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Documentation practice and associated factors among nurses working in adult intensive care units at public hospitals in Addis Ababa, Ethiopia, 2022

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ABSTRACT

Background*: Nursing care documentation is a vital and powerful tool in the healthcare system to ensure continuity of care and communication between health personnel for better patient outcomes. Nurses' practice towards nursing care documentation affects the quality and coordination of patient care. Hence, this study aimed to assess practice and associated factors towards nursing care documentation among nurses working at public hospitals in Addis Ababa, Ethiopia.*

Methods*: An institutional-based cross-sectional study was conducted among 358 nurses working in intensive care units at public hospitals in Addis Ababa from August 2021 to January 2022. All nurses were selected by proportional allocation. Data was collected by using a self-administered questionnaire and observation checklist. EPI info and SPSS were used for data entry and analysis, respectively. Binary analysis was performed to select candidate variables for multivariable logistic regression analysis. All independent variables with p-values less than 0.20 were taken as candidates for the multivariable logistic regression model. The AOR is estimated to measure the strength of the association. In the final model, a p-value of less than 0.05 at 95% CI was considered a statistically significant association.*

Results: *358 respondents participated in this study, with a response rate of 97.8%. Of all the nurses who took part in the study, 61.17%) of them were females. Two hundred twenty (61.45%) of the study respondents scored as having good practice, 222 (62.01%) as having good knowledge, and 221 (61.73%) had favorable attitudes. In the final model of multivariable logistic analysis, knowledge (AOR= 1.63; 95% CI: 1.04, 2.54) and attitude of nurses (AOR= 2.30; 95%CI: 1.47, 3.58) had a statically significant association with nursing documentation practice.*

Conclusion and Recommendation: *This study revealed that good nursing documentation practice was 61.45 % among ICU nurses. The knowledge and attitude of intensive care unit nurses toward nursing documentation were the only factors associated with nursing care documentation practice.*

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1. Introduction

Nursing documentation is the process of recording and keeping evidence to have an account of what happened and when it happened.[1] The history of nursing care documentation started when Florence Nightingale defined it as the record of nursing care planned and given to individual patients and clients by nurses.[2] The quality and coordination of care depend on the communication between nurses with each other and other healthcare team members for continuity of care for their patients.[3]

Failure to have nursing documentation of a patient's condition, medications administered, or anything related to patient care can result in poor patient outcomes and liability issues for the facility, the physician in charge, and nurses.[4] Accurate documentation is important for communication and continuation of care.[5] Nursing documentation is also very important for legal issues regarding patient records that can be used as evidence in court.[6] Clear, accurate, timely, and accessible documentation is essential to safe, quality, and evidence-based nursing practice.[7] Nursing is not complete until the care has been properly documented, and as the old saying goes, "If it was not documented, it was not done". [8] Additionally, nursing documentation is important for education, research, quality assurance, and reimbursement by third-party claimants.[9] A study by Bjorvelleal suggests that nurses perceive nursing documentation as an important element in their practice and also to ensure patient safety.[10]

Nurses bear a large burden in managing and implementing the interdisciplinary team's plan for documenting the care and progress toward the goals since documentation is a working framework that provides a comprehensive account of care provided to a patient.[8, 11] Nurses' low practice on nursing care documentation has negative impacts on the health care of patients, the health care providers, and the profession and is associated with omitting of medications, improper or double medication administrations, and the risk of legal harm become high.[5,12,13]

The prevalence of poor nursing documentation practice is different from country to country and institution to institution. A study from London and Iraq, which have poor documentation practices, shows 53% and 51.7%, respectively.[14, 15] Similarly, studies done in South Africa and Uganda both reported poor practice of nursing documentation among nurses.[16, 17] In Ethiopia, data collection inadequacy and lack of quality were found to be a problem.

Poor documentation by nurses negatively impacts patients' health care and may lead to harmful consequences like exposing the care provider to medication administration errors.[18] Quality of patient care and good documentation improve the credibility of the institution and make the nursing profession visible, and the situation may lead to an extent that can affect the reputation of the healthcare facilities.[19] Therefore, this study aimed to assess documentation practice and its associated factors among ICU nurses working at public Hospitals in Addis Ababa, Ethiopia, in 2022. The findings of this study will provide baseline data for interventions implemented at hospitals with ICUs and any further research conducted in Ethiopia. This study will also help to picture the practice of documentation explicitly.

