)
The amount of privacy nurses gave you	2 (0.4)	24 (6)	70 (17.5)	157 (39.6)	145 (36.5)
The confidentiality nurses gave you	2 (0.4)	13 (3.2)	60 (15.1)	224 (56.5)	99 (24.9)

Factors associated with patients' satisfaction

In the bi-variate analysis five variables such as residence, duration of stay, frequency of admission, sex and type of ward were associated.

In this study, admitted patients stayed for two up to five days in the ward were 13 times (AOR=13.13, 95% CI: (2.875, 59.958))

more likely to be satisfied as compared to those who stayed more than five days. In addition the odds of admitted patients from urban area were 1.86 times (AOR=1.86, 95% CI: (1.104, 3.119)) more likely to be satisfied compared to patients admitted from rural area. Patients' who were admitted for the first time were two times (AOR=2.09, 95% CI: (1.274, 3.456)) more likely to be satisfied compared to patients who were admitted two or more
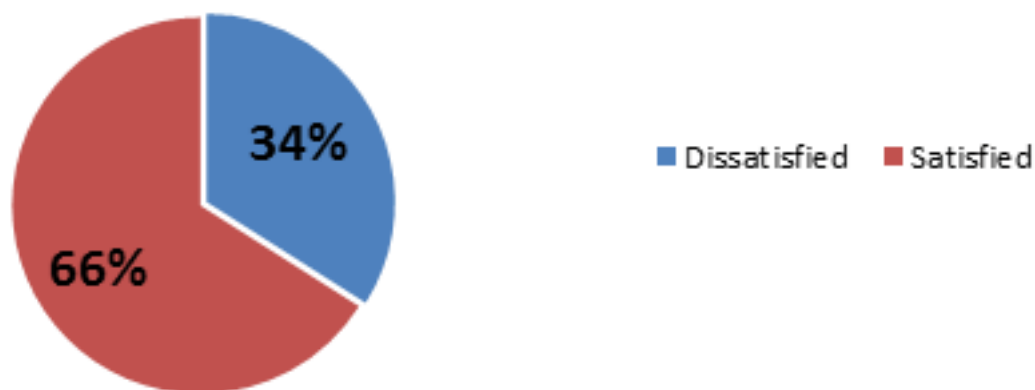
Figure 2 Status of adult inpatients satisfaction with nursing care at Debre Tabor General Hospital, Northwest Ethiopia 2017.

Table 5: Bivariate analysis of factors associated with adult patient satisfaction with inpatients nursing care in Debre Tabor General Hospital, Northwest Ethiopia 2017.

Variables		Satisfaction		Crude OR	P-value<0.25
		Not satisfied	Satisfied	(95% CI)	
Sex	Male	48 (48.6)	50 (51.4)	2.47 (1.419, 4.293)*	0.01
	Female	89 (29.3)	211 (70.7)	1	
Residence	Rural	81 (29.6)	193 (70.4)	1	
	Urban	54 (43.8)	70 (56.2)	1.86 (1.104, 3.119)*	0.02
Duration of stay in the ward					
2-5 days		119 (31.4)	259 (68.6)	13.13 (2.875, 59.958)	0.001
>5 days		17 (85.7)	3 (14.3)	1	
Frequency of admission					
First time		64 (27.2)	172 (72.8)	2.09 (1.274, 3.456)*	0.004
>=2 times		71 (44)	91 (56)	1	
Types of ward					
Medical		67 (49.2)	70 (50.8)	2.56 (1.363, 4.825)*	0.004
Surgical		29 (32.7)	59 (67.3)	2.9 (1.043, 3.826)	0.037
Gynecology		47 (27.2)	126 (72.6)	1	

times and male inpatients were two times (AOR=2.47, 95% CI: (1.419, 4.293)) more likely to be satisfied compared to female admitted patients. Similarly, patients admitted in medical and surgical ward were 2.56 (1.363, 4.825) and 2.9 (1.043, 3.826) times more likely to be satisfied with nursing care compared to patients admitted in gynecology ward respectively **(Table 5)**.

