


Patient Experience in Nursing Care and Associated Factors Among Adult Admitted Patients in Debre Markos and Dessie Referral Hospitals, Amhara Region, Ethiopia, 2019

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Abstract

Patient experience of nursing care is the perception of the patient about the real existing nursing service. Addressing patient experience of nursing care is very important to improve nursing service quality because it identifies the factors that affect the nursing care quality better than patient satisfaction. Therefore, this study aimed to assess patient experience in nursing care and associated factors among adult admitted patients in Debre Markos and Dessie referral hospitals. An institution-based cross-sectional study was conducted from March 1, 2019, to March 30, 2019, among 528 consecutively selected adult admitted patients. Data were cleaned, coded, and entered in Epi-data version 3.1 then exported to Statistical Package for Social Sciences version 25 for analysis. Multivariate logistic regression, with a 95% CI was used to identify variables that had a significant association. The overall good patient experience in nursing care was 64%. Duration of admission ≥ 22 days (adjusted odds ratio [AOR] = 2.67, 95% CI = 1.013-7.025) and free service (AOR = 3.69, 95% CI = 2.381-5.730) showed a positive association with patient experience in nursing care. However, admission in gynecology ward (AOR = 0.43, 95% CI = 0.257-0.707), secondary education (AOR = 0.53, 95% CI: 0.308-0.907), and college or above education (AOR = 0.55, 95% CI = 0.320-0.957) showed a negative association with patient experience in nursing care.

Keywords

patient experience, nursing care, associated factors, admitted patients, Ethiopia

Introduction

Nurses are the forward-facing for patient care endeavors, and they are officially trustful for quality nursing care delivered to the patient. Nurses, among other health care professionals, have the greatest patient contact time, and nursing care performs 24 hours a day for the satisfaction of the patient and themselves (1,2). However, heavy workload, inappropriate tasks, insufficient resources, poor management, and shortage of health professionals are the challenges to provide quality nursing care in developing countries (3).

Patient experience is defined as the sum of all interactions that are shaped by an organization's culture and influence patient perceptions across the continuum of care from the first time of communication up to discharge (4). Similarly, the patient experience of nursing care is the perception of the

patient about caring behavior (practice) of the real existing nursing service. However, patient satisfaction reflects the judgment or subjective view of a patient in health care concerning patient expectations of the service provided, or it shows the perception of the patient about the outcome of the

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care and the extent to which the expected needs are met (5). Patient satisfaction may not indicate the quality of care, but patient experience is crucial to improve nursing service quality because it identifies the factors that affect nursing care quality better than patient satisfaction (6,7).

In this regard, studies conducted in India and Jordan resulted that 65%, 74%, and 72.9% of participants had a good experience of nursing care, respectively (1,8,9). Similarly, a cross-sectional study conducted in Nagele Borena and Addis Ababa, Ethiopia, showed that 91% and 56.1% of patients had a good experience of nursing care (10,11).

Several professional and patient-related factors affect patient experience in nursing care. Patient's sex, age, educational level, employment status, hospital stay, clinically competent nurses, collaborative working relationships, autonomous nursing practice, adequate staffing, control over nursing practice, interpersonal relationships with staff, hospital environment, managerial support, and patient-centered culture are essential factors related to patient experience (1,7,11–14).

Patient experience is positively associated with clinical effectiveness and patient safety (15). In the health institution, nurses have frequent interaction with the patient, and the nurse–patient interaction significantly affects the health care quality provided (16). Therefore, assessing patient experience in nursing care is essential to identify different factors that will affect the nursing service quality. However, a study conducted in this regard is limited in Ethiopia, particularly in the study area. So this study aimed to assess the level of patient experience in nursing care and associated factors among adult admitted patients in Debre Markos and Dessie Referral Hospitals, Amhara Region, Ethiopia.

