

Pain Level in Critical Patients With Sleep Hygiene Care In Intensive Care Unit

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ABSTRACT

Background: Complaints in critical patients are an unpleasant experience as long as patients are admitted to the ICU. Critical patients with pain are still common and need collaboration to reduce patients in the ICU.

Purpose: This study aimed to determine the Pain Level Description of Critical Patients with Sleep Hygiene Care in the Intensive Care Unit.

Method: Research design is descriptive-analytic. The study population was all critical patients in the ICU. The study sample was a portion of critical patients who received 170 sleep hygiene care patients. The sampling technique is purposive sampling. The research variable is a description of the patient's pain level. The research instrument used a questionnaire. Data were collected and analyzed using the frequency distribution method.

Result: The results of the pain indicator on the Facial Expression study found that the majority of respondents showed grimacings (46.6%), Body movements study found that most showed restlessness (39.4%), Vocalization found that almost all respondents showed Tolerating ventilator or movement / Talking in normal tone / no sound (72.9%), Muscle tension assessment found that most respondents showed Relaxed as much (51.8%). The results of the study showed that the pain scale based on CPOT of the majority of respondents had mild pain as many as 64 respondents (37.6%).

Conclusion: Pain description in critical patients with sleep hygiene care shows that there are still many patients who feel pain and need identification and further intervention to reduce it.

Keywords: Sleep hygiene, Pain, Critical Patients

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BACKGROUND

Pain in critical patients is a real and disturbing problem in critical patients. Some conditions in critical patients are a decrease in the level of consciousness, limited body movement, and cannot express what is felt including the pain experienced. The pain is caused by the study of pain in critical patients with a decrease in an awareness that is a challenge for nurses (Gelinas, 2016). Patients in the intensive care unit have a variety of complex experiences and poor prognosis and have problems with pain and discomfort. Data shows that the incidence of pain in critically ill patients is greater than 50%, the experience of pain is felt during rest and during routine clinical procedures (Barr et al., 2013; Puntillo, 2014). Some of the causes of pain are identified as traumatic injury, standard procedure (tube removal, early mobilization, endotracheal suction, and other invasive actions), acute disease, surgery, invasive equipment (Abelha, Santos, Maia, Castro, & Barros, 2007; Barr et al., 2013). Environmental factors can also affect the pain response in patients, especially with the assessment of inappropriate pain can cause pain unknown problems so that pain is not handled (Rimawati, Suwardianto, & VW, 2018; H. Suwardianto, 2016). Pain in critical patients who have not received optimal nursing care can have an impact on physiological functions, cognitive, mental and physical disorders, increase hospitalization time in the ICU, increase the time of ventilator use. Critical patients with untreated pain can also cause an increase in intracranial pressure (Al Sutari, Abdalrahim, Hamdan-Mansour, & Ayasrah, 2014; Ayasrah, 2014). If we do not recognize the causes of pain in critical patients then also have the consequences of causing post-traumatic stress disorder (Jackson, Pandharipande, Girard, Brummed, & Thompson, 2014; Nathan E, Brummel, James C. Jackson, 2013). The role of nurses in the proper management of pain depends on the assessment of pain in systematic and accurate assessment of the occurrence of pain (H. Suwardianto, Prasetyo, & Utami, 2018; H. Suwardianto & Selvia, 2015). Pain in critical patients should be studied routinely and structurally, seeing that each of the factors causing pain is the ICU environment, but this is often not done. Critical patients in the ICU because of the condition of the disease, causing patients to not be able to express pain subjectively, therefore nurses sometimes do not see the pain response expressed by patients because of the condition.

The results of the data show that critical patients have a severe anxiety level of 41.7%, moderate anxiety level 29.2%, mild anxiety 18.8%, and no anxiety at 10.4% (Iskandar, 2016). VAP (Ventilator-Associated Pneumonia) is a nosocomial infectious disease that still causes deaths of around 24-50% and reaches 76% if experiencing complications (Heni, 2014). More than 63% of critical patients complain of pain and get sedation when complaining of pain and anxiety.

The role of nurses to detect and assess environmental factors, in this case, is when patients sleep which is often called sleep hygiene. Critical patients need to identify current conditions, images that occur in critical patients when patients are admitted to the ICU. The role of nurses is very important in the assessment of critical patients and this is a challenge for ICU nurses because the severity of the patient's pain intensity is often underestimated (Georgiou, 2015; heru Suwardianto, 2018). Critical patients in expressing their pain responses who cannot communicate effectively need another technique (Hopkins, RR, L, Spuhler, & G.E, 2012). In the critical nursing area, many patients with sedation and intubation were unable to communicate to show their level of pain, either verbally or by showing their level of pain using pain scale tools, this made the pain

assessment difficult in this group of patients (H. Suwardianto, 2014). This is what makes the assessment of pain in the critical nursing area very complex. Nurses in the assessment of pain in critical nursing areas require comprehensive pain assessment as an objective evaluation through observation of pain indicators. The use of a pain scale based on behavioral indicators is recommended for patients who cannot communicate their pain, by observing their motor function. The nurse in understanding and identifying critical patients to understand the condition of the next critical patient is very important and supports patient recovery.

