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Original Investigation

Pain Management and Nursing in Intensive Care Units: A Phenomenological Study

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Abstract

Objective: The aim of this study is to evaluate the nursing approaches shown to patients followed up in intensive care units, to describe pain in terms of the biopsychosocial aspects, and to review patient-nurse outcomes.

Material and Methods: The study had a qualitative research design and was conducted in anesthesia, cardiovascular surgery, and coronary intensive care units of a private hospital in Ankara between June 22 and December 22, 2015. The study group included twenty-six nurses who voluntarily agreed to participate in the study. The data were collected using observational techniques and individual interview reports.

Results: It was found that 69.2% of the study participants were female, 77.0% were high school graduates, 69.0% had an experience of 1-9 years, and 69.2% of them were single. From the data obtained from the participants using observational techniques and individual interviews, the nurses attributed various meanings for pain sensation that patients described and adopted a psychosocial nursing approach to pain complaints; however, possible reactions to nurses were encountered in case of ongoing pain complaints.

Conclusion: Pain is not only a stressful process that affects patients with pain complaints but also a challenging care process for nurses who provide care to patients in pain. Therefore, patients' pain and feelings (such as discomfort, stress) should be attentively evaluated by nurses before interventions for pain management can be implemented.

Keywords: Pain, nursing care, intensive care unit

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Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Bayındır Hospital (BTEDK-10/15).

Informed Consent: Written informed consent was obtained from nurses who participated in this study.

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Introduction

The word pain, which is defined as "the sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage" by the International Association for the Study of Pain (IASP), differs when it is examined originally and etymologically (1). While it corresponds to the word "alam" which means "suffering physically" in Arabic (2), it originates from the Latin word "poena", which corresponds to the "punishment and torture", in English. It is included in Divan-ı Lügat-ıt Türk, the first Turkish dictionary, as "ağrımak" ("ache") and is defined as "pain in a certain region of the body" (3).

In terms of factors related to psychodynamic and interpersonal interaction, pain is a means of expressing psychic distress. According to this, pain can be experienced as a result of an actual or imaginary threat to the physical and mental integrity of the body. In such a case, the body can be addressed as an object of the ego and pain can be perceived as a threat to the body in the case when an undesired situation is encountered or when there is a loss of the physical and mental body integrity (4). In this context, it is important for health professionals to treat a patient having pain with his/her surrounding and with the meaning that the patient attributes to the sensation of pain and assess it as a whole, physically and mentally (5).

Undoubtedly, intensive care units are the environments where pain is experienced at most and biopsychosocial assessment is a priority. Insertion of a

catheter or endotracheal aspirations, as needed by the patients' health status and even brief interventions such as decubitus care can be the cause of pain experience and psychic distress in patients (6). Furthermore, presence of mechanical devices such as the infusion pumps, perfusors, and ventilators that have never been encountered before and being in a noisy environment created by these devices can trigger the sensation of pain in the patient. On the other hand, being isolated from family members and own external environment, inability to sustain daily activities (7), and being dependent on someone else's help may lead to a depressive mood and increased anxiety level in patients (5). Therefore, approaches exhibited by nurses towards a variety of physical, emotional, and behavioral reactions and attitudes of patients caused by painhave vital importance.

In this context, in this study, it was aimed to assess the nursing approaches exhibited towards patients followed in intensive care units and to describe pain from biopsychosocial aspects and to review patient-nurse outputs.

Material and Methods

Research Design

This study was carried out in a qualitative research design of the phenomenological type (phenomenology) that reveals the experiences of individuals and focuses on sharing the meanings that individuals give to phenomena (8, 9).

Study Group

The study group consists of twenty-six nurses working in the anesthesia, cardiovascular surgery, and coronary intensive care units of a private hospital in Ankara and volunteering to participate in the study, between the dates of 22 June and 22 December 2015. The majority of the nurses are female (69.2%), high school graduates (77.0%), with an experience of 1-9 years (69%), and single (69.2%).

Characteristics of the Environments Where the Study was Carried Out

The anesthesia intensive care unit, among the units where the study was carried out, is a nine-bed unit, where there is an anesthesiologist twenty-four hours a day and the patient prognosis varies depending on multifaceted factors such as the patient's diagnosis (chronic obstructive pulmonary disease, acute metabolic disorders, multiple serious trauma, complications after a surgical operation, respiratory failure, poisoning, suicidal attempts, liver-kidney failure, etc.), the severity of the disease, the physical state of the patient, the response of the patient to the treatment, the type and duration of the treatment. The majority of the patients are intubated, with tracheostomy, and require invasive monitorization.

