Implementation of Nursing Management MAKP Method and Dosing Cards System to Reduce the Risk of Burnout in Nurses at Simpang Lima Gumul Kediri Regional General Hospital

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ABSTRACT
Burnout is a psychological syndrome resulting from prolonged exposure to chronic stress, especially prevalent in high-pressure environments such as healthcare. Among the healthcare providers, such as nurse appear to be at a higher risk of burnout, which can have serious personal consequences (substance abuse, broken relationships, and even suicide), as well as serious professional consequences such as lower patient satisfaction, lower quality of care, and even medical errors which expense carers and hospitals considerable funds. We conducted a community service by identifying the leading factors that caused burnout among nurses at Simpang Lima Gumul Kediri General Hospital. We found that Burnout among nurses in Simpang Lima Gumul Kediri is intensified by some factors including excessive workload, overcrowding, and challenging non-physical work environments. We proposed two interventions the Professional Nursing Care Model (*Model Asuhan Keperawatan Profesional*, MAKP) and the Dosage Card System as strategies to mitigate burnout among nurses at Simpang Lima Gumul Kediri Hospital. Through a community service activity, socialization sessions were conducted with department heads, nurses, and service administrators, where pre-test and post-test were administered to evaluate understanding of the interventions. Findings suggest that these sessions effectively enhanced participants' knowledge of the MAKP and Dosage Card System, providing actionable insights into applying these methods in clinical settings to help alleviate nurse workload and reduce burnout. The participants also raised another option which is Timbang Terima Digital as a third potential tool for enhancing nursing efficiency and patient care quality.

Keywords: Burnout, Dosing Card Systems, MAKP, Nurse, Nursing Management

INTRODUCTION

Burnout is a long-term response to persistent psychological and social stressors on the job that defined by three dimensions: exhaustion, cynicism, and professional ineffectiveness, particularly in high-pressure environments (Schaufeli & Maslach, 2018). Theoretical models such as Freudenberger's describe burnout as emotional exhaustion resulting from overwork,

while Maslach & Jackson conceptualized it into three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment (Edú-Valsania et al., 2022). Healthcare workers appear to be at a higher risk of burnout, which can have serious personal consequences (substance abuse, broken relationships, and even suicide), as well as serious professional consequences such as lower patient satisfaction, lower quality of care, and even medical errors which expense carers and hospitals considerable funds (De Hert, 2020).

Previous research has identified various factors associated with burnout in nursing. For instance, job satisfaction and workplace environment significantly influence burnout levels among nurses at Petrokimia Gresik Hospital (Andarini, 2018). Poor job satisfaction was directly correlated with higher instances of burnout, suggesting that when nurses feel undervalued or unsupported, their emotional and psychological resilience diminishes Another research also reported that factors such as role ambiguity and lack of social support contribute to burnout among nurses in Tangerang (Adawiyah & Blikololong, 2019).

Additionally, psychological work environment perceptions were also found to be one factor that caused burnout among nurses at Cilandak Marine Hospital (Fanani et al., 2020). Nurses who perceived their work environment as negative or unsupportive were more likely to experience higher burnout levels. This aligns with findings in research among nurses in Makassar which revealed a significant relationship between hope and burnout, indicating that those with higher levels of hope were less likely to experience burnout (Aulia, 2018).

Furthermore, research among nurses in Yogyakarta, further highlights that intensive patient visits can increase emotional exhaustion, particularly in inpatient settings (Fatimah & Yugistyowati, 2022). This finding reinforces the notion that workload and the intensity of patient interactions are critical factors influencing burnout.

According to our preliminary findings at Simpang Lima Gumul (SLG) Kediri General Hospital, healthcare workers, particularly nurses, experienced burnout, which is exacerbated by a variety of organisational and environmental factors that are consistent with the first dimension of burnout theories. The nurses at are under tremendous physical and emotional strain as a result of high Bed Occupancy Rates (BOR) in critical care units such as the PICU, NICU, ICU, and CVCU (which frequently exceed 100%). The theoretical understanding ties directly into these real-world conditions, where the intense workload leads to emotional exhaustion a primary dimension of burnout (Ariyanti, 2021). This condition especially employed in inpatient units with a significant number of deceased patients, elevated fatality rates, or a high proportion of elderly patients (Sacadura-Leite et al., 2020). The Nurses at SLG Kediri General Hospital reported frequent feeling drained despite having adequate rest, as they face overwhelming patient loads and difficult cases in these high-intensity wards.

