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Analysis of Factors Relating The Quality of Nursing Care Documentation

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Abstract

Background: Effective documentation can help prevent various issues experienced by patients in hospitals. By maintaining thorough, systematic, and accurate records, nurses can mitigate the risk of errors and ensure the continuity of care. This research seeks to identify the factors influencing the quality of nursing care documentation in accordance with the Indonesian Nursing Diagnostic Standards (*SDKI*), Indonesian Nursing Outcome Standards (*SLKI*), and Indonesian Nursing Intervention Standards (*SIKI*) at Dr. M Djamil General Hospital in Padang in 2023.
Methods: This research employed a cross-sectional study design. The study population comprised all nurses working in the inpatient unit of Dr. M. Djamil General Hospital Padang. The sampling technique used in this research was proportional random sampling, and the sample size consisted of 238 respondents.
Results: The research results indicated that 61.3% of the documentation quality was deemed inadequate, with 63% lacking in knowledge, 61.8% exhibiting poor attitudes, 57.6% demonstrating low motivation, 68.9% experiencing insufficient supervision, and 57.1% showing inadequate socialization. The study found significant relationships between knowledge, attitude, supervision, and socialization with the quality of nursing care documentation, with a p-value of <0.005. The factor most strongly associated with the quality of nursing care was socialization (OR = 2.019, 95% CI 1.045-3.901).
Conclusion: This research identified that the quality of nursing documentation was still suboptimal, highlighting the ongoing need for continuous and intensive socialization regarding the documentation of nursing care.
Keywords: Nurse, knowledge, attitudes, motivation, supervision, socialization, documentation quality

Introduction

By establishing the nursing profession as a healthcare occupation in this government regulation, it is evident that the nursing care system must be capable of delivering professional nursing care, both in terms of nursing services and the nursing care system itself. Therefore, the nursing care documentation system must be structured and integrated to ensure professional, efficient, and accountable documentation. Documentation plays a crucial role in preventing nurses from encountering various potential issues with clients in the hospital. Through meticulous, systematic, and accurate documentation, potential nursing errors can be averted, and the continuity of nursing care can be upheld. This precision and accuracy, based on patient needs, can further enhance the level of client satisfaction[1].

Several studies have revealed that inadequate implementation of nursing documentation is a global issue, resulting in incomplete, inaccurate, and low-quality documentation. The quality of documentation can be enhanced through improvements in the factors that influence it. For instance, it has been reported that only approximately 15%-25% of nurses engage in nursing documentation during each shift at Jamaica Hospital[2,3].

The results of research in Ghana explained that 46% of nursing care provided was not documented, and 63% of patient progress notes were not commented on after the first day of patient admission. In Nigeria, nurses who

have knowledge and can carry out nursing documentation are reported to be 44%. Research on Felege Hiwot Referral Hospital in North West Ethiopia found that almost 87% of health services experienced documentation errors.

Several factors influence nursing documentation, including the nurses' level of knowledge and skill, training in the standard nursing process, nurse-to-patient ratio, workplace environment, available facilities, organizational management, leadership style, continuous evaluation of nursing documentation, and hospital accreditation. Implementation, evaluation, and improvement of these factors can enhance the quality of nursing documentation, thereby improving the overall quality of nursing services. Data from Dr. M Djamil Hospital's Medical Records in 2018 showed that out of 5882 patient records, 52.12% were filled in completely and correctly. In 2019, 53.16% of 4555 patient records were filled in completely and correctly. From January to July 2020, a total of 2730 patient records were filled in completely and correctly at a rate of 64.92%[4].

