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Nurses' Compliance with Principles of Documentation in Electronic Health Records (EHRs): A Descriptive, Short Observational Study from Oman

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Abstract: **Background**: Nursing documentation is a critical component of patient care, communication, and legal accountability. Inadequate documentation compromises patient safety and quality of care. **Objective**: To assess nurses' compliance with principles of nursing documentation. To correlate the demographic characteristics with the quality of nursing documentation. **Methods**: A descriptive, quantitative observational study was conducted using patient records documented by nurses over a defined period in multicenter at primary health care institution, South Sharqyiah. Documentation was assessed using a structured audit checklist based on established documentation principles. Descriptive and inferential statistics were used for analysis. **Results**: A total of 273 nurses were observed for their documentation post care delivery for a defined period. Overall compliance with documentation principles was moderate (71.3%). The study findings indicated varying levels of compliance with documentation principles. High compliance was observed in general structure and quality of documentation such as'' Document is entered by staff who delivered the care'' (mean=1.99, SD=0.12); Document is stated in specific, concise, accurate manner (mean=1.96, SD=0.20), while The lowest scores in the entire audit were found in documenting pain assessment (mean=1.26). Low scores in nursing documentation were also found in nursing process, psychological support, procedural notes contain details of intervention (mean=1.38) for each one. Providing health education, and communication with clients/ family were also got low scores (1.39, 1.46) respectively. In regards to documentation of vital signs, the highest scores of documentation was blood pressure (1.81), whereas the lowest was documenting respiratory rate (1.53) and documenting consciousness level of the patient (1.01) . The quantitative data also illustrates that only 98 (36%) of nurses had in service training related to nursing documentation. Significant associations were found between quality of documentation and demographic characteristics include nationality, education, institution category ($p < 0.05$). **Conclusion**: Nurses' compliance with documentation principles was suboptimal in several areas. This study found a critical gap in nursing documentation related to documenting psychological care, health education and nurse/patient communication, which recommend to re-assess the current policies and protocols and modify them accordingly. Strengthening training, supervision, and

standardized documentation tools are also recommended to improve documentation quality and patient safety.

Keywords: Nursing documentation, compliance, observational study, cross-sectional, patient records

INTRODUCTION

Nursing documentation is a fundamental component of professional nursing practice and a critical element in the delivery of safe, high-quality patient care [1]. Nursing documentation is the documented record by nurses of detailed nursing care that is planned and delivered to patients. Nursing documentation should include the nursing process such as assessment, diagnosis, planning, implementation, and evaluation of care [2]. Specifically, documentation is the process of creating a record of evidence and any written information about a client that explains the status, care, or service given to the patient. Accurate, focused and comprehensive documentation ensures continuity of care among healthcare providers, and facilitates appropriate communication among the multidisciplinary team, and provides legal evidence of the care delivered [3]. Nursing documentation also ensure patient safety by reduce errors due that may be result of missed information. Primary ways nursing documentation reduces errors by minimizes communication gaps, prevents medication mistakes, alerts of patient deterioration, and identifies adverse risks [4]. For instance, A major recent survey in United kingdom found that 23% of patients identified errors in their medical records (e.g., incorrect information on medications, conditions, or personal details [2]. The World Health Organization (WHO) estimates that about 1 in every 10 patients is harmed in healthcare settings [5], and much of this avoidable harm is linked to communication lapses, medication mishaps, and documentation fault [6]. Based on a survey done by WHO, it has been revealed that poor communication between health care professionals is one factor for medical errors [7].

Specific nursing documentation errors types are observed in research include: Incomplete entries (e.g., missing dates/time, signatures); Lack of standardized terminology; errors in nursing assessment and intervention and missed documentation of care transitions or clinical finding [8]. In contrast, High-quality nursing documentation contributes significantly to patient safety, clinical decision-making, and quality improvement initiatives. It supports accountability, enhances transparency in care delivery, and serves as a valuable source of data for research, audit, and policy development [9]. In addition, documentation plays an essential role in accreditation processes and institutional evaluation systems [10]. Furthermore, inadequate documentation increases legal and ethical risks, as medical records often serve as essential evidence in professional accountability reviews or litigation [11].

