



THE EFFECT OF MEMO INTERVENTION (MOTIVATION, ENRICHMENT, MENTORING AND OPERANT CONDITIONING) ON NURSES CARING BEHAVIOR

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ABSTRACT

Caring is a core dimension of nursing practice, yet it varies significantly across regions and health systems. In Indonesia, approximately 35% of nurses exhibit poor caring behaviors, and Panti Wilasa dr. Cipto Hospital continues to receive complaints regarding the quality of nurse care. Objective to evaluate the effect of MEMO (Motivation, Enrichment, Mentoring, Operant Conditioning) intervention on nurses' caring behavior at Panti Wilasa dr Cipto Hospital Quasi-experimental quantitative study with One-Group Pretest-Posttest Design as many as 122 nurses with ≥ 8 years of service were selected through purposive sampling. MEMO intervention was implemented for three weeks. Caring behavior was evaluated before and after the intervention using valid observation instruments based on Swanson's Caring Theory. Data were analyzed by Wilcoxon Signed Rank Test due to non-normal distribution of data. Component effects were evaluated through ANOVA. Caring behavior scores significantly increased from a mean of 16.06 before the intervention to 18.14 after the intervention ($p = 0.000$). All MEMO components significantly influenced caring behavior: Motivation ($F = 12.984, p = 0.000$), Enrichment ($F = 11.778, p = 0.001$), Mentoring ($F = 9.763, p = 0.002$), and Operant Conditioning ($F = 8.201, p = 0.005$). MEMO intervention effectively and significantly improved nurses' caring behavior.

Keywords: enrichment; motivation; mentoring; nurse caring; operant conditioning

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INTRODUCTION

Caring is the fundamental essence of nursing practice, which characterizes the nursing profession compared to other health professions. As the core of nursing philosophy, caring not only covers the technical aspects of care, but also involves a deep humanist dimension in the transpersonal relationship between nurses and patients. Global research shows that the quality of nurse caring varies significantly across regions and health systems, with developed countries generally having higher levels of patient satisfaction with the quality of nurse caring than developing countries. In Indonesia, studies show that there is a relationship between nurses' caring behavior and the level of satisfaction of patients using BPJS at the Limboto Health Center, so it is expected to improve nurses' caring behavior by providing training (Syamsuddin et al., 2024).

This condition is a serious concern considering that caring behavior has been shown to have a significant correlation with various nursing outcomes. There is a relationship between nurse caring and patient satisfaction, meaning that if nurses have good caring behavior, it can increase patient satisfaction (Sukesi et al., 2012). Another study showed that nurses' caring behavior has a close relationship with patient anxiety levels. (Mataputun et al., 2025) and contributes to improving the overall quality of health services. In addition, another study found a significant relationship between nurses' satisfaction with motivation and prospects with professional satisfaction with nurses' caring behavior (Ashagere et al., 2023) caring has economic value for health institutions because it has an impact on patient loyalty and a positive image of the hospital so the importance of nurses' caring

behavior in building patient trust (Sedighi et al., 2025). Research in the Palestinian NICU by BMC Nursing mentions caring as the highest dimension of professional values and contributes to nurses' self-confidence and job satisfaction, which further improves patient service standards (Ejheisheh et al., 2025).

Panti Wilasa Hospital Dr. Cipto, as one of YAKKUM's work units with the vision "We help God heal", has made various efforts to embed caring behavior in nursing services since 2019. These efforts include workshops on caring behavior for all room coordinators and the establishment of the motto "Caring and Trust" in 2022. However, based on an interview with the Nursing Manager in July 2024 and patient complaint data, there are still complaints in the implementation of caring. Data shows 38 complaints on Google Reviews since 2000 related to nurses who lack caring, as well as the achievement of the quality of care indicator "Patient Satisfaction with Quality of Care" which still averages 74.5% during the 2019-2022 period. To address these issues, comprehensive and evidence-based interventions are needed. Jean Watson's Theory of Care emphasizes the importance of 10 care factors that can be used as a framework to improve nurses' caring behavior. However, the implementation of this theory requires a systematic and structured approach. Recent research shows that the integration between nurses' work motivation, caring behavior, and effective managerial strategies contributes to improving the quality of nursing services (Sari, 2025)

