Adult in Patients' Satisfaction and Associated Factors with Nursing Care in Wards of Hospitals of in Guji Zone, Oromia, South Ethiopia

Tadese Gemechu Jiru (BSC, MPH) [1,] Waju Beyene Salgedo (BSN,MPH,Associate professor) [2] * Tesfamichael Alaro Agago (BSC, MPH) [2]

[1] Negele Borena Hospital, Guji Zone Oromia, Ethiopia,
[2] Department of Health Economics, management and policy, Faculty of Public Health, Jimma University,
[2] Department of Health Economics, management and policy, Faculty of Public Health, Jimma University, Jimma University,

Abstract: Background: Patients' satisfaction is a persons' feeling of pleasure or disappointment resulting from services perceived performance or outcome in relation to their expectations. Patients' satisfaction with nursing care constitutes an important component to measure of quality of nursing care in hospital settings.

Objective: The purpose of this study was to assess adult inpatient satisfaction and associated factors of nursing care in Nagele Borena and Adola General Hospital,Guji zone Oromia, southern Ethiopia,2016.

Methods: Across-sectional facility based study was conducted on in-patients at Nagele Borena and Adola General Hospital in Medical, Surgical, and Gynecology/Obstetric wards. The study was conducted from May 20-June 30/ 2016 on a Sample of 413 patients those admitted for two or more nights. Data collected using a structured questionnaire, entered into Epidata version 3.1 and analyzed using IBM SPSS version 20. Factor score was computed for the items identified to represent the satisfaction scale by varimax rotation method. Multiple linear regression analysis was performed to determine the effect of independent variables.

Results: A total of 422 in-patients were approached from the study hospitals and 413 of them participated in this study (non-response rate of 2.13%). In this study overall level of patient's satisfaction mean score and level of patient experience were 55.9% and 56.125 respectively. Moreover, patients had perceived institutional aspect mean score of 54.2%. According to this research finding, number of night spent in the ward, marital status being widowed and divorced, perceived institutional aspects score and patient experience with nursing care were found to be independent predictors of in-patients satisfaction with nursing care f at selected Hospital setting.

Conclusions: The overall level of inpatient satisfaction with nursing care was low. It was influenced by their perceived institutional aspects, communication and information sharing of nurses with patients was significantly influence patient satisfaction in the in-patient setting. Thus, the hospitals should consider mechanisms to improve the nurses' way of communication and interpersonal relationships beyond training on direct patient care.

Key words – Adult inpatients' satisfaction, Nursing care, Negele Borena and Adola hospitals, Guji Zone, Ethiopia**.**

INTRODUCTION

The on-going improvement in the quality of health care has become daily objective for health care professionals and healthcare systems as a whole. Patient satisfaction that constitutes an important dimension of quality care and patients' outcomes, complementing measures of institutional performance and clinical outcome have proven to be a valuable, relatively cheap and conventional way to assess the provision of quality care to patients. Nurses are the frontline people that patients most likely meet up with, spend the highest amount of time with and rely upon for recovery during their hospitalization (1, 2, 3).

Assessing patient satisfaction with nursing care is important in evaluating whether patients' needs are fulfilled and subsequently facilitating in the planning as well as implementing appropriate nursing interventions for patients. Determining factors contribute most to patient satisfaction can further assist nurses in improving the quality of nursing care. Hence, patient satisfaction with nursing care is an imperative determinant of quality of care particularly in the clinical/ healthcare facility settings (2).

Asking patients what they think about the care and treatment they have received is an important step towards improving the quality of care, and ensure local health services are meeting patients' needs (4).

Satisfaction is not a pre-existing phenomenon waiting to be measured, rather a judgment people made reflecting their experience under specific circumstances. A simple and practical definition of satisfaction would be the degree to which desired goals have been achieved (5).

Donabadian, arguably the leading theorist in the area of quality assurance, has emphasized that client satisfaction is fundamental importance as a measure of the quality of care. According to concept of Thomas et al., patient satisfaction of six dimensions of nursing care proposed by was used in this study. Patients expected varied aspects of nursing care that affect their satisfaction namely nurses' attentiveness and availability, reassurance and provision of information, openness of informality, and provision of individual treatment (6, 7).

