

Original Research

Knowledge of Nurses in Using Critical-Care Pain Observation Tools to Assess Pain of Unconscious Patient in Intensive Care Unit



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Article Info	Abstract
Article history: Received: 29 August 2022 Accepted: 25 November 2022	<i>Introduction:</i> In the critical nursing area, many intubated patients are unable to communicate to indicate the level of pain felt. Assessing the characteristics of pain, especially in patients with mechanical ventilation is a major nursing intervention that requires nursing knowledge. The examination of the CPOT pain scale was certainly accompanied by the knowledge that must be possessed by the nurse when going to conduct a pain assessment in patients who were not able to express pain verbally in the ICU, so as to provide appropriate intervention and help assess the patient's pain response non-verbally. The purpose of this study was to determine the knowledge of nurses in using the Critical-care Pain Observation Tool in assessing pain. <i>Methods:</i> This study used a quantitative descriptive research method, with total sampling. Samples were taken by 72 respondents. <i>Results:</i> The results obtained 14 respondents with good knowledge, 26 respondents with enough knowledge, and 32 respondents with less knowledge. <i>Conclusion:</i> The conclusion is that the knowledge of nurses in using the Critical-care Pain Observation Tool in assessing pain is poor knowledge. The recommendation for this research is to provide knowledge related to pain assessment using CPOT with education.
Keywords: critical care, CPOT, knowledge, pain scale	

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INTRODUCTION

The American Association of Critical Care Nurses, said that many critically ill adult patients experience significant pain during hospitalization [1]. More than 30% of critically ill patients have significant pain at rest and more than 50% of patients experience significant pain during routine care processes, such as during position changes, endotracheal suctioning, and wound care [2].

Appropriate management of pain depends on systematic and accurate assessment. Pain should be assessed regularly and structured, this is often not done. Proper and definitive pain assessment tools are available, but many nurses do not use them. There are many in the ICU because of their illness, causing the patient to become unconscious or using a ventilator-assisted breathing apparatus so that they cannot communicate their pain to the nurse. This is a challenge for ICU nurses because the patient's pain intensity is often underestimated [3]. This is because there are groups of ICU patients who cannot communicate effectively. At the same time, the self-report method is still the 'gold standard in pain assessment according to guidelines from the International Association for The Study of Pain [4], [5].

Assessing the characteristics of pain, especially in patients with mechanical ventilation is the main nursing intervention that requires nursing knowledge [6]. Nurses' knowledge about pain is very important for the formation of nurse actions (overt behavior) in pain management [7]. In unconscious patients who are treated in

intensive care, nurses need concepts and knowledge related to pain, pain assessment, data collection about pain, and useful therapy, and also require sensitivity and empathy from a nurse [8].

In line with the research conducted, the results showed that 73.3% of nurses had a low level of knowledge and 26.7% of nurses had a sufficient level of knowledge [9], [10]. Therefore, the importance of knowledge in assessing patients with decreased consciousness in helping convey the pain of patients who are unable to convey it verbally [11].

An assessment of the general characteristics of pain helps nurses form an understanding of pain patterns and the types of therapy used to treat pain. Pain intensity is a measure of how severe the pain is felt by the individual [12]. Pain measurement with the most objective approach possible is to use the body's physiological response to pain itself. The American Association of Critical-Care Nurses (AACN), the American College of Chest Physicians (ACCP), the Society for Critical Care Medicine (SCCM), and the American Society for Pain Management (ASPM), suggest that in pain assessment, standardized pain assessment tools should be used, including several behavioral indicators in mechanically ventilated patients who are unable to report pain, or in those who may be able to report pain but are unreliable [13], [14]. Pain management at PKU Muhammadiyah Gombong Hospital and Kebumen Hospital is not optimally carried out. PKU Muhammadiyah Gombong ICU itself still uses pain assessment using a numeric rating scale, while the ICU at Kebumen Hospital uses a

Behavioral Pain Scale (BPS) pain assessment. Another pain scale assessment that can be recommended for use in the ICU with the condition of patients who are unable to express themselves verbally is the Critical-care Pain Observation Tool. CPOT has been tested for sensitivity and specificity with the gold standard of verbal pain reporting by extubated patients with the results of a sensitivity value of 86% and a specificity value of 78%. The results for the CPOT measuring instrument with a p-value of 0.009 (< 0.05) are significant with a kappa value of 0.915 indicating a very good level of agreement.

The tested assessment of the CPOT pain scale is certainly accompanied by the knowledge that nurses must possess when conducting a pain assessment in patients who are unable to express pain verbally in the ICU so that they can provide appropriate interventions and help assess the patient's pain response non-verbally [15]. Based on this background, the researchers are interested in conducting further studies on the knowledge of nurses in using the Critical-care Pain Observation Tool in assessing pain.

METHODS

This research used descriptive quantitative research methods. This study identified

nurses' knowledge in assessing pain in patients using CPOT. The populations were 72 respondents, and the sampling technique used was total sampling. The instrument used was a knowledge questionnaire related to the assessment of CPOT pain. The data analysis technique used only univariate analysis, because this study only describes the characteristics of respondents and nurses' knowledge regarding CPOT pain assessment. This research has passed ethics through the STIKES Muhammadiyah Gombong research ethics institute on May 22, 2021 with the number 012.6/II.3.AU/F/KEPK/II/2021.

RESULTS

The results of the study obtained 72 respondents who filled out the questionnaire via google form. Based on the results of the study, it was found that the age of most respondents was above 30 years. This is related to the length of work of nurses in the intensive care room, where the length of work is more than 5 years as many as 52. The distribution results showed that there were more women than men with a total of 52 nurses. The results of the research related to knowledge were found that 32 nurses had poor knowledge categories, and 14 nurses had good knowledge.

