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Nursing Care Documentation Practice: The Unfinished Task of Nursing Care in the University of Gondar Hospital

Running head: Nursing care documentation practice

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Abstract

Introduction: Even though nursing care documentation is an important part of nursing practice, it is commonly left undone. The objective of this study was to assess nursing care documentation practice and the associated factors among nurses who are working at the University of Gondar Hospital.

Methods: An institution-based cross-sectional study was conducted among 220 nurses working at the University of Gondar Hospital inpatient wards from March 20 to April 30, 2014. Data were collected using a structured and pre-tested self-administered questionnaire. Data were entered into Epi Info version 7 and analyzed with SPSS version 20. Descriptive statistics, bivariate and multivariate logistic regression analyses were carried out.

Results: 206 nurses returned the questionnaire. Good nursing care documentation practice among nurses was 37.4%. Low nurses-to-patients ratio AOR=2.15 (95%CI [1.155, 4.020]), in-service training on standard nursing process AOR= 2.6 (95%CI [1.326, 5.052]), good knowledge AOR= 2.156(95% CI [1.092, 4.254]) and good attitude towards nursing care documentation AOR= 2.22 (95% CI [1.105, 4.471] were significantly associated with nursing care documentation practice.

Conclusion: Most of the nursing care provided remains undocumented. Nurse to patients ratio, in-service training, knowledge and attitude of nurses towards nursing care documentation were factors associated with nursing care documentation practice.

Key words: Care left undone, Documentation, Documentation Practice, Evidence based practice, Nursing care process

Introduction

Documentation is a formal way of recording the account of what happened and when it happened. It is a way of keeping evidence to describe what happened and is often created by the person who has direct knowledge of the event or the person under investigation (1, 2). Medical documentation is any paper or electronically produced medical or health related information about patients that clarifies the care or service provided to that particular patient.

Ensuring the quality of medical services demands good quality medical documentation (3-5) and nursing care documentation is one of the main parts of clinical documentation (6, 7). The practice of keeping good medical records helps physicians to track the medical history of patients and

investigate the related problems. Evidence suggests that the continuity of care, engagement of patients as well as the provision of patient-centered medical services are highly linked with the quality of nursing care documentation (3, 8-10).

Quality nursing care documentation helps convey the information about the care planned, patient observations, decisions taken, interventions administered and patient outcomes. It is a key aspect of nursing care in ambulatory and inpatient settings, which ensures a simple stability of care and also serve as a legal record of the care provided (1, 2, 11-14). It helps to sustain the wellbeing of patients, improve patient care and patient satisfaction that ultimately increases the quality of life of the society (2, 4, 9, 15). The growth of the nursing profession is also likely to be dependent on the quality of documentation and the knowledge generated from the nursing care process (16).

Nursing care documentation is an integral part of patient care (2, 17, 18). Recognizing the importance of nursing care documentation as well as adherence to the documentation requirements are key aspects of nursing professionalism (18, 19). There is an "old but gold" rule that says a procedure, which is left undocumented, is presumably undone.

However, nursing care documentation is one of the major nursing care activities that are commonly left undone (20-22). The cares provided, interventions administered and outcomes observed are not consistently written. Furthermore, it is common to discover that nursing records lack accuracies, legibility, and completeness (9, 16, 23-26). Spending time for documenting the care provided is perceived as irrelevant and as an additional workload (9). In addition, studies from Sweden (27), Nigeria (28) and Ghana (29) reported the limited use of nursing care documents as sources of data for improving the delivery of care, conducting clinical audit and assessment of quality and evaluation of care.

Undocumented nursing intervention can have negative impacts on the health care of patients (30, 31). Poor nursing care documentation is associated with preventable medical errors that can lead to adverse patient outcomes. Incomplete nursing care documentation is associated with the problem of omitting medications, improper or double medication administrations (26). Further, not only it is linked with suboptimal health care service provision, the health care provider can also be sued for an improper act of documentation (12, 32).

Research evidence has pointed out the conditions that underpin the underutilization and the poor practice of nursing care documentation. The first and foremost reason is nurses do not perceive that nursing care documentation is to be a powerful means of communication that supports the continuity of care (9). They instead prefer getting information directly from other nurses who had attended the patient under care. This information is based on the colleagues' observation knowledge and/or personal notes (9, 33). There is also a negative attitude towards formal nursing care documentation and a negative perception that record keeping is just an irrelevant requirement for nursing care process (9).