The second dimension, depersonalisation, is characterised in the literature as a detrimental quality marked by an impersonal or excessively detached approach to work. This phenomenon is exacerbated by increased workloads due to nursing shortages, heightened patient demands, and insufficient resources and organisational support (Abhicharttibutra & Tungpunkom, 2019). This manifests in detachment or cold attitudes, as observed in some staff at SLG General Hospital, particularly when emotional demands exceed their coping capacity. This creates an environment where interpersonal care suffers, not only impacting patient outcomes but also reducing job satisfaction among the nursing staff.

The third dimension, reduced personal accomplishment has been consistently associated with several factors: high workload, low staffing levels, extended shifts, limited control, inflexible scheduling, time pressure, elevated job and psychological demands, low task variety, role conflict, insufficient autonomy, weak supervisor or leader support, ineffective leadership, poor team relationships, and job insecurity (Dall'Ora et al., 2020). The preliminary finding

shows that evident in the dissatisfaction and frustration that some nurses at SLG general hospital caused by limited resources, such as incomplete medical equipment and non-optimal working conditions, contribute to a sense of inadequacy in performing their roles effectively. When the nurses feel they are not achieving their professional goals, it deepens the burnout cycle, further diminishing their morale and productivity.

According to those backgrounds, we conducted a community service by identifying the leading factors that caused burnout among nurses at SLG Kediri General Hospital. Then, we proposed two interventions to address those factors. Furthermore, we disseminated our suggestions to the nurses and conducted tests to view the possibility of the application of the interventions.

METHODS

The method outlines the approach and stages for conducting community service activities aimed at reducing burnout among nurses at SLG Kediri General Hospital. The stages are as follows:

1.   Situation Analysis of Nursing Staff
In the initial stage, the team conducts assessments of the nursing staff's work conditions and experiences of burnout. This includes surveys to gather data on stress levels, workload, and job satisfaction, as well as interviews to understand personal experiences related to emotional exhaustion and depersonalization.

2.   Problem Identification
Preliminary findings indicate that a significant percentage of nurses report experiencing symptoms of burnout, with up to 90% experiencing emotional exhaustion and high levels of stress due to excessive workloads and inadequate support systems. Observations suggest that factors such as high Bed Occupancy Rates (BOR) and poor organizational support contribute to the burnout experienced by the nursing staff.

3.   Solution Planning
To address the identified issues, the team plans to implement educational and support initiatives. This includes developing educational materials on stress management techniques and creating resources that emphasize the importance of self-care practices. Additionally, strategies such as establishing peer support groups and implementing regular workshops on coping mechanisms and work-life balance will be introduced.

4.   Social Approach
Before the implementation of these initiatives, the team will engage in a social approach by meeting with nursing staff to discuss the causes and impacts of burnout. This will include sharing best practices for managing stress and facilitating discussions about the importance of mental health in the workplace.

5.   Activity Implementation
The proposed activities will commence with a workshop scheduled for October 17, 2024, aimed at equipping nurses with the *Model Asuhan Keperawatan Profesional* (MAKP) and the Dosage Card system, which have been proposed in this conversation. This workshop will provide training on how to effectively implement these tools to enhance patient care and manage burnout. Topics will include stress management techniques, effective communication strategies, and the proper use of the Dosage Card system to streamline medication administration, ultimately fostering a more supportive work environment.

According to our analysis, several factors specific to SLG Kediri General Hospital contribute to the onset of burnout among nurses including:

1.   Based on interviews, observations, and data collection, findings indicate that Bed Occupancy Rates (BOR) in several units are consistently high, with some areas exceeding

100%, leading to prolonged shift handovers and extended working hours. In critical care units, the nurse-to-patient ratio often falls short of the ideal, with the recommended 1:2 or 1:3 ratio frequently unmet, particularly in rooms where patients require total care. This excessive workload represents a major predictor of burnout, as corroborated by studies conducted within the hospital setting.

2. Non-Physical Work Environment: The non-physical aspects of the work environment, such as inadequate administrative support, the pressure of hybrid manual systems, and insufficient medical equipment, further aggravate stress levels. The emotional toll of handling difficult cases without sufficient support has been found to increase burnout risk.