The cardiovascular surgical intensive care unit is an eight-bed unit and is in contact with the operating rooms. This is the unit where the postoperative follow-up and treatment are performed mainly after coronary artery bypass surgeries and valve disease surgeries. There is a specialist present twenty-four hours a day. Postoperative patients are admitted as intubated, and the procedure of extubation is performed within an average of four hours. Patients are followed up by invasive monitorization and transferred to the cardiovascular surgery service on the second postoperative day.

The coronary intensive care unit is a seven-bed unit. Patients with heart failure, acute coronary syndrome, atrioventricular blocks, rhythm disorders, pulmonary edema, pericarditis, cardiopulmonary arrest are admitted to this unit. A specialist is in contact with the coronary angiography unit and is present twenty-four hours a day.

In all three units, a nurse is responsible for the care and treatment of every two patients. However, in case of unstable patients who are followed in an isolation, one nurse is responsible for the care and treatment of each of these patients.

Ethical Dimension of the Study

This study is in accordance with the Declaration of Helsinki and was carried out after receiving the ethics committee approval numbered BTEC-10/15 of Bayındır Hospital Medical Ethics and Deontology Committee. Written consent forms of the participants were obtained. The interviews were held within the confidentiality principle and recorded by the researcher in writing. It was explained to each participant that their recorded statements could be read to them if they wished, and some statements in the interview could be partly or completely removed upon their request.

Data Collection Techniques

The data were collected using observation and semi-structured individual interview forms. Attention was paid to the credibility, acceptability, transferability, and assertion of the data. The semi-structured observation form was arranged by the researchers in four areas of mental, physical, emotional, and behavioral by receiving expert opinions following the literature review. The interview form consisted of four questions with internal validity.

Carrying Out the Study

The study was carried out in two stages. In the first stage, the observation process of each participant was initiated in their natural working environment. Each nurse was observed for two months and assessed at the end of two months. This process lasted for six months, and each participant went through three observation processes. All the information obtained at the end of the process was assessed, and it was proceeded to the second stage of the study. In the second stage, individual interviews were held with each participant whose observation was completed. These individual interviews were held between 15-30 min and in a suitable interview environment that had been prepared in advance where participants could feel peaceful and comfortable. Interview reports, which were recorded by the researcher in writing, were reviewed again with the participants to correct potential misperceptions related to the phenomena observed by the researcher or to confirm the accuracy of certain judgments. Undesired sections were excluded upon request of the participants (Figure 1).

Data Analysis

After being put into writing in the computer environment, the data collected by the researchers were analyzed using the content analysis among qualitative research techniques. According to this, when the opinions of the intensive care nurses were analyzed, they were classified according to the similarity of the statements given. Each of the nurses interviewed was given a code number (N1, N2, N3...) and the most striking statements that emerged during interviews were coded in exactly the same way.

Results

The data obtained as a result of the content analysis performed were associated with three main topics: (1) perceptions and perception cod-

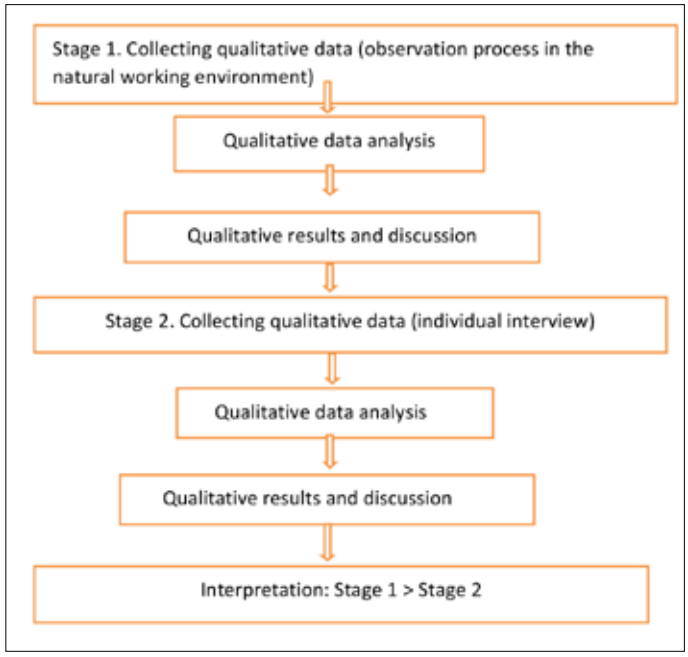

Figure 1. Flowchart of the study.

