ORIGINAL ARTICLE

Application of nursing terminology based on the Indonesian nursing standards (diagnosis, outcome, and intervention) on the quality of filling out documentation

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ABSTRACT

Introduction: There are still many nurses whose quality of filling in the documentation on patient development records could be better. So, to be accountable for its implementation, Indonesian nurses must be able to provide comprehensive and independent care. ***Objectives:*** *This study aims to determine how using standard nursing terminology affects the quality of nursing documentation.* ***Methods:*** *This study uses a non-equivalent quasi-experimental design without a control group. The population of this study was all ward nurses, with a total of 150 nurses using a total sampling approach. The independent variable of this research is training in filling out ownership documentation, while the dependent variable is the quality of filling out documentation. The questionnaire used is SAK (Nursing Standards) for data collection. Questionnaire with a Likert scale of 4 = strongly agree, 3 = agree, 2 = disagree, and 1 = disagree. Based on the normality test, the data were not normally distributed, so the Wilcoxon non-parametric test was used for analysis with p 0.05.* ***Results:*** *The p-value of the results was 0.000. After training and assistance with filling out nursing documentation, the quality score for filling out nursing documentation improves.* ***Discussion:*** *High-quality nursing documentation promotes structured, consistent, and successful communication. Inadequate nurse-to-nurse communication causes care discontinuity and mistakes. Implementing standard Indonesian nursing terminology has several ramifications.* ***Conclusion:*** *Standard nursing terminology significantly improves the quality of nursing documentation based on Indonesian Nursing Standards (diagnosis, outcome, and intervention). Hospitals are expected to establish nursing documentation standards and conduct regular monitoring.*

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1. Introduction

Nursing is a process or activity in nursing practice in which various health services are delivered to clients based on professional nursing principles, nursing knowledge, and abilities, and being humanized and oriented towards the objective needs of customers to address customer problems. Documentation is one of the most crucial aspects of nursing. Nursing documentation is defined as the record of nursing care planned for and provided to individual patients and clients by registered nurses or other caregivers under the supervision of a registered nurse. In addition, nursing documentation can serve specific functions, such as quality assurance. Despite consistent advice from quality-improvement programs and professional organizations over several years, achieving and maintaining good clinical documentation standards remains challenging in the health profession (Alkouri et al., 2016). Documentation in nursing is an essential aspect of professional nursing practice (Hariyati et al., 2016). The documentation should be factual, current, and exhaustive to provide consistent information regarding the assessment, care provided, and evaluation of patient responses to care (Hassan, 2018).

The Indonesian National Nurses Association (INNA)/*Persatuan Perawat Nasional Indonesia* (PPNI) has published a culturally standardized book to facilitate the implementation of nursing diagnoses following Indonesian culture. The writing style that is standardized by

INNA/PPNI indicates good documentation. The Indonesian Nursing Diagnostics Standard (IDHS) is one standardized nursing classification system for the analysis, final presentation, and identification of assessment data and patient problems. Utilizing a classification system will facilitate the planning and implementation of interventions designed to assist patients in overcoming their disease problems and regaining their normal health status and activities. In nursing, the Indonesian Nursing Outcome Standard (SLKI) and the Indonesian Nursing Intervention Standard (SIKI) constitute the classification system**.** Nursing diagnosis is a clinical determination regarding individual responses (clients and society) to actual or potential health problems that serve as the basis for selecting nursing interventions to achieve the goals of nursing care within the nurse's authority.

Completeness and comprehensiveness are two essential characteristics of high-quality patient record information. Nursing documentation based on the nursing process facilitates effective care because nurses are empowered to make clinical decisions, and patient's needs can be traced back to the assessment. Practical or quality documentation uses common terminology, legible writing, and authorized abbreviations and symbols (Lindo et al., 2016). Completeness, quantity, legibility, patient identification, chronological report of events, thorough description, objectivity of information, signature, date, and timeliness are the quality criteria for nursing documentation (Hassan, 2018).

This study examines the impact of applying nursing language standards based on Indonesian Nursing Standards (diagnosis, outcomes, and interventions) on the quality of nursing documentation in hospital patient medical records.

2. Methods

This study uses a non-equivalent quasi-experimental design without a control group. The population of this study was all ward nurses, with a total of 150 nurses using a total sampling approach. The independent variable of this research is training in filling out ownership documentation, while the dependent variable is the quality of filling out documentation. The questionnaire used is SAK (Nursing Standards) for data collection. Questionnaire with a Likert scale of 4 = strongly agree, 3 = agree, 2 = disagree, and 1 = disagree. Based on the normality test, the data were not normally distributed, so the Wilcoxon non-parametric test was used for analysis with p 0.05.

3. Results and Discussion

Researchers conducted studies on 150 nurses at the Kaliwates General Hospital, Jember, before and after implementing the Standard Nursing Language Based on Indonesian Nursing Standards (diagnosis, outcome, intervention). The following are the findings of the data collection acquired following the number of instruments collected:

Table 1. Differences in the quality of filling out nursing documentation

Variable	Mean	Median	Min	Max	SD
Before	62.14	65.00	33	78	11.56
After	91.85	95.00	64	96	11.21

According to Table 1, the quality of nursing documentation prior to respondents receiving standard nursing language terminology training based on Indonesian Nursing Standards (diagnosis, outcome, and intervention) and assistance in filling out nursing documentation obtained data, namely a mean value of 62.14, a median value of 65.00, a minimum value of 33, and a maximum value of 78. 11.56 is the standard deviation value. After receiving training in standard nursing language terminology based on Indonesian Nursing Standards (diagnosis, outcome, and intervention) and assistance filling out nursing documentation, a mean value of 91.58, median value of 95.00, minimum value of 64, and maximum value of 96 were obtained. 11.21 is the standard deviation value. The results show the effectiveness of the training based on the

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completeness of the documentation assessed, ranging from a low to a high average score. It mainly shows a significant increase in mean scores after the intervention. Education-focused interventions addressing the nursing process have been shown in studies to increase the quality of nursing records (Linch et al., 2012; Müller-Staub et al., 2009).