Methods

Study Design, Area, and Period

An institution-based cross-sectional study design was conducted from March 1, 2019, to March 30, 2019, in Debre Markos and Dessie Referral Hospitals, Amhara Region, Ethiopia. Debre Markos referral hospital is found in Debre Markos town, which is 299 km away from Addis Ababa, the capital city of Ethiopia, and 265 km away from Bahir Dar, the capital city of the Amhara region. In 2018, Debre Markos referral hospital had a total of 111 beds and 888 admissions in the medical, surgical, and gynecology ward. Dessie referral hospital is found in Dessie town, 400 km from Addis Ababa, and 462 km away from Bahir Dar, and there were 139 beds in the medical, surgical, and gynecology wards.

Populations

Sources population. All adult patients admitted in Debre Markos and Dessie Referral Hospitals

Study population. All selected adult patients admitted at least 4 nights in medical, surgical and gynecology wards during the data collection period.

Eligibility Criteria

Exclusion criteria. Patients who cannot differentiate nurses or unable to respond well were excluded from the study.

Sample Size Determination and Procedure

The sample size was determined using a double population proportion formula with the assumptions of 95% CI, 5% margin of error, 80% power, and exposed to unexposed ratio 1:1 calculated using open Epi Info 7 Statcalc. Occupation was used as a significant variable, which results in a larger sample size with $P_1 = 92.02\%$ and $P_2 = 83.33\%$ using the following formula (11).

$$N = \frac{\left[z\alpha/2\sqrt{\left(1 + \frac{1}{r}\right)p(1-p)} + z\beta\sqrt{P_1(1-P_1) + P_2(1-P_2)/r} \right]^2}{(P_1 - P_2)^2}$$

where N: Sample size, P_1 : Proportion of good experience among exposed, P_2 : Proportion of good experience among unexposed, $Z \alpha/2$: Taking 95% CI.

The initial sample size calculated was 490, and by adding a 10% nonresponse rate, the final sample size was 539. Participants were allocated proportionally in each hospital and respective wards based on the number of beds.

Data Collection Instrument

A semistructured questionnaire was used to collect the data in a face-to-face interview. The assessment tool comprises 3 sections: (I) Sociodemographic information section, (II) patient-related (admission-related) characteristics, and (III) nursing care experience scales. The nursing care experience was assessed according to Newcastle's Experience with Nursing Care Scales (NENSSs), which was also used in related studies (11,17). The scale consists of 26 items, and all items scored in a 7-point Likert scale (1 = completely disagree, 2 = disagree a lot, 3 = disagree a little, 4 = neither agree nor disagree (neutral), 5 = agree a little, 6 = agree a lot, and 7 = completely agree).

Data Collection Procedure and Quality Control

The data were collected by 6 BSc nurses and supervised by 2 MSc adult health nurse professionals recruited out of the study site. A pretest was conducted in 5% (27) of the final sample size in Finote Selam general Hospital and 2 days of training was given for data collectors and supervisors. Moreover, the supervisor and principal investigators conducted regular supervision, immediate feedback, and daily checking of the completeness of the data.

Data Processing and Analysis

The data were checked for completeness, cleaned, coded, and entered in EPI data (version 3.1) then exported to SPSS (Statistical Package for Social Sciences, version 25) for data analysis. The responses across all experience items were summed and transformed to yield an overall experience score after the recoding of negative NENS items. Descriptive statistics with percentages, frequency distributions, measures of central tendency, and dispersion was used to describe the data. Bivariate logistic regression was used to assess the association of independent variables with the outcome variable, and those variables found to have P value $<.2$ were further analyzed using multivariate logistic regression. Finally, the adjusted odds ratio (AOR) with 95% CI was used as a measure of association, and variables that had a P value $<.05$ was considered as a significantly associated variable. The model fitness was checked in the Hosmer and Lemeshow goodness of fit test, which was $P = .464$.

Operational Definitions

Adult admitted patient: A patient aged >18 years and seek health care services in medical, surgical, and gynecology wards.

Good experience: Greater than 60% response to NENSs or agree with ≥ 16 NENS items (11).

Poor experience: Less than or equal to 60% response to NENSs or agree with <16 NENS items (11).

Results

Sociodemographic, Admission Class, and Patient-Related Characteristics

A total of 528 admitted adult patients were included in the study, with a 98% response rate. About 329 (62.3%) of the respondents were females, and the majority of patients (43.9%) were married. The median age of respondents was 33 years (IQR = 26-43; Table 1).