This evidence indicates that nurses' awareness of documentation practices remains low. However, data obtained from KMMR (Medical Record Management Committee) regarding the implementation of nursing care documentation shows that nurses have high compliance rates in filling out assessment formats (90%), diagnoses (89%), interventions (88%), implementation (90%), and nursing evaluations (91%)[4]. Despite this, field supervision and the nursing committee have observed discrepancies in the documentation of nursing care, particularly regarding the alignment between assessments, interventions, diagnoses, and evaluations as per the Indonesian Nursing Diagnostic Standards (*SDKI*), Indonesian Nursing Outcome Standards (*SLKI*), and Indonesian Nursing Intervention Standards (*SIKI*) standards. Nurses' performance in documenting nursing care can be influenced by various factors. Three variables influence work behavior and individual performance: 1) Individual factors, including abilities and skills, individual background and demographics, 2) Organizational factors, such as resources, leadership, rewards, work structure, and design, 3) Psychological factors, including perception, attitude, personality, learning, and motivation[5,6].

These three factors significantly influence individual behavior in performing their work, ultimately affecting their overall performance. Gibson's theory was later expanded by incorporating control and supervision as sub-variables within the organizational factors. The sub-variable of rewards directly impacts increasing work motivation, thereby enhancing individual performance. Another sub-variable that can enhance individual performance is superior supervision. The supervision involves facilitating the resources necessary to complete a task, or a series of decision-making activities closely linked to planning, organizing, and evaluating each employee's performance. The describes supervision as the planned activities of a manager to guide, direct, observe, motivate, and evaluate their staff in their daily tasks. The implementation of supervision can enhance work effectiveness and efficiency. From these definitions, it can be concluded that supervision activities are aimed at improving the performance of subordinates, rather than finding faults[7,8].

Through supervision activities, it is possible to guide implementing nurses to work more purposefully, receive feedback, and gain input, leading to increased work motivation, efficiency, effectiveness, and ultimately improved nurse performance. Dr. M Djamil General Hospital Padang is a government-owned hospital that operates as a private health service facility (private Good), serving as a referral service and holding a significant role in public services as a type A hospital with Hospital Accreditation Commission (*KARS*) International accreditation.

Based on observations conducted at Dr. M Djamil General Hospital Padang, which included direct observations and interviews, a review of the nursing process documentation format was conducted on 20 client statuses selected randomly from five statuses in each non-surgical inpatient installation: male intern, female intern, geriatric, and High Care Unit (HCU) intern in 2022. The data obtained from this review is as follows: 15 statuses were complete and in accordance with the stages of the nursing process, while 5 statuses were incomplete, with 4 statuses lacking in assessment completeness, 5 statuses not comprehensively identifying etiology, 3 statuses having outcomes not synchronized with the data collected, and 4 statuses having incomplete nursing note sheets where the written implementation did not align with the prepared intervention. Instead, these statuses focused on daily activities or Activity Daily Living (ADL) such as bathing and vital signs. Furthermore, evaluations did not refer to objectives or outcomes.

Information obtained from direct interviews between researchers and 10 nurses working in non-surgical inpatient installations revealed that 3 of them understood the steps for documenting nursing care, while 5 stated they did not comprehend what needed to be assessed in clients, and 2 nurses indicated a lack of understanding regarding the nursing plan.

Based on the results of the nursing committee's supervision and joint supervision with the field, it was found that the documentation was not synchronized, the collected data did not lead to a diagnosis, did not meet the

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80% rule for major data, the reviewed etiology was not appropriate, and the results did not fill in the time criteria. Additionally, the output was not synchronized with the retrieved major data.

The nursing interventions are also not appropriate, as sometimes everything is checked without analyzing whether the intervention can be implemented or not, and the written implementation does not align with the planned intervention. Furthermore, nursing evaluations are inappropriate as they only display one of several diagnoses. Through staff interviews, it was found that documenting medical certificates in the room is challenging due to the heavy workload, patient volume, and inadequate facilities, such as suboptimal medical document formats and Medical Record (MR) systems, difficult-to-input signals, and challenges in filling out the RME. Staff members also mentioned the difficulty of manual documentation for nursing care plan and the requirement for sufficient skills and knowledge in MR documentation. They expressed that they often have to complete documentation after the patient has been discharged due to time constraints, and not all staff members have received training on *SDKI, SLKI*, and *SIKI* documentation. The training, which was conducted via Zoom during the pandemic, was not considered optimal.