Predictors of patients' satisfaction

Out of these five variables identified in the bivariate analysis of logistic regression only duration of stay, frequency of admission, sex and residence were significantly associated with adult inpatients' nursing care satisfaction in the multivariate analysis. In this study, admitted patients stayed for two to five days in the ward were fourteen times (AOR=14.14, (95% CI: 2.948, 66.816)) more likely to be satisfied as compared to those who stayed more

than five days. In addition the odds of admitted patients from urban area were two times (AOR=2.01, (95% CI: 1.144, 3.536)) more likely to be satisfied compared to patients' admitted from rural areas. Patients' who were admitted for the first time were 1.87 times (AOR=1.87, (95% CI: 1.090, 3.218)) more likely to be satisfied compared to patients who were admitted two or more times and male inpatients were 2.22 times (AOR=2.22, (95% CI: 1.102, 4.473)) more likely to be satisfied compared to female patients **(Table 6)**.

Discussion

This study clearly demonstrated that, magnitude of patient satisfaction with nursing care was 66% (95% CI: 60.4%, 71.2%). This finding was in line with the study done in the Mizan Aman of Ethiopia which was 61.3%. The finding of this study was lower

Table 6: Multivariate analysis of factors associated with adult inpatient satisfaction with nursing care Debre Tabor General Hospital, Northwest Ethiopia 2017.

Variables		Satisfaction		Adjusted OR (95% CI)	P-value
		Not satisfied	Satisfied		
Sex	Male	48 (48.6)	50 (51.4)	2.22 (1.102, 4.473)**	0.026
	Female	89 (29.3)	211 (70.7)	1	
Residence	Rural	81 (29.6)	193 (70.4)	1	
	Urban	54 (43.8)	70 (56.2)	2.01 (1.144, 3.536)**	0.015
Duration of stay in the ward					
2-5 days		119 (31.4)	259 (68.6)	14.04 (2.948, 66.816)**	0.001
>5 days		17 (85.7)	3 (14.3)	1	
Frequency of admission					
First time		64 (27.2)	172 (72.8)	1.87 (1.090, 3.218)**	0.023
>=2 times		71 (44)	91 (56)	1	

** P-value< 0.05 for multivariate analysis, 1=reference

than study done in Mekelle city which was 79.7% and study done in Black Lion teaching Hospital [7] which was 90.1%. The difference might be due to most of nurses in Black Lion teaching Hospital were professional expertise and the hospital use adequate technology for the implementation of better nursing care practices. But, the finding was higher than studies done in other part of the country. A cross sectional study done in selected public health institution showed that 52.7% of patients were satisfied with the nursing care [16]. Also, this finding was higher than study done in Dassie [14] which was 52.5%, study done in Felegehiwot [17] which was 44.9%, In south nation nationality and people [2] which was 47% and study done in Amhara region [6] which was 56.9%. Our finding was also higher than the study conducted in Dil Chora Hospital found in eastern part of Ethiopia, Addis Ababa (which was 48.8%) and Minilik II Hospital (which was 55.8%) [18]. The reason for difference might be the above mentioned hospitals may have high number of patient flow and work overload which leads low percent of adult inpatient satisfaction or might be due to the difference in management system among the hospitals. The finding of this research also, differs from study done in other part of the world. The satisfaction of patient with the nursing care in Kenya was much higher than our finding. In Kenya 87% of patients were satisfied with the nursing care [9]. This difference might be due to the socio economic and technological as well as due to the difference in management system of two countries. But, our finding was higher than study done Risgary of Iraq which was 40.5% [12].

In this study sex of patients, residence, and duration of stay in the ward as well as frequency of admission were statistically significant.