The Federal Ministry of health (FMOH) in Ethiopia is also striving to provide a quality nursing service in every health institution and it is also developing different reforms, quality management guidelines and evaluation mechanism for nursing care (8). Thus, this study is expected to provide important evidence about the level of adult inpatients' satisfaction with nursing care at selected Hospitals and identify the factors that affecting it and eventually guide the improvement intervention to be taken by responsible bodies.

METHODS

A facility based cross sectional study was conducted from May 20- June 30/ 2016 at Nagele Borena and Adola general Hospitals in Medical, Surgical, Gynecology and Obstetrics wards in Guji zone, southern Ethiopia. Nagele Borena General Hospital has currently been delivering its inpatient health services in 113 beds using a total of 101 health personnel out of which 81 were nurses while Adola General Hospital has currently been running its healthcare deliveries with a total of sixty seven (67) beds and a total of 93 medical personnel; of which 72 were nurses.

The source populations were all patients who were admitted in Medical, Surgical, and Gynecology/ Obstetric wards of the study hospitals during the study period while the study populations were sampled in-patients aged $\geq$18years and above that were admitted for at least two days. Too seriously ill and unable to communicate and Patients with hearing and visual problems were excluded from the study.

A single population proportion formula, $[n = (Z \alpha/_2)^2 p (1-p) / d^2]$, was used to estimate the sample size. Due to lack of previous studies showing the proportion of inpatient satisfaction with nursing care 50% proportion, 95% confidence interval, 5% margin of error and 10% of non-response rate with calculate size of 422. Patients were allocated proportionally based on Hospitals patient load, 246 inpatients from Nagele Borena Hospitals and 176 from Adola General Hospitals. Similarly, Study participants were proportionally allocated to each wards based on the total number of patient admitted by taking consecutively until fulfilling the required sample size.

The dependent variable of measurement was patients' satisfaction while the independent variables were: socio demographic factors (age, sex, religion, marital status, ethnicity, education, income and occupation,), hospital conditions (duration of admission, admission ward), patients' conditions (history of previous admission) and experiences nursing care provided (patient experience with nursing care in general).

Data was collected using Inpatients Patients Satisfaction Questionnaire (IPSQ) adapted from Newcastle Satisfaction with Nursing Scale (NSNS) (6, 9). IPSQ included three parts: socio-demographic and personal characteristics that had 12 items, perceived patient satisfaction with nursing care measured using a five level Likert scale that had 19 items and patient experience with nursing care in general measured using a five level Likert scale 26 items in a five points Likert Scale (1 = strongly disagree, 5 = strongly agree).From 19 items, 3 items were discarded because of communality less than 0.5 and complex structure greater than 0.4 during principal component analysis.

From 26 patient experiences tool 11 items are negatively worded. These negatively worded items are reversely coded during analysis. Out of these, 17 items were discarded because of communality less than 0.5 and complex structure greater than 0.4 by principal component analysis.

The questionnaire was translated into Afaan Oromo by two language experts to ease its administration. In addition, a pretest study had also been conducted using 20 subjects (calculated based on 5% of the total number of subjects) to determine the reliability of the questionnaire. The reliability of the IPSQ evaluated through Cronbach's alpha coefficient, resulted in an internal satisfactory consistency for all IPSQ. The data was collected by four trained diploma nurses whom work out of the study Hospitals to minimize health worker bias and supervised by two BSC graduate nurses. Data was checked for completeness and consistency, edited, entered into computer & analyzed using SPSS window version 20. Cross tabulation was made & presented using tables & graphs and narrative description. The relationship between patient satisfaction status and independent variables was assessed using bivariate followed by multiple linear regressions. The overall level of patients' satisfaction was measured by the mean of the percentage of maximum scale score (PMSS) as calculated by the following formula.

$$PMSS= \frac{(\text{Actual score} - \text{potential minimum score}) \times 100}{\text{Potential Maximum score} - \text{potential minimum score}}$$

In accordance with Sitzia's (10) recommendations, factor analysis, reliability estimates (internal consistency), and multi-trait scaling were conducted on the inpatient satisfaction Likert scale. Exploratory factor analysis was used to ascertain whether the underlying construct of inpatient satisfaction for adapted versions of the NSNS and to identify the most important dimension of patient satisfaction. A direct solution (principal components analysis) was the first step in analyzing the 26-item scale for patient experience with nursing care in general (11). Only items with communality estimates (common factor variance) >0.30 were taken into consideration, as items with unique variance (specific variance + error variance) >0.70 tend to be unreliable (12). In order to ascertain significant loadings at the 1% level, loadings >0.50 were examined (11, 12). A forced orthogonal (VARIMAX) two-factor rotational solution was conducted to minimize the number of variables with high loadings on a factor and achieve simple structure and in each case, the items loaded on one factor only.