Patient Experience in Nursing Care

According to the summed and transformed result of Newcastle's experience with nursing care items, nearly two-thirds of the respondent (64%) had a good experience in nursing care. Over one-third of male respondents (69.3%), 80.6% of participants aged >50 years, and 76.8% of participants with no formal education had good experience in nursing care. Likewise, 70.6% of nonemployed, 71.1% of rural residents, and 81.2% of participants obtained free service had good experience in nursing care (Table 2). Lastly, 80% of respondents hospitalized for ≥ 22 nights, and 73.6% of patients admitted in the medical ward had a good experience in nursing care (Figures 1 and 2).

Table 1. Sociodemographic, Admission ward, and Service-Related Characteristics of the Participants in Debre Markos and Dessie Referral Hospitals, 2019.^a

Variable	Category	Frequency	Percent (%)
Age	≤ 50 years	466	88.3
	>50 years	62	11.7
Sex	Male	199	37.7
	Female	329	62.3
Educational status	No formal education	185	35.0
	Primary school	104	19.7
	Secondary school	125	23.7
	College and above	114	21.6
Marital status	Married	232	43.9
	Single	223	42.2
	Divorced	43	8.1
	Widowed	19	3.6
	Separated	11	2.1
Nights spent in the ward	≤ 10	387	73.3
	11-21	111	21.0
	≥ 22	30	5.7
Service type	Free	229	43.4
	Payment	299	56.6
Admission ward	Medical ward	197	37.3
	Surgical ward	159	30.1
	Gynecology	172	32.6

^aN = 528.

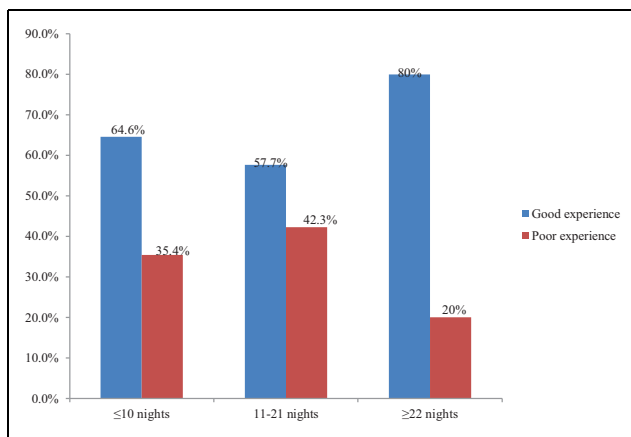
Factors Associated With Patient's Experience in Nursing Care

In the bivariate analysis, factors that had P value $<.2$ includes the number of nights spent in the ward, level of education, service type, admission ward, age, sex, occupation, and residence. Variables, which had a P value $<.2$ in the bivariate analysis, were further analyzed using multivariate logistic regression. The result of this analysis showed that the number of nights spent in the ward, service type, admission ward, and educational status was significantly associated variables (Table 3).

The patient who spent ≥ 22 nights in the ward was 2.67 times more likely to had a good experience in nursing care (AOR = 2.67, 95% CI: 1.013-7.025) than those patients who spent ≤ 10 days. Patients who were admitted in gynecological/obstetrics wards were 57.4% less likely to have a good patient experience (AOR = 0.42, 95% CI: 0.257-0.707) than patients admitted in the medical ward. Similarly, patients who received health service for free were 3.7 times more likely to had a good nursing experience (AOR = 3.70, 95% CI: 2.381-5.730) than those who received health service with payment. Lastly, patients who had secondary and college or university education were 47.2% (AOR = 0.52, 95% CI: 0.308-0.907) and 44.6% (AOR = 0.55, 95% CI: 0.320-0.957) less likely to had a good experience in nursing care compared with participants with no formal education, respectively.