Despite its importance, several studies have reported deficiencies in nursing documentation, including incomplete entries, lack of individualized care plans, poor recording of patient education, limited documentation of psychological support, and inconsistencies in the use of standardized terminology [12]. Factors influencing documentation quality include nurses' level of education, shortage of staff [9]; clinical experience, workload, organizational support, availability of structured documentation systems, lack of in-service training and lack of support from nursing leadership. Studies

report poor nursing documentation in 37% to 52% of cases, indicating records were incomplete or inadequate [7]. The increasing use of electronic health records (EHRs) has further transformed documentation practices. While structured electronic systems can improve standardization and accessibility, they may also introduce challenges such as increased workload, time constraints, and reduced direct patient interaction [13].

Accurate and timely documentation promotes continuity of care, enhances communication among healthcare professionals, and provides legal and professional accountability. Adherence to established principles of documentation—such as accuracy, completeness, timeliness, clarity, and confidentiality—is essential to ensure patient safety and quality healthcare delivery [6]. Effective documentation gives the foundation for demonstrating nursing's valuable contribution to patient outcomes and to the institution that provides and supports quality patient care.

In Oman, Ministry of Health documentation guideline sets out required nursing record forms (e.g., nursing assessment forms, care plans, progress notes, patient education, pain documentation), reflecting the structural expectations for documentation in clinical practice. Despite clear guidelines, studies indicate that nurses' compliance with documentation standards and principles is often inconsistent in many healthcare settings such as incomplete entries, delayed charting, and lack of standardization negatively impact communication across care teams and may affect patient outcomes [13,14]. Deficiencies such as heavy workload, time constraints, and limited training [15].

In Oman, where healthcare systems are rapidly evolving and quality improvement initiatives are emphasized, understanding nurses' compliance with documentation principles is essential for both clinical governance and patient care outcomes. However, there is a paucity of observational data describing actual practices on the ground. At present, there is limited published research specifically on nursing documentation practices (e.g., documentation quality audits, completeness, accuracy) that has been indexed in major journals. This descriptive observational study therefore aims to evaluate the extent to which nurses in selected healthcare facilities in Oman comply with established documentation principles, identifying both strengths and areas for improvement. Findings from this study may provide evidence to inform targeted education, policy refinement, and quality improvement strategies that strengthen nursing documentation practices within the region. The literatures in nursing documentation exists tends to be broader research on safety, practice, quality, and competencies where documentation is mentioned as part of professional practice. In addition, most available studies evaluate nurse's compliance in nursing documentation using retrospective researches, don not assess nursing compliance in spot at real time. A short observational study allows for direct assessment of real-time documentation practices and provides practical insight into nurses' compliance within routine clinical settings. There is a need for empirical research directly evaluating nursing documentation quality in Oman (e.g., audits, factors influencing documentation, correlation with nurse characteristics). Observational studies are particularly valuable as they capture actual nursing behavior rather than self-reported practices, which may be biased. Findings from such studies emphasize the need for regular monitoring, training, and supportive documentation systems to enhance compliance with documentation. Given the critical role of documentation in ensuring safe and effective care, there is a need to assess the compliance of nursing documentation practices and identify factors associated with its

quality. This study aims to observe and evaluate nurses' adherence to documentation principles during routine patient care

Aim of the Study

- This study aims to assess nurses' compliance on principles of documentation and basic of nursing care at primary health institutions, South Sharqyiah governorate.

Secondary Aim

- To correlate between demographic characteristics and the quality of nursing documentation.

MATERIALS AND METHODS

Study Design

A descriptive short observational study design was conducted at multicenter primary health care institutions at South Sharqyiah Governorate, Sultanate of Oman. This study design was more suitable to choose instead of retrospective analysis of records because it gives in spot data about the nurses' compliance as well as characteristics of nurses, so will be able to correlate the compliance level with the demographic characteristics and other variables. The data was collected between December 2024 to September 2025.

Study Participants and Sampling

The participants were 273 registered nurses from multicenter health institutions. A convenience sample of nurses providing direct patient care during the study period on duty during was included. The Inclusion criteria were: nurses who work in clinical practice, and provide consent to participate in the study. Nurses on leave or working in the administration were excluded from the study. Nurses were observed one time only.

Data Collection Tool/Procedure

A structured observational checklist based on standard documentation principles adapted from ministry of Health policy (the Ministry of Health policies and Lippincott and Williams for nursing procedures). The components of checklist included specific themes: such as General quality and structure; timeline; nursing care; communication; nursing ethics and patient. The study was concealed to assure validity and reliability in obtaining the accurate results of the routine nursing practices without putting the participants under pressure as it may affect their normal behavior and skew the findings.

