Reflective Supervision as the Primary Predictor of Improved Nursing Care Documentation Completeness

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ABSTRACT
Nursing care is a series of professional activities aimed at delivering comprehensive services to patients. Nursing care documentation is a critical component of professional nursing practice because it reflects the nurse's legal and ethical accountability for the interventions provided. In many healthcare settings, documentation completeness remains suboptimal, requiring structured supervisory approaches to improve quality. This study aims to analyze the effectiveness of a reflective supervision model in improving the completeness of nursing care documentation at Hospital X, Kupang. A quantitative approach was employed using a quasi-experimental pretest–posttest control group design. A total of 60 nurses participated across both groups. Data were collected through direct observation using a validated documentation completeness checklist based on hospital accreditation standards. Statistical analyses included proportion tests, mean difference tests, and logistic regression. Most respondents were female nurses aged 25–35 years, holding a Bachelor's degree in Nursing and PK II certification. The intervention group showed an improvement in documentation completeness scores from a mean of 23.07 before the intervention to 35.26 after the intervention. There was a significant difference in the proportion of complete documentation between the intervention and control groups ($p = 0.000$), and a significant increase in the mean documentation score before and after the intervention ($p = 0.000$). Multivariate analysis indicated that reflective supervision was the main predictor of improved documentation completeness ($p = 0.002$). In conclusion, reflective supervision is effective in improving the completeness of nursing care documentation. Hospitals should institutionalize reflective supervision as part of routine nursing development programs through director-level decrees or internal nursing policies. Training for ward heads and supervisors is recommended, including 1–2 working days of facilitator preparation covering reflective communication techniques, constructive feedback, and documentation evaluation based on accreditation standards.
Keywords: reflective supervision model; nursing care documentation; nurses

INTRODUCTION
Nursing care constitutes a fundamental component of the healthcare delivery system and plays a decisive role in shaping patient outcomes and overall quality of life during hospitalization. It encompasses a complex and systematic process; beginning with assessment, followed by nursing diagnosis, care planning, implementation, and evaluation designed to address the multidimensional needs of patients across biological, psychological, social, and spiritual domains [1]. The professional competence of nurses is reflected in their ability to accurately identify patient problems and deliver interventions that align with established clinical guidelines and standard operating procedures.

Nursing care documentation represents a critical element of professional accountability, serving both ethical and legal functions within clinical practice. Accurate, comprehensive, and timely documentation facilitates effective communication among healthcare providers and forms the basis for clinical decision-making [2]. Complete documentation ensures continuity of care and provides legal protection in the event of disputes or litigation [3]. Despite its importance, substantial gaps persist between expected documentation standards and actual practice. In many healthcare settings, incomplete documentation remains a chronic issue that compromises patient safety and undermines the quality of care [4].

This challenge is also evident at Hospital X, where internal monitoring data indicate a rising trend in documentation incompleteness; from 18.86% in August 2024 to 20.37% in October 2024 despite the implementation of routine supervisory activities [5]. These findings suggest that existing supervisory approaches have not effectively addressed the underlying causes of documentation deficiencies. Poor documentation quality not only jeopardizes patient safety but also diminishes the overall performance of healthcare services [2].

One of the primary contributors to documentation incompleteness is the inadequacy of conventional supervisory systems [6]. Traditional supervisory models that rely on directive, one-way communication have been shown to be insufficient in fostering sustained behavioral change among nurses. Such approaches often lead to feelings of burden rather than guidance. Evidence indicates that supportive and frequent supervision is significantly more effective in improving documentation quality [7].

The Reflective Supervision Model offers a more interactive and transformative approach by promoting two-way dialogue between supervisors and nurses. This model encourages nurses to critically evaluate their own practices, identify gaps, and formulate improvement strategies through reflective thinking [8]. Reflective supervision cultivates a culture of continuous learning and enhances professional awareness, leading to improved documentation quality not through coercion but through a deeper understanding of the clinical and legal implications of nursing records [2].

The theoretical foundation of this approach is strengthened by Callista Roy's Adaptation Theory, which conceptualizes individuals; including nurses as adaptive systems that interact dynamically with their environment and require appropriate support to respond effectively to change [9]. Within the context of reflective supervision, Roy's theory provides a framework for understanding how nurses can adapt to documentation demands amid heavy workloads and complex clinical environments. Adequate supervisory support can activate nurses' coping mechanisms, enabling them to adjust to the increasing documentation requirements of modern healthcare settings [9]. Through reflective supervision as a primary stimulus, nurses are expected to achieve positive adaptation in their documentation practices, ultimately enhancing care quality and patient safety.

