




EXAMINATION OF CARE PLANS OF STUDENTS TAKING SURGICAL NURSING COURSE IN TERMS OF DIAGNOSIS OF PAIN

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ABSTRACT

The aim of this study is to determine whether or not students include diagnosis of acute pain in their nursing care plans and evaluate it appropriately. The population of this retrospective descriptive study consisted of 161 students who completed the clinical practice of the surgical diseases nursing course at a university's nursing faculty. When the nursing care planes of the students were examined, it was determined that 61.5% were female and their average age was 21.56±1.43 years. When the diagnosis of acute pain was examined in terms of the nursing process steps, it was determined that 60.2% of the students were competent in taking medical history of patients and 49% in physical assessment in the data collection stage. However, 56.1% of the students used a pain assessment scale and 45.9% indicated the pain area in the diagnosis step. After the nursing practices they planned for the patients whose pain diagnosis they determined, 19.4% of the students stated that they reached the goal, while 38.8% did not evaluate the effectiveness of the nursing practices. It is recommended that students' training should be planned in the context of their deficiencies in the nursing process and they should prepare more care plans to gain experience in preparing care plans.

INTRODUCTION

The nursing process is a planned and dynamic approach in which critical thinking method and problem-solving steps are applied to identify problems of patients and solve them and nursing practices are based on scientific basis (Ardahan et al., 2019; Avşar, Ögünç, Taşkın & Burkay, 2014; Zaybak, İsmailoğlu & Özdemir, 2016). The nursing process, which brings a scientific quality to nursing practices, is important in terms of providing individual-centered quality nursing care by nurses and student nurses in line with a certain plan, using time more effectively, improving communication between team members, creating written resources and evidence for nursing education and research, and making nursing services visible (Hakverdioğlu Yönt, Korhan, Erdemir & Müller-Staub, 2014; Tasdemir & Kizilkaya, 2013).

The use of the nursing process in patient care enables nurses to increase job satisfaction, to secure care, to transfer scientific knowledge to practice, to contribute to the development of the profession by evaluating the results of practice, and to recognize the authority and duty areas of nurses by the society (Avşar et al., 2014). It is known that students, who comprehend

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planning of nursing care by using a care plan during the vocational education process and apply the plan of nursing care, continue to use the care plan when they graduate (Ardahan et al., 2019; Tasdemir & Kizilkaya, 2013).

The related previous studies reported that students could not sufficiently comprehend the nursing process and the importance of the use of nursing diagnoses during clinical practice, and students were incompetent in using the stages of data collection, identifying nursing diagnoses, determining descriptive features, related factors, and outcome criteria, planning and evaluation (Ardahan et al., 2019; Aykin, Alptekin & Akyüz, 2022; Keski & Karadağ, 2010; Uysal, Gürol Arslan, Yılmaz & Yelkin Alp, 2016).

Surgical interventions are an important cause of pain. Pain is one of the most common complications in patients in the postoperative period. Worldwide, it is known that more than 47% of patients undergoing surgery experience postoperative pain (Gao, Mu, Lin, Wen & Gao, 2023; Paladini et al., 2023). Postoperative pain needs to be managed multidimensionally because it affects the patient's quality of life and recovery process. When postoperative pain is managed effectively, the patient is discharged early, thus resulting in reduced health costs and higher patient satisfaction (Gürarslan Baş et al., 2016; Karadağ Arlı, 2017). The aim of postoperative pain control is to minimize or prevent the patients' discomfort, to protect them from possible side effects, to shorten the duration of hospitalization and to ensure that complaints about pain do not recur (Sidar, Dedeli & İşkesen, 2013).

Some reasons such as guiding the patient in coping with pain, spending more time with patients compared to other health team members, monitoring the results of the practices and using empathy skills enable nurses to take an active role in pain control (Karadağ Arlı, 2017; Şenyüz & Koçalışlı, 2017; Olimat et al., 2021). In this context, it is important for nursing students to learn surgical pain management during their education. However, it is known that students encounter difficulties in learning and adopting the nursing process concerning the diagnosis of pain, evaluating the diagnosis of pain using a pain scale, and determining appropriate nursing interventions (Ardahan et al., 2019; Dirimeşe, Özdemir & Şahin, 2016; Erden, Deniz, Arslan & Yurtseven, 2018; Hakverdioğlu Yönt et al., 2014).

MATERIAL AND METHOD

Purpose and Type of the Study

This study was designed as a retrospective descriptive study to determine whether or not students include acute pain diagnosis and manage appropriate acute pain while preparing a care plan.

Population and Sample

The population consisted of 173 students who completed the clinical practice of the Surgical Diseases Nursing course between April and May 2022 in the nursing faculty of a private university. The care plans of 161 students who agreed to participate in the study were examined without sample selection and the data were obtained from 98 care plans with diagnosis of acute pain.

