IMPLEMENTATION OF PAIN MANAGEMENT IN THE INTENSIVE CARE UNIT (ICU) ROOM

Nurul Iklima[1], Lia Nurlianawati[2]
[1]Universitas ARS, Bandung, Indonesia
[2] Universitas Bhakti Kencana, Bandung, Indonesia
Corresponding Author: nuruliklima94.ni@gmail.com

Abstract: Background Critical patients in the intensive care unit (ICU) suffer from pain, especially mechanical ventilation. From 35% to 55% of nurses have reported underestimating patient pain. A current practice study revealed that practical pain assessment during the procedure in mechanical ventilation patients was still below 40%. Poor pain treatment can lead to severe complications, including neurohumoral changes, neuronal remodeling, and prolonged psychological stress that can harm critical patients.

Methods: This study is a quantitative descriptive study with a sample number of 84 nurses who served in intensive rooms. The data was collected using the Acute Pain Evidence-Based Practice Questionnaire (Current Practice Related to Pain Assessment and Pain Management in Older Adults).

Result: The results showed that most respondents carried out pain management in patients classified as quite optimal, as much as 51.2%.

Conclusions: Nurses need to continuously improve knowledge and competence through formal education and training to maintain the quality of pain management services, especially in critical care areas related to the implementation process in the implementation of pain management.

Keywords: Intensive Care Unit, Pain management

Background

The ICU is a treatment room for critically ill patients who require immediate intervention for coordinated management of organ system functions and requires continuous constant supervision and immediate action. Critical patients in the intensive care unit (ICU) suffer from pain, especially mechanical ventilation. From 35% to 55% of nurses have reported underestimating patient pain. A current practice study revealed that practical pain assessment during the procedure in mechanical ventilation patients was still below 40%. Researchers have recognized that bad aches and pains are the leading causes of physiological difficulties and emotional stress. Therefore, it seems vital to achieve effective management of analgesics but previously had to measure pain validly and reliably [1].

Poor pain treatment can lead to severe complications, including neurohumoral changes, neuronal remodeling, and prolonged psychological stress that can harm critical patients [3]. Obstacles that affect the implementation of pain management include the condition of the hospital environment, the completeness of medical equipment, and the severity of the patient's illness [2]. The research results related to internal factors that affect the implementation of pain management by most nurses (89%) who choose not to use pain assessment tools for patients who cannot communicate, and nurses are not very familiar with pain assessment and assessment guidelines [8].

The American Association of Critical-Care Nurses (2013) says that many critically ill adult patients experience significant pain during hospitalization. In the ICU, for example, more than 30% of patients have significant pain while resting, and more than 50% of patients experience significant pain during routine treatment, such as during the process of changing position, endotracheal suction, and wound care. Additional pain will arise from simple procedures such as endotracheal suction and other measures [11]. About 50%-80% of hospitalized patients experience pain at some time during the treatment period due to the procedure, surgical intervention, and disease status [6]. Another study conducted in France on 1,381 patients attached to mechanical ventilators said that 51% of patients had substantial pain non-procedure [7].

Conventional pain assessment has been viewed hierarchically with "self-report" as the "gold standard" to improve pain management. Pain is the fifth vital sign that is considered at this time self-report in pain assessment is only one of the strategies used by health workers. In addition to pain assessments based on the patient's self-report, non-verbal and behavioral expressions become very important in implementing pain management. Non-self-report assessment strategies for assessing pain include facial expressions (e.g., grimacing), behavioral observations (e.g., guarding and body movements), and physiological monitoring (e.g., vital signs) [9]. In implementing pain management, nurses often act as mediators between doctors and patients and as the primary observer of the patient's pain and discomfort condition.

Critical patients are often unable to communicate effectively, so nurses need to do more specific pain assessments in the pain assessment process and rely on the patient's self-report. However, nurses still look at the patient's condition objectively from hemodynamic conditions behavioral changes that arise. Pain management in critical patients with mechanical ventilation is challenging to recognize pain behavior, interpret pain scores, and make informed decisions. This clinical reasoning is an inherent process in poorly understood advanced nursing practice. A better understanding of the process can improve pain assessment and management [5].

Methods

This study is a quantitative descriptive study with a sample number of 84 nurses who served in intensive rooms. Data was collected using the Acute Pain Evidence-Based Practice Questionnaire (Current Practice Related to Pain Assessment and Pain Management in Older Adults) questionnaire.

Univariate analysis is done by analyzing distribution and descriptive statistics to see an overview of frequency distribution and percentage of factors studied knowledge factors. Variables will be analyzed descriptively to get an overview of the implementation of pain management in the ICU room. The analysis results are displayed in the frequency distribution and percentage of the continuous data of the categorical data on all variables, both free and bound variables, presented in the frequency distribution table or other corresponding forms.

Results

The following presented the study results with a descriptive analysis approach on "implementation of pain management by nurses in intensive rooms" with 84 study respondents.

Table 1. Frequency Distribution Overview of Pain Management Implementation (n=84)

Category	Frequency (f)	%
Optimal	8	9,5
quite optimal	43	51,2
less than optimal	33	39,3
Total	**84**	**100**

Table 1 above summarizes respondents' responses to the overview of nurses' implementation of pain management in a patient in intensive care rooms. From the table, it is known that most of the respondents carry out pain management in patients classified as quite optimal, as much as 51.2%.