Table 2. The Distribution of Patient Experience in Nursing Care in Relation With Sociodemographic, Admission Ward, and Service-Related Characteristics of the Participants in Debre Markos and Dessie Referral Hospitals, Ethiopia, 2019.^a

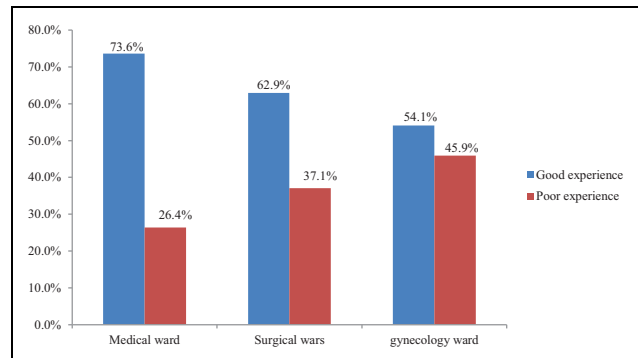
Variable	Category	Patient experience		
		Poor experience, N (%)	Good experience, N (%)	Total, N (%)
Sex	Male	61 (30.7%)	138 (69.3%)	199 (100%)
	Female	129 (39.2%)	200 (60.8%)	329 (100%)
Age	≤50	178 (38.2%)	288 (61.8%)	466 (100%)
	>50	12 (19.4%)	50 (80.6%)	62 (100%)
Educational status	No formal education	43 (23.2%)	142 (76.8%)	185 (100%)
	Primary school	34 (32.7%)	70 (67.3%)	104 (100%)
	Secondary school	63 (50.4%)	62 (49.6%)	125 (100%)
	College and above	50 (43.9%)	64 (56.1%)	114 (100%)
Number of nights	≤10	137 (35.4%)	250 (64.6%)	387 (100%)
	11-21	47 (42.3%)	64 (57.7%)	111 (100%)
	≥22	6 (20%)	24 (80%)	30 (100%)
Admission ward	Medical	52 (26.4%)	145 (73.6%)	197 (100%)
	Surgical	59 (37.1%)	100 (62.9%)	159 (100%)
	Gynecological	79 (45.9%)	93 (54.1%)	172 (100%)
Occupation	Employed	97 (45.8%)	115 (54.2%)	212 (100%)
	Non employed	93 (29.4%)	223 (70.6%)	316 (100%)
Residence	Urban	122 (42.4%)	166 (57.6%)	288 (100%)
	Rural	68 (28.3%)	172 (71.7%)	240 (100%)
Service type	Free	43 (18.8%)	186 (81.2%)	229 (100%)
	Payment	147 (49.2%)	152 (50.8%)	299 (100%)

^aN = 528.**Figure 1.** Distribution of patient experience in nursing care based on number of night spent at Debre Markos and Dessie Referral Hospital, Ethiopia, 2019 (N = 528).

Discussion

The finding of this study showed that 64% of the participants had good experience in nursing care. Participants who spent ≥22 nights, educational level (secondary and college and above), admission ward (gynecological), and service type (free service) showed a significant association with patient experience in nursing care.

This study revealed that the proportion of patient's experienced good nursing care was 64% (95% CI: 60%-68%). This finding was consistent with a study conducted in Krishna institute of nursing sciences, India (65%) (1). But

**Figure 2.** Distribution of patient experience in nursing care based on admission ward at Debre Markos and Dessie Referral Hospital, Ethiopia, 2019 (N = 528).

it is lower than studies conducted in Addis Ababa (91%) (11) and Jordan at different years (72.9%, 74%) (9,17). The discrepancy with the Addis Ababa's study might be due to the limitation of more advanced medical devices and health services in Debre Markos and Dessie referral hospitals compared with the Black Lion hospital. The difference with Jordan's study might be due to the inclusion of the gynecological and obstetrics ward in this study, which showed a lower level of good nursing experience compared with other wards. This study resulted in higher patient good nursing experience compared with the study conducted in Guji zone, Oromia, South Ethiopia (10). This might be due to the difference in study participants. The Guji zone study includes

Table 3. Factors Associated With Adult Patients' Experience in Nursing Care in Debre Markos and Dessie Referral Hospital, 2019.^a