Ethical clearance was obtained from ethical Review committee of College of Public Health and Medical Sciences, Jimma University. The Zonal health Department and other respective offices were informed by letters while verbal consent was obtained from respondents during data collection

RESULTS

A total of 413 participants were included in the study giving a response rate of 97.8%.From the total of patients, 291(70%) were female. The mean age of respondents was 32($\pm$9.85).A larger proportion of the respondents, 198(47%) were in the age group between 25-34 years and followed by 100 (24%) from 35-44 age group. Majority of the respondents, 217(52%), were from urban area while the remaining 198(48%) were from rural.

Three hundred forty (81%) of study subjects were married and 41(10%) were single. Concerning educational status, 140(33%) of the respondents could able to read and write and 126(30%) of the respondents unable to read and write, only 73 (17%) of them had attended primary education.

One hundred fifty four (37%) of the participants were Muslim in religion and followed by the protestant 132(31%) and most of the respondents, 279(66%) were Oromo, followed by Amhara 65(15.7%) (**1**).

Table 1:- Socio-demographic characteristics of adult in patients in Nagele Borena and Adola General Hospitals Oromia , Ethiopia, May 2016

Variables	Category	Frequency(n=413)	Percent
Sex			
	Male	122	30
	Female	291	70
Age			
	18-24	82	20
	25-34	198	47
	35-44	100	24
	>44	33	8
Residence			
	Urban	215	52
	Rural	198	48
Religion			
	Orthodox	98	23
	Muslim	154	37
	Protestant	132	31
	Catholic	17	4
	Wakefata	12	3
Ethnicity			
	Oromo	279	66
	Amhara	65	15
	Somale	38	9
	Other*	31	7.5
Marital status	Married	340	81
	Single	41	10
	Other**	32	7.7
Educational status			
	Unable to read and write	126	30
	Able to read and write	140	33
	Primary	73	17
	Secondary	48	11
	Above secondary	26	6
	$\leq$150 birr/month	18	4.3
Income	151 to 600 birr/month	104	24.8
	601 to 1200 birr/month	124	29.5
	1201 to 2500 birr/month	150	35.7
	$\geq$2501 birr/month	17	4.0
Occupation			
	House wife	175	41.7
	Merchant	83	19.8

	Government employee	37	8.8
	Farmer	41	10
	daily laborer	28	6.8
	Student	22	5.3
	Other**	36	8.7

Other* (Gedeo, Walayita, Gurage, Tigre), other** (divorced, widowed) other*** (house servant, unemployed and private employee)

With regards to patient's condition, duration of admission, 389(94%) of participants stayed 2-10 day, 19(5%) of those stayed 11-22 days, and 5(1%) of participants stayed for more than 22 days. On the other hand, 342(83%) of patients had admitted for the first time and 71(17%) patient had repeat admitted in those selected Hospitals.

Regarding the admission wards, 203(49.3%) of the patients were admitted in gynecology/Obstetrics ward, 117(28.3%) were admitted to surgical ward and 93(22%) were admitted in medical ward **(Table 2)**.

Table 2:- Frequency of admission & admission ward in Nagele Borena and Adola General Hospitals, Southern Ethiopia, May 2016.

Variables	Category	Frequency(n=413)	Percent
Nights in wards			
	2_10	389	94
	11_22	19	5
	>22	5	1.2
Frequency of hospital admission			
	New admission	342	83
	Repeated	71	17
Ward of admission	Medical	93	22.4
	Surgical	117	28.3
	Gynecology/Obstetric	203	49.3

Overall level of patients' satisfactions with nursing care:

Overall level of patient satisfaction as calculated by percentage mean score was 55.9% with a maximum score of 80% and a minimum of 16%. 289(70%) of the patients reported as felt at home by nurses' treatment, 278(67%) were treated as a respected individual, 273(66%) were happy by way nurses helped them and their relatives at ease. but 264(63.9%) said that they were dissatisfied by the way nurses gave information about the hospital environment and their health problem. 207(50%) said they were satisfied by the amount of time nurses spent with them and 210(51%) of participants were satisfied the amount of privacy nurses gave them (**Table 3**)

Table 3: Satisfaction of inpatients by the dimensions of nursing care given at Nagele Borena and Adola General Hospitals in Southern Ethiopia, May 2016

Items	Not at all satisfied	Barely satisfied	Quite satisfied	Very satisfied	Completely satisfied
Attentiveness					
The amount nurses knew about your care	5(1.2%)	63(15.3%)	149(36.1%)	193(46.7%)	3(0.7%)
How willing nurses were to respond to your requests	0	69(16.7%)	161(38.9%)	180(43.5%)	3(0.7%)
How capable nurses were at their job	2(0.5%	55(13.3%)	173(42%)	175(42.3%)	8(1.9%)
nurses awareness of your need	1(0.2%)	62(15%)	144(34.8%)	205(49.6%)	1(0.2%)
Nurses' manner in going about their work	1(0.2%	73(17.7%)	144(34.8%)	192(46.5%)	3(0.7%)
Availability					
There always being a nurse around if you needed one	2(0.5%)	72(17.4%)	176(42.6%)	157(38%)	6(1.5%)
How quickly nurses came when you called for them	5(1.2%)	84(20.3%)	140(33.8%)	180(43.5%)	4(1%)
The amount of time nurses spent with you	10(2.4%)	82(19.9%)	114(27.6%)	202(48.9%)	5(1.2%)
Reassurance					

4

The way the nurses made you feel at home	3(0.7%)	87(21.1%)	199(48.18%)	123(29.7%)	1(0.2%)
How nurses listened to your worries and concerns	2(0.5%)	75(18.2%)	169(40.9%)	160(38.7%)	6(1.5%)
The amount of privacy nurses gave	1(.2%)	84(20.3%)	118(28.5%)	207(50%)	3(0.7%)
openness/informality					
How nurses helped put your relatives' or friends' minds at rest	3(.7%)	76(18.4%)	194(46.9%)	138(33.4%)	2(0.5%)
The amount of freedom you were given on the ward	2(0.5%)	88(21.3%)	120(29%)	199(48.2%)	4(1%)
Information					
The way nurses explained things to you	3(0.7%)	106(25.4%	155(37.5%)	146(35.4%)	2(0.5%)
Individual treatment					
Nurses' helpfulness	1(0.2%)	69(16.7%)	176(42.6%)	159(38.5%)	8(1.9%)
Nurses treatment of you as an individual	1(0.2%)	81(19.6%)	196(47.4%)	131(31.7%)	4(1%)

Remark: 5 = completely satisfied, 4 = very satisfied, 3 = quite satisfied, 2 = barely satisfied, 1 = not at all satisfied

Perception of inpatient on institutional Aspects:

A perceived institutional aspect of the services refers to the environment in which nursing services were carried out and necessary materials needed to deliver nursing services. Accordingly six items on five point Likert scale ranging from strongly disagree to strongly agree were used to measure to what extent patients were satisfied with services environment and availability of materials. Among perceived institutional aspects measuring items, three hundred six (74%) of respondents agree or strongly agree and 72(17%) were in different with availability of medical supplies while, 173(43.8%) were disagree or strongly disagree and 162(39%) were strongly agree or agree about water supply of the room and the one with which less agree compared to others **(Table 4).**

Table 4:-Perception of inpatients towards institutional aspects items of nursing care at Nagele Borena and Adola General Hospital, Southern Ethiopia, May 2016.

