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Research Article

### **Factors Influencing Documentation Based on NANDA NIC NOC and SDKI, SLKI, SIKI**

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#### **Abstract**

**Background:** The development of nursing care standards in accordance with nursing laws issued by professional organizations, namely PPNI. These standards of care are the Indonesian Nursing Diagnosis Standards (IDHS), the Indonesian Nursing Outcomes Standards (SLKI) and the Indonesian Nursing Intervention Standards (SIKI). There are still many hospitals that have not switched according to the recommendations of the nursing law. There is still completeness of nursing care documentation that is not up to the standards of the Ministry of Health.

**Objectives:** To describe a comparative study of the completeness of nursing care documentation in the application of documentation based on Nanda NIC NOC and IDHS, SLKI, SIKI.

**Methods:** This comparative study was conducted in the Inpatient Room of Malingping Hospital and Serang City Hospital in April-June 2022 with a total sampling of 80 nurses and 80 medical records that were selected randomly. The observation sheet is used to record the completeness of the documentation. Data were analyzed using independent t test and multiple linear regression multivariate analysis.

**Results:** Completeness of documentation for 3S 90.74% and Nic NOc 74.04%. There is a difference in the completeness of the documentation with a p value of 0.000

**Conclusion:** 3S documentation is more complete than Nic Noc

**Keywords:** documentation, 3S (SDKI, SLKI, SIKI), NANDA NIC NOC

#### **Introduction**

Nursing documentation is a document that stores evidence of the patient's condition and serves as an important record in the implementation of professional nursing care, aimed at facilitating communication among healthcare professionals.<sup>1</sup> It also serves as an accurate record of the nursing process.<sup>2</sup> Key aspects to consider in documentation include communication, the nursing process, and nursing care standards. Relevant information collected will enhance effectiveness and efficiency and improve the quality of nursing care documentation.<sup>3</sup> In nursing literature across various countries, nursing care standards have

not been thoroughly explained.<sup>4</sup> To enhance nursing services and align nurses' understanding in the preparation of nursing care, the Indonesian National Nurses Association (PPNI) has issued nursing care standards based on the 3S framework, which includes Indonesian Nursing Diagnosis Standards, Indonesian Nursing Intervention Standards, and Indonesian Nursing Outcomes Standards.<sup>5</sup> The North American Nursing Diagnosis Association (NANDA) was established as an official body to enhance and review the latest list of nursing diagnoses used by practicing nurses. Once a diagnosis is made, nurses must know the interventions or plans that need to be implemented for the patient, such as basic human needs or other requirements. When documenting nursing care for patients in a hospital, nurses should write it in the format of Nursing Intervention Classification (NIC) and Nursing Outcomes Classification (NOC).<sup>3</sup>

Although these nursing care standards already exist and are recognized internationally, such as those from NANDA NIC NOC, which are widely used in Indonesia, they have not been refined to consider the cultural differences and characteristics of nursing services in Indonesia. As a result, these standards may not be suitable for the Indonesian context.<sup>6</sup> The changes issued by PPNI are based on the 3S framework. According to accreditation standards, every nursing action taken for patients must be documented in accordance with the standards. The documentation process of nursing care begins with assessment, care planning, implementation, and evaluation or integrated patient progress notes (CPPT).<sup>7</sup> Nursing care documentation can be considered of high quality if assessed from several aspects, namely factual, accurate, complete, current, and organized.<sup>8</sup>

Research conducted by Tamir (2021) showed that there is a 38.5% completeness of nursing care documentation.<sup>1</sup> The implementation of standardized nursing care is important for improving the quality of nursing care.<sup>9</sup> Nursing documentation instruments must also be prepared based on clinical standards established by practice guidelines.<sup>10</sup> In Africa and Ethiopia, nursing documentation practices remain challenging due to a lack of training, resources, comprehensive nursing education (CNE), time constraints, high nurse-to-patient ratios, insufficient knowledge, and attitudes.<sup>1</sup> The World Health Organization has conducted a survey that states poor communication among healthcare workers is one of the triggers for errors in care, which is associated with patient mortality rates.<sup>11</sup> The implementation of nursing care documentation in Jamaica Hospital shows that 15% to 25% of nurses perform documentation during each shift.<sup>12</sup> Generally, worldwide, the quality of nursing care documentation remains inadequate, as research indicates low documentation quality: 32.7% in America, 32.3% in Europe, and 52% in New Zealand.<sup>13</sup> The documentation completeness mentioned above does not specify the standards used. In Indonesia, the completeness of documentation is 65%.<sup>14</sup> However, this study does not explain the documentation standards employed.