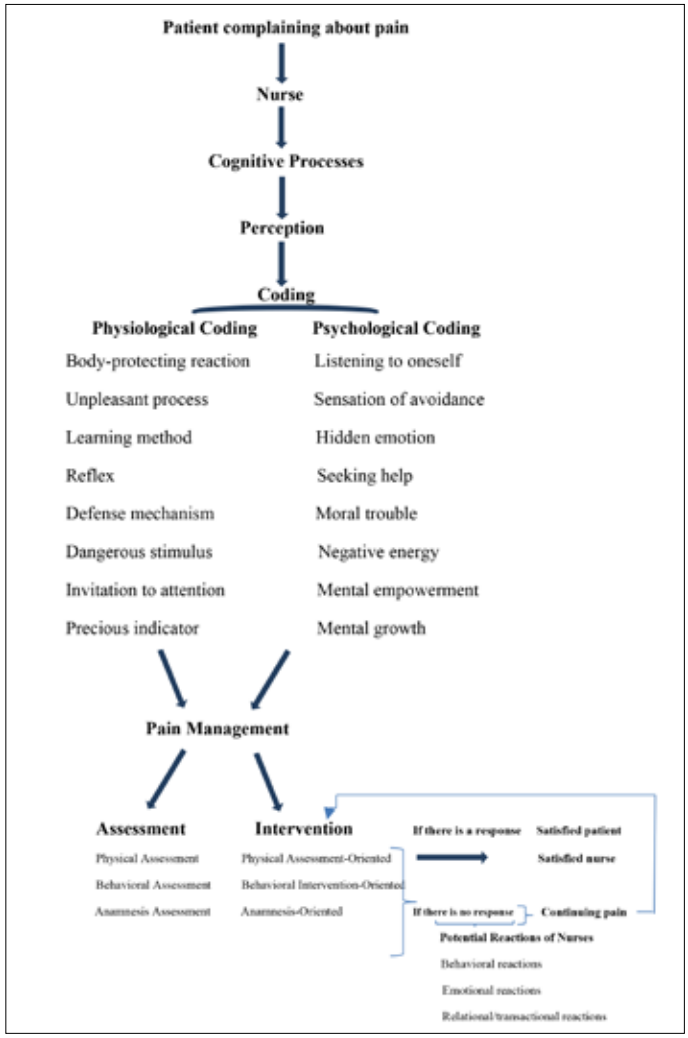

Figure 2. Perceptions, pain management, and outputs of the nurses for the sensation of pain.

ing of the nurses related to the sensation of pain reported by patients, (2) pain management elements of nurses, and (3) potential reactions of nurses and patients to the sensation of pain (Figure 2).

1. Perception Themes and Perception Levels Related to the Reported Sensation of Pain

While seventeen of the participants presented an opinion that the sensation of pain reported to them by patients was related to psychological reasons, the other participants indicated that it was related to physiological reasons (Table 1). The opinions of N1 and N12, among the participants of the study, were quoted in exactly the same words: N1: "Pain is the invitation to attention to prevent the worst process that can develop", N12: "It is a precious indication for the measures that can be taken".

2. Pain Management Elements

In the context analysis performed, the pain management elements indicated by the participants were grouped under two main themes, being the pain assessment and pain intervention (Table 2). The pain assessment was divided into sub-themes of physical, behavioral, and anamnesis assessment, and the pain intervention was divided into sub-themes of physical, behavioral, and anamnesis-oriented intervention. The opinion of participant N5 "If a patient is constantly moaning, that patient definitely has pain. Narcotic analgesic must be administered immediately" was considered considerably striking.

3. Potential Reactions of Nurses and Patients to Continuing Sensation of Pain

It was concluded that when the sensation of pain is eliminated with the nursing interventions, satisfaction is achieved in patients and job satisfaction is achieved in nurses. It was found out that in cases when no response could be received to nursing interventions, the existing complaints of pain in patients increased, other alternatively planned nursing interventions were applied, and nurses exhibited potential reactions to the sensation of pain (Table 3). In this context, expressions of a few participants are mentioned as an example. N3: "I do not get very close to patients with pain except for the treatment", N1: "I tune out patients' complaints because they exaggerate them", N22: "The patient whose pain is relieved; softens like cotton. Thus, I get relief."