Variables	Str.Disagree	Disagree	Neutral	Agree	Str. Agree
I am satisfied with availability of medical supplies	4(1%)	68(16%)	35(8.3%)	297(70%)	9(2.1%)
I'm satisfied with ward management and admission procedure	3(0.7%)	89(21.2%	131(31.2%)	182(43.3%)	8(1.9%)
I'm satisfied with state of discipline in the room	3(0.7%)	71(16.9%)	110(26.2%)	222(52.8%)	7(1.7%)
I'm satisfied with cleanness and comfort of the room	2(0.5%)	126(30%)	118(28.1%)	163(38.8%)	4(1%)
I'm satisfied with privacy of the room	2(0.5%)	153(36.4%)	78(18.6%)	178(42.4%)	2(.5%)
I'm satisfied with water supply of the room	3(0.7%)	170(40.5%)	78(18.6%)	160(38.1%)	2(0.5%)

Satisfaction of patients on their experience during ward stay:

From the items we used to measure patients experience of nursing care one components were extracted, one factor the patients had mean scale score (as percentage) of 56.125% and average raw mean score of 27.45 ± 7.62 with possible value range of 9 to 45. These variables were found to explain total Variance 57.68% of the variability in the satisfaction factor score and Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) 0.933 and Cronbach's Alpha .904.

In regard to highest rate of in patient satisfaction with patient experience nursing care were the nurses took interest on me 298(72%), nurses did not seem to know my problem 282(68%) were agree and strongly agree by nursing care given at selected

General Hospitals, in the other way round, the highest proportion of the dissatisfaction level was observed with it was easy to laugh with nurse and nurses took a long time to came 143(44%) and 117(28.8%) respectively(**Table 5**).

Table 5:-Inpatient satisfaction accords to patients experience with Nursing Care of study participants at Nagele Borena and Adola General Hospitals, Southern Ethiopia, May 2016.

Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It was easy to laugh with nurse	4(1%)	139(33%)	49(11.7%)	212(50.5%)	9(2.1%)
Nurses did not tell me my condition	4(0.5%)	144(34.3%)	39(9.3%)	67(16%)	159(37.9%)
Nurses took a long time to came	2(0.5%)	117(27.9%)	43(10.2%)	85(20.2%)	166(39.5%)
Nurses gave me information	14(3.3%)	94(22%)	75(17.9%)	222(52.9%)	8(1.9%)
Nurses did not seem to know my problem	1(0.2%)	63(15%)	67(16%)	136(32.4%)	146(34.8%)
nurse comforting the patients	6(1.4%)	67(16%)	120(28.6%)	214(51%)	6(1.4%)
Nurses took no interest on me	0(0%)	57(13%)	58(13.8%)	136(32.4%)	162(38.6%)
Nurses explain what was wrong with me	5(1.2%)	70(16.7%)	99(55.5%)	233(1.4%)	6(1.4%)
There was a happy atmosphere in the ward	6(1.4%)	62(14.8%)	79(18.8%)	271(64.5%)	2(0.5%)

Nursing care dimensions score have mean score of 51.81 and ± SD of 9.35.the maximum score was 80 and the minimum score was 16.Perceived institutional aspect score have mean score of 19.34 and ± SD of 4 the maximum score was 30 and the minimum score was 6.Patient experience score have mean score of 27.45 and ± SD of 7.62 the maximum score was 45 and the minimum score was 9(Table 6).

Table 6: Reliability coefficient, total variances explained; mean score and SD of the extracted factors of each scale for assessing adult inpatients satisfaction with nursing care at Nagele Borena and Adola General Hospitals in Southern Ethiopia, May 2016.

Extracted variables	No of items load	Cronbach's alpha coefficient	Total variance explained	Mean	SD
Level of patient satisfaction with nursing care	16	0.966	57.107	51.81	9.35
Perceived institutional aspect score	6	0.866	60.036	19.34	4
Component of patient's experience score	9	0.904	57.68	27.45	7.62

Factors associated with patient satisfaction:

We assessed the association of dependent and independent variable by using bivariate regression model followed by multiple linear regression model. First we analyzed each independent variable and then we put all variables those showed p-value of < 0.5 into multiple linear regression model to rule out confounder/s. The result of multiple analysis showed that age, religion, educational status, ethnic group, occupation, admission ward were not significantly associated. The results showed that significant predictors of patient satisfaction with nursing care were marital status, duration of hospitalization, patient experience with nursing care in general and perceived institutional aspect.

As it is indicated in the table 7, a day increase in duration of hospital stay from 11-22 will lead to 0.228 increase in patient satisfaction with nursing care (95%CI = 0.009, 0.465) at p 0.041. Regarding Patients stayed in the hospital for >22 will lead to 0.297 increase in patient satisfaction with nursing care (95%CI = 0.248, 0.842) at p 0.002.