Male patients who were admitted in the ward were two times (AOR=2.47) more likely to be satisfied compared to female admitted patients. This finding was in line with study done in Dassie in which sex was an associated factor for the satisfaction of patients [14]. Admitted patients from urban areas were two times (AOR=2.01) more likely to be satisfied compared to patients from rural area. This finding appeared to be consistent with studies done in Mizan and Mekelle in which the place of the residence were the associated factor [7,19]. Adult in-patients who were admitted for the first time (AOR=1.87) were 1.87 times

more likely to be satisfied compared to those who were admitted more than one. This result was the similar with other studies done in Ethiopia and abroad. In Saud Arabia, patients who had prior history of admission and the satisfaction had significant association [8]. In Ethiopia, study done in Addis Ababa [20], Dessie [14], and in selected public hospital [16] were revealed frequency of admission had significant association with patient satisfaction with nursing care.

Duration of stay in the ward had also a significance association with patient satisfaction with nursing care. In this study, admitted patients who stayed 2-5 days in the ward had (AOR=14.14) 14.14 times more likely to be satisfied compared to those who stayed more than 5 days. This result is consistent with other study done in Ethiopian hospitals and other part of Africa. The study done in Addis Ababa [1], Mekelle [19] and Mizan [7] had clearly showed the length of stay had influence on the satisfaction of patients with the nursing care. In Kenya also patient satisfaction was influenced by the length of stay in the hospital [9]. In other study satisfaction of patients with nursing care was influenced by age of respondents, income, education level, type of wards in which the admitted, marital status and privacy [2,7–9,14]. But, in this study they were not statistically significant.

Conclusion

In conclusion, the level of patients' satisfaction with inpatient nursing care was found to be moderate or not too bad. The patient expectation was also good since majority of patients got what they expect. Sex of patients, residence, and duration of stay in the ward as well as frequency of admission were significantly associated with adult inpatient satisfaction with nursing care. Since nursing care is determinant of patient outcomes during hospitalization, health administrators should often emphasize on nursing technical competency and interpersonal relationships throughout patient care. Prompt quality nursing care should be prioritized to match with patient expectations in each hospital units and ensure patient satisfaction through reduction of length of stay in hospital and frequency of admission.

Implication of the Study

Data on patient satisfaction was collected using survey tools,

can be considered a valid source for performance indicators from patient perspective. If health policies have to be patient centered, managers and health workers need to monitor patient experience and to consider the results obtained to plan services and to evaluate performance. Promoting surveys regarding patient experience and considering them as a systematic tool to detect patient needs help to give more importance to the role of patient in health care. The service performance improved only if each professional is made accountable for the quality of assistance he delivers.

Declaration of Conflict of Interest

There is no competing conflict of interest with the presented data as external data collectors collected. We, the researchers, have no any form of competing financial and non-financial interest between ourselves.

Availability of Data and Materials

The data collected for this study can be obtained from the first or last author based on a reasonable request.

Authors Contribution

All authors involved in the study proposal writing, design, data analysis, write-up, and drafted the first version of the manuscript, and participated in all phases of the project.

Ethical Consideration

Ethical clearance was obtained from institute of health ethical review board of jimma university. Permission letters was obtained from debra tabor general hospital and the letter was presented to selected wards. Oral consent was taken from each participant before start of data collection. Confidentiality was assured by indicating they are not requested tell their name and by assuring that their responses not in any way be linked to them. In addition, they were told that they have the right not to participate or withdraw from the study any time during data collection.

Declaration of Competing for Interest

There is no competing conflict of interest with the presented data as external data collectors collected it. There was no financial interest between the funder and the research area community and the authors. We, the researchers, have no any form of competing for financial and non-financial interest between ourselves.

References

1. Tsegaw MG (2017) In-patients' satisfaction level towards Nursing care services and associated factors at public Hospitals of Addis Ababa, Ethiopia. Journal of Health, Medicine and Nursing 1: 1-17.

2. Salgedo WB (2016) Adult patient satisfaction with in-patient nursing care in a referral and teaching hospital in southern nations nationalities and peoples' region. J nurs care 5: 2-6.