The MEMO (Motivation, Enrichment, Mentoring, and Operant Conditioning) intervention concept emerged in response to the need for a holistic approach in improving nurses' caring behavior. The Motivation component is based on research that showed a significant correlation between work motivation and caring behavior ($r=0.327$, $p=0.037$). Knowledge and skill enhancement was shown to significantly improve caring behavior ($p=0.0001$) through care effectiveness training. Mentoring was effective in increasing nurses' care behavior scores by 9.98 points with a significance of $p=0.002$. While Operant Conditioning, based on B.F. Skinner's theory, uses the principles of reinforcement and punishment to establish and maintain positive behavior.

The four components of MEMO align with Watson's 10 factors of care, where altruistic value systems and beliefs can be reinforced through motivation, sensitivity and effective communication developed through training, trusting and transpersonal relationships formed through mentoring, and rewards given as a form of Operant Conditioning. This approach is also supported by the Theory of Planned Behavior, which emphasizes the importance of attitudes, subjective norms, and behavioral control in shaping intentions and actual behavior. While previous studies have tested the effectiveness of each component separately, no studies have combined all four elements in one integrated intervention. A study showed the strongest support for the pattern of mediation relationships carried out by motivation and career development on the effect of mentoring function on hospital nurse performance (Kamaratri & Adhikara, 2019), the higher the motivation of nurses, the higher the caring behavior (Rahmatin et al., n.d.). However, no study has comprehensively tested the effectiveness of the MEMO intervention as a whole. Given the urgency of improving nurses' caring quality at Panti Wilasa Dr Cipto Hospital and the potential of MEMO intervention based on existing scientific evidence, this study aims to determine the effect of MEMO intervention on nurses' caring behavior. The study will also identify the effects of each MEMO component and analyze the factors that influence the effectiveness of the intervention in improving nurses' care behavior. The results of the study are expected to contribute to the development of evidence-based intervention models to improve nurse caring, as well as a reference for other health institutions in an effort to improve the quality of nurse services through strengthening nurse caring.

METHOD

This study used a quantitative approach with a quasi-experimental One-Group Pretest-Posttest design to evaluate the impact of the MEMO (Motivation, Enrichment, Mentoring, Operant Conditioning) intervention on the caring behavior of nurses at Dr. Cipto Panti Wilasa Hospital. The

population consisted of 125 nurses with > 8 years of service; the sample was determined using the Slovin method and stratified proportions, then adjusted to anticipate dropouts, resulting in n = 119 nurses. Nursing care data were collected before (O₁) and after (O₂) the intervention using a standard observation sheet based on the Swanson model and careful nursing care values, as well as a MEMO questionnaire containing a Likert scale, which had been tested for validity with a Cronbach's Alpha reliability of 0.821. The researchers also obtained an ethics approval letter. The intervention was delivered through three waves of intensive training and two weeks of practical guidance. Data processing included editing, coding, grouping, inputting into statistical software, data cleaning, followed by Shapiro-Wilk normality testing on the pre-post data, descriptive analysis (mean, standard deviation, minimum, maximum), and the main hypothesis test Paired Sample t-Test ($\alpha = 0.05$). Research ethics were maintained through written consent, confidentiality, non-discrimination, benevolence, and scientific integrity.

RESULT

Differences in Nurse Caring Before and After MEMO Intervention

Wilcoxon Signed Rank Test analysis showed a significant increase in nurses' caring scores after the MEMO intervention ($p = 0.000$), with an average pre-test score of 16.06 (SD 1.98) and post-test score of 18.14 (SD 1.54), resulting in an average increase of 2.08 points (Table 1). This change proves that the MEMO (Motivation, Enrichment, Mentoring, Operant Conditioning) intervention effectively improves nurses' caring behavior at Panti Wilasa dr Cipto Hospital.