Regarding perceived institutional aspect and patient experience factor score has also a strong significant change in satisfaction score. A unit score increase in perceived institutional aspect score will lead to; 0.514 increments in patient satisfaction with

nursing care (95% CI = 0.450, 0.579) and A unit score increase in patient experience with nursing care in general score will lead to;0.423 increments in patient satisfaction with nursing care (95% CI = 0.360, 0.486)(Table 7).

Table 7: Predictors of inpatients' satisfaction with nursing care in Nagele Borena and Adola General Hospitals, Southern Ethiopia, May 2016.

Variable	Category	Non standardized Coefficients	95%CI for B		P value
Age		-0.001	-0.007	0.004	0.626
Religion					
	Muslim*			1	
	catholic	-0.121	-0.375	0.132	0.347
Educational status	unable to read and write	-0.01	-0.131	0.131	0.999
	Able to read and write*			1	
	primary	-0.02	-0.166	0.126	0.789
	secondary	-0.054	-0.219	0.111	0.523
	above secondary	0.023	-0.189	0.235	0.83
	Married			1	
Marital status	single	-0.124	-0.294	0.045	0.15
	widowed	-0.41	-0.641	-0.18	0.001*
	divorced	-0.304	-0.602	-0.005	.046*
Ethnic group					
	Oromo			1	
	Amhara	0.104	-0.031	0.239	0.13
	Somale	0.118	-0.057	0.293	0.186
	Gurage	-0.155	-0.456	0.147	0.315
Occupational	House wife			1	
Status	farmer	-0.158	-0.487	0.17	0.343
	daily labor	-0.093	-0.286	0.1	0.342
Day of admission					
	2_10			1	
	11_22	0.228	0.009	0.465	.041*
	> 22	0.297	0.248	0.842	.002*
	Gyn/obstetric			1	
Admission ward	surgical	-0.012	-0.128	0.105	0.844
Patient experience factor score		0.423	0.36	0.486	.000*
Perceived institutional aspect factor score		0.514	0.45	0.579	.000*

*reference group, those with high frequency observations was used, R=0.887, **R .square = 0.787, Adjusted R square =0.777**

DISCUSSION

Patient satisfaction is an important indicator of quality of healthcare in a hospital setting. The measurement of patients' satisfaction with nursing is particularly important since nursing care is often a primary determinant of overall satisfaction during a hospital stay (1).

The finding of this study revealed that the mean satisfaction score of the patients towards nursing care services rendered were 55.9%. This was lowest when compared to studies conducted in Tikur-Anbassa specialized Hospital and Public Hospitals in Addis Ababa, Ethiopia 90.1% and 67% respectively(13,14). The difference might be related to the level of Hospital that it is referral hospital that most of nurses were professional expertise and have adequate technology for the implementation of better nursing care practices. On the other hand, the overall satisfaction in this study was higher than study conducted in Hawasaa University specialized and Teaching Hospital (47%) and Ghana teaching hospital where about 33% of respondents were satisfied with their nursing care (15, 16).

The findings of this study showed that there was no relationship between most of socio-demographic variables including age, religion, educational status, ethnic group, occupational with inpatients' overall satisfaction with nursing care score. This could be

due to the fact that most of socio demographic variables did not affect overall level of satisfaction; hence they did not influence patient's expectations. This findings similar with the findings of Taleghani University Hospital, Iran and Hawasaa University specialized and Teaching Hospital, who studied improving patient satisfaction through the consistent use of scripting by the nursing staff and pointed out those demographic characteristics, seem to be unimportant(15, 17).

Concerning marital status this study showed that, divorced and widowed patients were less satisfied with inpatient satisfaction when compared with the married counterparts. This is in agreement with finding in Turkey that married patients' satisfaction levels are higher than those of widows and divorced patients'(18).This might be due to more than half of the patient was married and the social support and care that married patients receive from their spouses and children might decrease their care needs and expectation levels.

The results of this study also showed a significant positive association between perceived institutional aspect factor score with patient satisfaction score. Mean scale score as percentage of perceived institutional aspects factor score was 54.2% which was low compared with study done by Ahmad M.M. & Alasaad J.A. 2004 and 49.1% of respondents strongly agree and agree perceived institutional aspects in these selected Hospitals(11). A unit score increase in perceived institutional aspects will lead to 0.387 increments in the patient satisfaction factor score (95% CI = 0.295, 0.478).This finding also supported by study conducted in Hawasaa University specialized and Teaching Hospital and A Case Study at Kwame Nkrumah University of Science and Technology pointed out that satisfaction was also positive association with perceived institutional aspect, if the perceived needs of the patient fulfilled they would have been more satisfied with nursing care they received (15,16).