Good quality patient care, nursing research and education require good nursing care process documentation. However, nursing care documentation worldwide suffers from the weak representativeness and completeness of the content (27, 34). Inadequate time spent on documentation as well as poor documentation practice among nursing professionals makes it to be inadequate for the evaluation of the actual care provided (35).

A few studies from Sub Saharan Africa have reported different levels of undocumented nursing care. One study from Ghana described that 46% of the nursing care provided was not recorded and progress notes were not documented for 63% of patients after the first day of admission (29). In a study conducted in different hospitals of Nigeria, nurses' knowledge and practice of documenting care was reported to be only 44% by (28).

In Ethiopia, nearly all of the nursing care process documentation is conducted through paper-based records. Very little has been done electronically. The Ethiopian Federal Ministry of Health Operational Standard for Nursing Care outlines that the assessment, planning and evaluation of care must be clearly documented (36). Nevertheless, there are some evidence showing the lack of documentation of child delivery process in the delivery wards (37). A study in Felege Hiwot Referal Hospital in North West Ethiopia revealed that nearly 87% of the medications provided had documentation errors (38). However, there is no evidence about the nursing care documentation practice in the country.

In principle, it is unlikely that good quality healthcare service can be provided without documenting the important information about patients. For a patient to receive the best care, all of the essential information about the patient as well as medical interventions should be well recorded. Lack of quality nursing care documentation can lead to miscommunication among nurses

and physicians that may potentially affect patient outcomes. Therefore, in addition to revealing the magnitude of the problem, this study was initiated to contribute to the evidence base for future studies in the area. The study results will provide a benchmark for designing further studies as well as building and implementing electronic nursing record system. This study aimed to assess nursing care documentation practice and associated factors among nurses working at the University of Gondar Hospital, Gondar, North West Ethiopia.

Methods

Study design and setting

An institution based cross-sectional study was conducted from March 20 to April 30, 2014 at the University of Gondar Hospital inpatient departments. The University of Gondar Hospital is located in Gondar town, 735 k.ms North West of Addis Ababa. The hospital has 320 nurses and midwives with 220 of them are working in the inpatient wards. It serves more than 5 million people and has 512 beds and 14 wards in five different inpatient departments. Fourteen different units provide outpatient services to clients. Nearly 250,000 patients visit the outpatient clinics and there are more than 21,000 admissions every year. In addition, approximately 6000 major surgeries and 5000 deliveries are attended every year. This teaching hospital serves as a sole referral center in North-West Ethiopia.

Study Subjects

All nurses who are working at the University of Gondar Hospital inpatient wards were the source and the study populations of this study. Hence, all the 220 nurses working at the University of Gondar Hospital inpatient wards were recruited to be included in the study.

Study variables

The primary outcome measure for this study was nursing care documentation practice which was dichotomized into two (good and poor practice). Various explanatory variables that could potentially affect nursing care documentation practice were included by a review of the existing literature (3, 4, 8-10, 16, 17, 24, 25, 27, 31, 33, 39, 40). The existing literature were also used to develop the conceptual model of the study (Fig 1). Sociodemographic variables of the nursing

professionals, organizational factors, knowledge and attitude towards nursing care documentation were included as independent variables of the study.

Method of data collection and analysis

Data regarding the sociodemographic characteristics of the nurses, organizational factors, knowledge and attitude towards nursing care documentation were collected using a structured, pre - tested and self-administered questionnaire. Nursing care records were also reviewed to supplement the data collected using the questionnaire and to determine the nursing care documentation practice. One clinical nurse was employed for the recruitment and enrollment of the respondents. Two other clinical nurses were responsible for ensuring that nurses fulfilled the study criteria. The criteria used to select the respondents was: a clinical nurse who has been working at the University of Gondar Hospital for more than six months. Two BSc nurses supervised the overall data collection process. To avoid bias, all the data collectors, supervisors, as well as the one clinical nurse employed for the recruitment and enrollment of the respondents were not employees of the study hospital. Feedback on the progress and quality of the data collection activities were given to the data collectors by the principal investigator on a daily basis.