2. Methods and Materials

Study area, Study design and period

The Study sites were public Hospitals in Addis Ababa, including Tikur-Anbesa specialized Hospital, St Paul's Millennium Medical Collage, St. Peter's

Specialized Hospital, AaBET Hospital, Zewditu Memorial Hospital, Yekatit 12 Hospital, Rasdesta Damtewu Memorial Hospital, Dagmawi Menelik Hospital, and Ghandi Memorial Hospital; Tirunesh Beijing Hospitals nurses working in intensive care units at public hospital. The data was collected from December 10 to 30, 2021.

An institutional-based cross-sectional study was conducted to assess the documentation of practice among ICU nurses working at public hospitals in Addis Ababa and all nurses working in Adult ICUs at public hospitals in Addis Ababa.

The study included nurses with at least 6 months of experience in each public hospital and nurses who were available during the study period. Nurses on annual leave and unable to participate in the study due to illness during data collection were excluded.

Sample size determination

The study employed a single population proportion sample size determination formula, taking the proportion as 47.5% from a previous study conducted in Harar Hospital and Dire Dawa Administration Governmental Hospitals (26), a 95% confidence interval (CI), and a 5% margin of error.

A sample size of 422 was calculated, with 10% compensation for no response. Although the sample size was calculated to be 422, the total number of nurses working in the Adult ICUs of sample hospitals was 366. Hence, data was collected from all nurses as shown below

Sampling technique

During the data collection period, there were 12 public hospitals in Addis Ababa. Lists of nurses from each hospital were identified, and data was collected based on the number of nurses available.

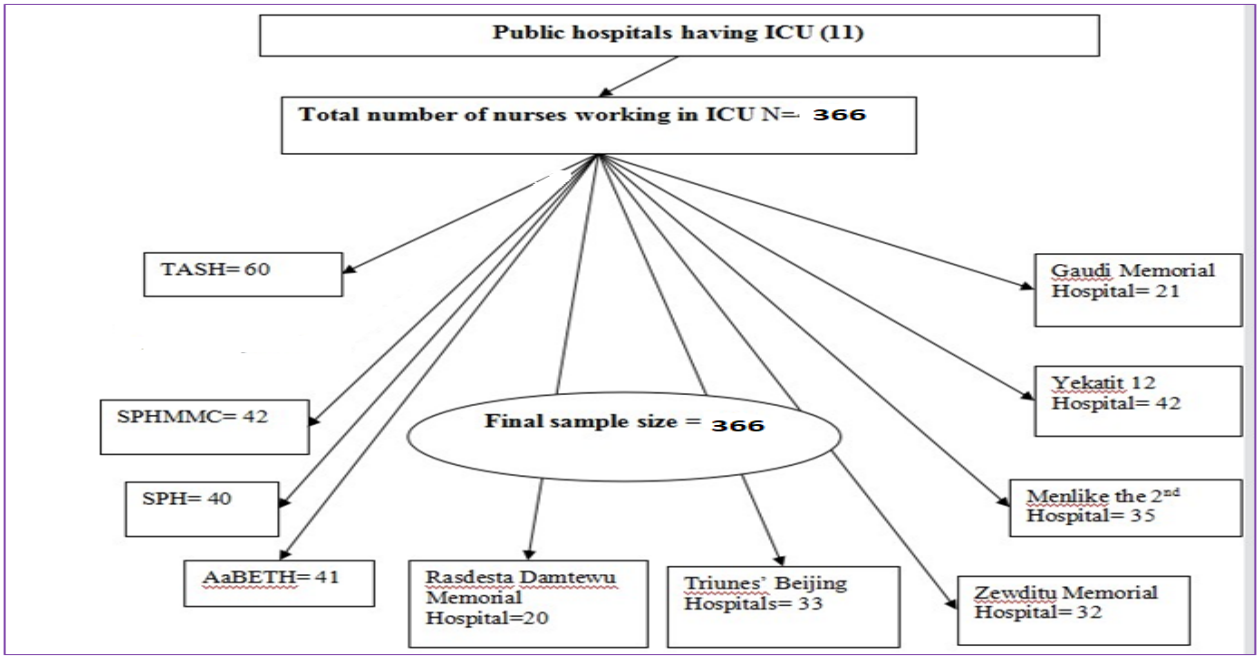

Figure 1: Schematic presentation of hospitals and distribution of nurses for each hospital in Addis Ababa, Ethiopia, 2022

Study variables

Dependent variable: documentation practice

Independent variables:

Socio-demographic factors (age, sex, educational status, current working hospitals, and work experience), Status, current working hospitals, work

experience, availability of standard guidelines, in-service training, recording time, motivation, knowledge, and attitude towards nursing documentation.

