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THE EFFECT OF IMPLEMENTING SBAR HANDOVER ON THE CONTINUITY OF NURSING CARE IN INPATIENT WARDS

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ABSTRACT
Continuity of nursing care is an important indicator of hospital service quality and is strongly influenced by the effectiveness of communication among nurses, particularly during handover. One communication method recommended to enhance patient safety is SBAR (Situation, Background, Assessment, Recommendation). Integrating the SBAR method with Jean Watson's caring theory is expected to strengthen clinical communication in a more humanistic and holistic manner. This study aimed to analyze the effect of SBAR handover implementation on the continuity of nursing care in the inpatient wards of Pekanbaru Medical Center Hospital. This study employed a quasi-experimental design with control and experimental groups.This study used a total sampling technique involving 30 inpatient nurses, who were divided into an experimental group (n = 15) and a control group (n = 15). Data were collected by measuring continuity of nursing care scores before and after the intervention. Data analysis was conducted using the Generalized Linear Model Repeated Measures to assess changes in scores over time and differences between groups. The results showed that before the intervention, the mean continuity of nursing care scores were 37.27 ± 5.92 in the control group and 35.67 ± 4.37 in the experimental group. Following the implementation of SBAR handover, scores increased in both groups; however, the improvement was greater in the experimental group, with a mean score of 50.93 ± 1.10 compared to 41.80 ± 3.45 in the control group. The control group showed a statistically significant improvement (p = 0.020), whereas the experimental group demonstrated a highly significant increase (p = 0.000). Between-group analysis revealed a significant difference (F = 9.414; p = 0.005), as well as significant time effects and time × group interaction effects (p = 0.000). In conclusion, the implementation of SBAR handover was effective in improving the continuity of nursing care in inpatient wards.

Keywords: continuity of nursing care; inpatient nurses; jean watson's caring theory; SBAR handover

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INTRODUCTION

Nursing services are an integral part of the healthcare system, oriented toward meeting patients' needs holistically. The quality of nursing care is highly determined by the effectiveness of communication among nurses during the delivery of nursing care (Potter, Perry, Stockert, & Hall, 2023). Effective communication among nurses plays a crucial role in maintaining the continuity of nursing care, particularly in inpatient wards. One globally recommended communication method to enhance patient safety is Situation, Background, Assessment, Recommendation (SBAR), as it enables information to be conveyed in a systematic, structured, and accurate manner (Dewi & Utami, 2021; World Health Organization [WHO], 2022).

Handover is the process of transferring information and responsibility for nursing care from one nurse to another, and it plays an essential role in maintaining continuity of care and preventing gaps in service delivery (Effendy, 2021). Various studies have shown that the implementation of SBAR

in the handover process can improve the accuracy of information, accelerate clinical decision-making, and reduce the risk of losing important patient-related information (Lestari, Handayani, & Prasetyo, 2021). However, effective handover should not only focus on clinical data but also reflect the values of caring, empathy, and nurses' responsibility toward patients.

Jean Watson's caring theory emphasizes the importance of humanistic and holistic relationships in nursing practice, including communication among nurses during handover (Watson, 2021; Watson, 2022). The integration of the SBAR method with caring principles is believed to strengthen the continuity of nursing care and improve the quality and safety of healthcare services (Kusnanto, 2022). Based on a preliminary survey conducted in the inpatient ward of Pekanbaru Medical Center Hospital, it was found that the implementation of SBAR handover has not fully reflected caring principles and continuity of care, resulting in inconsistencies in nursing interventions between shifts. Therefore, this study is important to analyze the effect of implementing SBAR handover from the perspective of Jean Watson's caring theory on the continuity of nursing care in inpatient wards. The purpose of this study is to determine the effect of implementing SBAR handover on the continuity of nursing care in inpatient wards.

METHOD

This study employed a quasi-experimental design with a non-equivalent control group pre-test and post-test approach. The research was conducted in the inpatient wards of Pekanbaru Medical Center Hospital from November to December 2025. The sample consisted of 30 inpatient nurses, divided into an experimental group (n = 15) and a control group (n = 15) using a total sampling technique. The experimental group received an intervention in the form of training and mentoring on the implementation of SBAR handover based on Jean Watson's caring theory for four weeks, while the control group carried out nursing handovers according to routine hospital procedures without additional intervention. After the training, the experimental group implemented SBAR handover based on caring principles in daily practice, while the control group continued standard handover practices.