The questionnaire to assess the outcome measure (nursing care documentation practice) was adopted from the standardized Ethiopian Hospital Reform Implementation Guideline (EHRIG) (41). For the purpose of comparison and standardization, the same standardized checklist from EHRIG was used to assess the nursing care documentation practice across each ward in the hospital. Patient charts corresponding to the nurse who was in charge of the patient care provided were reviewed to fill the documentation audit checklists. Patient charts corresponding to each nurse in charge of the care were randomly selected to audit the documentation practice and linked with the responses of the self-administered questionnaire. Identification numbers were used to link the responses of the checklist with the responses of the self-administered questionnaire. The documentation audit checklist used eight “Yes” or “No” items. These items assess whether the nurse in charge of the care recorded the nursing admission assessment, nursing diagnosis, nursing care plan, implementation of the care plan, progress report, as well as timely completion and evaluation of the implementation of the care provided (Table 1). During analysis, the “Yes” answers were scored as ‘1’ and “No” answers as ‘0’. Hence, the range of the total score for a nursing care documentation practice was between 0 and 8. The aggregated nursing care documentation practice score was then dichotomized into good and poor level of practices. Levels of the total score of the nursing care documentation practice were measured by 75^{th} percentile cut

off point. A score greater than or equal to the 75th percentile was classified as having good documentation practice, else as poor.

The level of knowledge towards nursing care documentation was measured using the 12 multiple choice questions. The responses of the 12 multiple choice knowledge questions were added up and the level of knowledge was aggregated and categorized into two levels (good knowledge of nursing care documentation practice: for a score score greater than or equal to the mean, poor knowledge towards nursing documentation practice: when the score is below the mean).

Likewise, the attitude towards nursing care documentation was measured using the 12 Likert scale questions composed of 5 responses ranging from "strongly agree" to "strongly disagree". The level of attitude towards nursing care documentation was classified as good or poor, based on whether the score was below or above the mean score. The consistency of the questionnaire was assessed by pretesting and through the Cronbach alpha test.

To ensure the quality of the data collected the questionnaires were pre-tested at Felege Hiwot referral hospital among 20 nurses. A one-day comprehensive training was given for the supervisor and for the data collectors. Furthermore, the supervisor and the principal investigator gave daily feedback and correction to the data collectors. The completeness, accuracy, and clarity of the collected data were checked carefully to ensure good quality and integrity of the data.

Data processing and analysis

Data were entered using EPI Info version 3.5.3 and transported to SPSS version 20 for further analysis. Descriptive statistics were performed to describe the background of the study participants and to describe the level of nursing care documentation practice. Bivariate and multivariable logistic regression analyses were performed to assess the association of independent variables with the outcome variable. To investigate the strength of association and their statistical significance, crude odds ratio with 95 % confidence interval were calculated for each independent variable against dependent variable using the binary logistic regression. Variables having a $p<0.2$ in the bivariate analysis were entered into the multivariate analysis using the backward likelihood ratio method as recommended by Hosmer and Lemeshow (42). Adjusted odds ratios were then calculated using the multivariable logistic regression analysis to avoid the effect of confounding. The final results were interpreted based on the level of significance ($p<0.05$) or based on the

confidence interval of the odds ratios. Variables having a $p<0.05$ or having an adjusted odds ratio having a 95% confidence interval excluding 1.0 were considered to have a statistically significant association with the dependent variable.

Ethical clearance

Ethical clearance was obtained from the Institute of Public Health, Research Ethical Review Committee of the College of Medicine and Health Sciences, University of Gondar. Communication with the University of Gondar Hospital administrations were made through official letters from the clinical director and nursing director. The purposes and the importance of the study were explained to each study participant and written and signed informed consents were received from each study participant prior to the data collection. They were fully informed about the importance of the reviewing documentation, voluntary participation and about their right to withdraw from the study at any time. Furthermore, respondents were also informed that the chart review was not an audit of their work and would not be linked with their performance appraisal. Confidentiality was maintained at all levels of the study by making the data collection anonymous. Respondents were told that participation is on a voluntary basis. A respondent who was unwilling to participate or who wished to exit the study at any time was free to do so. In addition, the confidentiality of the patient chart data was secured to avoid any ethical breach with regard to the patients' chart. Once the data collection from the patient chart was completed, it was returned to its usual place.