Operational definition

Practice: In this study, practice refers to the actions taken by the nurses on the documentation practice checklist.

Good practice refers to those study participants who correctly perform the documentation practice checklist through observation and score greater than the mean score.

Poor practice: refers to study participants who correctly perform the practice checklist through observation and have a score less than or equal to the mean score.

Good knowledge: those respondents who scored above or equal to the mean score of knowledge questions

Poor knowledge: those respondents who scored below the mean score of knowledge questions

Favorable attitude: Those respondents who scored above or equal to the mean score

Unfavorable attitude: Those respondents who scored below the mean score of attitude questions

Nursing documentation practice: a record of nursing care delivered to individual clients by nurses.

Data collection tools and procedures

An observation checklist and a structured, self-administered questionnaire were used for data collection. Both instruments were modified and adapted from other research. The documentation practice of nurses working in intensive care units was assessed using an observation checklist with 13 practice-related questions. Based on the observation checklist, nurses who applied/followed the recommended action were included in the "Yes" section, and nurses who didn't apply/ follow the recommended action were included in the "No" section. Finally, from this aggregate score, nurses who performed greater than the mean score of practice-related questions using a checklist were categorized as having good practice. In contrast, nurses who practiced less than or equal to the mean score of practice-related questions were categorized as having poor practice. The data was collected by trained data collectors and supervisors. The observation was conducted by the principal investigator, two supervisors, and two data collectors, and they were given scores according to the checklist. Participant nurses were observed for 15-30 minutes; the time was selected randomly.

After the observation, a structured self-administered questionnaire was implemented. [6, 24, 25, 28] Nine multiple-choice questions were used to measure respondents' knowledge of the nursing documentation adopted.[32] Participants' attitudes were assessed via a Likert scale, with item scores ranging from strongly agree[5] to strongly disagree.[32]

Data quality control

To ensure data quality, data was collected by BSC nurses who were not employees of the study hospitals after two days of training on the techniques of data collection. The principal investigator and supervisors checked the completeness of the data. 5% (19) of the sample size were pre-tested at Shashemene ICU, which was not included in the final study.

Data processing and analysis

The collected data was checked visually for com-

pleteness, and the responses were coded and entered into the computer using the Epi info statistical package.

Five percent of the responses were randomly selected and checked for the consistency of data entry and exported to Windows of Statistical Package for Social Science (SPSS) for data analysis. Results were summarized using frequencies, percentages, mean, standard deviation, and media and inter-quartile range presented using figures, tables, and text. Binary logistic regression was done to see the crude significant relation of each independent variable with dependent variables. Variables with P value <0.20 at a 95% confidence interval during the bi-variable analysis were used in multivariable logistic regression analysis by using the backward likelihood ratio method to see the relative effect of confounding variables and the interaction of variables. Odds ratio with 95%CI was performed to determine the strength of association of variables at p-value less than 0.05, which was taken as significant.

Ethical clearance

The research protocol was approved, and ethical clearance was obtained from SPHMMC Institutional Review.

Consent from the city health bureau and respective public hospitals was also obtained. All nurses serving as data collectors and supervisors were informed in writing about the study.

Data collectors gave full information to the study participants about the purpose of the study and asked them to give their consent before participating in the study. Participation in the study was entirely voluntary and any involvement in the study was assured only after obtaining complete verbal informed consent. Confidentiality was strictly adhered to, and identification numbers (using codes) rather than names were used during the data collection and analysis.

3. Result

Socio-demographic characteristics of respondents

A total of 358 respondents participated in this study, achieving a response rate of 97.8%. Among the participants, 61.17% were female nurses. The age distribution revealed that 74.3% of the respondents were between 25 and 30 years old, with a median age of 28 years and an interquartile range (IQR) of 3 years. Additionally, the majority (91.34%) held a degree-level qualification. Over three-quarters (82.12%) of the participants had three years or less of work experience, while 15.08% had between 4 and 7 years of experience (see Table 1).