The Malingping General Hospital initially had 17 beds, then developed to Class C with 41 beds. In 2021, it expanded to 138 beds. On April 26, 2018, the Hospital Accreditation Commission (KARS) issued a Hospital Accreditation certificate with a passing status at the initial level, and reaccreditation was conducted on December 20, 2019. According to the report from the inpatient unit of Malingping General Hospital regarding the completion of medical records, which is the responsibility of the nurses, the average completeness of nursing care documentation in the first semester of 2020 reached 65.68%, while in the second semester of 2020 it reached 65.40%, and in the first semester of 2021, it reached 64.85%. These results do not meet the Ministry of Health's standard of 90%. Additionally, from interviews with ten nurses, eight of them stated that the NANDA NIC NOC-based nursing care documentation format is still difficult to understand. Although this documentation format has already implemented a checklist format.

The Serang City General Hospital was established in 2018 with a total of 60 beds. It is a Class C hospital owned by the Serang City government. According to an interview with the head of the nursing committee at Serang City General Hospital, the checklist format for SDKI, SLKI, and SIKI-based nursing documentation has been in use for only four months,

so its effectiveness has not yet been evaluated. This was also acknowledged by the Head of the Nursing Department, who stated that there are regulations in the form of policies and guidelines signed by the Director of Serang City General Hospital, which have been disseminated but not evaluated. According to five practicing nurses at Serang City General Hospital, this format is easy to use because it is in checklist form and the language used is easy to understand. However, older graduates of nursing need to adapt and understand the content of SDKI, SLKI, and SIKI.

From the above, the aim of this research is to explain a comparative study of the completeness of nursing care documentation in the implementation of NANDA NIC NOC-based documentation in the inpatient unit of Malingping General Hospital and SDKI, SLKI, SIKI in the inpatient unit of Serang City General Hospital.

### Methods

This comparative study was conducted in the Inpatient Wards of Malingping General Hospital and Serang City General Hospital from April to June 2022, with a total sample of 80 nurses (54 from Malingping General Hospital and 26 from Serang City General Hospital) and 80 medical records selected randomly (more technical details). The observation sheet was taken from the Ministry of Health (details here) using a 5-point Likert scale (from not filled to fully completed) to assess documentation completeness. The data was analyzed using an independent t-test on the completeness data.

### Results

**Table 1.** Demographic Characteristics of Nurses (N=80)

Variable	Serang City General Hospital	Malingping General Hospital
<b>Gender</b>		
Female	22 (84,6%)	23 (42,62%)
Male	4 (15,4%)	31 (57,4%)
<b>Age (years)</b>		
Mean, ± SD	29, ± 3,011	30, ± 4.904
Median	28	30
Min-Max	25-37	23-42
<b>Education Level</b>		
Associate's Degree (D3)	17 (65,4%)	38 (69,1%)
Bachelor's Degree (S1)	0 (0%)	3 (5,6%)
Professional Nurse (Ners)	9 (34,6%)	13 (24,1%)
<b>Work Experience (years)</b>		
Mean, ± SD	2.79, ± 1.328	4.41, ± 4.470
Median	3.00	2.00
Min-Max	1-4	2-17

Based on Table 1, it shows that most of the nurses in the Inpatient Ward of Malingping General Hospital are male, with 31 respondents (57.4%), while nearly all of the nurses in the Inpatient Ward of Serang City General Hospital are female, with 22 respondents (84.62%). The average age of nurses in the Inpatient Ward of Malingping General Hospital is 30 years, while at Serang City General Hospital it is 29 years. In terms of education level, the majority of nurses in the Inpatient Ward hold an Associate's Degree in Nursing (D3), with 38 respondents (70.42%) at Malingping General Hospital and 17 respondents (65.4%) at Serang City General Hospital. Based on work experience, the average tenure of nurses in the Inpatient Ward of Malingping General Hospital is 4 years, while at Serang City General Hospital it is 3 years.