The observation tool consists of two sections: the demographic characteristics and clinical variables of the nurses, including age, nationality, years of experience, working place, level of education, and other variables. The form consists of specific grading scale (met=2, partially met=1, not met =0). An overall compliance score was calculated and categorized based on specific cut-off and is commonly utilized in nursing documentation

audits [16,17] table 1. The form was filled out by the auditor/observer electronically and the auditor will then interview the nurse for demographic and clinical variables.

Table 1: Classification of Nursing Documentation Quality

Quality Level	Compliance Score Range	Interpretation
High (Good)	> 75%	Documentation consistently meets standards with minimal errors.
Moderate	50% – 75%	Documentation meets basic standards but has significant gaps in specific areas.
Low (Poor)	< 50%	Documentation frequently fails to meet standards, posing risks to continuity of care.

Nurses' documentation practices were observed during routine care over a short period in spot. Patient records and nursing notes were reviewed without interfering with patient care. The researcher (Principal Investigator) organized a team of well-instructed qualified nurses with 10 years and above experience as nurse leaders and clinical facilitators. The data collectors have been trained comprehensively in conducting the audit and using the tool. The nurses were observed in all shift duty: morning, afternoon and night. Each nurse has been observed once only. The data collection was held at a multicenter health institution, and each auditor (observer) was responsible for the specific health institutions of data collection. To maintain the reliability of the data collection process and prevent already known biases, the observed nurses were not informed about the observations previously, only on the data collection time. The data was collected on documentation using the disguised observation method, meaning that nursing staff needed to be made aware of the study's detailed purpose and the tool's content to prevent a Hawthorne effect [18]. The Nurse Documentation (Short Period) was held according to the following steps: Initially, the auditor explained to the nurse about the observation after entering the documentation in AL-Shifa system (electronic health records). The used audit checklist was not exposed to the participants. The data collectors audited the records of the nurse following patient care in the same shift based on the checklist. To ensure the completeness of the documentation, the data collectors focused, structured, and standardized approach. For instance, the data collectors ensure nurses got enough time to document. The auditors also focused only in the components mentioned in the checklist. Each checklist was completed with demographic data of the nurse before each assessing the documentation. The short period observation provides a real time to assess nurses demographic and compliance in documentation, whereas retrospective provide data of health records after long time.

Ethical Considerations

The study was approved by the regional committee and by the Institutional Review Board of the Ministry of Health, Sultanate of Oman. All participant information was confidential, and verbal consent was taken from the participants prior to the observation. Confidentiality and anonymity were maintained. No personal identifiers of patients or nurses were recorded. Institutional permission was obtained prior to data collection.

Data Analysis

A descriptive approach (frequencies and percentages) was used in data analysis and inferential statistics in the statistical package for social sciences SPSS software (version 26). A p value < 0.05 was considered statistically significant; the more consequential the finding, the smaller the p-value obtained. Categorical variables, such as nationality, education level, and institution type, were presented as frequencies (n) and percentages (%). Continuous variables, including age, years of experience, and documentation quality scores, were expressed as means (M) and standard deviations (SD). Inferential statistical tests were employed to identify relationships and differences between the study variables. Pearson's product moment correlation coefficient (r) was calculated to examine the strength and direction of the linear relationship between continuous independent variables (age and years of experience) and the quality of nursing documentation. Additionally, Analysis of Variance (ANOVA) was conducted to test for significant differences in mean documentation scores across the categorical demographic groups (nationality, education, and institution). All statistical tests were two tailed. The chi-square test and Pearson's correlation coefficient were used to assess the study hypotheses and the significance between quantitative variables. The mean scores are derived from a scale where 2.0 represents "Met" (Perfect compliance). A mean score approaching 2.0 indicates high performance, while scores below 1.5 indicate systemic failure in that specific domain.

RESULTS

Section One: Demographic Characteristics

The demographic characteristics of the observed 273 nurses are shown in Table 2. The majority of nurses were between the age 35-39 years (34.9%, n=9) with the mean age of (38) years. A substantial mean experience of (15) years (ranging up to 58 years) indicate that the documentation under review is primarily produced by mid to late career nurses rather than novices. The majority of the participants have Diploma certificate (68.50%, n=224). The sample is nearly evenly split between Omani nationals (49%, n=133) and expatriate nurses (51%, n=140).