Results

Socio-demographic characteristics of study participants

From the 220 proposed study participants, 206 (93.63) returned the questionnaire. More than half of them 108 (52.4 %) were male, most of them 117(56.8 %) were single and the mean age (SD) was 28.03 years (5.42 years). About one-third 69 (33.5 %) of them were working in surgical wards. Most of the respondents, 176 (85.4%), had a Bachelor of Science (BSc.) degree in nursing and more than two-third were in the early stages of their career having work experience less than 5 years (68.4%) (Table 2).

Organizational factors

Organizational factors that could potentially affect nursing documentation practice were assessed in this study. Most of the respondents, 127(61.7 %), had received in-service training on nursing care documentation. More than half, 123 (59.7%), were providing care to more than 9 patients per day. In most of the inpatient wards, 174(84.5%), an appropriate nursing care documentation sheet that was assumed to be used for documentation was available (Table 3).

Respondents were also asked to mention the reasons for not documenting the nursing care that they would have provided. More than one-third, 74 (36%), of the respondents disclosed the main reasons for not documenting the nursing care process. Nearly 19% (39) and 22% (45) of the nurses working in the hospital reported that a shortage of time and patient load respectively hampered their nursing documentation practice. From the total 74 nurses who mentioned the reasons for not documenting their work, 46 (62%) of them mentioned two major interrelated reasons: lack of time and patient load. Other reasons such as the lack of formats, 6 (2.9%), and lack of space, 9(4.3%), for documentation of nursing care were also mentioned (Fig. 3).

Knowledge and attitude towards nursing care documentation

The score of respondents knowledge towards nursing documentation practice was added up and dichotomized into two based on the mean knowledge score which was 17. Hence, scores of 17 with SD=±4.15 and above out of the possible 24 were considered as good nursing care documentation practice. Based on this cut-off point, more than half of the participants, 120 (58.3%) had a good knowledge of nursing care documentation.

Similarly, attitude scores were obtained from the total attitude score and it was categorized into two; positive and negative attitude towards nursing care documentation The mean attitude score was 28 with SD=±5.21. The majority of the respondents, 125 (60.7%), had a positive attitude towards nursing care documentation.

Nursing care documentation practice

From the 206 respondents who participated in the study, slightly more than one-third, 37.4 % (n=77) [95% CI of 31% to 44.2%], had good nursing care documentation practice. Among almost all of the nurses working in inpatient departments, good nursing care documentation practice was found to be very low. Good nursing care documentation was practiced by 11% to 52% of the total

nurses in the wards of the hospital. More than half of the pediatric department nurses, 28 (52.8%), were observed to have good nursing care documentation practice (Figure 2).

Factors associated with nursing care documentation practice

Binary and multivariable logistic regression analyses were conducted to assess the statistical association between independent variables and the dependent variable.

In-service training, service year, age, working setting, nurse to patients ratio and knowledge and attitude were significantly associated with nursing care documentation practice in the bivariate logistic regression analysis. However, the multivariable analysis identified only training, nurse to patients' ratio, knowledge, and attitude towards nursing care documentation as factors significantly associated with the practice of good nursing care documentation.

In this study, nurses who had taken part in nursing standard documentation in- service training were 2.59 times (95% CI [1.326, 5.052]) more likely to have good nursing care documentation practice as compared to those who had not taken part in the training .

Nurses who had 8 and fewer patients during the day time were 2.16 (95% CI [1.155, 4.020]) times more likely to have good documentation practice as compared to those who had 9 or more patients.

Nurses who had a good knowledge of nursing care documentation were 2.16 (95% CI [1.092, 4.254]) times more likely to have good nursing care documentation practice as compared to those with poor nursing care documentation knowledge. Compared to nurses who had a poor attitude towards nursing care documentation, those who had good attitude were 2.22 times (95% CI [1.105, 4.471] more likely to have good documentation practice as depicted in Table 4.

Discussion

Previous studies have found that nursing care documentation is one of the important nursing care activities which are left undone (20-22, 43, 44). This study focused on determining the level of nursing care documentation practice and associated factors. We discovered that nursing care records at the University of Gondar hospital lack completeness, and most of the nursing care

provided is left undocumented. Good nursing care documentation was only practiced by 37.4 % of the nursing professionals working in the inpatient wards of the hospital.

Nursing care documentation practice in this study is lower than studies from Jamaica 98 % (45) and Hospitals of England 47% (21). This might be due to the differences in organizational structure (45), favorability of the working environment (22), the number of patients per registered nurse and familiarity with the required documentation guidelines (20-22).