Based on the above data, it is evident that the completeness of nursing care documentation at Dr. M Djamil General Hospital Padang is still low according to the *SDKI, SLKI,* and *SIKI* standards. While the head of the inpatient room has conducted supervision, the implementation of supervision has not been scheduled to cover all aspects of nursing supervision, and some nurses have not received training in nursing supervision.

Given these observations, the author is interested in conducting research to identify the factors related to the documentation of nursing care in the inpatient ward of Dr. M Djamil General Hospital Padang according to the 2023 *SDKI, SLKI,* and *SIKI* standards.

Methods

This research employed a cross-sectional study approach with the entire population of nurses serving in the inpatient installation of Dr. M. Djamil General Hospital Padang as its target group. The sampling technique used was proportional random sampling, with a sample size of 238 people determined using the infinite formula. The quality of documentation was assessed based on records containing all necessary information for determining a nursing diagnosis, preparing a nursing plan, systematically implementing and evaluating nursing actions, and being valid and morally accountable.

Measurement results were considered good if they were > 100%, less if they were < 100%. Knowledge encompassed the nurse's understanding of documentation of nursing care according to the *SDKI, SLKI,* and *SIKI*, including requirements for making a diagnosis, understanding nursing care, major and minor data, outcome determination, impact of nursing care implementation, intervention methods, and evaluation. A good value was > 76%, while a sufficient value was < 76%. Attitude referred to the nurse's response to nursing care documentation implementation according to the *SDKI, SLKI,* and *SIKI,* with a positive value > 75% and a negative value < 75%. Motivation represented the feelings or thoughts encouraging nurses to carry out nursing care documentation in line with the *SDKI, SLKI,* and *SIKI,* with a high value > 75% and a low value < 75%. Supervision denoted the activity of providing guidance and support to staff in completing their work according to policies and procedures, with a good value > 84% and a poor value < 84%. Socialization involved managers' interactions and learning processes to provide staff with knowledge about documenting nursing care in line with the *SDKI, SLKI,* and *SIKI,* with a good value > 75% and a poor value < 75%.

The research utilized a questionnaire instrument with interviews. The dependent variable was the quality of nursing care documentation. Data analysis involved univariate analysis to examine the frequencies and percentages of the research variables, followed by bivariate analysis using the Chi-Square test. Multivariate analysis focused on the most related variables. This research received ethical approval from Dr. M Djamil General Hospital Padang with the number: LB.02.02/5.7/440/2023.

Results

The following table presents the frequency distribution of respondents based on documentation quality, knowledge, attitude, motivation, head of room supervision, and documentation socialization (Table 1).

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Table 1. The frequency distribution of respondents based on documentation quality, knowledge, attitude, motivation, head of room supervision, and documentation socialization.

Variable	f (%)
Documentation quality	
Good	92 (38.7)
Not good	146 (61.3)
Knowledge	
Good	88 (37)
Not good	150 (63)
Attitude	
Positive	91 (38.2)
Negative	147 (61.8)
Motivation	
Good	101 (42.4)
Not good	137 (57.6)
Supervision	
Good	74 (31.1)
Not good	164 (68.9)
Socialization	
Good	102 (42.9)
Not good	136 (57.1)

Table 1 revealed that more than half of the documentation quality (61.3%), knowledge (63%), attitude (61.8%), motivation (57.6%), supervision (68.9%), and socialization (57.1%) were deemed not good.
Analysis of the Relationship between Knowledge, attitudes, motivation, supervision and socialization with Documentation Quality (Table 2)

Table 2. Analysis of the Relationship between Knowledge, attitudes, motivation, supervision and socialization with Documentation Quality at Dr M Djamil Hospital Year 2023

Variabel	Documentation Quality		P Value
	Not good f (%)	Good f (%)	
Knowledge			0,009
Low	102(68%)	48 (32%)	
High	44 (50%)	44 (50%)	
Attitude			0,005
Negative	101 (68,7%)	46 (31,3%)	
Positive	45(49,5%)	46 (50,5%)	
Motivation			0,002
Low	96 (70,1%)	41 (29,9%)	
High	50 (49,5%)	51 (50,5%)	
Supervision			0,000
Not good	114(69,5%)	50 (30,5%)	
Good	32 (43,2%)	42 (56,8%)	
Socialization			0,000
Not good	98 (72,1%)	38 (27,9%)	
Good	48 (47,1%)	54 (52,9)	

Table 2 showed that the factors related to the quality of nursing care documentation were knowledge, attitude, supervision, and socialization with $p < 0.05$.