OBJECTIVE

This study aimed to determine the Pain Level Description of Critical Patients with Sleep Hygiene Care in the Intensive Care Unit.

METHODS

The design of this study is descriptive-analytic. The population of this study was all critical patients who entered the ICU. The sample of this study amounted to 170 critical patients. The independent variables of this study were the diagnosis, age, sex, education, occupation. The dependent variable of this study is the critical patient pain scale. The research instrument used a questionnaire. Data is collected, tabulated, and coding then statistical tests are performed using frequency distribution. The study was conducted after receiving a letter *ethical clearance* with letter number 024/01 / V / EC / KEPK / STIKES RSBK / 2019 and had obtained a research permit from the research site.

The participants were assured that their engagement was voluntary, and that anonymity, privacy, and confidentiality of the data were guaranteed. Furthermore, they were informed about the purpose and the method of the study before signing a written informed consent. The questionnaires were distributed to eligible participants at the Baptis Hospital, and respondents were asked to complete and return them in the same time.

RESULTS

Table 1. Characteristics of Critical Patients in ICU (n = 170)

No.	Characteristics	∑	%	Mean ± SD
A	Diagnosis			4,9±2,8
1	CHF	30	17,6	
2	Hypovolemic Shock	3	1,8	
3	Miokard Infark	15	8,8	
4	Respiratory Failure	47	27,6	
5	Cardiogenic Shock	17	10,0	
6	DCFC	11	6,5	
7	Septic Shock	6	3,5	
8	CKD	14	8,2	
9	Dengue Shock Syndrome	17	10,0	
10	Head injury	6	3,5	
11	Tuberculosis	2	1,2	
12	Hyponatremi	1	0,6	
13	HHF	1	0,6	

No.	Characteristics	Σ	%	Mean \pm SD
B	Gender			1,50 \pm 0,50
1	Male	84	49,4	
2	Women	86	50,6	
C	Age			55,24 \pm 19,94
1	6-11 years	12	7,1	
2	26-35 years	5	2,9	
3	36-45 years	2	1,2	
4	46-55 years	17	10,0	
5	56-65 years	31	18,2	
6	> 65 years	51	30,0	
C	Education			3,12 \pm 1,11
1	No school	18	10,6	
2	Elementary	33	19,4	
3	Junior high school	38	22,4	
4	Senior high School	72	42,4	
5	College	9	5,3	
D	Occupation			2,68 \pm 1,57
1	Does not work	44	25,9	
2	Housewife	53	31,2	
3	employee	29	17,1	
4	Entrepreneur	17	10,0	
5	PNS	11	6,5	
6	Other	16	9,4	
E	Use of Mechanical Ventilators			
1	Use	63	37,1	1,37 \pm 0,48
2	Do Not Use	107	62	

Based on the results of the study it was found that almost half of the respondents had diagnosed respiratory failure as many as 47 respondents (27.6%), most of the respondents were female respondents as many as 86 respondents (50.6%), almost half of the respondents had 56-65 years old as many as 51 respondents (30%), almost half of the respondents had a high school education of 72 respondents (42.4%), almost half of the respondents were housewives as many as 53 respondents (31.2%) and patients using mechanical ventilators as many as 63 patients (37.1%)

Table 2. Secondary Data of Critical Patients in ICU (n = 170)

No	Variable	Mean	SD
1	Temperature ($^{\circ}$ C)	38,90	25,17
2	Systolic Blood Pressure (mmHg)	119,64	37,10
3	Diastolic blood pressure (mmHg)	74,56	23,64
4	Pulse rate (times / minutes)	107,58	73,2
5	Respiratory rate (times / min)	26,34	10,91
6	Mean arterial pressure (mmHg)	104,56	47,29

Based on the results of the study obtained secondary data that the mean variable with an abnormal value is temperature (38.9° C), blood pressure (119.64 / 74.56 mmHg), pulse frequency (107.58 times/minute), and breathing frequency (26.34 times/minute)

Tabel 3 Pain Indicator in Critical Patients (n=170)