Lack of good nursing care documentation practice was reported by a related study from Felege Hiwot referral Hospital of Ethiopia, in which 87% of the medications administered in the hospital had documentation errors (38). Consistent with the current study, reports from other sub-Saharan African countries also highlighted the lack of adequate nursing care documentation practice. Good practice of wound care documentation was observed only among 44% of nurses working in the different hospitals Nigeria (28). Similarly, 46% of the inpatient nursing care in Eastern Ghana was not recorded and progress notes were not documented for the 63% of patients after the first day of admission (29). However, comparison with other similar studies from the Ethiopian context is limited due to lack of related literature. The nursing care documentation practice observed in this study is surprisingly higher than that reported in studies from European Hospitals where it was 28% (20) and in teaching hospitals of Iran where it was 22.9% (16) . A possible reason for this could be the difference in the size of the study samples and the number of hospitals included in the studies. Our study is based on all wards from one teaching hospital. The study from Iran included four teaching hospitals and all the study subjects were only from medical-surgical wards (16). The study from the European Hospitals on the other hand included 488 hospitals across 12 European countries (20). In addition, the workload in the medical surgical wards in the hospitals in Iran were observed to be high and this could have led to the lower nursing care documentation practice (16).

Our study identified a number of factors associated with good nursing care documentation practice. Nurse to patient ratio was significantly associated with nursing care documentation practice. Nurses who provided care to 8 or less patients were more likely to have good documentation practice relative to those nurses who care for 9 or more patients per day. The finding is consistent with the results of a study done in Jamaica (20-22, 45). The explanation for this could be that nurses will have enough time for documentation as well as the tendency to use the standard nursing care documentation guidelines more if they are not overloaded with patients. In addition, nurses

with less patient load experience less stressful and less hectic situations that make them less likely to be interrupted by other patients while documenting the provided and planned nursing care, as supported by evidence from Nigeria (46).

Moreover, in-service training on standard nursing care process was significantly associated with good nursing care documentation practice. Nurses who received in-service training were more likely to have good nursing care documentation practice as compared to those who were not trained. This finding is also supported by other studies from Sweden (47, 48) and Iran (49, 50). A possible explanation might be due to the training on standard nursing process could enhance the motivation and knowledge of nurses about the importance of nursing care documentation. The results of studies from Iran and Sweden also support that training improves motivation and teamwork that will ultimately improves the nursing care documentation practice (49, 51). In the current study, nurses who had good knowledge regarding documentation are more likely to have good nursing care documentation practice as compared to those who have poor knowledge. This finding is in line with the studies from Nigeria (46), Iran (50), Jamaica (45), Australia (52), Sweden (51) and the United States (9). This can possibly be explained with the following: good knowledge of nursing care documentation improves familiarity with documentation guidelines and manuals and enhances the adherence to standardized nursing practice, and nursing professionalism.

Nurses who had a good attitude towards nursing care documentation were also more likely to have good documentation practice compared to those who had a poor attitude. This observation is consistent with study results from Sweden (47, 48). This could be due to the fact that good attitude towards nursing care documentation enhances motivation of nurses to document nursing care. Additionally, nurses may learn to appreciate the value of documentation in the care process of patients.

Our study also revealed the nurses self-reported barriers to nursing care documentation. Nurses mentioned the shortage of time, patient load, lack of formats and the unavailability of adequate space for documentation as potential barriers to nursing care documentation. In line with this finding, studies from Nigeria and Kuwait reported that lack of time and patient load as the main impediments of the nursing care documentation (46, 53).

Limitations of the study

A main limitation of the study is that it was conducted in only one teaching hospital; hence, it may not be possible to generalize the findings to other hospitals in Ethiopia. Furthermore, as this was a self-administered questionnaire survey, knowledge of nurses towards nursing care documentation practice might have been overestimated due to social desirability bias. Moreover; for each study subjects, nursing care documentation practice was measured by randomly selecting only one patient care record folder for the nursing professional who was in charge of the care. The chosen record might have been less representative of other records even though the selection process was completely random. Including more than one patient records for each respondent might have improved the representativeness of the sample. However, we believe that the randomization process during the selection of the patient record served to improve the validity of the study.