3. Organizational Behavior: Studies on organizational behavior indicate that insufficient peer support can contribute to the exacerbation of burnout symptoms. At SLG Kediri General Hospital, while there have been initiatives to recruit additional nurses and revise Standard Operating Procedures (SOPs), the ongoing need for emotional and professional support persists, which may play a role in the experience of burnout among staff.

According to those factors, we proposed two key interventions through workshop to the head of rooms, nurses, and head section of services of SLG Kediri General Hospital. The interventions are as follows.

1. Model Asuhan Keperawatan Profesional (MAKP)

The *Model Asuhan Keperawatan Profesional* (MAKP) is a structured approach designed to enhance the quality of nursing care while alleviating the administrative burdens that contribute to burnout among nurses (Pradana et al., 2022). The implementation of MAKP has demonstrated a significant positive correlation between nurse satisfaction and the effective implementation of the MAKP, indicating that a well-defined nursing care model can lead to improved performance and job satisfaction (Kanang et al., 2020).

Key components of the MAKP include:

o   Comprehensive Nursing Care Management: The MAKP emphasizes the importance of structured patient care management. By providing training focused on high-quality nursing practices, especially in critical care settings, nurses at RSUD SLG will be better equipped to handle complex patient needs. This aligns with findings research in Pamekasan which reported that implementing a professional nursing care model not only improved patient outcomes but also enhanced staff morale and engagement (Ghazali et al., 2023).

o   Stress Management Techniques: Integrating stress management strategies within the MAKP framework is crucial for addressing burnout. Training programs will focus on resilience-building techniques and coping mechanisms that empower nurses to manage the emotional demands of their roles. Studies have shown that effective stress management can reduce burnout and increase overall job satisfaction among nursing staff.

o   Leadership and Teamwork Development: Promoting effective leadership and teamwork is another vital aspect of the MAKP. Research indicates that fostering collaboration and communication among nursing staff can alleviate feelings of isolation and improve overall team dynamics. This approach not only supports individual nurses but also contributes to a healthier work environment.

2. Dosage Card System

The Dosage Card system serves as a practical intervention to streamline the medication administration process, which is often a significant source of stress for nurses. By providing standardized references for medication dosages and protocols, the Dosage Card system minimizes the cognitive load associated with administering medications. This approach is especially beneficial in high-pressure environments where the risk of errors can lead to

substantial stress and burnout. The implementation of the Dosage Card system will involve:

o   Standardization of Medication Protocols: Developing a user-friendly dosage card that nurses can quickly reference during shifts will ensure accuracy and efficiency in medication administration.

o   Training and Integration: Providing training on the effective use of dosage cards will further reduce anxiety around medication errors, allowing nurses to focus on patient care rather than the fear of making mistakes.

RESULTS

There are two main points of discussion from the workshop, first is the knowledge test and the application possibility test. The analysis revealed a positive change in participants' knowledge regarding the Model Asuhan Keperawatan Profesional (MAKP) and the Dosage Card following the intervention, which included structured training sessions.

In the pretest, 7 participants reported familiarity with MAKP. This number increased to 8 participants in the posttest, indicating a marginal improvement with one additional participant gaining knowledge about MAKP after the intervention.

Knowledge of the Dosage Card also improved, with 5 participants initially reporting familiarity in the pretest, which increased to 8 participants in the posttest. This reflects a more substantial increase of 3 participants who became knowledgeable about the Dosage Card after the intervention.

These findings suggest that the intervention was effective in enhancing participants' understanding of both MAKP and the Dosage Card, with a notably larger impact observed for Dosage Card knowledge. The positive change in reported knowledge serves as an indicator of the intervention's efficacy in achieving its educational objectives.

The analysis of pretest and posttest responses concerning the application of the Model Asuhan Keperawatan Profesional (MAKP) and the Dosage Card in the workplace yielded the following insights.

In the pretest, 62.5% of participants indicated that they believed MAKP could be applied within their workplace, reflecting a generally positive perception of its feasibility. However, 37.5% of participants expressed skepticism, suggesting varying levels of confidence in its applicability. In the post-test, following the intervention, 100% of participants expressed confidence in the feasibility of MAKP implementation. This increase from the pretest suggests a positive shift in perception, likely attributable to the enhanced understanding gained through the educational session.