Table 2: Demographic Data (Number and Percentage)

Variable	Category	Count (n)	Percentage (%)
Age (Years)	**Mean (Range)**	**38.1**	**27.0 58.0**
	<30	14	5.15%
	30-34	66	24.26%
	35-39	96	34.93%
	40-44	53	19.49%
	45-49	25	9.19%
	55-60	8	2.94%
	50-54	11	4.04%
Nationality			
	Omani	133	49%
	Non-Omani	140	51%
Education			
	Diploma	224	68.50%

	Bachelor (BSN)	49	15.80%
Experience (Years)	**Mean (Range)**	**15.17**	**2.0 42.0**
	1-5	9	3.31%
	6-10	57	20.96%
	11-15	84	30.88%
	16-20	85	31.25%
	21-25	25	9.19%
	>26	12	4.41%
Institution			
	Health Center	150	54.90%
	Hospital	123	44.70%
In-Service training in nursing documentation	Yes	98	36%
	No	175	64%
Total Sample	N	273	100.00%

Section Two: Scores of Nurse's Documentations

General Quality and Structure

This section presents the descriptive statistics for the 33 audit criteria in table 3. The scores provide a granular view of adherence to quality standards. The study findings indicated varying levels of compliance with documentation principles. The highest scores were achieved in the structural and administrative domains. "Document entered by staff who delivered care" achieved a near-perfect mean of (1.99), and "Document is stated in a specific, concise, accurate manner" scored (1.96).

Table 3: Components and scores of Nurse's Documentations

Component of Nursing Documentation	Mean (SD)	Met (%)	Partially Met (%)	Not Met (%)	P Value (Hosp vs HC)
General Quality & Structure					
Document is stated in specific, concise, accurate manner	1.96 (0.20)	95.97	4.03	0	0.216
Document is entered by staff who delivered the care	1.99 (0.12)	98.53	1.47	0	0.251
Document is aligned to staff scope of practice/job responsibilities	1.87 (0.38)	88.64	9.89	1.47	0.25
Document is relevant and readable	1.93 (0.30)	93.77	5.13	1.1	0.224
Standardized abbreviations/symbols are used	1.84 (0.40)	84.98	13.92	1.1	0.108
Document is written in small caps	1.84 (0.42)	86.45	11.36	2.2	0.841
Uses professional language and terminology	1.85 (0.43)	88.28	8.79	2.93	0.039
Chronology & Timeliness					
Records events in the order they occurred	1.79 (0.49)	82.78	13.55	3.66	0.73
Timely and sequential to ensure accuracy	1.77 (0.51)	80.95	15.02	4.03	0.077
Nursing Process					
Includes subjective data	1.53 (0.75)	68.86	15.38	15.75	0.002
Includes objective data	1.55 (0.72)	68.5	17.95	13.55	0
Present health history	1.63 (0.69)	74.36	13.92	11.72	0

Past health history	1.46 (0.82)	67.03	12.09	20.88	0
Vital signs	1.67 (0.67)	78.39	10.26	11.36	0.334
Physical assessment	1.60 (0.66)	69.6	20.88	9.52	0
Pain assessment	1.26 (0.88)	55.31	15.75	28.94	0.012
Nursing Process: Diagnosis & Planning					
Nursing process & care plan	1.38 (0.83)	60.81	16.85	22.34	0.004
Nursing Process: Implementation/Intervention					
Medication administration five rights (name, dose, route)	1.73 (0.60)	80.22	12.09	7.69	0
Communication with client's family/supports	1.46 (0.76)	62.27	21.61	16.12	0.105
Health education	1.39 (0.77)	57.14	24.91	17.95	0.592
Psychosocial support	1.38 (0.81)	57.14	24.91	17.95	0.592
Procedural notes contain details of intervention	1.38 (0.81)	59.34	19.41	21.25	0.192
Patient Safety & Ethics					
Includes code of ethics (privacy/confidentiality)	1.46 (0.72)	59.71	26.74	13.55	0.234
Document includes safety measures	1.65 (0.68)	76.19	12.45	11.36	0
Communication & Continuity					
Document includes receiving notes, mid shifts, closing notes	1.54 (0.80)	73.63	6.59	19.78	-
Receiving notes (Mode of arrival, GCS, orientation)	1.44 (0.77)	61.54	20.88	17.58	0
Verbal/telephone orders written correctly	1.48 (0.82)	68.5	10.62	20.88	0
Describes changes in condition & patient complaint	1.69 (0.62)	78.02	13.19	8.79	0
Vital Signs Specifics (Detailed Breakdown)					
Blood pressure documented	1.81 (0.54)	87.18	6.23	6.59	-
Respiratory rate documented	1.53 (0.81)	72.89	6.96	20.15	-
Pulse rate documented	1.71 (0.65)	82.42	6.59	10.99	-
Temperature documented	1.77 (0.57)	84.62	8.06	7.33	-
Glasgow Coma Scale (GCS) /APVU documented	1.01 (0.94)	44.69	11.36	43.96	-