Conclusion

To our knowledge, this study is the first to examine the nursing documentation practice in Ethiopia. The findings of the study indicate that good nursing care documentation practice is very low. The study identified that in-service training, nurse to patients ratio, knowledge, and attitude towards nursing care documentations are significantly associated with the practice of nursing care documentation. Nursing care planned and provided should be adequately documented. An approach to harmonize the nursing care documentation fostering a uniform and universal standardized approach for care documentation is essential. Enhancing the knowledge and attitude of nurses towards documentation of the planned and provided nursing care is important to improve nursing care documentation practice, which could then help develop the culture of care documentation and promote the professional practice**.** In addition, future studies need to consider a better way of finding the representative sample of patient records to evaluate the nursing care documentation practice. We also recommend using mixed research designs that is, combining quantitative and qualitative methods, to shed more light on the problem. We believe that our study has provided the ‘‘tip of the iceberg’’ evidence for implementing an electronic system. However, further studies are needed before ushering into the implementation of electronic medical record.

Declaration of interest

The authors declare that they have no competing interest.

Author contributions

1. MK made substantial contributions to the conception and design of the study, reanalysis of the data and interpretation of the results, wrote the manuscript, conducted the subsequent revisions upon the receipt of the reviewers' report, and gave the final approval for the version to be published
2. YE has made substantial contributions to conception and design, or acquisition of data, data collection supervision, data analysis and interpretation of the data
3. DZ has supervised the research process during the data collection, write up and have agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

All authors read and approved the final draft of the manuscript.

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List of Figures

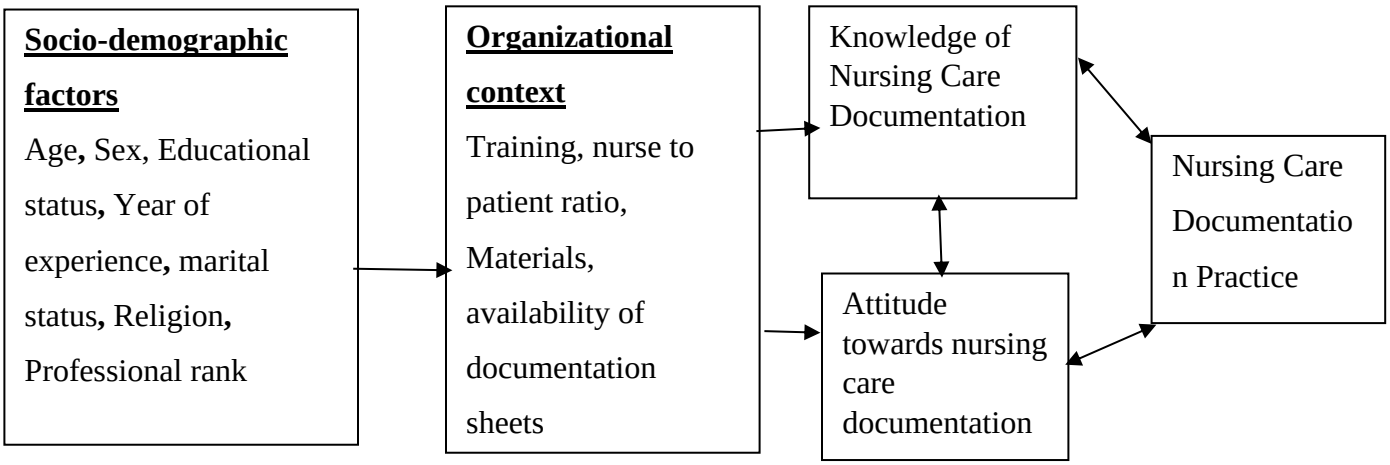

Fig 1. Conceptual model of the study adopted from related literatures [1, 2, 4-6, 11, 12, 15, 19, 20, 22, 24, 26, 29, 30]