Table 1: Socio demographic characteristics of intensive care unit nurses at public hospitals in Addis Ababa from December 10th - 30th 2021 (n=358)

Variable's	Response	Frequency	Percent
Age in years	21-24	7	1.96
	25-30	266	74.30
	31-34	54	15.08
	≥35	31	8.66
	Median ± IQR	28 ± 3	
Sex	Male	139	38.83
	Female	219	61.17
Education	Diploma	5	1.40
	Degree	327	91.34
	MSC	26	7.26
Experience in years	≤3	294	82.12
	4-7	54	15.08
	≥8	10	2.79

Work area-related characteristics of study participants

In this study, 95 respondents (26.54%) reported receiving in-service training. Among those trained, more than three-fourths (88.66%) completed their training within two years. When asked about the availability of clinical guidelines, 59 participants (16.34%) indicated that these guidelines were accessible. Additionally, over half of the respondents (66.13%) were familiar with the guidelines.

Regarding patient care, 355 respondents (99.16%) reported a 1:1 patient-to-nurse ratio. A significant majority of nurses (86.87%) stated they had sufficient sheets for patient care, while 236 participants (65.92%) felt that having more sheets motivated them. Furthermore, 183 respondents (48.32%) documented patient care shortly after it was completed.

Nurses' attitudes towards nursing documentation practice

In this study, participants were assessed on 13 items from a questionnaire regarding documentation practices. A total of 346 respondents (96.65%) reported documenting every patient's records. More than three-quarters (87.99%) provided documented subjective data, while 329 participants (91.90%) documented objective data. Additionally, 294 respondents (82.12%) indicated that they documented significant communications with family members.

The majority of respondents (81.84%) confirmed that they engaged in advocacy on behalf of patients. Regarding the legibility of documentation, 322 participants (89.94%) ensured that documents were clear when using paper forms. Furthermore, 307 nurses (85.75%) documented advice, care, or services provided to individuals within groups, communities, or populations. Notably, 325 participants (90.78%) reported completing documentation in a timely manner, either during or immediately after care events.

As illustrated in Figure 2, participants' performance was categorized into good and poor practices. Scores of 0.8756 (the mean value) or above were classified as good practice, while scores below the mean indicated poor practice. Of the respondents, 220 (61.45%) demonstrated good practice, while 138 (38.55%) scored below the mean, indicating poor practice.

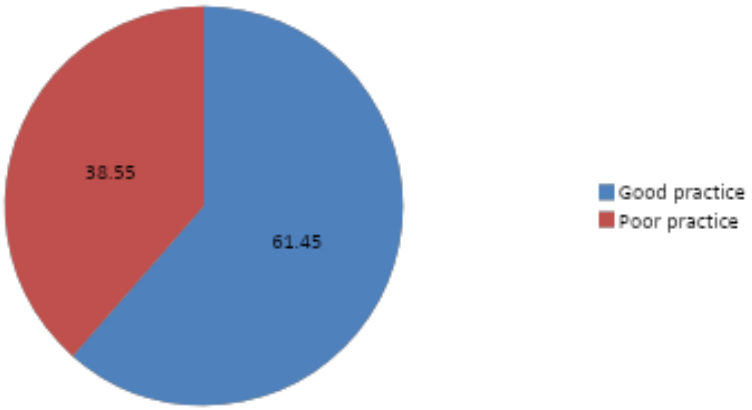

Figure 2: Percentage of practice of documentation among Nurses working in Public Hospital in Addis Ababa (n=358)

Knowledge of respondents towards nursing documentation

In this study, respondents were assessed on their knowledge of documentation through nine questionnaire items, each allowing multiple responses. A total of 315 participants (88.0%) reported that nursing care should be documented according to established guidelines. Regarding the principles that should be followed during documentation, more than three-quarters (88.83%) of participants indicated they were knowledgeable, and 313 nurses (87.43%) confirmed that the documents were easily readable.

Furthermore, 341 respondents (95.25%) noted that improved quality was achieved through proper documentation, and 330 participants (92.18%) described effective communication with staff regarding the benefits of patient care documentation. When asked about the main nursing activities expected to be documented, the responses included: assessing data (315 participants, 89.11%), tracking patient progress (322 participants, 89.94%), recording transfers and discharges (284 participants, 79.33%), providing care (295 participants, 82.40%), and evaluating care.

However, the majority (91.62%) acknowledged inadequate awareness of the potential consequences of poor documentation. More than three-quarters (89.39%) also incorrectly associated the use of non-standard abbreviations with errors in patient care documentation. A significant number of respondents (334, or 93.30%) reported that documenting the date and time of actions protects them from legal issues, and 337 (94.13%) were aware of the necessary components of medication administration documentation. Regarding who should document the care provided, 289 participants (80.73%) stated that the same individual who delivered the care should be responsible for documentation.

