

THE INFLUENCE NURSING CARE DOCUMENTATION DESIGN SDKI, SLKI, SIKI (3S) IN HOSPITAL MANAGEMENT INFORMATION SYSTEMS ON NURSE SATISFACTION

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ABSTRACT

The Service is required to be part of the hospital in implementing the documentation of nursing care using computerization. Patients in hospitals often feel dissatisfied with services because nurses take too long to search for patient history data and nurses feel dissatisfied in paper-based documentation which makes the workload increase. The purpose of this study was to design a nursing care documentation design in the 2000s SDKI, SLKI, SIKI (3S) in hospital management information systems on nurse satisfaction. The research method used a research and development design as well as descriptive observational cross sectional with a total sampling technique of 74 nursing respondents at Dian Harapan Jayapura Hospital and analyzed using simple regression analysis. The results showed that 73% of the 3-S nursing care documentation design in SIMRS was in the good category and 77% of nurses were satisfied with the 2000s nursing care documentation design in SIMRS and a significant p-value (0.000) which means that there is an effect of 30.8 % between the design of the 3S nursing care documentation in SIMRS and the satisfaction of nurses at Dian Harapan Jayapura Hospital. It can be said that by increasing the resulting information system, the satisfaction of nurses as users is getting better. It is recommended to hold socialization, training and policy realization for nurses documenting 3S nursing care in SIMRS.

INTRODUCTION

The phenomenon of the use of information systems and technology in human life is increasing sharply following the times (Jiang, 2020). The presence of information systems and technology has a major impact on human life (Seymour et al., 2018). Human life becomes effective and efficient in supporting work in all sectors including the health sector (Cooke & Bartram, 2015). The health sector has health workers where nurses are the largest health

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workers, so that their role is very large as a contributor to the fulfillment of the performance and quality of health services.

Nursing service is the provision of nursing care as evidenced by documentation of nursing care (Kent & Morrow, 2014). Documentation of nursing care in Indonesia is regulated by PPNI based on the provisions of shared standards. Standard guidelines are divided into three standard sections on nursing diagnoses, nursing interventions and nursing outcomes (Müller-Staub et al., 2007). The standards in these guidelines have relevance in nursing care services (Douglas et al., 2014).

The first guiding standard set by PPNI is the Indonesian Nursing Diagnosis Standard or also known as the SDKI (Israfil & Making, 2019). The second guiding standard is the Indonesian Nursing Intervention Standard or also known as SIKI (Andriani et al., 2021). The third guiding standard is the Indonesian Nursing Outcome Standard or also known as the SLKI (Tamher et al., 2021). SDKI, SIKI and SLKI are commonly abbreviated (3S) in the standard guidelines set by PPNI. The 3S is currently the guideline used by nurses in every health facility.

Guidelines for nursing care (3S) are nursing practice activities that are provided which are strung and processed directly to service recipients (patients) in the setting of health service facilities (Hicks et al., 2015). Nursing care is a nursing process method applied by nurses in meeting patient needs systematically scientifically (Salvador et al., 2022). The needs of patients in nursing care are able to achieve or maintain optimal biological, psychological, social and spiritual conditions for patients. The achievement of nursing care is passed from the process of assessing patients, analyzing data, formulating diagnoses, planning and implementing and evaluating them through SIMRS. Moreover, Health information technology solutions are expected to enhance nurses' use of knowledge, experience, and judgement in assessment of patient problems and planning care strategies (Redley et al., 2022).