Both pretest and post-test responses demonstrated unanimous agreement (100%) regarding the feasibility of Dosage Card implementation in the workplace. This consistency indicates that participants were already aware of its benefits and practical applicability prior to the intervention, with their confidence remaining unchanged post-intervention.

The findings indicate a substantial improvement in participants' perception of MAKP's applicability in the workplace, moving from a majority belief to unanimous agreement following the intervention. In contrast, participants' positive perception of the Dosage Card's applicability remained constant, suggesting that the intervention was particularly effective in strengthening understanding and confidence related to MAKP while reinforcing existing positive attitudes toward the Dosage Card.
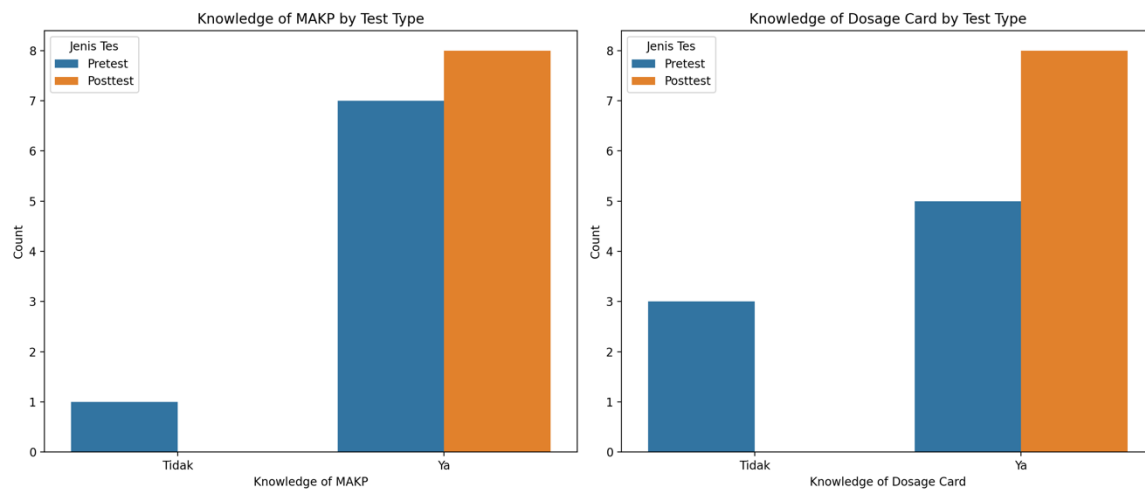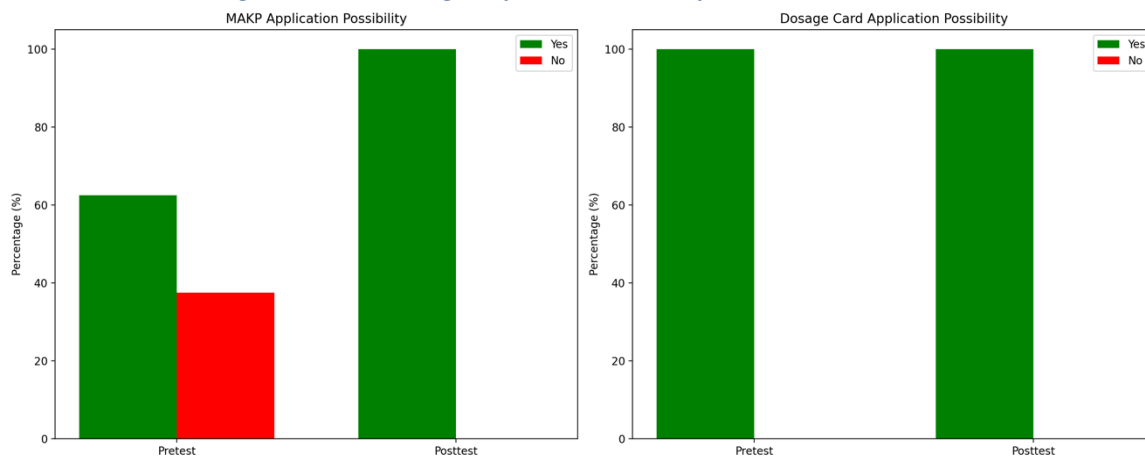
TABLES AND FIGURES