Table 2: The effect of using Standard Nursing Language terminology based on Indonesian nursing standards (diagnosis, outcome, and intervention) on the quality of nursing documentation

Variable	Mean	Median	SD	N	p-value
Before	62.14	65.00	11.56	150	0.000
After	91.85	95.00	11.21		

According to Table 2, the mean value of the group that received Standard Nursing Language training based on Indonesian Nursing Standards (diagnosis, outcome, and intervention) and support in completing nursing documentation rose by 29.71 points compared to the prior group. Like the preceding group, the minimum and maximum scores were higher after training in Standard Nursing Language based on Indonesian Nursing Standards (diagnosis, outcome, and intervention) and support in completing nursing documentation. The Wilcoxon test yielded a p-value of 0.000 (0.05), indicating that the average quality of nursing documentation at the Inpatient Installation of Kaliwates General Hospital, Jember, was different before and after the implementation of Standard Nursing Language Based on Indonesian Nursing Standards (diagnosis, outcome, and intervention). In other words, the Standard Nursing Language-Based Indonesian Nursing Standards (diagnosis, outcome, and intervention) training affects the quality of nursing documentation.

This improvement in the quality of nursing documentation identifies nursing documentation knowledge gaps. None of the audited patient records met the documentation standards recommended by the Indonesian Nursing Standards (diagnosis, outcome, and intervention). However, improvements were observed after implementing customized multifaceted intervention strategies for all steps of the nursing process, except "evaluation/progress reports," and there has been progress in implementing standard-compliant changes in documentation. Nevertheless, even though nurses spend an estimated 13 to 28% of their shift time documenting clinical care (Olatubi et al., 2019). Most nursing documentation must be more utilized and undervalued (Adistya et al., 2018). It is possibly exacerbated by allegedly inadequate nursing documentation (Wang et al., 2011). Information of high quality is essential for patient safety and high-quality care (Molina-Mula et al., 2018).

Documentation of nursing care is essential for continuity of care, communication between nurses and other healthcare professionals, and the legal aspects of care (Thabet et al., 2019). Documentation is essential to provide quality and safe nursing care to patients. Furthermore, nursing documentation also serves as the indicator of service quality, evidence of responsibility and accountability of nurses, and a database for research purposes or evidence-based policymaking (Scruth, 2014). Most of the samples examined in the present study produced acceptable nursing documentation quality. This result provides the answer to the study's initial research question. Following the present study's findings, Molin and Gallo's study from 2020 (Molina-Mula & Gallo-Estrada, 2020) demonstrated that the majority of studied samples produced acceptable levels of nursing documentation quality. The quality of nursing documentation plays a crucial role in encouraging structured, consistent, and effective communication between caregivers, facilitating continuity and individualized care, and ensuring patients' safety.

It has been argued that a standardized nursing language might provide better continuity of care and thus contribute to patient safety, but heterogeneity among studies prevented a reliable effect estimate (Johnson et al., 2018). It demonstrated similar improvements in documentation quality by introducing standardized terminology (Menezes et al., 2020). High-quality nursing documentation depends on documentation aligned with the nursing process, standard terminologies, and user-friendly formats (De Groot et al., 2019). As the standardized

terminologies are updated and adapted, it is not easy to generalize the results of these studies and necessitates maintaining mappings between nursing-specific and reference terminologies. It can be a difficult task, as not all nursing terms will intuitively map to the reference terminology, and avoiding loss of meaning must be balanced against the risk of content duplication within the nursing standardized terminology (Machado et al., 2017).

A standardized terminology search engine that responds quickly returns a small number of pertinent phrases and can identify often-used acronyms and synonyms (Kamil et al., 2018). Natural language processing can alleviate the burden of entering coded data for healthcare professionals (Kreimeyer et al., 2017). Nonetheless, semantic interoperability and unambiguous data sharing also necessitate standardization of the data and metadata structures (Akhu-Zaheya et al., 2018) and the method (Dehghan et al., 2013; Febriana & Mulyono, 2019). From the researcher's perspective, high-quality nursing documentation aims to promote structured, consistent, and effective communication between nurses and facilitate continuity of care and patient safety. Inadequate nurse-to-nurse communication is associated with care discontinuity, contributing to errors. Discontinuity of care is associated with increased cost and length of hospital stay, readmissions, lower patient satisfaction, adverse events, delays in treatment and diagnosis, inappropriate care, and omission of care. Overall, the implementation process has many implications for the benefits derived from standard Indonesian nursing terminology (diagnosis, outcome, and implementation) in improving the quality of nursing documentation and, therefore, should be described in detail in future studies and with additional research focuses.

4. Conclusion

High-quality nursing documentation promotes structured, consistent, and effective communication between nurses. Inadequate nurse-to-nurse communication is associated with care discontinuity, contributing to errors. The implementation process has many implications for the benefits derived from standard Indonesian nursing terminology. Standard nursing language terminology significantly improves the quality of nursing documentation based on Indonesian Nursing Standards (diagnosis, outcome, and intervention). Hospitals are expected to establish nursing documentation standards and conduct regular monitoring.

Ethics approval and consent to participate

This study has passed the Faculty of Nursing's (Universitas Jember) ethical review (approved number 065/UN25.1.14 KEPK/2022). This ethical approval is valid between 13 April 2022 and 13 July 2022. Before beginning the questionnaire, respondents were told of the study's objectives and purposes, and their verbal consent was obtained.

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