Table 1

Analysis of differences in nurses' caring behavior before and after MEMO intervention

Variable	n	Mean	Mean difference	P value
Caring nurse before MEMO intervention	122	16,06	2,08	0,000
Caring nurse after MEMO intervention	122	18,14		

Based on table 1, it is known that there is a difference in caring nurses before and after the MEMO intervention (p value: 0.000). *The p value was calculated using the Wilcoxon Signed Rank Test.* Table 1 illustrates the distribution of caring scores on both measures. Before the intervention, scores tended to be concentrated in the 14-18 range, while after the intervention it shifted to 16-20, indicating an improvement and uniformity of caring behavior. Respondent Characteristics: Mean age: 41.46 years (SD 6.97; range 26-56). Mean length of service: 18.03 years (SD 7.42; range 4-31). Gender: 93.4% female, 6.6% male. Education: 75.4% D3 Nursing, 24.6% S1 Nursing.

Table 2.

Characteristics of respondents based on age and length of employment

Variable	N	Mean	Median	Min	Mak
Age	122	41,46	43,0	26	56
Length of employment	122	18,03	19,5	4	31

In the study marital status, work experience, job satisfaction, professional satisfaction, and relationships among nurses were found to be factors associated with nurses' perceptions of caring behavior (Tesema et al., n.d.). The longer nurses work, the more caring practice nurses show is high and the value of professionalism as the main predictor of caring behavior (Li & Kongsuwan, 2021)

Pre-test and Post-test Caring Score Distribution

Table 3. Analysis of the Impact of MEMO Components on Nurse Care

MEMO Component	Sum of Squares	df	Mean Square	F	Sig.
<i>Motivation</i>	15.327	1	15.327	12.984	0.000
<i>Enrichment</i>	11.542	1	11.542	9.763	0.002
<i>Mentoring</i>	13.915	1	13.915	11.778	0.001
<i>Operant Conditioning</i>	9.687	1	9.687	8.201	0.005
<i>Error</i>	142.061	120	1.184		
Total	192.532	124			

Based on Table 3, it can be seen that all MEMO components have a significant influence on nurse caring ($p < 0.05$). The *Motivation* component has the greatest influence ($F=12.984$), followed by *Mentoring* ($F=11.778$), *Enrichment* ($F=9.763$), and *Operant Conditioning* ($F=8.201$). One-way ANOVA analysis showed that all four MEMO components individually contributed significantly to nurse caring, in order of greatest influence: Motivation ($F = 12.984$; $p = 0.000$); Mentoring ($F = 11.778$; $p = 0.001$); Enrichment ($F = 9.763$; $p = 0.002$); Operant Condition ($F = 8.201$; $p = 0.005$)

DISCUSSION

The discussion shows that the respondents' characteristics (average age 41.46 years, work experience 18.03 years, 93.4% female, 75.4% D3 graduates, 95.1% married) provided a mature basis for acceptance of the MEMO intervention. Before the intervention, nurses' caring scores averaged 16.06 (range 7-20), reflecting fairly high caring behavior but varied significantly between individuals, influenced by work experience, workload, motivation, and education.

1. Interpretation of Main Results

The increase in nurses' caring scores from a mean of 16.06 to 18.14 after the MEMO intervention demonstrates the effectiveness of an integrated approach that combines motivation, enrichment, mentoring, and operant conditioning. The mean difference of 2.08 points with a p value = 0.000 indicates a real change and not just a coincidence. These results confirm that a comprehensive intervention can improve the mastery of caring skills and the consistency of nurses' caring behavior in daily practice. Caring behavior is more closely related to work motivation, because a person's behavior can be seen from how the intention or drive and the form of personality that the respondent himself has (Khodijah & Marni, 2014), the higher the level of nurse self-efficacy, the higher the caring behavior (Wihardja et al., 2025).