Data Collection and Analysis

Students in clinical practice used the data collection and evaluation form for patient care to record information about the patient. This form was prepared based on Gordon's Functional Health Patterns (FHP) Model and consists of 11 functional areas: health perception-health management, nutritional-metabolic, elimination, activity-exercise, cognitive-perceptual, self-perception, role-relationship, sexuality-productive, coping/stress tolerance, values-beliefs, and sleep-rest (Gordon, 2016). This model facilitates the accurate, objective and complete data collection and analysis by examining the needs of patients (Yılmaz & Atay, 2014).

During the theoretical lecture of the Surgical Diseases Nursing course, nursing interventions were taught in the last part of each subject by associating with the North American Nursing Diagnosis Association (NANDA) diagnoses in order to comprehend the nursing process and care plans. After completing the theoretical course hours, the students completed their clinical practice period in the surgical clinics of hospitals in the Turkish Republic of Northern Cyprus and Türkiye. The students prepared a care plan including the nursing process for each patient they cared for during clinical practice. The data were obtained from the data collection forms and the final nursing care plans prepared by the students according to the FSS Model used in clinical practice.

In order to obtain data from the care plans, a form was prepared by the researchers as a collection tool and the data were classified. This form included descriptive information of the participants such as the city, hospital, and clinic they made practices, medical diagnosis of the patient, and the nursing diagnoses included by them in the nursing processes, their status of determining the diagnosis of pain, the interventions they planned for the diagnosis, and their evaluations.

In clinical practice, the students were recommended to use NANDA diagnostic criteria for pain diagnosis as in all diagnoses in the diagnosis stage of the care plans they would prepare. The acute pain diagnosis determined by the students for the patients was evaluated. The information related to the diagnosis of acute pain was grouped as “competent”, “partially

competent”, and “incompetent” considering all stages of the nursing process. Especially in the care plans examined, it was evaluated whether the descriptive characteristics, the determined acute pain diagnosis and related factors were written in accordance with the nursing diagnosis of the patient, whether the expected patient outcomes were related to the nursing diagnosis, whether the nursing interventions were related to the nursing diagnosis and patient outcomes, and whether the evaluation section was associated with the expected patient outcomes. In addition, descriptive characteristics, related factors, outcome criteria, planning/implementation and evaluation stages related to each diagnosis were grouped as competent, partially competent, and incompetent according to the above criteria.

The care plans prepared by the students, who completed the clinical practice, after the practice were evaluated between August and November 2022. The data were analyzed by percentage and frequency analysis using the Statistical Package for Social Sciences (SPSS) 18.00 software.

Limitations

The study has several limitations. The first one is that the patient circulation is high in surgical clinics and the student cannot provide care to the same patient for more than two days in hospital practice. Another limitation is that the study was conducted with second-year students. Students have not yet acquired some professional competences that will enable them to evaluate the patient holistically.

Ethical Considerations

Approval (no: YDU/2017/48-436) from the Scientific Research Evaluation Ethics Committee of a University, permission from the Dean’s Office of the Faculty of Nursing and consent from the participants were obtained to collect the data of the study.

RESULTS

When the care plans were analyzed, it was found that 61.5% of the students were female and their average age was 21.56 ± 1.43 years. While 32.3% of the students completed their clinical practice in the Mediterranean Region in Türkiye, 23.6% in the Turkish Republic of Northern Cyprus (TRNC), 19.3% in the Southeastern Anatolia Region in Türkiye, 53.4% of the patients whose nursing process was planned received treatment in a state hospital. Of the patients whose care plans were evaluated, 32.3% underwent lower abdominal surgery, 14.9% extremity surgery, and 10.6% spinal surgery.

When 161 care plans prepared by the students were analyzed, it was found that they identified a total of 67 different nursing diagnoses. Of these diagnoses, 19 were excluded from the study because they were not nursing diagnoses. The students made a total of 487 diagnoses with 48 NANDA nursing diagnoses. Some of the medical conditions that students evaluated as nursing diagnoses while preparing a care plan but were not nursing diagnoses were hypertension, hematoma, kidney stones, and the risk of complications related to drug treatment. It was determined that the most frequently used NANDA nursing diagnoses by the students were acute pain (60.9%), risk of infection (50.3%), anxiety (34.7%), lack of information (18%) and risk of falls (16.1%). 52% (n=51) of the students (n=98) who included the nursing diagnosis of acute pain ranked it first when preparing nursing processes.