As illustrated in Figure 3, 222 participants (62.01%) demonstrated good knowledge, while the remaining 136 (37.99%) scored below the mean, indicating poor knowledge.

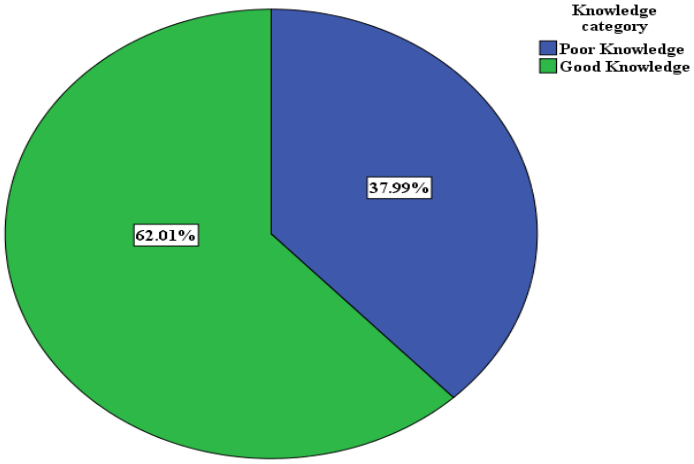

Figure 3: Knowledge of nurses towards nursing documentation in public hospital, Addis Ababa

Attitudes of nurses towards nursing documentation practices

The study respondents were assessed on their attitudes towards documentation through twelve items. Among the participants, 189 (52.79%) strongly agreed that Nursing documentation is equally important as any other task. Additionally, 206 (57.54%) strongly agreed that documentation ensures continuity of care.

Regarding the importance of documentation to other healthcare professionals, 136 nurses (37.99%) expressed agreement. More than half of the respondents (58.66%) strongly agreed that documentation serves to show the workload and tasks performed. However, only 120 nurses (33.52%) agreed with the statement that many benefits can be derived from the use of documentation.

As illustrated in Figure 4, 137 participants (38.27%) were categorized as having an unfavorable attitude toward documentation, while 221 (61.73%) displayed a favorable attitude.

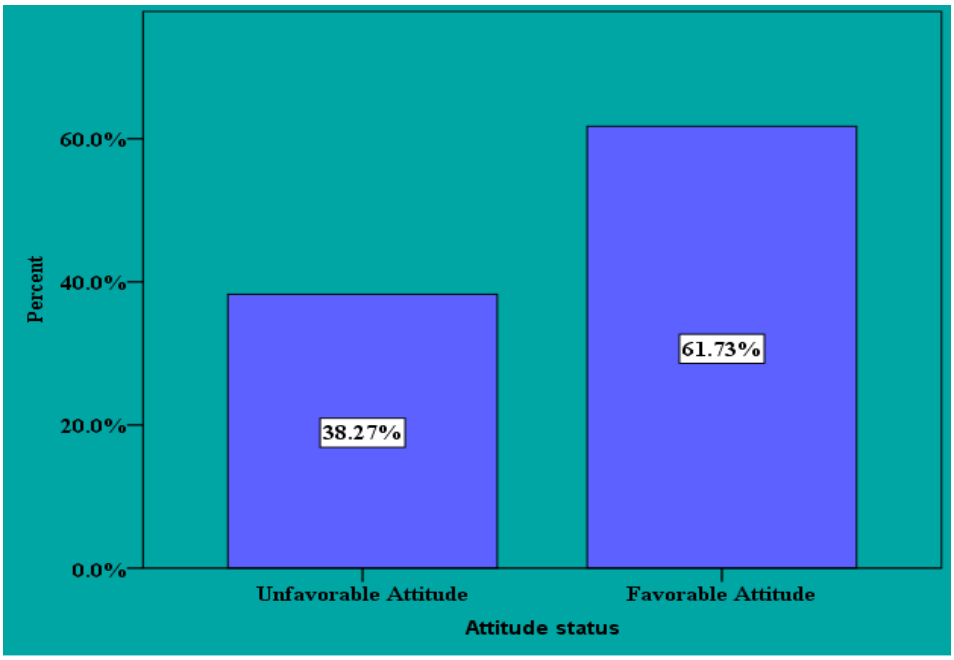

Figure 4: Attitudes of nurses towards nursing documentation in public hospital, Addis Ababa

Associated factors

A bivariate analysis was conducted to examine the correlation between nurse documentation practices and independent variables. Initially, each variable was entered separately into a binary logistic regression model. Subsequently, variables with a p-value less than 0.20 were selected for multivariate logistic regression analysis. The bivariate analysis identified several variables associated with documentation practice: age (in years), educational background, work experience, availability of guidelines, documentation time, knowledge, and attitude.