The study results in Table 1 showed that the implementation of pain management in the ICU room had not been done to the maximum. However, most have done it with a maximum of enough (51.2%) only (9.5%) have carried out optimally, the rest as much as (39.3%) is still not optimal in carrying out pain management. Table 1 shows that the lowest score in the statement is that most nurses are not optimal in implementing pain management. The implementation of pain management uses equianalgesic tables to estimate new doses (as prescribed by the doctor) when the patient's pharmacotherapy changes to a different route of administration.

Some nurses also never avoid the use of pethidine in patients. Nurses should consult this with a doctor for appropriate therapy because the results of a study conducted by Solhi et al. (2016) said that patients who received morphine reported better pain control compared to those who received meperidine (pethidine) [10]. Research also reveals that morphine may be recommended in pain management in opioid-dependent patients.

This condition is in line with research conducted by Rose et al. (2012), which said that in addition to the assessment process, the factor that becomes an obstacle to the implementation of pain management is in the implementation process. In this process, the obstacles include how a nurse determines the priority of patient care, assessing the academic intensity and motivation obtained by a nurse from the surrounding environment [8]. Intensive care is one of the most intensive forms of medical care in terms of resources. That is due to the severity of the patient's illness, which usually has several life-threatening conditions and is in a unit with a high staff level (both in number and competence) and a high-tech environment [4].

Conclusion

The implementation of pain management carried out by nurses in intensive care has not been done optimally, although most have done it optimally (51.2%) but only (9.5%) have carried out optimally, the rest as much as (39.3%) are still not optimal in carrying out pain management. So that nurses need to continuously improve knowledge and competence through formal education and training to maintain the quality of pain management services, especially in critical care areas related to the implementation process in the implementation of pain management.

Author's Contributions

1. Nurul Iklima is a lecturer at the Faculty of Nursing at ARS University Bandung, a graduate of S1 Nursing, and a Master's Degree in Critical Care Nursing from Padjadjaran University.
2. Lia Nurlianawati is a lecturer at the Faculty of Nursing at Bhakti Kencana Bandung, a graduate of S1 Nursing, and a Master's Degree in Community Nursing from Padjadjaran University.
3. All authors designed the study, Nurul Iklima and Lia Nurlianawati completed the entire filed work, input and analysis data. All authors contributed to writing the report of research and manuscript.

References

1. Ahlers, S. J., van der Veen, A. M., van Dijk, M., Tibboel, D., & Knibbe, C. A. (2010). The use of the Behavioral Pain Scale to assess pain in conscious sedated patients. *Anesthesia & analgesia*, *110*(1), 127-133.
2. Al-Shaer, D., Hill, P. D., & Anderson, M. A. (2011). Nurses' knowledge and attitudes regarding pain assessment and intervention. *Medsurg Nursing*, *20*(1), 7.
3. Barr, J., Fraser, G. L., Puntillo, K., Ely, E. W., Gélinas, C., Dasta, J. F., … Jaeschke, R.

(2013). Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit, 263–306. https://doi.org/10.1097/CCM.0b013e31827 83b72

4. Falk, A. C., & Wallin, E. M. (2016). Quality of patient care in the critical care unit about nurse-patient ratio: A descriptive study. *Intensive and Critical Care Nursing*, *35*, 74-79.

5. Gerber, A. (2015). Australian Critical Care Expert clinical reasoning and pain assessment in mechanically ventilated patients: A descriptive study. *Australian Critical Care*, *28*(1), 2–8. https://doi.org/10.1016/j.aucc.2014.06.002.

6. Gregory, J., & McGowan, L. (2016). An examination of the prevalence of acute pain for hospitalized adult patients: a systematic review. Journal of Clinical Nursing, 25(5-6), 583–598.

7. Puntillo, K. A., Max, A., Timsit, J. F., Vignoud, L., Chanques, G., Robleda, G., ... & Ionescu, D. C. (2014). Determinants of procedural pain intensity in the intensive care unit. The Europain® study. *American journal of respiratory and critical care medicine*, *189*(1), 39-47.

8. Rose, L., Smith, O., Gélinas, C., Haslam, L., Dale, C., Luk, E., ... & Watt-Watson, J. (2012). Critical care nurses' pain assessment and management practices: a survey in Canada. *American Journal of Critical Care*, *21*(4), 251-259.

9. Schiavenato, M., & Craig, K. D. (2010). Pain Assessment as a Social Transaction Beyond the "Gold Standard" *26*(8), 667–676.

10. Solhi, H., Sanaei-Zadeh, H., Solhi, S., Nadian, M. A. A., Gharibi, M., & Sedeh, B. S. (2016). Meperidine (pethidine) versus morphine in acute pain management of opioid-dependent patients. *Open access emergency medicine: OAEM*, *8*, 57.

11. Wysong, Peggy RuppWysong, P. R. (2014). Nurses' beliefs and self-reported practices related to pain assessment in nonverbal patients. *Pain Management Nursing*, *15*(1), 176–185. https://doi.org/10.1016/j.pmn.2012.08.003