**Table 2.** Distribution of Average Patients per Shift and Completeness of Nursing Care Documentation in the Inpatient Wards of Malingping General Hospital (N=54) and Serang City General Hospital (N=26)

Variable	Serang City General Hospital (N=26)	Malingping General Hospital (N=54)
<b>Average Patients</b>		
Mean, ± SD	5.35, ± 1.294	14.44, ± 6.683
Median	5.00	14.00
Min-Max	4-7	4-21
<b>Documentation Completeness</b>		
Mean, ± SD	90,74, ± 9,914	74,04, ± 11,566
Median	93,33	72,50
Min-Max	62-100	57-90

Based on Table 2, it shows that the average number of patients handled by nurses in the Inpatient Ward of Malingping General Hospital is 14, while at Serang City General Hospital it is 5. As for the average completeness of nursing care documentation, it is 74.04% in the Inpatient Ward of Malingping General Hospital, compared to 90.74% in Serang City General Hospital.

**Table 3.** Distribution of Average Completeness of Nursing Care Documentation in the Implementation of NANDA NIC NOC-Based Documentation in the Inpatient Ward of Malingping General Hospital and SDKI, SLKI, SIKI-Based Documentation in the Inpatient Ward of Serang City General Hospital

Completeness of Nursing Care Documentation	Mean	SD	SE	P Value	N
NANDA NIC NOC-Based in the Inpatient Ward of Malingping General Hospital	74,04	11,566	1,574	0,000	54
SDKI, SLKI, SIKI-Based in the Inpatient Ward of Serang City General Hospital	90,74	9,914	1,944		26

Based on Table 3, the statistical test results show a p-value of 0.000, which indicates that at an alpha level of 5%, there is a difference in the completeness of nursing care documentation in the implementation of NANDA NIC NOC-Based documentation in the Inpatient Ward of Malingping General Hospital and SDKI, SLKI, SIKI-Based documentation in the Inpatient Ward of Serang City General Hospital.

### Discussion

This study aims to determine the differences in the completeness of nursing care documentation in the implementation of NANDA NIC NOC-Based documentation in the Inpatient Ward of Malingping General Hospital and SDKI, SLKI, SIKI-Based documentation in the Inpatient Ward of Serang City General Hospital. The results of the study indicate a difference in the completeness of nursing care documentation between the two hospitals. These findings are consistent with the research by Nurhesti (2020), which found significant differences in the ease of diagnosis, clarity of diagnostic reasoning, and comprehensiveness between SDKI and NANDA. However, the results also indicated that

there were no differences in nursing diagnoses in the context of diagnostic language between SDKI and NANDA.<sup>15</sup>

The results of this study are also supported by research conducted by Efendy (2012), which found differences in the quality of nursing process documentation before and after the implementation of NANDA NIC NOC. The implementation of NANDA NIC NOC-Based nursing care documentation is one form of using standard nursing language in the nursing process. This aligns with Park's (2010) statement that the use of standard nursing language can enhance the quality of documentation and improve the efficiency of nursing data management. The assessment of nursing care records can be fulfilled through all documents, from assessment to evaluation. Each documentation format is created using a checklist system, ensuring standardized terminology by referring to the NANDA, NIC, and NOC books (meeting documentation items that are clearly written, concise, and use correct and standardized terms). In each documentation format, there is always a space provided for recording the date, time, and the person performing the action. Nurses must include their name, signature, as well as the date and time the action was performed.<sup>16</sup>

The differences in the implementation of NANDA NIC NOC-Based nursing care are derived from the nursing association, whereas the SDKI, SLKI, and SIKI are derived from the Indonesian National Nurses Association (PPNI). Additionally, the differences in the implementation of nursing care documentation based on NANDA NIC NOC and SDKI, SLKI, SIKI lie in the classification of nursing diagnoses. Serang City General Hospital is a newly established hospital, and the regulations for implementing nursing care using SDKI, SLKI, and SIKI differ from those at Malingping General Hospital, which still uses NANDA NIC NOC and has not yet transitioned to SDKI, SLKI, and SIKI, in accordance with the mandate of the nursing law.

### **Conclusion**

There is a difference in the completeness of nursing care documentation in the implementation of NANDA NIC NOC-Based documentation in the Inpatient Ward of Malingping General Hospital and SDKI, SLKI, SIKI-Based documentation in the Inpatient Ward of Serang City General Hospital. The most dominant factor affecting the completeness of nursing care documentation in the implementation of NANDA NIC NOC-Based documentation in the Inpatient Ward of Malingping General Hospital and SDKI, SLKI, SIKI-Based documentation in the Inpatient Ward of Serang City General Hospital is the level of education.

### **Conflict of Interest Declaration**

The researchers declare that there is no conflict of interest in this study, either individually or collectively.

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