Discussion

In this study, different meanings attributed to the sensation of pain by the nurses were determined. It was concluded that particularly the pain reported by patients expresses a holistic meaning from physiological and psychological aspects for the nurses, and furthermore, the perception levels related to pain are high. This result obtained may be related to the fact that patients in an intensive care environment are in a visible area, and therefore, the reactions and changes in the physiological and psychological behavior of patients are more easily noticeable. Moreover, the fact that the hospital where the study was conducted has an algology unit and the training provided by the unit to nurses twice a year is included within the scope of compulsory education, may have revealed the necessity that patients with pain must be assessed psychosocially by nurses. As a matter of fact, Stenbarch and Engel, who attributed a different meaning to the sensation of pain as the penalty compensating pain-suffering and guilt, emphasized the importance of the psychosocial approach and skills in pain management (10, 11).

Upon looking at the present, it is observed that there is no disease or complaint without any psychological effect. Therefore, it is necessary to have sufficient psychosocial knowledge for every disease and complaint described by the patients (5). While back and chest pain is commonly reported by patients in coronary and cardiovascular intensive care units; particularly in studies conducted, it has been reported that patients describe pain due to invasive interventions (catheter insertion, intubation, etc.), wound care, aspiration, position change, and deep breathing exercises in the anesthesia intensive care unit (7, 10). Therefore, considering that individuals performing the first assessment of pain complaints are nurses, it is inevitable that nurses must have psychosocial knowledge and management skills (12).

In the study, it was determined that the nurses assessed pain as physical, behavioral, and anamnesis-oriented and attempted to intervene according to the assessment results. However, in general, during psychosocial assessment, the effects of the disease or complaints on the individual/family are focused and the intervention is planned. It is observed that the nurses, who participated in the study, assessed only the effects of the pain complaint on the patient and intervened. This may be due to the fact that the intensive care units in which the study is conducted are isolated spaces, the visiting hours are limited, and nurses are unable to allocate the necessary time for the relatives of the patient due to the labor intensity.

In a study conducted to assess the pain of patients in the intensive care unit for forty-five days, Kemp et al. (12) benefited from behavioral pain scales. In this context, it was emphasized that patients in intensive care units should be assessed not only by the pain assessment scales but

Table 1. Perceptions and perception codes that occurred in nurses for the reported sensation of pain

Theme	Codes of the Findings	Frequency
Physiological coding High level (n: 9)	Body-protecting reaction	2
	Unpleasant process	4
	Learning method	1
	Reflex	1
	Defense mechanism	2
	Dangerous stimulus	7
	Invitation to attention	6
	Precious indicator	4
	Total	27
Psychological coding High level (n: 17)	Listening to oneself	5
	Sensation of avoidance	1
	Hidden emotion (fear, anxiety, death)	10
	Seekinghelp	8
	Moraltrouble	1
	Negative energy	1
	Mental empowerment	2
	Mental growth	2
	Total	30

Table 2. Pain management elements and coding of the nurses

Main themes and codes	Frequency
1. Pain assessment	
1.1. Physical assessment	25 (9.7%)
Vital findings	13
Location of the pain	2
Frequency of the pain	2
Duration of the pain	1
Pain-increasing/reducing factors	7
1.2. Behavioral assessment	59 (22.6%)
Groaning	18
Crying	4
Not talking	6
Refusing to eat	3
Not moving	12
Aggressive attitude	5
Mobility in bed	7
Immobilization of the painful region	4
1.3. Anamnesis assessment	34 (13%)
Drug dependency status	7
Alcohol addiction status	10
Existing or previous psychiatric disorder	5
Marital status	9
Educational status	3
2. Intervention to the pain	
2.1. Physical assessment-oriented	94 (36%)
Administering analgesic	26
Laxative application if it is constipation-related	3
Applying active-passive exercises	6
Providing protective position for the painful region	8
Massaging	12
Hot and cold application	9
Mobilizing	7
Distraction	5
Change of position	17
Taking ECG and making the patient cough (for stinging pain in the back and left arm)	1
2.2. Behavioral assessment-oriented	30 (11.5%)
Informing about the environment	3
Talking about patients' fears and worries about the disease and treatment	5
Providing privacy for the expression of fears and worries	1
Giving clear answers to questions	7
Accepting visitors during the day	14
2.3. Anamnesis-oriented	19 (7.2%)
Interacting as frequent as possible	9
Carefully listening	4
Holding hands	2
Reducing the stressors (such as reducing the ambient noise and light)	1
Being present in areas which the patient can see	1
Administering a narcotic medication	1
Applying placebo	1
Total	261