While routine checks scored relatively well, deeper assessment criteria lagged. "Vital signs checked & abnormal reading documented" scored mean of (1.67) , but detailed assessments revealed significant deficiencies. "Includes subjective data (client perspective)" scored (1.53), and most critically, "Pain assessment" dropped to a mean of (1.26).

The data exposes a systemic weakness in the core Nursing Process. The criterion "Aligned with nursing process & care plan " scored (1.38), with (22.34%) of records failing to meet this standard entirely. This contrasts sharply with task-based documentation like "Medication administration" (mean 1.73).

The lowest scores in the entire audit were found nursing process, psychological support, procedural notes contain details of intervention (mean=1.38) for each one.

Providing health education, and communication with clients/ family were also got low scores (1.39, 1.46) respectively. It was also observed that receiving note scored low scores (1.44). In regards to vital signs, the highest scores of documentation was blood pressure, whereas the lowest was documenting respiratory rate (1.53) and consciousness level of the patient (1.01).

Overall Compliance Analysis

The overall quality of nursing documentation in this audit was classified as Moderate as shown in graph 1, with a calculated mean compliance score of (71.3%) .

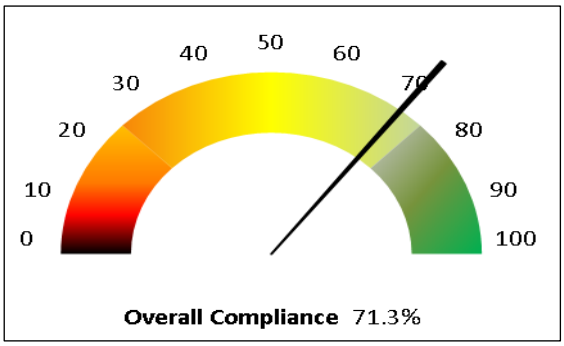

Figure 1: Overall compliance analysis of nursing documentation

Section 3: Determinants of Quality: Correlational Analysis

This section examines the relationships between independent variables (demographics) and the dependent variable (Documentation Quality). The findings challenge several conventional wisdoms regarding nursing competence. Perhaps the most striking finding of this study is the lack of significant correlation between experience (r = 0.09, p=0.135) or age (r=0.018, p=0.757) and documentation quality.

DISCUSSION

This study examined the compliance of electronic documentation and its determinants among 273 nurses, providing important insights into current documentation practices. Adherence to strict nursing documentation practices plays an important role in ensuring the quality and continuity of patient care, ultimately driving positive outcomes [19]. While accuracy and confidentiality were well maintained, gaps in timeliness and completeness were evident. These findings may be attributed to workload pressure and time limitations during clinical shifts [13].

Demographic Characteristics and Workforce Profile

The demographic profile indicates that nursing documentation in the studied institutions is predominantly produced by mid- to late-career nurses, with a mean age of (38 years) and a substantial mean experience of (15 years). This suggests that documentation practices observed in this study cannot be attributed to inexperience or novice practice. Abd El Rahman et al., (2021) argued that individual age affects physical, mental, workability, and

responsibility compared to older people because of material and energy changes, even though they have enormous responsibilities [20]. Similar findings have been reported in previous studies, where documentation deficiencies were identified even among experienced nurses, highlighting that experience alone does not guarantee high-quality documentation [4].