The research instruments included an observation checklist for the implementation of SBAR handover based on caring principles and a nursing care continuity questionnaire adapted from Kurniawan and Siregar (2023). The questionnaire consisted of 26 items using a Likert scale and was tested for validity and reliability, with a Cronbach's Alpha value of 0.963. Measurements were conducted before the intervention (pre-test) and after the intervention (post-test), accompanied by weekly observations during the study period. Data analysis included univariate analysis to describe respondent characteristics, bivariate analysis using paired t-test or Wilcoxon Signed Rank Test to assess differences before and after the intervention, and multivariate analysis using the General Linear Model–Repeated Measures to evaluate changes in the continuity of nursing care over time and between groups, with a significance level set at 0.05.

RESULT

Table 1, the majority of nurses in the control and experimental groups were in the young adult age category. All nurses in the experimental group (100%) and almost all nurses in the control group (93.3%) fell into this category. In terms of gender, respondents were predominantly female nurses, namely 100% in the control group and 93.3% in the experimental group. Most of the control group's education level was D3 Nursing (53.3%), while the experimental group was dominated by nurses with S1 Nursing + Ners education (60%). In terms of length of service, most respondents in both groups had a work period of 1–5 years, namely 53.3% in the control group and 66.7% in the experimental group.

Table 1.
Characteristics of Nurses in the Inpatient Ward

Respondent Characteristics	Control Group		Experimental Group	
	f	%	f	%
Age				
Young Adults	14	93.3	15	100
Middle Adult	1	6.7	0	0
Gender				
Man	0	0	1	6.7
Woman	15	100	14	93.3
Education				
D3 Nursing	8	53.3	6	40
Bachelor of Nursing + Nurse	7	46.7	9	60
Years of service				
1 year – 5 years	8	53.3	10	66.7
> 5 years	7	46.7	6	33.3

Table 2.
Analysis of Differences in Pre-test and Post-test Continuity of Nursing Care in the Experimental Group in the Inpatient Ward

Group	N	Mean	Median	Standard Deviation	Min	Max
Control						
Meeting 1	15	37.27	38.00	5.92	28	52
Meeting 2	15	35.93	35.00	5.90	29	52
Meeting 3	15	40.33	40.00	3.44	34	47
Meeting 4	15	42.40	43.00	2.75	36	46
Meeting 5	15	42.53	43.00	2.75	34	47
Meeting 6	15	41.80	43.00	3.45	34	49
Experiment						
Meeting 1	15	35.67	35.00	4.37	30	44
Meeting 2	15	38.87	38.00	3.76	34	47
Meeting 3	15	41.47	41.00	3.48	37	48
Meeting 4	15	44.60	46.00	3.70	40	50
Meeting 5	15	47.53	48.00	3.38	41	52
Meeting 6	15	50.93	51.0	1.10	49	52

The analysis results showed that in the experimental group there was a consistent increase in the continuity of nursing care score from pre-test to post-test. The mean score of the experimental group increased from 35.67 at the first meeting to 50.93 at the sixth meeting, accompanied by a decrease in the standard deviation, indicating a more homogeneous increase in scores across respondents. In contrast, the control group showed fluctuations in the mean score with an inconsistent increase and tended to be stable at the post-test (mean 41.80). These findings indicate that the intervention given to the experimental group contributed to an increase in continuity of nursing care more optimally than the control group.

Table 3.
Dependent t-test Values (Paired t-test) of Pre-test and Post-test Continuity of Nursing Care in the Experimental Group in the Inpatient Ward

	Continuity of care	N	Mean	Standard Deviation	T (t-test)	p-value
Experimental Group	Pre-intervention (1)	15	35.67	4.36981	-	0,000
	Post intervention (6)	15	50.93	1.09978	12,882	

There was a significant difference in continuity of nursing care between the pre-test and post-test in the experimental group ($p < 0.001$). The mean score increased from 35.67 to 50.93, indicating that the intervention was effective in improving continuity of nursing care.