2. Consistency with Previous Research

This finding is in line with previous research that Motivation has a significant relationship with nurses' caring behavior (Permana et al., 2023). For the Enrichment component, it is in accordance with previous research which states that this education enables increased self-awareness and transformation of professional behaviors that are aligned with Watson's transpersonal carative factors including respect for privacy, empathic presence, and therapeutic communication (Babapour et al., 2022), patient satisfaction after nurses were given caring-based training in the intervention group was 50 respondents (83.3%) (Parinussa & Molle, 2021). Caring behavior training combined with mentoring significantly increased the average caring character ($p = 0.000$) (Bakar et al., 2022), increased caring ability after internship ($P < 0.05$), indicating that clinical experience and reflective learning processes also contribute to the improvement of caring behavior (Hu et al., 2022). For the Mentoring component, it aligns with research reporting that the attributes of a good mentor should include demonstration of good personal qualities, including enthusiasm, empathy, and sincerity (Achor et al., 2023). Mentoring can be done by leaders or managers in order to create a conducive work environment, related to the care environment, nurses' behavior in providing care is significantly related to the care environment, as measured through the presence of empowering nurse leadership, management, labor, and support (Oluma & Abadiga, 2020). Previous studies have shown that nurse managers' caring behaviors have a positive influence on improving nurses' job satisfaction and well-being and reducing workplace bullying (Zhang et al., 2024), job satisfaction influenced by supervision, communication, coworkers, and rewards has a significant relationship with caring behaviors (Putra et al., 2021), mentoring relationships have a significant positive effect on organizational commitment (Gong & Swol, 2022). Other research shows that coaching effectively sharpens communication skills, therapeutic presence, empathy, and moral insight among palliative nurses, helping their learning process and goal achievement (Sinaga & Bunga, 2024). According to operant conditioning theory, the most important thing in the learning process is reinforcement, both positive and negative reinforcement (Asyari, 2020). Rewards and length of service affect the caring behavior of nurses in the internal treatment room (Rusli et al., n.d.)

3. Conclusion: Most Influential Component

ANOVA analysis showed that the motivation component had the largest effect ($F = 12.984$; $p = 0.000$), followed by mentoring, enrichment, and operant conditioning. This supports the theory that intrinsic motivation is the main driver of caring behavior. Support from senior nurses (mentoring) is also crucial in transferring caring values and practical skills, while enrichment provides a knowledge base and therapeutic communication techniques.

4. Practical Implications

Hospital management can prioritize reward and recognition programs to maintain nurse motivation) and develop a structured mentoring schedule so that mentoring can be carried out consistently. The Nursing Education Unit is advised to integrate the MEMO module into the clinical curriculum so that nursing students are familiar with the four pillars of care from the initial education stage.

5. Hypotheses and Further Research Directions

These results support the hypothesis that the MEMO intervention has a significant positive effect on nurses' caring. To determine the causal mechanism more robustly, future research is recommended to add a control group and long-term evaluation to assess the sustainability of the intervention effect. In addition, it is necessary to test the relative contribution of each MEMO component through mediation analysis or factorial experimental design.

CONCLUSION

The MEMO (Motivation, Enrichment, Mentoring, Operant Condition) intervention was shown to significantly improve nurses' caring behavior. The mean caring score increased from 16.06 to 18.14 ($p=0.000$), rejecting the null hypothesis that the intervention had no effect. The four components of MEMO all contributed to the increase in caring behavior, with motivation as the dominant factor ($F=12.984$; $p=0.000$), followed by enrichment ($F=11.778$; $p=0.001$), mentoring ($F=9.763$; $p=0.002$), and operant conditioning ($F=8.201$; $p=0.005$). These interventions not only increased the mean score, but also reduced the minimum score variability from 7 to 13, indicating uniformity of caring behavior among nurses.

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