The predominance of diploma-qualified nurses (68.5%) reflects the current nursing workforce composition in many healthcare systems in the region. Academic literature consistently associates BSN preparation with stronger critical thinking skills, which are essential for the diagnostic and planning phases of documentation. Diploma programs traditionally focus more on technical skills and task completion. The high ratio of diploma holders may theoretically predispose the documentation quality toward "task based charting" (e.g., recording vital signs) rather than "process based charting" (e.g., formulating complex nursing diagnoses and evaluating outcomes.

The nearly equal distribution between Omani and expatriate nurses provides a balanced perspective and strengthens the validity of comparisons related to nationality. This reflects the current transitional state of the Omani healthcare workforce, which is actively pursuing "Omanization" while still relying heavily on international expertise. This diversity has profound implications for documentation. Variations in nursing education curriculums across countries (e.g., India, Philippines, Oman) create heterogeneity in how the "Nursing Process" is taught and conceptualized. While expatriate nurses often bring extensive experience, they may face challenges in adapting to local Omani MOH documentation standards or navigating the specific requirements of the Al Shifa system compared to the systems in their home countries.

This study also found only 98 (36%) nurses got in-Service training in nursing documentation similar as findings of [21]. Studies show that providing structured training significantly improves nurses' understanding of documentation practices and nurses demonstrated higher comprehension and capability after targeted training interventions [22]. Moreover, training Improves documentation quality [23], and is linked to documentation training is linked to practice Outcomes [15]. In one quasi-experimental study, post-training assessments showed dramatic improvements in documentation skills and significant increases in nurses' knowledge and performance levels after documentation training programs [24]. The results of this study indicates in adequate structured programs related to documentation locally.

Quality and Structure of Nursing Documentation

Overall Compliance Level

The overall documentation quality was classified as moderate (71.3%), indicating partial adherence to standards but substantial room for improvement, with notable strengths in structural compliance but persistent gaps in clinical reasoning, holistic assessment, and nursing process–based documentation. This is similar to previous studies [1,21,25]. In contrast, Pimentel et al., (2023) revealed showed low quality scores for nursing process records cross-sectional, retrospective study that analyzed 258 medical records of nursing documentation [26]. Studies suggests that while documentation systems and policies may be in place, their consistent and comprehensive application remains a challenge [10,12].

Studies identify the main factors influence the compliance in documentation such as time constrains [6,27]. Organizational factors such as leadership support, training, operational framework and high workload environment, absence of effective mechanism for supervising nursing care and patient to staff ratio [13,28]. Individual factors like nurse competency, knowledge, attitude and motivation [21]. A quantitative study by Tadese et al., (2024) utilized random sampling method among 421 nurses reported that nearly half of the nursing care was not documented [29]. The results also show that availability of operational standards for nursing documentation, availability of documenting sheets (AOR = 1.51; 95% CI: 1.01, 2.29), and a monitoring system were significantly associated with nursing care documentation practice.

The results of this study demonstrate strong compliance in structural and administrative aspects of documentation. High scores for criteria such as documentation being entered by the nurse who delivered care, being concise and accurate, use professional terminology, scope align, standard abbreviation, relevant and readable suggest that nurses are familiar with institutional policies, legal accountability, and basic documentation standards. These findings align with previous literature indicating that nurses tend to prioritize task-oriented and legally visible aspects of documentation [9]. This may be explained that nurses understand that deficiency related to basic structure of documentation or enter documentation entered by other nurse who did not provided the care may threaten patient's safety and lead to ethical and legal consequences. For instance, studies identifies unsafe abbreviations linked to medication errors' and patient harm [30] ; Charting outside scope may lead to legal and professional violations [27].

However, the findings also reveal significant deficiencies in clinical content and nursing process elements. While vital signs documentation showed relatively acceptable compliance, more complex assessments—such as pain assessment, subjective data, and psychosocial information—were poorly documented. The particularly low mean score for pain assessment (1.26) is concerning, given pain's status as a fundamental vital sign and a key indicator of patient comfort and quality of care. This finding is similar to other study [31]. Literatures suggests that nurses often fail to document pain in primary health care due to high workloads, time constraints, and excessive, time-consuming documentation requirements [32]. Other reason is low perceived importance as some nurses, particularly more experienced ones, may rely on intuition rather than formal documentation, or fail to see the purpose of documenting pain. Additionally, some nurses focus on completing immediate, task-oriented care often leads to the neglect of comprehensive pain documentation.