The study also showed that, the duration of hospitalization was significantly associated with inpatient satisfaction factor score. According to this finding those patients those (11 to 22) and >22 nights has higher satisfaction than those patients who spent 2-10 night in counterparts. This may be due to the patient is hospitalized for the long period of time, they express their satisfaction or dissatisfaction with service provider to get sufficient counseling, effective and continuous service and they understand the behaviour of the care provider and simply ask what they want.

This was not in agreement with a study done in Brazil (19) and in Addis Ababa, those patient who spent 11to22 night and >22night were less satisfied than those who spent (13).

The overall mean scale score as percentage constructs of patients' experiences with nursing care in general in the current study was 56.125% which was low when compared with study done in teaching Hospital at Karad city named as the Krishna Hospital and Medical Research Center which was (64.5% and study conducted on patients in medical-surgical wards in a major teaching hospital in Jordan which is 74% (9, 20). The results of this study also showed a significant positive association between patient experience with nursing care and level of the inpatient satisfaction score during hospital stay. Patient experience is one of the predictor in the final model. This finding also supported by the, study conducted in the Brazilian in medical- surgical wards suggest that patient experience in nursing care in general was one of the predictors of the patient satisfaction with nursing care(21). Unit score increase in patient experience will lead to 0.423 increments in the patient satisfaction score (95% CI = 0.360, 0.486). Examining patients' experiences of nursing care would help nurses to reflect on the care they provide and assist them to plan appropriate modifications to the services offered by their institutions. When the patient has a positive experience with the nursing care, this will be positive for the nurse and the entire health organization as well.

Strength and limitation of the study:

Strength:

1.   The study utilized a valid and standardized instrument (NSNS)
2.   It dealt with important component of nursing care dimensions
3.   Since interview was made with admitted patients, patients who stay for a long period of time were not missed.

Limitation:

1.   It is difficult to generalize this finding for other Hospitals because of the consecutive sampling technique were employed.
2.   This study is only limited to quantitative aspect.
3.   The finding of this study might be subjected to social desirability bias due to the fact that patients may be afraid to say whatever they feel when they were still in the ward. So, the findings of this study might be inflated when we compared to the real findings.

CONCLUSION AND RECOMMENDATION

The overall satisfaction score of inpatient satisfaction and patient experience as measured by the mean of percentage of maximum scale score were low when compared with other literature. According to this research finding, day of hospitalization, marital status being widowed and divorced, perceived institutional aspects factor score and patient experience with nursing care were found to be independent predictors of in-patients satisfaction with nursing care factor score.

The findings of this study will provide nurses with evidence to either maintain currently favored practices or change un favored practices. Nurses can enhance patients' experiences with nursing care by taking advantage of the time they spend with patients, by

providing more information to patients, enhancing patient's privacy and maintain their individuality, being aware of patients' needs and responding to such needs, and providing respect and support to patients' family and friends.

However, there is no significant association between inpatients 'satisfaction and demographic characteristics such as age, religion, educational status, ethnic group, occupational status and admission wards in final multiple regression model.

Thus, the concerned bodies at the administrative positions of the study hospitals or higher organizational hierarchies at the Oromia regional Health Bureau are recommended to design and launch intervention programs to improve the information provision and communication skills and the skills of making clients feel well of the nursing staff at the study hospitals. Improve the nursing care services rendered at hospitals by improve the way of conveying information to and from patients, arrange in-service training to improve their communication skills with patients, nurses need to take advantage of the time they spend with patients, being aware of patients' needs and responding to their needs, and providing respect and support to patients' family and friends.

ACKNOWLEDGMENTS

Abbreviations:

SPSS: SPSS-Statistical Package for Social Sciences
NSNS: Newcastle satisfaction with nursing cares
IPSQ: Inpatient satisfaction questionnaires
PMSS: Percentage maximum scale score

Competing interests:

There is no competing interest with the presented data as external data collectors collected it. There was not financial interest b/n the funder and the research area community and us. We, the researchers, have no any form of competing financial and non-financial interest between ourselves.