Integrating reflective supervision with Roy's Adaptation Theory reinforces the potential of this approach by emphasizing nurses' adaptive capacity across four modes: physiological, self-concept, role function, and interdependence. This study examines the effectiveness of the reflective supervision model in improving the completeness of nursing care documentation. By applying this integrated framework, the study aims to facilitate higher levels of nurse adaptation, thereby strengthening documentation quality and ensuring compliance with patient safety standards.

METHODS
This study was conducted at Hospital X and Hospital Y in Kupang, both of which are private Type-C hospitals with comparable organizational characteristics and nursing service structures. The research took place from November 2025 to December 2025, encompassing all stages from instrument preparation, intervention implementation, data collection, and statistical analysis.

A quantitative research approach was employed using a quasi-experimental design, specifically the non-equivalent control group pretest–posttest design. This design was selected to evaluate changes in outcomes before and after the intervention within the experimental group and to compare these changes with a control group that did not receive the intervention. The design allows for the assessment of causal effects in real-world clinical settings where random assignment is not feasible [1].

The study population consisted of all staff nurses responsible for nursing documentation in the inpatient units of Hospital X, Kupang. The sample was selected using a simple random sampling technique to minimize selection bias and ensure equal opportunity for participation among eligible nurses. Sample size determination considered variance estimates, expected mean differences, significance levels, and statistical power to detect the effect of reflective supervision on documentation completeness. Based on these parameters, the intervention group comprised 60 nurses and the control group also comprised 60 nurses, resulting in a total sample of 120 nurses who met the inclusion criteria.

The independent variable was the Reflective Supervision Model, implemented to examine its effect on improving the completeness of nursing care documentation. The intervention was delivered through a structured reflective supervision program consisting of three phases: preparation, implementation, and evaluation. Reflective supervision was conducted four times over four consecutive weeks, with each session lasting 30–45 minutes. The sessions included guided discussions, reflective dialogue, constructive feedback, coaching, and monitoring of documentation practices. Supervisors; ward heads or nursing supervisors had previously undergone training on reflective supervision, covering foundational concepts, reflective communication, constructive feedback techniques, application of the Driscoll Model ("What? So What? Now What?"), and documentation evaluation based on accreditation standards [2]. A standardized training module and supervision format were used to ensure consistency, direction, and evaluability of the intervention.

The dependent variable was the completeness of nursing care documentation. Measurement was conducted using an observation checklist based on the ADPIE framework (Assessment, Diagnosis, Planning, Implementation, Evaluation), which reflects the core components of the nursing process [3]. The instrument had undergone validity testing and reliability assessment, yielding a Cronbach's Alpha value of 0.872, indicating a very high level of internal consistency and reliability. This validated instrument ensured accurate and systematic evaluation of documentation completeness across both groups.

Data were analyzed using SPSS software. Descriptive analysis was performed to describe respondent characteristics and baseline documentation scores. Bivariate analysis included paired t-tests to assess pre- and post-intervention differences within the same group, and independent t-tests to compare differences between the intervention and control groups. Multivariate analysis using binary logistic regression was conducted to identify factors influencing documentation completeness and to determine the magnitude of the effect of reflective supervision after controlling for potential confounders [4].

RESULTS

The research findings are presented systematically, beginning with the descriptive characteristics of respondents, followed by univariate analyses of documentation completeness before and after the intervention, bivariate analyses comparing differences across time and groups, and multivariate analyses to identify the influence of the intervention while controlling for confounding variables.

The characteristics of respondents in both the control and intervention groups were relatively homogeneous. Most nurses were aged 25–35 years, representing 83.3% of the control group and 85.0% of the intervention group ($p = 0.504$). The majority were male (65.0% in the control group and 71.7% in the intervention group; $p = 0.278$). Most respondents held a Bachelor of Nursing degree (80.0% in the control group and 70.0% in the intervention group; $p = 0.146$). Clinical nurse levels were also comparable, with PK II being the most dominant category (58.3% in the control group and 66.7% in the intervention group; $p = 0.352$). All p-values exceeded 0.05, indicating no significant differences between groups prior to the intervention.

In the intervention group, documentation completeness increased markedly from 23.07 ± 7.35 (pretest) to 35.26 ± 2.18 (posttest). The paired t-test yielded $t = -13.50$ and $p < 0.001$, indicating a highly significant improvement. The mean difference (MD = 12.20) demonstrates the substantial impact of reflective supervision on documentation completeness.