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Multivariate Analysis of Knowledge, Attitudes, Motivation, Supervision, Socialization with Nursing Care Documentation by Implementing Nurses (Table 3).

Table 3. Multivariate Analysis of Knowledge, Attitudes, Motivation, Supervision, socialization with Documentation Nursing Care of Executive Nurses in the Inpatient Room of Dr M Djamil Hospital

Variable	OR 95% CI (initial)	p-value	Step 1	Step 2	Step3	Step 4	Exp(B)	95% CI
Knowledge	1,287(0,653-2,534	0.466	1.287	1.276	1.310	-	1.310	2.452
Attitude	1,109 (0,510-2,410)	1.794	1.109	1.090	-	-	1.090	2.253
Motivation	0,941 (0,365-2,426)	0.900	0.941	-	-	-	0.941	2.426
Supervision	1,876(0,929-3,789)	0.80	1.876	1877	1.900	1.951	1.951	3.898
Socialization	1,813(0,731-4,498)	0.199	1.813	1.756	1.810	2.019	2.019	3.901

Discussion

Based on the research data, the majority of respondents were in the early adulthood range, indicating that individuals in this age group are more capable of learning, engaging in analogical reasoning, and demonstrating creative thinking. Age is a factor influencing knowledge, with early adulthood being a period when individuals have the ability to think and work more maturely. These findings are consistent with previous research, which found that 45.5% of implementing nurses aged between 40 and 55 years fall within the adulthood range[9].

Furthermore, the research data revealed that more than half of the respondents held a bachelor's degree in nursing. Previous study noted that education is a fundamental human need crucial for self-development. A higher level of education facilitates the acceptance and development of knowledge and technology, thereby improving performance, including the quality of nursing care documentation according to the *SDKI* and *SLKI*.

Regarding length of service, the majority of nurses had long-term work experience[10]. The longer a nurse works, the higher their expected productivity due to accumulated experience and developed skills. Therefore, it is expected that with longer work experience, nurses would tend to document nursing care according to the *SDKI, SLKI* and *SIKI* more thoroughly and with higher quality. Another study, which reported that 72.7% of nurses had worked for more than 10 years[11].

More than half of the nurses at Dr. M Djamil General Hospital in Padang had low knowledge regarding the documentation of nursing care, specifically related to the *SDKI, SLKI,* and *SIKI* in inpatient care. This was indicated by a lack of understanding among nurses regarding the requirements for making a diagnosis, incomplete understanding of disease etiology, and failure to synchronize data with existing outcomes. Additionally, more than half of the nurses held a D3 Nursing degree and had not received socialization regarding *SDKI, SLKI,* and *SIKI*. Interviews with staff and managers revealed that training for *SDKI, SLKI,* and *SIKI* was only provided to low-level managers such as team leaders, while socialization for nursing staff was conducted by managers, and team leaders. However, the information conveyed was not fully understood by the staff, resulting in incomplete socialization on the documentation of nursing care among the nurses.

Furthermore, the attitude of more than half of the nurses towards documenting nursing care according to the *SDKI, SLKI,* and *SIKI* was not positive. Nurses expressed feeling burdened by the documentation process, citing heavy workloads and discomfort with documentation as contributing factors. Interviews with staff revealed difficulties in documenting nursing care due to the use of computers that were shared with other professions, intermittent signal issues, and heavy workloads in the room, especially during periods with a high number of patients. As a result, some nurses resorted to copying and pasting documentation from their colleagues on the previous shift.