Optimal nurse satisfaction is proven through documentation of optimal nursing care for nurses. Documentation of nursing care is the basics of the responsibility of nurses in carrying out their duties between providers and recipients of health services (Kusumaningrum & Sulistyowati, 2022). Optimization of nurse satisfaction is currently developing through system support. information and technology in hospitals such as SIMRS (Kusumaningrum & Sulistyowati, 2022). SIMRS supports nursing services widely which is considered the key to increasing nurse satisfaction because nurses are the largest health workers in health facilities.⁽²⁾

Previous research has shown that nurses' satisfaction with paper-based documentation is poor. Dissatisfaction includes inadequate information, unclear, incomplete or illegible data entry and missing signatures (Adjorlolo & Ellingsen, 2013). Other studies have shown that paper-based documentation does not meet the current health care requirements so that it is less satisfying for nurses. These health care requirements include those related to patient safety, continuity of care, legal evidence of the care process and or evaluation of the quality of patient care.

Other studies have shown that electronic nursing documentation can improve the quality of nursing services for inpatients and stimulate nurse satisfaction Electronic documentation has the potential to streamline processes, increase the accuracy and efficiency of nursing procedures and reduce the risk of errors. Other studies have shown that 65- 75% of nurses believe that electronic documentation increases the satisfaction and quality of nursing services (Kusumaningrum & Sulistyowati, 2022).

Electronic documentation can reduce documentation time and increase satisfaction for nurses in serving. Research shows that the average score for nurse satisfaction and performance in electronic documentation is effective in improving service quality. Other research results show that electronic documentation time has an impact on reduced 60% of

working time per week compared to paper-based documentation. It can be concluded that the application of digital-based information systems in nursing (nursing documentation) can build nurse satisfaction in providing services and the output has an impact on the quality of health services although further research is needed.

The author conducted a preliminary study at Dian Harapan Jayapura Hospital to several nurses. Based on a preliminary study conducted by the author, the performance of nurses includes assessing patients, analyzing data, formulating diagnoses, planning and implementing and evaluating them. The process of recording nursing care documentation has implemented the SDKI, SLKI and SIKI, but is still paper-based. This documentation starts from the physical assessment stage, formulating nursing problems, determining nursing diagnoses, interventions and implementation and evaluation. All these processes are carried out with a checklist filling system of documentation sheets and entries based on the results and evaluations that have been carried out. Preliminary studies showed that nurses reported experiencing several complaints and dissatisfaction during work and the performance of nurses was felt to be experiencing obstacles. The obstacles felt by nurses in documenting their performance (nursing care) felt burdened because there were so many.

Data based on preliminary studies conducted on committees and the field of nursing inform that, facts about the design of nursing care documentation SDKI, SLKI, SIKI (3S) are not yet available either on a paper-based basis or digitally, they are still in the process of comprehensively compiling the previous nursing care documentation. The author has an innovative design design for nursing care documentation SDKI, SLKI, SIKI (3S) in SIMRS at Dian Harapan Jayapura Hospital as a digital-based information system media in nursing to support documentation of nurse performance so that it can form a positive attitude, namely the satisfaction of performing nurses. Based on the background explanation above, the writer is interested in conducting research on the effect of the design of nursing care documentation of SDKI, SLKI, SIKI (3S) in hospital management information systems on nurse satisfaction at Dian Harapan Jayapura Hospital. The general objective of this study was to analyze the effect of the design of nursing care documentation of SDKI, SLKI, SIKI (3S) in SIMRS on nurse satisfaction at Dian Harapan Jayapura Hospital.

METHOD

The research design used in this study is a research and development method, namely the method used to produce a particular product (Creswell, 2010). In addition, the research design is descriptive correlational research regarding the effect of implementing a safety and health management system. work on the performance of nurses. In the research and development method, researchers only carry out research and information gathering, planning (planning), and model development (develop preliminary form of product). These stages can be summarized in the scheme below:

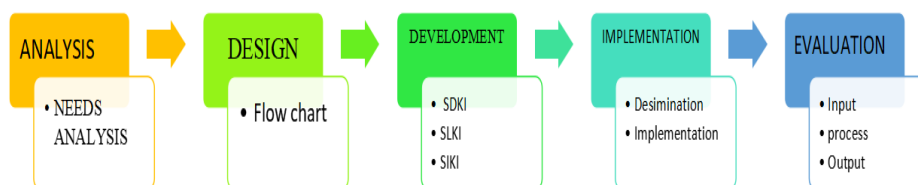


Figure 1. Research steps

RESULTS AND DISCUSSION

Table 1
Normality Test
One-Sample Kolmogorov-Smirnov Test

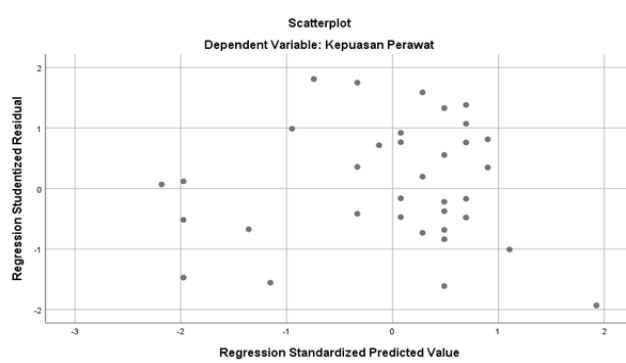
		Unstandardized Residual
N		74
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	6.46317306
Most Extreme Differences	Absolute	.087
	Positive	.078
	Negative	-.087
Test Statistic		.087
Asymp. Sig. (2-tailed)		.200 ^{c,d}

The Kolmogorov-Smirnov number is higher than the significance level of 5% (0.05) so it can be concluded that the data on the design variable for the 3S nursing care documentation design in SIMRS and the nurse satisfaction variable are normally distributed.

Table 2
Linearity Test
ANOVA Table

			Sig.
Kepuasan Perawat * Rancangan Desain	Between Groups	(Combined)	.073
		Linearity	.003
		Deviation from Linearity	.306
Within Groups			
Total			

The significance value of deviation from linearity in this research data is higher than the significance level of 5% (0.05), so it can be concluded that the data on the design variable for the 3S nursing care documentation design in SIMRS and the nurse satisfaction variable have a significant linear relationship.



Graphic 1. Heteroscedasticity Test

Graphic 1 shows that the distribution of points on the scatterplot is seen randomly and is spread both above and below zero on the Y axis. It can be concluded that there is no heteroscedasticity in this regression model. A good regression model is a model that does not occur heteroscedasticity where there is an inequality of variance from the residuals of one observation to another observation between the 3S nursing documentation design design variables in SIMRS and the nurse satisfaction variable.

Table 3
Hypothesis Testing the Effect of 3S Nursing Documentation Design in SIMRS on Nurse Satisfaction

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	34.135	6.864		4.973	.000
	Rancangan Desain	.680	.156	.456	4.348	.000

The significance value of 0.000 is smaller than the probability value of 0.05, so that the hypothesis is accepted (Ha), it can be concluded that there is an effect of 3S nursing care documentation design in SIMRS on nurse satisfaction.

Table 4
Determination Test
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.456 ^a	.308	.197	6.508

a. Predictors: (Constant), Rancangan Desain

b. Dependent Variable: Kepuasan Perawat

The value of R² or Rsquare is 0.308 or 30.8%, this means that the independent variable of 3S nursing care documentation design in SIMRS affects the dependent variable of nurse satisfaction by 30.8% and the rest is influenced by other variables not included in this study. ⁽⁸⁵⁾

Discussion

The results of the analysis of this study indicate that the design of the 3S nursing care documentation design in SIMRS at Dian Harapan Jayapura Hospital has a good category with a percentage of 77%. While 23% of respondents stated that the design of the 3S nursing care documentation in SIMRS was not good.

The design that the researcher made consisted of the SDKI, SLKI and SIKI. The SDKI is a standard nursing diagnosis developed by PPNI and is a combination of nursing diagnoses based on NANDA, ICNP and Carpenito. Nursing diagnoses in the SDKI contain 148 diagnoses with diagnostic labels based on NANDA for 2015-2017. Display of the SDKI design which includes 148 nursing diagnoses can be understood and accepted by nurses during the second stage of socialization of model development. This is indicated by the high results of the study, 77% of nurses said it was good.