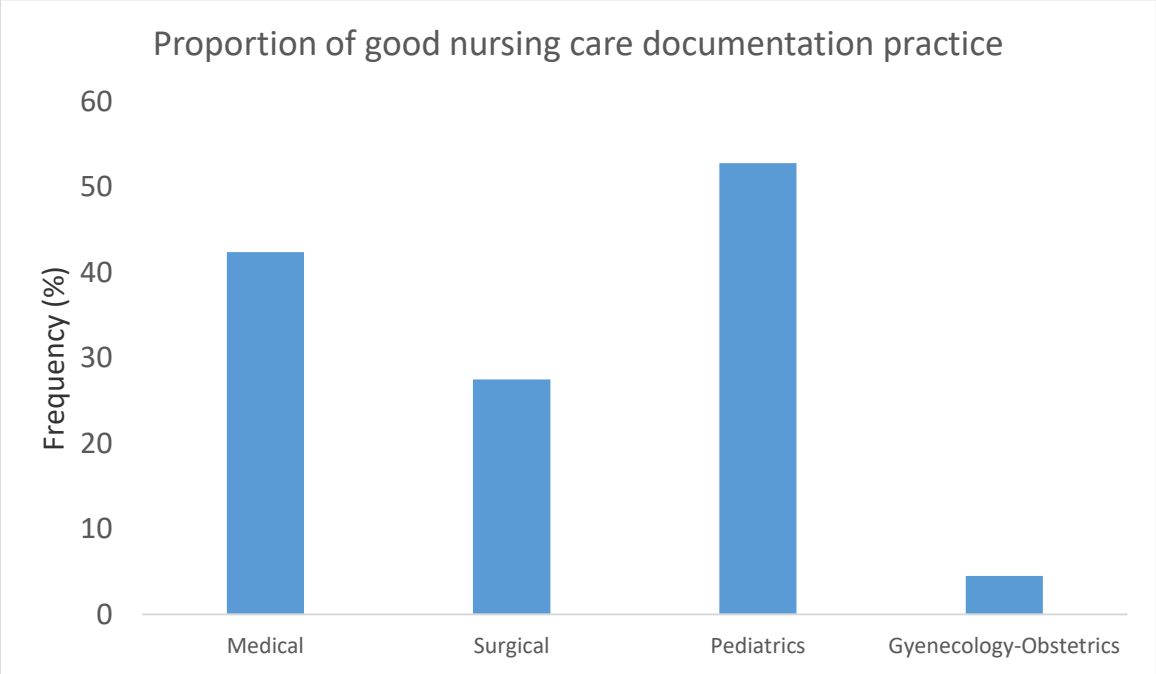

Figure 2: Percentage distribution of good nursing care documentation practice in inpatient wards at the University of Gondar Hospital inpatient departments, Northwest Ethiopia, April 2014