To further assess these relationships, a multivariable logistic regression was performed to determine the independent effects of these variables while controlling for potential confounders. Two variables demonstrated a significant association with documentation practice at a p-value of less than 0.05: nurses' knowledge and attitude.

Intensive care unit nurses with good knowledge were found to be 1.63 times more likely to exhibit good documentation practices compared to those with poor knowledge (AOR = 1.63; 95% CI: 1.04, 2.54). Similarly, the odds of having good documentation practices among intensive care unit nurses with a favorable attitude were 2.30 times greater than those with an unfavorable attitude (AOR = 2.30; 95% CI: 1.47, 3.58).

Table 2: Factors associated with nursing documentation practice among nurses working in ICU in public hospital in Addis Ababa (n=358)

Variables	Category	COR(95%CI)	AOR(95%CI)	P-value
Age in years	21-24	1.00		
	25-30	4.36(0.83, 22.88)	3.80(.61, 23.86)	0.154
	31-34	3.37(0.60, 18.94)	3.20(.47, 21.71)	0.233
	≥35	3.46(0.58, 20.70)	4.03(.55, 29.71)	0.172
Education	Diploma	5.45(0.53, 55.80)	4.40(.34, 56.21)	0.255
	Degree	2.29(1.02, 5.15)	1.63(.61, 4.35)	0.329
	MSC	1.00		
Experience	≤3	1.00		
	4-7	0.56(0.31, 1.01)	.77(.39, 1.53)	0.456
	≥8	0.56(0.16, 1.99)	.84(.19, 3.67)	0.813
Guidelines Availability	Yes	0.50(0.29, 0.88)	.72(.38, 1.40)	0.335
	No	1.00		
When you document	Any time when convenient	2.10(0.87, 5.07)	1.48(.58, 3.80)	0.411
	Soon after care finished	2.27(0.94, 5.48)	1.43(.56, 3.68)	0.453
	At the end of shift hours	1.00		
Knowledge	Poor	1.00		
	Good	1.69(1.09, 2.62)	1.63(1.04, 2.54)	0.033*
Attitude	Unfavorable	1.00		
	Favorable	2.35(1.51, 3.65)	2.30(1.47, 3.58)	<0.001*

Keys: 1.00 indicates reference category; * significance at p-value < 0.05

4. Discussion

The main purpose of this study was to investigate nursing documentation practice and associated factors among intensive care unit nurses in public hospitals in Addis Ababa, Ethiopia. The findings of this study showed that 61.45% of the study respondents had good practice. This finding is higher than a study conducted in the United Kingdom (47.3%)[14] and Iraq (49.3%).[15] The result of this study agrees with the study conducted in Jimma, Ethiopia, demonstrating that 51.4% of nursing documentation practice was poor among nurses[24], and a study conducted in Harari and Dire Dawa indicates nursing documentation practice was 47.5%.[25] Similarly, our study finding is higher than that of a study by West Gojjam, which reveals that 47.5% of nurses had good documentation practice.[28]

The result of this study shows that knowledge of intensive care towards practice nursing care documentation was good (62.01%). In the current study, nurses with good knowledge regarding documentation were 1.63 times more likely to have good nursing documentation practice than those with poor knowledge. This finding aligns with the studies from Uganda [23] and the United States.[5] This can be explained by the following: good knowledge of nursing care documentation improves familiarity with documentation guidelines and manuals and enhances adherence to standardized nursing practice and nursing professionalism.

Regarding attitude, 61.73% of the intensive care unit nurses had a favorable attitude. Nurses who had a good attitude towards nursing care documentation were also 2.30 times more likely to have good documentation practice compared to those who had a poor attitude. This observation is consistent with study results from Sweden.[33]

Limitations

The study design for this study was cross-sectional, which did not illustrate the cause-and-effect relationship between independent and dependent variables. The study was done in public hospitals in Addis Ababa, which might not represent the entire hospital in Ethiopia. A structural self-administer questionnaire is always subject to respondents' response bias.