Table 4.
Dependent t-test Values (Paired t-test) of Pre-test and Post-test Continuity of Nursing Care in the Control Group in the Inpatient Ward

	Continuity of care	N	Mean	Standard Deviation	T (t-test)	p-value
Control Group	Pre-intervention (1)	15	37.27	4.36981	12,882	0.020
	Post intervention (6)	15	41.80	1.09978		

There was a significant difference in continuity of nursing care between the pre-test and post-test in the control group (p = 0.020). The mean score increased from 37.27 to 41.80, indicating an increase in continuity of nursing care even without the primary intervention.

Table 5.
Independent t-test of Continuity of Nursing Care between the Control Group and the Experimental Group

Meeting	Mean Control	Experimental Mean	t	df	*p- value* (Sig. 2 tailed)
1	37.27	35.67	0.842	28	0.407
6	42.53	50.93	-9,775	28	0,000

At the first meeting (pre-test), there was no significant difference between the control and experimental groups (p = 0.407). However, at the sixth meeting (post-test), there was a highly significant difference between the two groups (p < 0.001), with the experimental group's mean score higher than the control group's. These results indicate that the intervention had a significant impact on improving the continuity of nursing care.

Table 6.
Intergroup Effect Test

Source	**df**	**F**	**p-value**
Group	1	9,414	0.005

The results of the intergroup effect test showed a significant difference between the control and experimental groups (F = 9.414; p = 0.005). This finding confirms that the intervention had a significant effect on improving the continuity of nursing care.

DISCUSSION

Characteristics of Nurses in the Inpatient Wards

The characteristics of nurses in the inpatient wards of Pekanbaru Medical Center Hospital include age, gender, level of education, and years of service, which theoretically may influence the continuity of nursing care through the quality of clinical communication. Age and years of service are associated with professional maturity and the accumulation of clinical experience, which supports systematic thinking, decision-making, and the implementation of SBAR handover in a more comprehensive and holistic manner, in line with Jean Watson's Caring Theory, which emphasizes full presence and transpersonal relationships (Watson, 2021).

Gender does not show a consistent influence on the quality of handover or continuity of nursing care, as the effectiveness of SBAR communication is more determined by competence, training, and professional experience rather than biological characteristics (Putri et al., 2022; Alshammari et al., 2021). Higher levels of education contribute to critical thinking, clinical reasoning, and completeness of handover information, thereby supporting more optimal continuity of nursing care. However, several studies indicate that work experience and SBAR training may have a more dominant influence than formal education alone (Wahyuni et al., 2022). Overall, nurse characteristics serve as supporting factors, while consistent SBAR training and a patient safety culture are the main determinants in improving the continuity of nursing care in inpatient wards.

Differences in the Continuity of Nursing Care Pre-test and Post-test in the Experimental Group

Continuity of nursing care is a continuous and integrated nursing service process that highly depends on the quality of communication among nurses during shift changes. Before the implementation of SBAR handover based on Jean Watson's caring theory, the mean scores of continuity of nursing care in the control group (37.27 ± 5.92) and the experimental group (35.67 ± 4.37) were relatively comparable, with considerable score variation. This condition indicates that continuity of care prior to the intervention was not yet optimal and was still influenced by individual differences and conventional handover practices.

The greater variation in the control group reflects inconsistencies in information delivery and coordination of nursing care between shifts. This finding is consistent with nursing communication theory, which states that handover without a standardized communication structure risks miscommunication and loss of important information, thereby affecting continuity of care and patient safety (Marquis & Huston, 2021; WHO, 2021). These results also support previous studies indicating that inpatient units that have not implemented SBAR tend to have moderate levels of continuity of nursing care with high inter-nurse variability (Sutanto et al., 2021; Alshammari et al., 2022).