In contrast, the control group showed only a slight increase from 34.41 ± 5.61 to 35.00 ± 4.02. The statistical test revealed $t = 0.75$ and $p = 0.388$, indicating no significant difference. These findings confirm that reflective supervision is effective in improving documentation completeness, whereas routine practice without reflective supervision does not yield meaningful improvement.

Bivariate analysis using an independent t-test showed a significant difference in documentation

Table 1. Distribution of nurse characteristics at Hospital X and Hospital Y

Variable	Control Group		Intervention Group		p-value
	Frequency	Percentage	Frequency	Percentage	
Age					0.504
<25 years	8	13.3	5	8.3	
25–35 years	50	83.3	51	85.0	
36–45 years	2	3.3	4	6.7	
Sex					0.278
Male	39	65.0	43	71.7	
Female	21	35.0	17	28.3	
Education					0.146
Diploma	12	20.0	18	30.0	
Bachelor	48	80.0	42	70.0	
Clinical nurse level					0.352
PK I	19	31.7	15	25.0	
PK II	35	58.3	40	66.7	
PK III	2	3.3	4	6.7	
PK IV	4	6.7	1	1.7	

Table 2. Effect of reflective supervision on nursing care documentation completeness (pretest–posttest analysis)

Group	Measurement	Mean ± SD	t	p	MD (95% CI)
Intervention	Pretest	23.07 ± 7.35	-13.50	0.000	12.20
	Posttest	35.26 ± 2.18			(-14.00 to -10.39)
Control	Pretest	34.41 ± 5.61	0.75	0.388	-5.583
	Posttest	35.00 ± 4.02			(-1.92 to 0.75)

Table 3. Posttest comparison of documentation completeness between intervention and control groups

Variable	Group	Mean	SD	t	p-value
Nursing documentation	Intervention	12.20	6.99	13.503	0.000
	Control	-0.583	5.19		

completeness between the intervention and control groups ($p < 0.001$). Nurses who received reflective supervision demonstrated substantially higher improvements compared to those in the control group. This aligns with previous studies indicating that reflective, feedback-based training enhances documentation accuracy and completeness.

Binary logistic regression analysis revealed that age (B = 2.015; p = 0.005) and reflective supervision (B = 1.944; p = 0.002) significantly influenced documentation completeness. Reflective supervision remained a strong predictor even after controlling for confounding variables. Sex (p = 0.903), education (p = 0.618), and clinical nurse level (p = 0.998) did not show significant effects. These findings reinforce reflective supervision as an effective managerial strategy for improving nursing documentation quality.

Table 4. Multivariate analysis of reflective supervision and confounding variables on documentation completeness

Parameter	B	p-value
Age	2.015	0.005
Sex	-0.070	0.903
Education	-0.314	0.618
Clinical Level (PK)	-0.001	0.998
Reflective Supervision	1.944	0.002
Constant	2.359	0.000

DISCUSSION

This study demonstrates that the reflective supervision model exerts a significant and positive impact on improving the completeness of nursing care documentation. The quantitative findings clearly indicate that nurses in the intervention group who participated in reflective supervision training experienced a substantial increase in documentation completeness, with mean scores rising from 23.07 during the pretest to 35.26 after the intervention. This notable improvement underscores the effectiveness of reflective supervision, a method grounded in self-reflection, critical thinking, and continuous evaluation. These results align with the findings of [10], who reported that reflective processes embedded within clinical supervision enhance the quality of nursing practice by facilitating experiential learning and promoting deeper professional insight.

Demographic characteristics also provide important contextual understanding of these outcomes. Age emerged as a significant factor influencing documentation completeness. Older and more experienced nurses tended to demonstrate greater accuracy, responsibility, and consistency in documenting nursing care. This observation is consistent with previous research indicating that mature nurses possess heightened attentiveness and precision due to their broader professional exposure and life experience [11]. Psychological stability and cognitive maturity, which typically increase with age, further support the production of accurate and comprehensive documentation. This finding resonates with the legal principle in nursing practice that asserts: “what is not written is considered not done” [12], emphasizing the critical role of documentation in ensuring accountability and continuity of care.