Variable	Category	Patient experience		COR	AOR (95% CI)	P value
		Poor experience	Good experience			
Sex	Male	61	138	1.459	1.10 (0.669-1.802)	.711
	Female	129	200	1.00	1.00	
Age	≤50	178	288	2.575	1.00	
	>50	12	50	1.00	1.37 (0.659-2.841)	.399
Educational status	No formal education	43	142	1.00	1.00	
	Primary school	34	70	0.623	0.76 (0.431-1.355)	.357
	Secondary school	63	62	0.298	0.52 (0.308-0.907)^b	.021
	College and above	50	64	0.388	0.55 (0.320-0.957)^b	.034
Number of nights	≤10	137	250	1.00	1.00	
	11-21	47	64	0.746	0.74 (0.448-1.221)	.239
	≥22	6	24	2.192	2.67 (1.013-7.025)^b	.047
Admission ward	Medical	52	145	1.00	1.00	
	Surgical	59	100	0.608	0.65 (0.399-1.051)	.078
	Gynecological	79	93	0.422	0.43 (0.257-0.707)^b	.001
Occupation	Employed	97	115	0.94	0.93 (0.577-1.492)	.758
	Non employed	93	223	1.00	1.00	
Residence	Urban	122	166	1.00	1.00	
	Rural	68	172	1.859	0.97 (0.580-1.613)	.899
Service type	Free	43	186	4.183	3.70 (2.381-5.730)^b	.000
	Payment	147	152	1.00	1.00	

Abbreviation: AOR, adjusted odds ratio.

^aN = 528.

^bBold values significantly associated ($P < .05$).

participants stayed for 2 or more days, but in this study, patients stayed for 4 or more days were included.

The duration of hospital stay had a significant association with the patient's experience in nursing care. Patients who spent ≥ 22 days in the ward were 2.67 times more likely to have a good experience in nursing care than those who spent ≤ 10 days. This might be due to the better communication and relationship with ward nurses upon longer hospital stay. A similar finding was observed from the studies conducted in Guji zone, Ethiopia (10), and Turkey (18).

The other variable which had an association with a patient's experience in nursing care was the educational status of the respondents. Participants who had secondary and college or above education were 47.2% and 44.6% less likely to had good experience than those had no formal education, respectively. This might be because participants with higher educational level will have a higher expectation of nursing care. Patients with higher levels of education probably make greater demands in nursing care, which might lead to expectations of more information and a higher level of education from nurses (19). But educational status did not affect experience with nursing care in the studies conducted in Jordan and Addis Ababa (11,17).

In this study, service type had a significant association with a patient's experience in nursing care. Patients who received health services for free were 3.7 times more likely to had a good nursing experience than those who received health service with payment. The possible reason might be patients who paid for the health service may have a higher

expectation of quality nursing care. Additionally, service type had a significant association in patient satisfaction with nursing care (5,20), which will, in turn, affects their experience (12).

The last variable which had a significant association with the patient's nursing experience was the admission ward. The patient who was admitted to the gynecology ward was 57.4% less likely to have good patient experience than patients admitted to the medical ward. These might be due to the variations in the duration of admission and sex of the participants. However, in the Jordan and Addis Ababa studies, the admission ward did not affect the patient experience in nursing care (11,17).

Limitation of the Study

Since it was a consecutive sampling, the generalizability of findings is potentially limited and the finding of this study is limited only in quantitative method.

Conclusion

Nearly two-thirds (64%) of the participants had a good experience in nursing care. The number of nights spent (≥ 22 nights), educational level (secondary and college and above), admission ward (gynecological), and service type (free service) had a significant association with patient experience in nursing care. Therefore, nurses should give special attention to patients admitted in the gynecology ward and to

those admitted for a shorter duration. Additionally, nurses should try to deliver high standard nursing services to address the patients expected levels of quality care.

Authors' Note

Data will be available upon request from the corresponding author. Ethical clearance and approval were obtained from the ethical committee of Debre Markos University. An official letter was submitted, and permission was obtained from Debre Markos and Dessie referral hospitals. After explaining the objectives of the study in detail, informed written consent was obtained from all study participants before data collection.

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