Authors' contributions:

We, the three, had significant contribution in the proposal development, defending for fund obtaining, data collection and data analysis and manuscript preparation process of this work.

REFERENCE

[1]. Nahed S. et al. Patients' satisfaction regarding nursing care provided in different hospitals in Makkah AL Mukramah Nahed: 2013;10:421–9.

[2]. Laschinger HS, Hall, L.M , Pedersen C, Almost J. A psychometric analysis of the patient satisfaction with nursing care quality questionnaire an actionable approach to measuring patient satisfaction. Journal of Nursing Care Quality. 2005;20(3):220- 30.

[3]. Wagner D,Bear M. Patient satisfaction with nursing care: A concept analysis within a nursing framework. Journal of Advanced Nursing. 2009;65(3).

[4]. Mathew S. and Beth E. Guide to Assessing Client Satisfaction. Durban, (South Africa): Health system Trust. January 2001.

[5]. The Health Boards Executive. Measurement of patient satisfaction guideline. Health Strategy Implementation Project, Ireland. 2002:p 37.

[6]. Thomas L, Bond S, McColl E, Milne E. The Newcastle Satisfaction with Nursing Scales (NSNS) (1996a): User's manual, Centre for Health Services Research, University of Newcastle.

[7]. Donabedian A. The Definition of Quality and Approaches to its Assessment, Health Administration Press, 1890, Ann Arbor, MI.

[8]. The Federal Ministry of health(FMOH).Ethiopia Hospital reform ImplementationGuidelines,2010;2

[9]. Mahadeo S, Kavita K**.** Patient's Satisfaction with Nursing Care Provided in Selected Areas of Tertiary Care Hospital: International Journal of Science and Research (IJSR) (Online); February 2014, V 3 (2): 2319-706.

[10]. Sitzia J. How valid and reliable are patient satisfaction data? An analysis of 195 studies. Int J Qual Health Care 1999; 11: 319–328.Abstract/FREE Full Text

[11]. Nunnally JC. Psychometric Theory. 2nd ed. New York: McGraw-Hill, 1978.

[12]. Child D. The Essentials of Factor Analysis. London: Holt, Rinehart & Winston, 1970, pp. 36–38.

[13]. Mulugeta M, Aster B, Yohannes A. Assessment of adult patient satisfaction and associated factor with nursing care in Black lion hospital, Ethiopia, institutional based cross-sectional study, 2012 International Journal of nursing and midwifery. 2012;6(4):49-54.

[14]. Chaka B. Adult patient satisfaction with nursing care in Addis Ababa University: 2005.

[15]. Legesse MT, Salgedo WB, Adamu A. Adult patient satisfaction with in-patient nursing care in a Referral and Teaching Hospital Southern Nations Nationalities and Peoples' Region (SNNPR), Ethiopia: J Nurs Care.2016 February; 5(2), doi:10.4172/2167-1168.1000334.

[16]. Dzomeku, V. M, Atinga Ba-Etilayoo TP and REM. Inpatient Satisfaction with Nursing Care: A Case Study at Kwame Nkrumah University of Science and Technology. Int. J. Res. Med. Heal. Sci. 2013;2(1):1–6.

[17]. Hajifathali A, Ainy E, Jafari H, Moghadam NM. In-patient satisfaction and its related factors in Taleghani University Hospital, Tehran, Iran: Pak J Med Sci. 2008; 24: 6-9.

[18]. Karaman Z, Uzun Ö. Evaluation of Satisfaction with Nursing Care of Patients Hospitalized in Surgical Clinics of Different Hospitals Zeynep. International Journal of Caring Sciences 2015;8(1):19-24.

[19]. Hespanhol G. Patient satisfaction in a gastroenterology unit. Acta Paul Enferm 2010;23(4):500-5.

[20]. Ahmad M.M, Alasaad J.A. Predictors of Patients Experiences of Nursing Care in Medical-Surgical Wards: International Journal of Nursing Practice. 2004;10(5):pp.235-41.

[21]. Gisele HD, Henrique C, Edinêis de B. Predictors of patients' experiences and satisfaction with Nursing care in medical-surgical wards: Texto Context Enferm, Florianópolis, 2015 Out-Dez; 24(4): 1003-8.