The appearance of the SLKI is similar, where nurses feel that the design of the SLKI is included in a good category. SLKI is an Indonesian nursing outcome standard that includes observable and measurable parts such as responses to nursing interventions on perceptions

(patients, families and communities) about their general condition and behavior. Nursing outcomes direct the status of nursing diagnoses after the implementation of nursing interventions. The final result of nursing intervention is an indicator or criterion for problem recovery outcomes.

The intervention design, in this case SIKI, is also in a good category. SIKI is an Indonesian standard of nursing intervention which is categorized the same as the group in the SDKI. Consisting of the SIKI taxon, namely 5 categories, 14 subcategories and 623 nursing interventions. SIKI is all nursing treatments based on knowledge and clinical judgment to achieve outcomes and nursing actions. Nursing actions such as performance specific behaviors nurses to implement. The SIKI is in line with the SDKI, where each nursing diagnosis in the SDKI will have an intervention in the SDKI. The SDKI, SLKI and SIKI are benchmarks for providing nursing care used in Indonesia. The technology developed is part of the concept of Bureaucratic Caring theory in which technology influences a person's decision making in his attitude towards professionalism.

Users who are human users have various stimuli in perceiving every thing they find, including when dealing with something new, including responses to a SIMRS design. This is in line with Input in Callista Roy's model which identifies input as a stimulus, which is a unity of information, materials or energy from the environment that can cause a response, which is divided into three levels of focal stimulus, contextual and residual stimulus. Process control. According to the Callista Roy model, it is a form of coping mechanism used, divided into regulatory subsystems, namely chemical, nervous or endocrine systems, brain and spinal cord which are transmitted as behavior or responses and cognator subsystems related to brain function in processing information, judgments and emotions. Output in Callista Roy's model is an adaptation system is a behavior that can be observed, measured, or can be expressed subjectively. The output of this system can be an adaptive response or a maladaptive response. The output of a system is behavior. that can be observed, measured or subjectively reported either from from inside or outside or is feedback to the system.

Nurse Satisfaction

The results of the analysis of this study indicate that the satisfaction of nurses at Dian Harapan Jayapura Hospital shows that nurses' satisfaction with the design of 3S nursing care documentation in SIMRS has a satisfied category with a percentage of 73%. While 27% of respondents stated that they were not satisfied with the design of the 3S nursing care documentation in SIMRS. In line with the results of this study, nurse satisfaction has not reached its maximum so it requires correction for further improvement.

The Effect of 3S Nursing Documentation Design in SIMRS on Nurse Satisfaction. The results of the test analysis show that the significance value is p-value of 0.000 or less than the probability value of 0.05 alpha. This shows that the significance of the effect of the 3S nursing care documentation design in SIMRS on nurse satisfaction, then the hypothesis (H_a) is accepted. The results of the analysis of this study concluded that there was an effect of the 3S nursing care documentation design in SIMRS on nurse satisfaction. Furthermore, the results of the analysis of the percentage of the influence of the 3S nursing care documentation design in SIMRS on nurse satisfaction showed an R^2 value of 0.308. This shows that the 3S nursing care documentation design in SIMRS has an effect of 30.8% on nurse satisfaction and the rest is influenced by other factors or variables that are not included in this study.

CONCLUSION

The design of 3S nursing care documentation in SIMRS at Dian Harapan Jayapura Hospital was 73% in the good category. Nurse satisfaction with the design of 3S nursing care documentation in SIMRS at Dian Harapan Jayapura Hospital by 77% is in the satisfied category. There is a significant effect of 30.8% between the design of the 3S nursing care documentation in SIMRS on the satisfaction of nurses at Dian Harapan Jayapura Hospital.

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