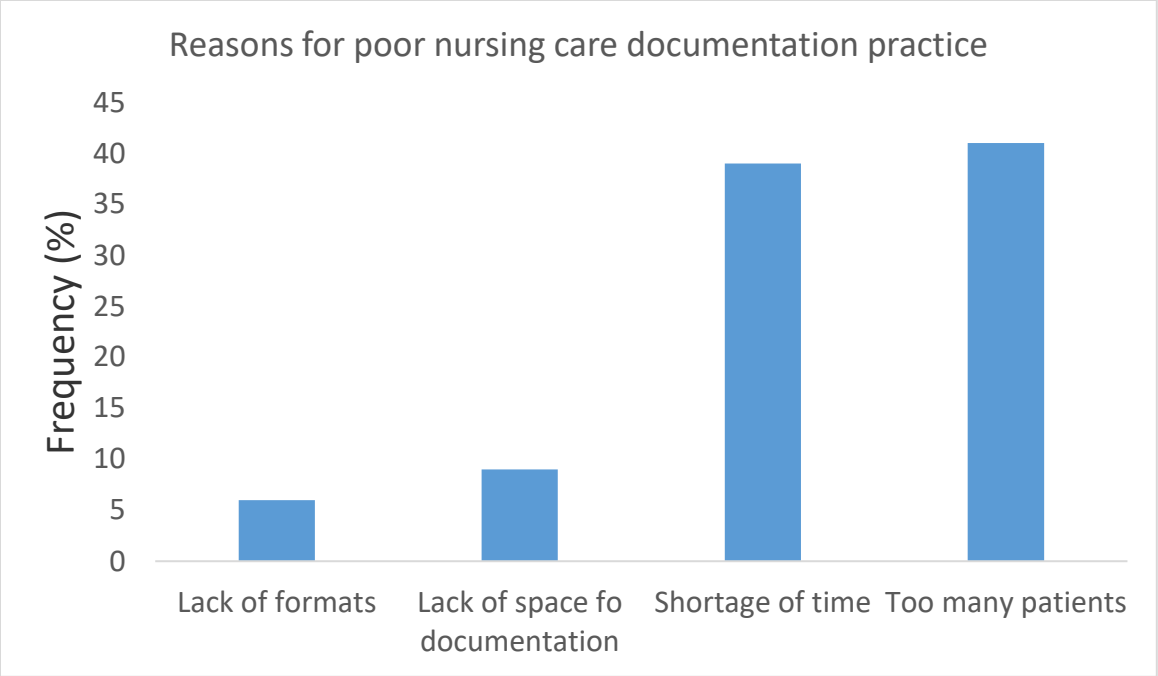

Figure 3: Self-reported reasons for poor nursing care documentation practice at the University of Gondar Hospital, Northwest Ethiopia, April 2014

List of Tables

Table 1: Content of the items of the nursing care documentation practice evaluation checklist adopted from the Ethiopian Hospital Reform Implementation Guideline

S.no	Standards	Yes	No	Remark
1	The nursing admission assessment form is attached for the patient admitted within the last 24 hours			
2	Nursing diagnosis is completed and documented			
3	Nursing care plan is completed and attached in the patient chart			
4	Implementation of care plan including the type and timing of medications administered are documented in the nursing patient progress report			
5	The progress report is documented at the end of each nursing shift			
6	The nurse has timely completed and evaluated the implementation of care including the outcomes of medications			
7	The nurse is using the nursing care plan documentation book prepared by the ward.			
8	Nursing care plan sheet is available			

Table 2: Socio demographic characteristics of nurses working at the University of Gondar Hospital, Northwest Ethiopia, 2014 (n=206)

Variables	Frequency	percentage
Age		

21-25	69	33.4
26-30	105	51.0
31-35	16	7.8
36 and above	16	7.8
Sex		
Male	108	52.4
Marital status		
Single	117	56.8
Married	83	40.3
Divorced	6	2.9
Religion		
Orthodox	186	90.3
Muslims	15	7.3
Others	5	2.4
Working setting		
Medical	66	32.1
Surgical	69	33.5
Pediatric	53	25.7
OB-GY	18	8.7
Educational status		
Diploma	24	11.7
Bachelor of science	176	85.4
Master of science	6	2.9
Years of experience		
Less than 5	141	68.4
6 -10 years	51	24.8
11 and above	14	6.8

Table 3: organizational factors of nurses who are working at University of Gondar Hospital April to May, Northwest Ethiopia, 2014 (n=206)

Variables	Frequency	percentage
In-service Training		

Yes	127	61.7
No	79	38.3
Nursing care documentation for all patients		
Yes	148	71.8
No	58	28.2
Patient nurse ratio		
Up to 8	83	40.3
9 and above	123	59.7
Availability of nursing care sheet		
Yes	174	84.5
No	32	15.5

Table 4: Bivariate and Multivariate analysis of factors associated with nursing care documentation practice among nurses, who are working at the University of Gondar Hospital, North West Ethiopia , 2014 (n=206)

Variables	groups	Documentation practice		Crude OR (95% C.I.)	Adjusted OR (95% C.I.)
		Poor (n=77)	Good (n=129)		
Age					

	21-25	24	45	1	
	26-30	40	65	1.154(.613,2.173)	
	31-35	7	9	2.411(.798,7.279)	
	36 and above	4	12	0.625(.182,2.150)	
Service year					
	5 and less year	49	92	1	
	6-10 years	23	28	0.943(0.305,3.018)	
	11 and above	5	9	1.479(0.435,5.031)	
In-service Training					
	Not trained	59	68	1	1
	Trained	18	61	2.94(1.565,5.526)	2.588(1.326,5.052)
Department					
	Gynecology-obstetrics	2	16	1	
	Medical	28	38	5.895(1.253,27.74)	
	Surgical	19	50	3.04(0.638,14.496)	
	Pediatrics	28	25	8.96(1.872,42.886)	
Nurse to patients ratio,					
	8 and less patients	36	87	2.359(1.321, 4.212)	2.155(1.155,4.020)
	9 and above patients	41	42	1	1
Knowledge					
	Good Knowledge	20	66	2.986(1.614,5.524)	2.156(1.092,4.254)
	Poor Knowledge	57	63	1	1
Attitude					
	Good attitude	18	63	3.129(1.665,5.878)	2.222(1.105,4.471)
	Poor attitude	59	66	1	1