The weak alignment of documentation with the nursing process and care plans further underscores a systemic issue. This result is compatible with a retrospective study conducted to analyze the quality of nursing process reviewed a 258 medical records found a low quality scores for nursing process [26]. Another study used an observational cross sectional method to analyses 114 medical records, revealed that nurses were not able to complete the implementation that refers to the treatment plan by 58,8% [25]. Despite nurses routinely performing assessments and interventions, these activities are not consistently translated into structured documentation that reflects assessment, diagnosis, planning, implementation, and evaluation. This finding mirrors earlier studies suggesting that documentation often becomes task-driven rather than patient-centered, focusing on "what was done" rather than "why it was done" and "how the patient responded'' [9]."

The previous result contrasts sharply with task-based documentation like "Medication administration", which is align with the result of a cross-sectional study evaluated 1361 paper-based, non-standardized prescription and medication administration charts found indicating high-quality medication documentation [8]. This may be explained that nurses tend to document medication administration regularly as it is the most common procedure in daily base routine work. Additionally, medication administration one of the critical component of patient safety, and reinforced by hospital system and audit.

Communication, Education, and Psychosocial Care

The lowest scores were observed in documentation related to communication with patient/family, health education, psychosocial support, and detailed procedural notes. This is similar to study used a retrospective descriptive cross-sectional design and quantitative data were collected from 300 patient record showed deficiencies in patient education (10.33%) [33]. These areas represent core components of holistic nursing care, yet they are often under-documented. This pattern may reflect time constraints, high workload, and shortage of nurses [14,33]. Other perception that such aspects of care are less critical to document compared to physiological or medication-related tasks [3]. Nevertheless, inadequate documentation in these domains can compromise continuity of care, interdisciplinary communication, and legal protection.

In regards of psychological support, more than half of the progress notes did not record any nursing intervention at all, and most documented physiological care rather than psychological support or relational interventions [34]. This suggests psychological and relational support is under-documented even when performed. Nurses find mental health and psychological status difficult to assess and document because: It’s a subjective domain It's hard to find the right language to describe observations without violating confidentiality or diminishing dignity. In addition, current documentation standards/tools don’t always support these entries well. Other reasons also due to lack of structured templates or coding systems that include psychological care elements, time pressures and electronic health record design that favors checkboxes over narratives [2].

The low score for receiving notes also raises concerns about handover practices, suggesting potential risks to patient safety due to incomplete information. Literatures support the implementation of SBAR communication tool. Nurses document communication as a critical component of nursing care to ensure continuity, accuracy, and safety among the multidisciplinary team [35]. This includes recording patient interactions, changes in condition, assessments, and care plans in electronic health records (EHR) or written formats, serving as a legal record. Suggests documentation often fails to fully capture the communication dynamics that occur between nurses and patients. The low score of nursing documentation in nurse/patient communication, psychological care and health education may be due to gaps in current policy or templates in nursing documentation that can modified.

Vital Signs Documentation

Among vital signs, blood pressure documentation achieved the highest compliance, while respiratory rate and level of consciousness were among the lowest. This selective

documentation aligns with findings from other study [9], which show that nurses tend to prioritize parameters perceived as more clinically significant or routinely monitored, despite evidence that respiratory rate and consciousness level are early indicators of patient deterioration.

Studies indicate that over 50% of nurses have poor knowledge of Glascow Coma scale (GCS) , leading to low confidence and inconsistent practice [36]. This results are similar to A study that reviewed 300 records using mixed method design of patient and found a critical gap in overall documenting vital signs [33]. However, the study was unlike to present study in blood pressure which BP was unrecorded (0%) and this may be due the records were in pediatric wards that have less monitoring in compare to other vital signs. The study also found that 20 nurses reported in interview some factors challenge them from regular documentation such as high workload, staff shortages, inadequate training, and inconsistent practices.

Pain is considered as one of the vital signs that nurses must consider in their daily work routine, including assessment management and documentation of patient re-evaluation [31]. However, this study found a failure in documentation of pain assessment and management. Despite very limited evidence of documentation of pain in primary health care settings, the result of present study is supported by a descriptive-correlational retrospective design , which evaluated the determinants of pain assessment documentation in intensive care [37]. The pain assessments and management documentation were extracted from 345 medical charts. The study revealed that pain assessment documentation is suboptimal in ICUs, especially for patients unable to self-report or those receiving higher opioid doses. Study findings highlight the need to implement tools to optimize pain assessment and documentation. In contrast, a retrospective study analyzed 99 patient records found high compliance of documentation in regards to pain assessment (84%) [38]. This may be explained due to differences in results nurse's documentation of pain may be affected by specialty or units, protocols, patient acuity, administering of opioids drugs and others. For instance, in primary health care pain is viewed as less priority in compare to other category of health institution. In PHCs Visits are often short and problem-focused, and Many patients come for minor complains.