Figure 1 Knowledges of Interventions for Pretest and Postest

Figure 2 Posiibilities of using intervention methods from pretest and postest

Figure 3 The Situation of the workshop

Figure 4 The Situation of the workshop

DISCUSSION

The analysis of survey responses regarding the implementation of the Model Asuhan Keperawatan Profesional (MAKP) and the Dosage Card reveals a notable shift in perceptions, which indicates the intervention's impact on nursing practices and perceptions. Initially, the pretest responses to MAKP implementation displayed a range of acceptance, with some participants questioning the adequacy of resources, such as nurse availability and the patient-to-bed ratio, as primary concerns. Specific reasons cited included a lack of alignment between workload and staff capacity and concerns over nurse-to-patient ratios in the current setting. However, several respondents recognized MAKP's potential for supporting structured care through modular frameworks, which could better equip professional nurses in providing patient care. One participant indicated that the MAKP could allow professional nurses to more effectively manage care delivery, enhancing service quality by adapting to patient needs.

In the posttest phase, the perception of MAKP's applicability improved significantly. Respondents highlighted the adaptability of MAKP across varied room conditions and noted its potential to deliver optimal patient care through professional service standards. The consensus pointed to the training and exposure gained from the intervention as pivotal in elevating confidence and understanding, with multiple respondents specifically citing that MAKP aligns well with both team-based and individualized care delivery approaches. The posttest responses suggest that participants increasingly perceived MAKP as an adaptable and practical model for supporting nursing professionalism and efficient patient care.

Similarly, responses regarding the Dosage Card implementation showed a strong, positive reception throughout both phases. Pretest responses already indicated broad support, with

respondents emphasizing the Dosage Card's role in simplifying dosage calculation and supporting accurate medication administration. Respondents mentioned that implementing the Dosage Card could ease daily tasks and enhance care quality, with specific references to its utility in ensuring dosage accuracy. Posttest responses reinforced this positive perception, with respondents noting that Dosage Cards are particularly beneficial for handling complex medication administration scenarios, including those involving titration and the use of devices such as syringe pumps. This increase in understanding following the intervention suggests that further exposure to dosage management techniques fortified the Dosage Card's perceived value in ensuring precise and efficient medication delivery.

In addition to the MAKP model and Dosage Card, respondents raised the Timbang Terima Digital system as a third potential tool for enhancing nursing efficiency and patient care quality. Timbang Terima Digital, a digital handover system, provides a structured and reliable means of exchanging patient information between shifts. This digital system was highlighted by respondents as a solution to common challenges encountered during traditional, paper-based handovers, such as incomplete information transfer and variability in reporting quality. By standardizing handover processes, Timbang Terima Digital enables nursing staff to access detailed patient information quickly, thereby reducing the risk of communication errors that can impact patient outcomes.

The positive response to Timbang Terima Digital reflects an awareness among respondents of the potential improvements in continuity of care and workflow efficiency that a digital handover system could bring. Nurses indicated that a digital handover tool could mitigate errors associated with information gaps during shift changes and ensure that patient information remains consistent and up-to-date across shifts. Furthermore, the digitalization of handovers aligns with broader healthcare industry trends toward increased use of technology to support decision-making and streamline daily operations. This preference for a standardized digital handover process suggests that nursing staff value innovations that promote clear and accurate communication, ultimately enhancing the quality and safety of patient care.

CONCLUSION

This journal article presents findings from community service activities aimed at reducing burnout among nurses at Simpang Lima Gumul Kediri General Hospital. The survey results indicate that nurses are likely to adopt the MAKP model, Dosage Card, and Timbang Terima Digital as practical solutions to improve workflow efficiency and patient care, thereby helping to alleviate stress and burnout.

The MAKP model is seen as beneficial for its structured, modular framework, which supports professional, organized, and patient-centered care. Nurses appreciated its adaptability to different care environments and its ability to enhance service quality, making it a suitable model for efficient patient management. The Dosage Card was also favorably viewed for its role in facilitating accurate and streamlined medication administration. Nurses found it particularly helpful for complex medication calculations, which enhances accuracy and reduces time demands, allowing for more efficient workflows. Lastly, the Timbang Terima Digital system was highlighted as a valuable tool for standardizing handovers between shifts. By digitizing patient information exchange, this tool reduces communication errors and ensures continuity of care, which contributes to a smoother and more reliable nursing process.

These tools collectively offer practical solutions to reduce nurse burnout by promoting efficiency, accuracy, and professional support in daily nursing tasks, thereby contributing to a more sustainable work environment.

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