Differences in the Continuity of Nursing Care Pre-test and Post-test in the Control Group

The implementation of SBAR handover improves the continuity of nursing care through structured, systematic, and patient-oriented clinical communication. After the intervention, the control group showed an increase in the mean score to 41.80 ± 3.45, while the experimental group experienced a higher and more consistent increase with a mean of 50.93 ± 1.10. This difference indicates that the implementation of SBAR significantly contributes to improving the continuity of nursing care, particularly in the experimental group. The smaller standard deviation in the experimental group reflects score homogeneity and consistency in communication practices among nurses, while the variation still observed in the control group indicates that without optimal SBAR implementation, continuity of care is not yet fully uniform. These findings reinforce that structured communication plays a crucial role in reducing variability in nursing practice and improving service quality. This study is consistent with theories of effective communication and patient safety, which positions SBAR as a key strategy to prevent miscommunication and loss of critical information during shift changes (Marquis & Huston, 2021).

Differences in the Continuity of Nursing Care Between Control and Experimental Groups

Differences in the continuity of nursing care between the control and experimental groups were analyzed based on pre-test and post-test measurements. The results showed that the control group experienced an increase in the mean score from 37.27 to 41.80 with a fluctuating pattern, whereas the experimental group showed a more consistent and significant increase from 35.67 to 50.93, accompanied by a decrease in standard deviation. This pattern indicates the effect of SBAR handover intervention on improving the continuity of nursing care.

Conceptually, continuity of care highly depends on systematic and structured clinical communication. The implementation of SBAR helps reduce variations in individual communication practices by providing a standardized framework for delivering clinical information. The integration of SBAR with Jean Watson's caring theory strengthens a communication approach that not only focuses on technical aspects but also on holistic understanding and empathy toward patients.

The unstable improvement in the control group reflects natural improvements due to work experience and adaptation to the clinical environment; however, without a standardized communication framework, such improvements tend to be inconsistent. In contrast, the progressive and homogeneous increase in scores in the experimental group indicates that SBAR handover functions as an effective quality control tool in aligning communication practices and maintaining the continuity of nursing care. These findings are consistent with previous studies reporting that

consistent implementation of SBAR improves handover quality, continuity of care, and nursing team coordination (Rahayu et al., 2022; Lee et al., 2021; Alshammari et al., 2022). Therefore, the significant difference between the two groups is primarily influenced by the implementation of SBAR handover as a structured intervention strengthened by Jean Watson's caring values in nursing practice.

Effectiveness of SBAR Handover Implementation on the Continuity of Nursing Care

The effectiveness of SBAR handover implementation on the continuity of nursing care is evident from the significant and consistent increase in scores in the experimental group compared to the control group. The control group showed an increase in the mean score from 37.27 to 41.80 with a statistically significant difference ($p = 0.020$), indicating natural improvement through work experience and communication adaptation, although without systematic SBAR implementation.

In contrast, the experimental group demonstrated a much greater increase, with the mean score increasing from 35.67 to 50.93 (mean difference 15.27; $p = 0.000$). This improvement indicates that SBAR handover is effective in enhancing the quality and consistency of clinical communication among nurses, thereby ensuring more optimal continuity of nursing care. The substantial difference in mean change between the two groups confirms that the improvement in the experimental group is not merely due to time effects but is a direct impact of the SBAR intervention.

The results of between-group effect tests and multivariate analysis showed significant differences between the control and experimental groups, as well as a meaningful interaction between time and group. These findings indicate that systematic implementation of SBAR can accelerate and stabilize improvements in the continuity of nursing care. Therefore, SBAR handover is proven to be an effective structured communication intervention in improving the quality and safety of nursing services in the inpatient wards of Pekanbaru Medical Center Hospital.

CONCLUSION

Nurses in the inpatient wards of Pekanbaru Medical Center Hospital were predominantly young adults, mostly female, with Diploma (D3) education in the control group and Bachelor plus professional nurse (S1 + Nurse) education in the experimental group, and the majority had 1–5 years of work experience. There was an increase in the continuity of nursing care before and after the implementation of SBAR handover in both the experimental and control groups. No difference in the continuity of nursing care was found between the two groups prior to the intervention; however, a significant difference emerged after the implementation of SBAR handover. The improvement in the experimental group was more significant compared to the control group ($p = 0.000$ vs $p = 0.020$), indicating that SBAR handover based on Jean Watson's caring theory is more effective in enhancing the continuity of nursing care.

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