Table 1

Characteristics of Respondents

Variable	n	%
Aged		
< 30 years	28	38.9
≥ 30 years	44	61.1
Gender		
Male	20	27.8
Female	52	72.2
Educational Background		
D3 Nurse	34	47.2
S1/Nurse	38	52.8
Length of work in Hospital		
< 5 years	20	27.7
≥ 5 years	52	72.3
Nursing Knowledge		
Good	14	19.4
Fair	26	36.1
Less	32	44.4
Total	72	100

DISCUSSION

Based on the results of the study, it was found that the age of most respondents was above 30 years. This is related to the length of work of nurses in the intensive care room, where the length of work is more than 5 years as many as 52. The length of work and the nurse's advancing age have an impact on her or his level of work experience. The older you get, the more your grasping power and mindset will develop so that the knowledge you gain will improve. In addition, nurses with a more senior age need a longer time to adapt to updated knowledge and the use of technology-based tools [16], [17]. Nurses who are proficient in English (adequate, good, and outstanding) commit more than an hour each week to updating the bibliography [18]. To maintain a high degree of medication

security in the ICUs, it may be helpful to extend and deepen the nurses' expertise in a cyclical fashion [19]. Although knowledge levels varied throughout nations, there weren't any significant variances [20], [21]. The comparatively low scores in the respiration/ventilation category, however, are concerning and indicate that this is an area of teaching that should be given priority [22], [23].

The opinion above is in accordance with the data on the characteristics of the respondents in the research conducted, where the mean is 30.29 including in early adulthood, namely 23-40 years, and only 16.7% of nurses are included in the adult category. Age affects a person's grasping power and mindset, so increasing age will further develop a person's grasping power

and mindset so that the knowledge he has is getting better. According to the Ministry of Health, early adulthood is the age at which a person begins to pursue his career, while late adulthood is the stage of maintaining what has been obtained [24].

The distribution results showed that there were more women than men with a total of 52 nurses. The nursing profession is more attractive to most of the female gender who have the tenacity and are skilled in treating patients. Patients with critical conditions whose basic human needs are assisted as a whole by nurses. A gender is a form of social construction that refers to a system that influences behavior and defines the relationship of power and status between men and women which often results in inequality [25]. Historically, women were considered to have lower competence than men and as a result, their views on decision-making were often ignored. Male nurses are given more opportunities to contribute to care decisions than female nurses, and their advice is often viewed more positively [10], [26].

Research conducted in Turkey reported that nurses who have a bachelor's degree or with a higher degree level have higher knowledge outcomes. The results of the score obtained are higher than those who have an education equivalent to a diploma. It is shown by statistical results that there is a significant relationship between education and the level of knowledge. ($P < 0.05$). The nurse's work environment and length of time can make a person gain experience and knowledge about the use of the Critical-care Pain Observation Tool (CPOT) both directly and indirectly [27],

[28]. This is also reinforced by the theory, which states that knowledge is influenced by someone with the motivation obtained in carrying out behavior, thus forming a lifestyle to obtain information to increase knowledge [29]. Thus, someone with long work experience and getting a high education will affect the knowledge gained. In accordance with the results of this study, 52 nurses worked for more than 5 years, and 38 nurses with a higher education equivalent to a bachelor's degree [5].

The results of the research related to knowledge were found that 32 nurses had poor knowledge categories, and 14 nurses had good knowledge. Good knowledge in the assessment using the Critical-care Pain Observation Tool (CPOT) was obtained when education and knowledge were still lacking, most of them had not received information about the Critical-care Pain Observation Tool (CPOT). So far, nurses are still using commonly used assessments such as the Numeric Rating Scale (NRS), Wong-Baker Faces Pain Rating Scale and some are using the Behavioral Pain Scale (BPS) [30]. Knowledge is the result of knowing and is formed after someone senses a certain object. Nurses have a role in effective pain management, one of which is the use of appropriate pain assessment tools [31].

Assessment of pain in critically ill patients is a challenge for nurses because the complexity and pain behavior of each patient is different between verbal and non-verbal. One study suggest that a high level of education results in good knowledge [22].

Critical patients in the Intensive Care Unit (ICU) who feel pain, especially those

using mechanical ventilation or who have decreased consciousness are unable to convey the pain they feel. Therefore, it is important to achieve effective management in terms of analgesic drug administration and self-therapy, but it is necessary to measure pain to obtain valid results.

Measurement of pain in patients using mechanical ventilation or those who have decreased consciousness can use the Critical-care Pain Observation Tool (CPOT) [4], [32]. CPOT has been tested for sensitivity and specificity with the gold standard of verbal pain reporting by extubated patients with the results of a sensitivity value of 86% and a specificity value of 78%. The results for the CPOT measuring instrument with a p-value of 0.009 (< 0.05) are significant with a kappa value of 0.915 indicating a very good agreement level [33].

LIMITATION

The results of this study are similar to the results of research which states that the Critical-care Pain Observation Tool is a superior measuring tool and its indicators are more comprehensive in assessing pain because all pain evaluations are based on behavioral signs and have a more detailed operational definition and can be used in patients who are not intubated.

CONCLUSION

Characteristics of respondents based on age are more dominated by nurses with an age of more than 30 years with the female gender having an undergraduate education/Nurse and working years of more than 5 years.

Nurses' knowledge about CPOT is still lacking. The recommendation for this research is to provide knowledge related to pain assessment using CPOT with education.

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