Table 3. Potential reaction of nurses to continuing sensation of pain

Main themes and codes	Frequency
1. Behavioral reactions	20 (40%)
Ignoring	12
Tuning out	8
2. Emotional reactions	5 (10%)
Raising the voice	3
Getting angry	1
Crying	1
3. Relational/transactional reactions	25 (50%)
Staying away from the patient	16
Not talking to the patient unless it is necessary	9
Total	50

also for external factors, family support, and cultural attitudes affecting the pain behavior (13). As a matter of fact, when the effects of liberal visits on intensive care patients was evaluated, it was seen that symptoms such as pain and insomnia were not observed when the patient was with his family (14). In another study conducted taking into consideration the changing needs of patients and families in the intensive care unit as a reflection of changing technological developments, it was determined that patients in the intensive care unit and their families require psychosocial support "to feel that the best care is given, to be informed about the changes in the patient's situation, and sincere approach and interest exhibited by nurses". It was concluded that in the case when this support is provided, both the situations such as the patient's pain complaint, anxiety, stress, etc. and worries of their relatives are reduced, and their satisfaction is increased, and thus the importance of the nursing psychosocial approach is mentioned (15).

In a cross-sectional study conducted on the sensation of pain and the patient's pain management system, Song et al. (15) noted that nurses benefited only from pain assessment indicators in the assessment and intervention of pain, did not benefit from psychosocial nursing approaches, and that the indicators used for the assessment of pain reported by bed-bound patients were inappropriate for the assessment of the pain level (16). In another retrospective study conducted on a similar patient group, it was mentioned that the effectiveness of the pain management can be best assessed in the home environment and thus, it is important to assess individuals who live with the patient, to educate them, and to provide psychosocial support for patients (17). However, Kizza and Muliira (17) showed that the lack of time, competitive priorities, pain management incoordination among nurses, and excessive patient intensity are obstacles to this. Nursing related obstacles such as not allocating sufficient time for the patient, the lack of experience, and inadequate communication were identified as factors that lead to the inadequate assessment of pain and cause pain control to be ineffective (18, 19).

It was observed that in this study, especially in cases where the pain control was inadequate, the nurses reapplied to the intervention steps planned according to the previous assessment without performing the pain assessment. It was determined that while the patient's pain complaint continued, caring nurses exhibited reactions such as "not caring about the pain complaint, tuning out the patient's complaint, crying, staying away from the patient, not talking to the patient unless it is necessary". Excessive working hours (60 hours per week), being in an indoor and noisy environment, and inadequate resting periods in the institution where the study has been conducted may have caused nurses to exhibit potential reactions. In studies conducted within this context, it was reported that psychiatric problems can be seen in intensive care nurses who are exposed to intense stress factors due to the characteristics of their working environment, and thus, it was suggested that psychological support should be provided to intensive care nurses and also, the choice of working in the intensive care unit is left to nurses (20, 21).

As a matter of fact, in the study conducted by Silva et al. (21) to analyze the psychosocial aspects of intensive care nurses, it was concluded that psychosocial support is needed to reduce the exhaustion of nurses and distress caused by the environment and workload. In a qualitative study investigating the needs of intensive care nurses and conducted in this direction, it was determined that the high mortality rates in intensive care units and the presence of mechanical devices lead to anxiety disorder in nurses (22).

Limitations of the Study

Despite the possible significant contributions of the study to the literature, there are limitations due to the selected research design. Particularly the use of a single method may lead to method-specific bias. Furthermore, there are also limitations related to the data collection and study group. As a matter of fact, considering the working conditions in intensive care units, environmental factors, critical situations of the patients, etc., the results obtained cannot be generalized to the nursing profession.

Conclusion

Pain is not only a distressful process that affects the patient with pain complaint but also a difficult care period for nurses who care for painful patients. Therefore, the pain and emotions (such as uneasiness, distress, etc.) that we can define as a two-way process affecting each other should be carefully assessed by nurses before the interventions for pain. However, the universal human emotions should not be neglected by nurses and should be supported in the context of psychosocial nursing interventions in terms of difficulties they may encounter in providing care for painful patients, which includes a grueling care-treatment process.

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