5. Conclusion and recommendation

This study revealed that nursing care documentation practice was good (61.4%) among intensive care unit nurses. The knowledge and attitude of intensive care unit nurses towards nursing documentation were the only factors associated with this practice. Nursing documentation is a very important aspect of professional practice for nurses. Based on the findings of this study, the following recommendations are forwarded: The researcher suggests to hospitals and health facilities to work on improving nurses' knowledge, attitude, and documentation practice skills through different mechanisms, like training, sharing experiences with other hospitals, and giving short-term courses. It is also important for stakeholders like staff, higher officials of the health system, and researchers.

Abbreviation

CNE: Comprehensive Nursing Education
EPI Info: Epidemiological Information Software
ICU: Intensive Care Unit
IRB: Institutional review board
NGO: Non-governmental organization
PPS: Probability proportion to sample size
SPSS: Statistical Package for Social Science
WHO: World Health Organization

Author Contributions

AK- supervision, data collection, data analysis and interpretation

MK- Data collection and data entry

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Conflict of Interest

The authors declare they have no competing conflict of interest

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References

1) Kebede M, Endris Y, Zegeye DT. Nursing care documentation practice: The unfinished task of nursing care in the University of Gondar Hospital. Inform Health Soc Care. 2017 Sep; 42(3):290- 302. doi: 10.1080/17538157.2016.1252766. Epub 2016 December 5. PMID:27918228.
2) Wang N, Hailey D, Yu P. Quality of nursing documentation and approaches to its evaluation: a mixed-method systematic review. J Adv Nurs. 2011 Sep;67(9):1858-75. doi: 10.1111/j.1365-2648.2011.05634.x. Epub 2011 April 6. PMID:21466578.
3) MACHUDO, Sabo Y; MOHIDIN, Sharifah. Nursing Documentation Project at Teaching Hospital in KSA. International Journal of Research in Science, [S.l.], v. 1, n. 1, p. 4-7, june 2015. ISSN 2412-4389.
4) Avoka Asamani J, Delasi Amenorpe F, Babanawo F, Maria Ansah Ofei A. Nursing documentation of inpatient care in eastern Ghana. Br J Nurs. 2014 Jan 9-22;

23(1):48-54. doi: 10.12968/bjon.2014.23.1.48. PMID:24406496.
5) The American Nurses Association (ANA) is a national professional association Nursing: Scope and Standards of Practice, Third Edition, guides nurses in the application of their professional knowledge, skills, andresponsibilities.2009
6) H Tasew · 2019 · Cited by 16 — 2014;4(1):137–44. Google Scholar. 17. Nakate G, et al. Knowledge and Attitudes of Select Ugandan Nurses towards Documentation of PatientCare.
7) 2017 American Nurses Association. Committee on Nursing Practice Standards 2017. Patricia Bowe, DNP, MS, RN. Danette Culver, MSN, APRN, ACNS-BC,CCRN.
8) Oliver JM. record keeping : self reported attitudes , knowledge and practice behaviors of nurses in selected cape town hospitals2021
9) Elisha M. Okaisu; Florence Kalikwani; Grace Wanyana; Minette Coetzee Improving the quality of nursing documentation: An action research project scinlo south Africa vol.37 n.2 Pretoria2014
10) Björvell, Catrin & Wredling, R & Thorell-Ekstrand, Ingrid. (2002). Long-term increase in quality of nursing documentation: Effects of a comprehensive intervention. Scandinavian journal of caring sciences. 16. 34-42.10.1046/j.1471-6712.2002.00049.x.
11) The American Nurses Association (ANA) is a national professional association Nursing: Scope and Standards of Practice, Third Edition, guides nurses in the application of their professional knowledge, skills, andresponsibilities.2010
12) Chebor,Alex.(2013).ChelagatD,SumT,ObelM,CheborA,KiptooRandBundotichB,Documentation: Historical Perspectives, Purposes, Benefits and Challenges as Faced by Nurses, International Journal of Humanities and Social Science Vol. 3 No. 16 [Special Issue –August 2013] P 236-240. ISSN 2220-8488 (print) 221-0989 (online).International Journal of Humanities and Social Science. 3.236-240.
13) Taylor, Helen. (2003). an exploration of the factors that affect nurses' record keeping. British journal of nursing (Mark Allen Publishing). 12. 751-4, 756.10.12968/bjon.2003.12.12.11338.
14) Law L, Akroyd K, Burke L. Improving nurse documentation and record keeping in stoma care. Br J Nurs. 2010 Nov 25-Dec 8; 19(21):1328-32. doi: 10.12968/bjon.2010.19.21.80002. PMID:21355356
15) Jebur HG, Mohammed W. Evaluation of Nursing Staffs' Documentation Standard Related to Nursing Procedures at Medical Wards in Al-Najaf Al-Ashraf Governorate. J Kufa Nurs Sci.2017;
16) Taiye BH. Knowledge and practice of documentation in Ahmadu Bella University Teaching hospital9Abth) Zaria, Kaduna State. IOSR Journal of Nursing and Health Science.2015;4(6):1-6.
17) Vital Wave Consulting. Health information systems in developing countries, in a landscape analysis; 2009. P.69–70.
18) Admasu.Documentation_Practice_and_associated_factors_amongNurses_Working_at_JUMC
19) Mutshatshi, T. E., Mothiba, T. M., Mamogobo, P. M., & Mbombi, M. O. (2018). Record-keeping: Challenges experienced by nurses in selected public hospitals. Curationis, 41(1),e1–e6.
20) Gugerty, Brian & Maranda, Michael & Beachley, Mary & Navarro, VB & Newbold, Susan & Hawk, W & Karp, J & Koszalka, M & Morrison, S & Poe, Stephanie & Wilhelm, D. (2007). Challenges and Opportunities in Documentation of Nursing Care ofPatients.
21) Joint Commission Center for Transforming Healthcare releases targeted solutions tool for hand-off communications. Jt Comm Perspect. 2012 Aug; 32(8):1, 3. PMID:22928243.
22) Alhawri, Fouad & Rampal, Krishna Gopal &