3. Riley JL, Gordan VV, Hudak-B SE, Fellows JL, Rindal DB et al. (2014) Concordance between patient satisfaction and the dentist's view: Findings from the National Dental Practice-Based Research Network. J Am Dent Assoc 145: 355-362.

4. Gupta ML, Sharma SR, Sundar A, Singh SB (1987) Geothermal studies in the Hyderabad granitic region and the crustal thermal structure of the Southern Indian Shield. Tectonophysics 140: 257-264.

5. Alsalleeh F, Alohali M, Alzeer M, Aloseimi M, Almuflehi N et al. (2018) Analyzing private dental clinics in Riyadh City, Saudi Arabia. Saudi Dent J 30: 70-73.

6. Alemu S, Jira C, Asseffa T, Desa MM (2014) Changes in in-patient satisfaction with nursing care and communication at Debre Markos Hospital, Amhara region, Ethiopia. Am J Public Health Res 2: 171-176.

7. Shewasinad S, Sayih A (2018) Assessment of adult patient satisfaction and associated factors with nursing care among admitted patient in medical, surgical, obstetrics and gynecology ward in mizan-aman general hospital , bonga and tepi hospitals, southwest ethiopia 2016. Nurse health care 8: 1-9.

8. Alsaqri S (2016) Patient satisfaction with quality of nursing care at governmental hospitals, Ha'il City, Saudi Arabia. J Biol Agric Healthc 6: 128-142.

9. Tarus TK, Mangeni JN, Nyariki JC, Simiyu KN, Obel MC et al. (2014) Assessment of patient satisfaction with nursing care at a large public referral hospital in Kenya. J Biol Agric Healthc 4: 156-161.

10. Sinclair S, Torres M, Raffin-bouchal S, Hack TF, Mcclement S et al. (2016) Compassion training in healthcare: what are patients' perspectives on training healthcare providers ? BMC Med Educ 16: 1-10.

11. Words K (2007) Nurse caring in Iran and its relationship with patient satisfaction. Aust J Adv Nurs 26: 75-84.

12. Al-tawil NG, Mustafa IH, Ismahil ZA (2016) Inpatients' satisfaction toward nursing services in the medical and surgical wards of Rizgary Teaching Hospital, Erbil, Iraq. J Med Sci 20: 1-7.

13. Yadav P, Mangwana S, Vihar P (2014) Analysis of patient satisfaction survey in multi- specialty accredited tertiary care hospital in. Int J Appl Basic Med Res 4: 33-9.

14. Eyasu KH, Adane AA, Amdie FZ, Getahun TB, Biwota MA (2016) Adult patients' satisfaction with inpatient nursing care and associated factors in an Ethiopian referral hospital, Northeast, Ethiopia. Adv Nurs Sci 2016.

15. Kirigia JMK, DG (2011) The essence of governance in health development. Int Arch Med 4: 1755-7682.

16. Ahmed T, Assefa N, Demisie A, Kenay A (2014) Levels of adult patients' satisfaction with nursing care in selected public hospitals in Ethiopia. Int J Health Sci 8.

17. Belayneh M (2016) Inpatient satisfaction and associated factors towards nursing care at Felegehiwot Referral Hospital, Amhara

Regional State, Northwest Ethiopia. Global Journal of Medicine and Public Health 5: 2277-9604.

18. Ababa A (2018) Assessment of customer satisfaction in menelik ii health Science College. Health Education Research & Development. J Health Educ Res Dev 6.

19. Marama T, Bayu H, Merga M, Binu W (2018) Patient satisfaction and associated factors among clients admitted to obstetrics and gynecology wards of public hospitals in Mekelle Town, Ethiopia: An Institution-Based Cross-Sectional Study. Obstet Gynecol Int.

20. Study C, Molla M, Berhe A, Shumey A, Adama Y (2014) Nursing and care assessment of nursing care experience and associated factors among adult inpatients in black-lion hospital, Addis Ababa, Ethiopia: An Institution-Based. J Nurs Care 3: 1-6.