When the diagnosis of acute pain was examined in terms of nursing process steps, it was found that students were competent mostly in taking medical history of patients (60.2%) and physical assessment (49%) in the data collection step. However, 56.1% of them used the pain assessment scale appropriately. In the diagnosis stage, 45.9% of the students indicated the pain site appropriately, 37.8% indicated the etiological factors of acute pain diagnosis and 34.7% indicated the factors associated with acute pain. In the planning stage, 50% of the students stated the aim, 30.6% stated the expected outcome appropriately, and only 19.4% stated the appropriate nursing interventions adequately. In the implementation stage, 41.8% of the students recorded the interventions, 37.8% included the individual and his/her family in the care at a partially competent level, and 39.8% implemented the planned interventions at a partially competent level. In the evaluation stage, while 36.7% of the students used the pain scale, it was observed that the evaluation of non-pharmacological methods (56.1%) and nursing intervention results (42.8%) were not performed competently. After the nursing interventions planned by the students in patients with a diagnosis of acute pain, 19.4% of them stated that they reached the target, while 41.8% partially evaluated the effectiveness of the nursing interventions (Table 1).

Table 1. Evaluation of Acute Pain Diagnosis According to the Nursing Process Stages (n=98)

Nursing Process	Competent n (%)	Partially competent n (%)	Incompetent n (%)	Total n (%)
Data Collection				
History of acute pain	59 (60.2)	30 (30.6)	9 (9.2)	98 (100)
Use of pain scale	55 (56.1)	26 (26.5)	17 (17.4)	
Physical assessment	48 (49)	35 (35.7)	15 (15.3)	
Psychosocial assessment	35 (35.7)	39 (39.8)	24 (24.5)	
Laboratory findings	28 (28.6)	43 (43.9)	27 (27.5)	
Diagnosis				
Determination of the pain zone	45 (45.9)	19 (19.4)	34 (34.7)	98 (100)

Determination of etiological factors	37 (37.8)	30 (30.6)	31 (31.6)	
Determination of factors associated with the diagnosis	34 (34.7)	28 (28.6)	36 (36.7)	
Planning				
Statement of purpose	29 (29.6)	49 (50)	20 (20.4)	
Correct expression of the expected result	30 (30.6)	36 (36.7)	32 (32.7)	
Indication of appropriate interventions	19 (19.4)	43 (43.9)	36 (36.7)	
Planning of non-pharmacological methods	22 (22.5)	30 (30.6)	46 (46.9)	98 (100)
Planning of pharmacological methods to be applied with the medical advice	26 (26.5)	35 (35.7)	37 (37.8)	
Implementation				
Involvement of the individual and his/her family in care	26 (26.5)	37 (37.8)	35 (35.7)	
Implementation of planned interventions	37 (37.8)	39 (39.8)	22 (22.4)	98 (100)
Recording the interventions performed	41 (41.8)	34 (34.7)	23 (23.5)	
Evaluation				
Assessment with pain scale	36 (36.7)	23 (23.5)	39 (39.8)	
Evaluation of the results of nursing interventions	18 (18.4)	38 (38.8)	42 (42.8)	
Evaluation of non-pharmacological methods	17 (17.4)	26 (26.5)	55 (56.1)	98 (100)
Evaluation of pharmacological methods applied with medical advice	20 (20.4)	32 (32.7)	46 (46.9)	
accomplishment of goals	19 (19.4)	41 (41.8)	38 (38.8)	

DISCUSSION

The nursing process, a model that finds solutions to nursing problems, is an important element of nursing education that bases nursing on scientific knowledge, organizes care and makes nursing visible (Ardahan et al., 2019; Bölükbaş, Irmak, Bulut, Özdemir & Bayrak, 2020; Şen Atasayar & İşeri, 2023). In addition, it has benefits such as determining nursing practices, evaluating nursing care, improving the knowledge of the nurse and the quality of care, and preventing loss of labor and time (Zaybak et al., 2016). Student nurses should use the nursing process correctly and effectively in clinical practice from undergraduate education in order to use the nursing process effectively and correctly in professional life (Bölükbaş et al., 2020; Ramanzadeh et al., 2023).

In the data collection stage, the importance of using various data collection models that provide comprehensive data is known (Şen Atasayar & İşeri, 2023). Therefore, an appropriate model should be used for data collection. Various models have been developed by theorists to collect data from patients and their families (Yılmaz & Atay, 2014). The FHP Model is one of

the models that evaluate individuals in a holistic way (Gordon, 2016). In the data collection stage, our students collected data systematically and comprehensively using a questionnaire prepared in accordance with the FHP Model.