Abdulla, Abdelkodose. (2021). Knowledge, Attitude, Performance, and Associated Factors Towards Nursing Documentation Among Nurses in Public Hospitals, Sana'a City,Yemen.
23) Nakate, G. & Dahl, D. & Drake, K.B. & Petrucka, Pammla. (2015). Knowledge and Attitudes of Select Ugandan Nurses towards Documentation of Patient Care. African Journal of Nursing and Midwifery. 2.56-65.
24) Gizaw, Admasu. (2018). Documentation Practice and associated factors among Nurses Working at JUMC
25) TamirT,GedaB,MengistieB.DocumentationPracticeandAssociatedFactorsAmongNursesin
26) Harari Regional State and Dire Dawa Administration Governmental Hospitals, Eastern Ethiopia. Adv Med Educ Pract.2021;12:453-462
27) Blair W, Smith B. Nursing documentation: frameworks and barriers. Contemp Nurse. 2012 Jun;41(2):160-8. doi: 10.5172/conu.2012.41.2.160. PMID:22800381.
28) Collins SA, Cato K, Albers D, Scott K, Stetson PD, Bakken S, Vawdrey DK. Relationship between nursing documentation and patients' mortality. Am J Crit Care. 2013 Jul;22(4):306-13. doi: 10.4037/ajcc2013426. PMID: 23817819; PMCID:PMC3771321.
29) Atsedemariam A., Tarekegn A., Mezinew S., Tiliksew L., Afework E., Bekalu B.and Mihretie G.: Knowledge, attitude, practice and associated factors towards nursing care documentation among nurses in West Gojjam Zone public hospitals, Amhara Ethiopia, Clinical Journal of Nursing Care and Practice:2018
30) Yeung MS, Lapinsky SE, Granton JT, Doran DM, Cafazzo JA. Examining nursing vital signs documentation workflow: barriers and opportunities in general internal medicine units. J Clin Nurs. 2012 Apr;21(7-8):975-82. doi: 10.1111/j.1365-2702.2011.03937.x. Epub 2012 January 14. PMID: 22243491.
31) Prideaux, Antony. (2011). Issues in nursing documentation and record-keeping practice. British journal of nursing (Mark Allen Publishing). 20. 1450-4.10.12968/bjon.2011.20.22.1450.
32) Petkovšek-Gregorin R, Skela-Savič B. Nurses' perceptions and attitudes towards documentation in nursing. Obzornik zdravstvene nege. 2015 Jun27;49(2).
33) AyeleS,GobenaT,BirhanuS,YadetaTA.AttitudeTowardsDocumentation and Its Associated Factors Among Nurses Working in Public Hospitalsof Hawassa CityAdministration,SouthernEthiopia.SAGEOpenNurs.
34) Ehnfors M. Nursing documentation practice on 153 hospital wards in Sweden as described by nurses. Scand J Caring Sci. 1993;7(4):201-7. doi: 10.1111/j.1471-6712.1993.tb00204.x. PMID: 8108624