Determinants of Documentation Quality

Nursing documentation quality is not only meeting legal and professional requirements, but also serves as a comprehensive record of the patient's history, medications, and response to the nursing care. Thus, examining the correlation between demographic data of participants and quality of documentation was essential. One of the most significant findings of this study is the absence of a significant relationship between age or years of experience and documentation quality; similar to findings of [4]. In fact, age can be a proxy for experience, but it’s not a reliable predictor on its own — because individual competence depends on training, motivation, and ongoing professional development. For instance, some studies find that older nurses (e.g., >40 years) are more likely to document care appropriately than younger nurses [27]. However, other research shows mixed or inconsistent relationships between age and documentation quality — in some settings no significant association was found, and in others older age correlated with either higher or lower documentation quality depending on setting and criteria used [19].

In regards to nurses years of experience, One Ethiopian study found that older nurses had better documentation practices compared to those aged 20–29.This is contradicting with several related studies across Africa and Asia show positive associations between work experience and documentation performance, suggesting that clinical exposure and familiarity with documentation routines boost proficiency [27] .This challenges the conventional assumption that more experienced nurses naturally produce higher-quality documentation.

Instead, the findings suggest that documentation quality may be more strongly influenced by organizational culture, education, training, and system-level factors than by individual longevity in practice. A study of nurses in East Java (Indonesia) found that higher education level (e.g., diploma vs higher degrees) was significantly associated with better nursing documentation quality. Nurses with more education tended to have better documentation scores [19]. Another large observational study in Ethiopia reported that nurses with a master's degree were over two times more likely to document nursing care appropriately than those with only a diploma [27]. Indeed, experience improves familiarity with documentation demands, practice routines, and clinical judgment — all contributing to better documentation [Hardido et al.,2023).

In contrast, the significant correlations between documentation quality and nationality, education level, and institution type indicate that contextual and educational factors play a critical role. There is no well-established research showing a direct and consistent correlation between nurses' nationality and the quality of their documentation in clinical settings. Searches in scientific databases and journals did not yield specific peer-reviewed studies that directly quantify how nationality affects documentation quality in nursing (e.g., documentation completeness, accuracy, or adherence to standards). This means as of now, there's not a strong body of evidence demonstrating that nurses from one nationality document better or worse than another because of nationality itself. Differences in educational preparation, documentation training, clinical expectations, and institutional policies may account for these variations. Institutions with stronger governance, standardized documentation tools, and ongoing audit and feedback mechanisms may foster better documentation practices regardless of individual nurse experience.

Table 4: correlation between demographic characteristics and quality of documentation

Type of Analysis	Variable	Statistic (r/F)	P Value	Significance
Pearson Correlation	Age	0.0188	0.757	Not Significant
Pearson Correlation	Experience	0.0909	0.135	Not Significant
ANOVA	Nationality	F = 6.988	0.000	Significant
ANOVA	Education	F = 3.721	0.000	Significant
ANOVA	Institution	F = 26.239	0.000	Significant

LIMITATIONS OF THE STUDY

This study has some limitations. The first limitation of the present study was that the Hawthorne effect could occur during data collection due to the nature of the study method, which was direct observation. This was managed through the training of data collectors and also their experience of working as trainers and auditors at clinical bedside. Additionally,

the of the present study was the convenience sampling methods, which may cause selection bias. To reduce convenience sampling bias, the study utilized different sites and different shifts for data collection.

CONCLUSION

Nurses' compliance with principles of documentation is essential for safe and effective patient care. This short observational study identified moderate compliance, with notable challenges in documenting aspects related to nursing care, pain assessment and management, vital signs, psychological care, health education. Whereas, high compliance was observed in general structure and quality of documentation such as'' Document is entered by staff who delivered the care'' , Document is stated in specific, concise, accurate manner. The study revealed that nurses' continuous education, regular audits, and organizational support and reviewing current policies and documentation templates are recommended to improve documentation practices.

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