Management of acute postoperative pain is among the important surgical nursing interventions. Since it affects the patient's physiological and psychological status, quality of life and recovery process, it should be handled multidimensionally. In addition, an effective pain management is one of the important factors determining patients' satisfaction with care. Therefore, nursing practices used in the preoperative and postoperative periods have an important place in pain management (Birimoğlu & Ayaz, 2015; Gürarslan Baş et al., 2016; Tasdemir & Kizilkaya, 2013). At the planning stage of the nursing process, the nurse, who collects data by taking medical history of patients and adequate observation, should be able to choose appropriate methods to control pain based on the data to be obtained, teach these methods to the patient, apply them together and evaluate their effect on pain (Yılmaz & Atay, 2014). During their education, nursing students are taught the concept of pain, the types of scales that can be used to evaluate pain, and pharmacological and non-pharmacological methods that can be applied in pain control. During clinical practice, the students evaluate patients and transfer what they learned into practice (Ünver, Kızılcık Özkan, Avcıbaşı & Babacan Dığın, 2016).

It was determined that the students mostly used the nursing diagnosis of acute pain while preparing the nursing process of surgical patients. Approximately half of the students who planned the nursing process ranked acute pain as the first nursing diagnosis. Likewise, some related studies reported that students and clinical nurses frequently diagnosed acute pain (Avşar et al., 2014; Taskin Yilmaz, Sabanciogullari & Aldemir, 2015). However, the related studies revealed that in the nursing processes prepared by the students, they often included diagnoses such as risk of infection, disruption of skin integrity and unbalanced nutrition, which they can easily recognize, in the first place, and diagnoses such as acute pain and anxiety expressed by the patient in the second place (Ardahan et al., 2019; Aydın & Akansel, 2013; Aykin et al., 2022; Gök Özer & Kuzu, 2006; Uysal et al., 2016). It is stated that students cannot analyze physical problems that require systemic evaluation of the patient, such as tissue perfusion disorder, impaired gas exchange, excess fluid volume, risk of decreased cardiac tissue perfusion, and risk of delay in postoperative recovery (Erden et al., 2018). The present study is compatible with the literature.

The results of the studies indicate that nursing students are incompetent in pain assessment, thus the level of determining appropriate nursing diagnoses is low (Ardahan et al.,

2019; Tasdemir & Kizilkaya, 2013; Yılmaz & Atay, 2014; Taskin Yilmaz et al., 2015). However, in the present study, it was determined that more than half of the students diagnosed acute pain. Taskin Yilmaz et al., (2015) conducted a study with students taking Internal Medicine Nursing course and found that 10% of the students diagnosed acute pain (Taskin Yilmaz et al., 2015). In their study with third- and fourth-year students, Ardahan et al., (2019), observed that 61% of the students identified the diagnosis of acute pain (Ardahan et al., 2019). According to other studies, it was observed that students addressed the diagnosis of acute pain more during and after the period when they took the surgical diseases nursing course while preparing a care plan (Ardahan et al., 2019; Gök Özer & Kuzu, 2006; Karadağ Arlı, 2017). This is thought to be associated with the fact that one of the most common problems experienced by patients in the postoperative period is acute pain and the students experienced the presence of pain in patients.

It is known that identifying the nursing diagnosis is the area where students have the most difficulty in preparing a care plan (Şen Atasayar & İşeri, 2023). Identifying the nursing diagnosis requires appropriate data collection and systematic and critical thinking (Aykin et al., 2022; Basit, 2020; Şen Atasayar & İşeri, 2023). Executing properly the stages of the nursing process after diagnosis and ensuring the effectiveness of care are closely associated with the correct identification of the nursing diagnosis (Şen Atasayar & İşeri, 2023). The present study revealed that while more than half of the students took the medical history of patients and used the pain scale, less than half of the students performed the physical assessment appropriately. According to the results of the study, it can be asserted that students were not competent at the data collection stage.

In the literature, it is seen that nurses are significantly dependent on physician order and nursing students think that pharmacological methods are sufficient for pain management (Basit, 2020; Gürarlan Baş et al., 2016; Yılmaz & Atay, 2014). Based on findings of the study, it can be asserted that nearly half of the students were incompetent in planning the application of non-pharmacological methods and tended to apply pharmacological methods at a higher rate.

CONCLUSION

Critical thinking is a nurse-specific reflective thinking process that enables the nurse to produce ideas in patient care, contributes to coping with professional concerns, and guides the transfer of the nursing process to the care environment. Therefore, the appropriate use of critical thinking skills by nursing students affects the correct identification of the nursing diagnosis, which is an important step in the nursing process.

While preparing the care plans of surgical patients, it was observed that the students mostly focused on the diagnosis of pain, and also included diagnoses such as risk of infection, anxiety, lack of information and risk of falls. Moreover, a few students focused on medical diagnoses instead of nursing diagnoses.

It is recommended to plan trainings in the context of students' deficiencies in terms of nursing process, to prepare more care plans in terms of gaining experience in preparing care plans, to communicate with patients more, to make pain assessment appropriately, to use scales in pain assessment, and to review the missing information about non-pharmacological methods applied in pain management.

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