No	Indicator (CPOT indicators)	∑	%	Mean	SD
A	Facial Expression			1,34	0,68
1	Relaxed, neutral	21	12,4		
2	Tense	70	41,2		
3	Grimacing	79	46,5		
B	Body movements			1,00	0,88
1	Absence of movements or normal position	66	38,8		
2	Protection	37	21,8		
3	Restlessness	67	39,4		
C	Compliance with ventilator or Vocalization			0,32	0,57
1	Tolerating ventilator or movement /Talking in normal tone/no sound	124	72,9		
2	Coughing but tolerating /Sighing, moaning	37	21,8		
3	Fighting ventilator/ Crying out, sobbing	9	5,3		
D	Muscle tension			0,58	0,67
1	Relaxed	88	51,8		
2	Tense, rigid	64	37,6		
3	Very tense or rigid	18	10,6		
E	CPOT			3,25	1,41
1	No pain	88	51,8		
2	Mild pain	64	37,6		
3	Moderate pain	18	10,6		
4	Severe pain	5	5,9		

The results of the CPOT indicator on the Facial Expression study found that the majority of respondents showed 79 grimacings (46.6%), Body movements study found that most showed restlessness of 67 respondents (39.4%), Compliance with ventilator or assessment. Vocalization found that almost all respondents showed Tolerating ventilator or movement / Talking in normal tone / no sound of 124 respondents (72.9%), Muscle tension assessment found that most respondents showed Relaxed as much as 88 respondents (51.8%). The results of the study showed that the pain scale based on CPOT of the majority of respondents had mild pain as many as 64 respondents (37.6%).

DISCUSSION

Based on the results of the study it was found that almost half of the respondents had a diagnosis of respiratory failure (27.6%). Critical patients are patients with organ failure one or more target organs (Suwardianto & Selvia, 2015). Patients to express pain are basically subjective but in patients who fail breathing identification of the scale of pain cannot be done. This makes nurses need to use different methods in patients with respiratory failure and attached a mechanical ventilator to determine the level of pain. Critical patients who are unconscious and/or have mechanical ventilators attached, for measuring pain can use CPOT. Critical patients were mostly female (50.6%) and almost half of respondents had 56-65 years of age (30%). This shows that critical patients are at the age of the elderly and during menopause. This is likely because some hormones have stopped working like the estrogen hormone (Suwardianto, 2016) (Barr et al., 2013). Critical patients almost half of the respondents had high school education (42.4%), almost half of the respondents were housewives (31.2%), this shows that education can be an indicator of perceived pain, pain experiences in critical patients (Al Sutari et al., 2014). Some critical patients use mechanical ventilators (37.1%). Poor prognosis and in accordance with the patient's diagnosis that at most patients have respiratory failure and need to use an airway. A mechanical ventilator is one of the causes of pain, invasive action and an environment that does not support.

Sleep hygiene is a modification of the environment when the patient sleeps at night. Environmental modification in the form of temperature, noise and lighting settings (Dakin & Margaron, 2010; Faraklas, 2013). Based on the results of the study obtained secondary data that the mean variable with an abnormal value is temperature (38.9° C), blood pressure (119.64 / 74.56 mmHg), pulse frequency (107.58 times/minute), and breathing frequency (26.34 times/minute). This shows that the process of sleep rest is important to support the patient's hemodynamics and respond to decreased pain (Barr et al., 2013; Skrobik, 2013). Critical patients treated in the ICU need to be identified with hemodynamic conditions so that they are able to show their best condition in the repair process. Hemodynamic improvement can be done with sleep hygiene by increasing optimal resting response. Sleep hygiene improves the quality of sleep, improves regulation of organ balance, and rests organs.

Critical patients can interpret the experience of pain without expressing it. Critical patients experience pain because of the environment, actions, and response to the disease. Patient pain can be identified using CPOT. The results of the study on CPOT indicators on the Facial Expression study found that most respondents showed grimacing (46.6%), Body movements study found that most showed restlessness (39.4%), assessment of Compliance with ventilator or Vocalization found that almost all respondents showed Tolerating ventilator or movement / Talking in normal tone / no sound (72.9%), muscle tension assessment found that most respondents showed Relaxed (51.8%). The results of the study showed that the pain scale based on CPOT of the majority of respondents had mild pain as many as 64 respondents (37.6%). Critical patients with pain need to continue to get attention from measurement methods, and appropriate nursing care. The condition of the patient can continue to change to achieve optimal conditions. The role of nurses in carrying out nursing care needs to be continuously supported in achieving nursing care to reduce optimal pain.

CONCLUSION

Critical patients with complaints of pain in the ICU had Facial Expression. It was found that the majority of respondents showed grimacing (46.6%), Body movements study found that most showed restlessness (39.4%), the Compliance with ventilator or Vocalization study found that almost all Respondents showed Tolerating ventilator or movement / Talking in normal tone / no sound (72.9%), Muscle tension assessment found that most respondents showed Relaxed (51.8%). The results of the study showed that the pain scale based on CPOT of the majority of respondents had mild pain (37.6%).

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