More than half of the nurses at the hospital had low motivation in documenting nursing care, as evidenced by instances of incomplete documentation completed after the patient had been discharged. While the superiors provided training opportunities and the nursing room offered comfort for documentation, there were

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challenges such as signal issues and server problems that caused delays in documentation. Nurses and managers in the room mentioned in interviews and focus group discussions that these technical issues, coupled with a lack of realization of soft nursing care for *SDKI, SLKI,* and *SIKI* in the electronic medical record section, affected the nurses' motivation. Additionally, the supervision of staff in documenting nursing care was reported to be mostly poor.

The data also revealed that not all superiors or managers provided feedback on nursing care documentation, although the head of the room provided guidance in this area. While managers offered periodic guidance, it was not consistent due to their busy schedules and the preparation for accreditation. Meetings for accreditation preparations took precedence, reducing the time available for providing guidance to staff. Moreover, patient overcrowding during peak times further limited the ability to provide intense and continuous supervision.

More than half of the socialization regarding documentation of nursing care according to the *SDKI, SLKI,* and *SIKI* was not effective based on the obtained data. Not all staff members had a comprehensive understanding of nursing care documentation, and continuous explanations and socialization efforts regarding *SDKI, SLKI,* and *SIKI* were lacking. This was due to limited training opportunities, with training sessions held for only two batches, each consisting of 30 participants, whereas the total number of nurses was 1,066. As a result, only a few staff members had the chance to attend, primarily those sent as representatives from their respective rooms. Socialization efforts were also hindered by scheduling conflicts, with some staff members unable to attend morning duty sessions where socialization was conducted.

The quality of care documentation by more than half of the nursing staff was found to be inadequate. The ability to collect data to confirm a diagnosis, data accuracy and completeness, data categorization, appropriate data analysis, accuracy in formulating nursing diagnoses based on the Indonesia Demographic and Health Survey (IDHS), data analysis adjusted to the appropriate etiology, accuracy in preparing interventions according to the *SDKI*, adherence to the nursing plan, accuracy in documenting nursing actions, and evaluation based on *SLKI* standards were all identified as areas lacking. Interviews and focus group discussions revealed that some staff members resorted to copying and pasting documentation from the previous shift without fully understanding the nursing problems, leading to inaccurate documentation and a lack of critical thinking regarding the correctness of the documentation. The primary focus was on completing the documentation rather than ensuring its accuracy.

During the supervision conducted by committees, fields, and managers, similar findings were observed. The research results indicated a correlation between knowledge and the quality of nursing care documentation, attitudes and the quality of nursing care, supervision and the quality of nursing care, as well as socialization and the quality of nursing care documentation. The majority of the nurses were female, with most having a D3 Nursing educational background and being in early adulthood. Additionally, a significant number of them had been working for an extended period.

The results of the bivariate analysis revealed relationships between knowledge, supervision, attitudes, and socialization with documentation quality. However, no relationship was found between motivation and documentation quality. In the multivariate analysis, the factor most strongly associated with the quality of nursing care documentation according to the *SDKI, SLKI,* and *SIKI* was socialization. As a result, it is recommended that intense and continuous socialization efforts, as well as monitoring and evaluation of staff in documenting nursing care, be prioritized in the future.

Conclusions

The majority of inpatient nurses at Dr. M Djamil General Hospital Padang were female, with most holding a Diploma of Nursing degree and being in early adulthood. Additionally, most had considerable work experience. The results of the bivariate analysis indicated relationships between knowledge, supervision, attitudes, and socialization with documentation quality. However, there was no correlation found between motivation and documentation quality. In the multivariate analysis, the most influential factor related to the quality of nursing care documentation according to the *SDKI, SLKI,* and *SIKI* was socialization. Therefore, it is recommended that intensive and continuous socialization efforts, along with the monitoring and evaluation of staff in documenting nursing care, be prioritized in the future.

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Declarations of competing interest
No potential competing interest was reported by the authors

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