Although age played a significant role, the study also found that female nurses; who constituted a substantial proportion of respondents exhibited higher levels of meticulousness in documentation practices. This supports the findings of [13], which indicate that female nurses tend to demonstrate stronger adherence to procedures and professional standards. Reflective supervision, with its emphasis on learning through experience and structured feedback, further strengthened nurses’ competencies in documentation. As noted by [14], reflective supervision enhances nurses’ abilities to formulate more accurate diagnoses, interventions, and outcomes, thereby improving the completeness and quality of nursing documentation.

Educational background also contributed to documentation outcomes. Nurses with higher educational attainment, particularly those holding a Bachelor of Nursing degree, demonstrated greater readiness to engage in training and apply newly acquired knowledge in clinical practice. This observation is consistent with [15], who emphasized that nursing documentation serves as a primary indicator of healthcare quality and professional standards. Importantly, the improvement in documentation quality was influenced more by structured supervision and continuous training than by work experience alone. This is supported by [16], who found that competency enhancement through supervision plays a more critical role in improving documentation completeness than years of service.

Bivariate analysis further confirmed that reflective supervision produced significant changes in the intervention group, as indicated by the very low p-value in the t-test. This finding aligns with earlier studies demonstrating that reflective, experience-based training improves documentation accuracy and completeness [17]. Beyond technical improvements, reflective supervision also contributed to nurses’ emotional well-being. As reported in [18], reflective supervision reduces stress and burnout among nurses working under high-pressure conditions, such as intensive care units. The reflective process provides a psychologically safe space for nurses to express emotional experiences, thereby alleviating accumulated psychological burdens. This contributes to the development of a supportive work environment that balances productivity with staff well-being. Reflective supervision thus emerges as a vital strategy for sustaining workforce resilience in demanding healthcare settings.

Multivariate analysis using binary logistic regression further confirmed the effectiveness of reflective supervision in enhancing documentation completeness. Without supervision, documentation practices tended to remain stagnant. Studies by [19,20] support this conclusion, demonstrating that structured and continuous clinical supervision improves adherence to documentation standards and overall healthcare quality. The analysis also revealed that age plays a significant role, indicating that cognitive maturity and psychological stability interact synergistically with reflective supervision to enhance documentation quality. This relationship is consistent with Roy’s Adaptation Theory, which posits that mature individuals possess more stable coping mechanisms [21]. Older nurses generally exhibit stronger emotional resilience when facing high workloads in inpatient units [22], enabling them to remain adaptive and manage time effectively to complete documentation despite the dynamic and demanding nature of clinical practice.

Overall, this study strengthens empirical evidence that reflective supervision is an effective strategy for improving the quality of nursing documentation. The significant increase in documentation completeness, accompanied by reduced standard deviation in post-test scores, indicates that reflective supervision not only enhances documentation quality but also improves consistency and accuracy across nursing staff. Consequently, reflective supervision plays a crucial role in ensuring that documentation is performed systematically, adheres to established standards, and contributes to improved healthcare quality and professional nursing practice.

Despite its strengths, this study has several limitations. The quasi-experimental design without individual randomization limits the ability to fully control external variables. Organizational culture and team dynamics, which were not measured, may have influenced the results. The intervention duration was relatively short, preventing evaluation of long-term effects such as the establishment of a sustained reflective culture. The study population was limited to nurses in two private Type-C hospitals, reducing generalizability to other hospital types or settings. The instrument used focused on quantitative completeness of documentation but did not assess clinical quality in depth. Behavioral bias due to the Hawthorne effect may also have influenced outcomes, although mitigation strategies were implemented. Nevertheless, the study provides meaningful contributions and opens avenues for further research and development.

CONCLUSION

This study concludes that the reflective supervision model is effective in improving the completeness of nursing care documentation. The intervention group demonstrated a clear increase in documentation completeness before and after the intervention, whereas the control group showed no meaningful improvement. The findings also indicate a significant difference in documentation completeness between the intervention and control groups following the implementation of reflective supervision. Furthermore, multivariate analysis confirms that reflective supervision is the primary factor influencing documentation completeness after controlling for nurse characteristics, with age emerging as an additional factor associated with documentation outcomes.

Ethical consideration, competing interest and source of funding

-Ethical approval for this study was obtained from the Ethics Committee of Stikes Sint Carolus, with approval number 185/KEPPKSTIKSC/XI/2025. All participants provided informed consent, and confidentiality, anonymity, and voluntary participation were ensured throughout the study in accordance with ethical research standards.
-The author declares that there is no conflict of interest in this study. All research procedures were carried out objectively without any influence from individuals, groups, or organizations that could compromise the integrity or independence of the research findings.
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