

Nursing Students' Reflections on the Clinical Learning Environment of the Oncology Unit: A Qualitative Study

Maryam Bagheri¹, Elaheh Ashouri^{1*}, Akram Mohammadi Pelarti²

¹Nursing and Midwifery Care Research Center, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

²Shafa Hospital, Isfahan University of Medical Sciences, Isfahan, Iran

Abstract

Background: The clinical learning environment is an important part of nursing education with a significant impact on nursing students' perceptions and experiences. This study aimed to explore nursing students' reflections to determine the effects of the first rotation in the clinical learning environment of the oncology unit on their perceptions and practices.

Methods: A descriptive qualitative study design was used. Data were collected using reflective diaries of forty 5th-semester nursing students about their experiences of learning in the oncology unit. Conventional content analysis was used for data analysis using MAXQD 10 software.

Results: Participants' perceptions of the clinical learning environment of the oncology unit were categorized into four main categories, namely challenging encounters, perceived needs, internal transcendence, and professional role development.

Conclusion: According to the results, nursing students' unpleasant experiences must be managed. Careful attention should be devoted to the unique characteristics of this ward. Different educational strategies are needed, and clinical instructors must play their roles as facilitators in challenging conditions to promote nursing students' clinical learning in oncology.

Keywords: Oncology nursing, Nursing students, Clinical education, Learning

Citation: Bagheri M, Ashouri E, Mohammadi Pelarti A. Nursing students' reflections on the clinical learning environment of the oncology unit: a qualitative study. *J Qual Res Health Sci.* 2023;12(3):129–136. doi:10.34172/jqr.2023.19

Received: August 14, 2022, **Accepted:** January 25, 2023, **ePublished:** September 30, 2023

Introduction

The clinical learning environment in which nursing students pass much of their learning time, is an integral part of nursing education, significantly affecting their perceptions and experiences (1). The oncology unit is one of the settings for nursing students' clinical learning, and cancer diagnosis is a traumatic situation that negatively affects the quality of life of patients and their families (2,3). Moreover, these patients are at high risk for death caused by cancer.

Nursing students' encounters in oncology units can expose them to challenges in care provision (4,5), make them experience different emotions and thoughts, and affect their attitudes and behaviors (6). Accordingly, their negative and positive experiences in providing care to patients with cancer can affect their ability to perform roles, adopt attitudes, and foster a desire to work in oncology wards (7,8).

Nursing students' negative experiences and emotions in the clinical learning environment can affect the quality of education (9-11). Studies on cancer education show that undergraduate nursing students experience various negative emotions such as fear, sadness, emotional

distress, frustration, anger, anxiety, inadequacy, and helplessness in this clinical learning environment (12-14).

To work in oncology units, nursing students need excellent theoretical knowledge and strong professional support (10). A study investigating students' reflections on care delivery to terminally ill patients showed that they needed internal and external support (15). Similarly, the American Association of Colleges of Nursing has highlighted the necessity of running educational courses for nursing students on providing care to patients with terminal conditions and their family members (16).

According to the undergraduate nursing curriculum in Iran, one credit of theoretical learning has been assigned to the cancer nursing course, which is presented in the fifth semester before entering the clinical environment. One of the sources for better understanding students' perceptions and experiences can be students' written reflections on clinical learning experiences. O'Donovan describes reflection as a "process of deliberative thinking, looking back, and examining oneself and one's practice to improve future practice" (17). In our study, students were required to deliver their learning experiences as an assignment in the form of written reflections and receive



feedback on them so that the nursing educator could provide effective support to manage students' emotions and experiences in the learning process.

Clinical experiences during clinical education can develop students' professional abilities, such as problem-solving, facilitate the transfer of knowledge to practice, and facilitate the formal and informal professionalization processes (18). In this regard, students' reflections need to be explored to evaluate their responses and performance in the first rotation in the clinical learning environment to identify the needs and effective activities for the presence of nursing students in the oncology unit. This study aimed to explore nursing students' reflections to determine the effects of the first rotation in the clinical learning environment of the oncology unit on nursing students' perceptions and practices.

Methods

Research design

A descriptive qualitative study design was used.

Setting and participants

The study was conducted in the first academic semester of 2019. Participants included forty 5th-semester nursing students of the Faculty of Nursing and Midwifery of Isfahan University of Medical Sciences, Isfahan, Iran. In the study setting, nursing students passed a course on adult nursing about nursing care for patients with hemato-oncological disorders. Afterward, they enrolled in a seven-day clinical course on oncology nursing and palliative care at Seyed al-Shohda hospital, Isfahan. All students enrolled in the clinical course were invited to participate. There were 25 female students and 15 male students with an age range of 20–24 years.

Data collection

Data were collected through daily written reflections/reflective diaries. Accordingly, participants were asked to reflect on and write about their daily learning experiences and events in the oncology unit. At the end of each day during their oncology nursing clinical course, they provided their reflective diaries to their clinical instructor. The clinical instructor read their writings and provided them with the necessary feedback. Every student provided seven reflective diaries, resulting in 280 writings by the 40 participants of the study. Finally, sampling was performed with maximum variation in terms of gender and grade point average (GPA), and 115 writings with rich data about participants' perceptions of clinical education in the oncology unit were selected. Inclusion criteria were based on the assessment of reflections in Association for Medical Education in Europe (AMEE) Guide No. 44, with a pragmatic approach (19). Therefore, writings that were unrelated to learning experiences, contained poor descriptions, included no interpretations of experiences,

or failed to describe the effects of the experience on their thoughts, feelings, attitudes, and learning changes were excluded. The first and the second authors performed the eligibility assessment.

Data analysis

The conventional content analysis using Graneheim and Lundman was used for data analysis (20). Reflective diaries were frequently read, and relevant lines or paragraphs were considered meaning units. Afterward, the meaning units were abstracted and coded. The identified codes were compared with each other and grouped into categories. The first and the second authors independently performed data analysis and then reviewed and combined their findings. The first author knew how to use reflection in education, and the second was an expert in cancer education and a clinical instructor of the course. The main categories and subcategories identified from the analysis of the two authors were agreed upon during the discussion and exchange of opinions. Data saturation took place when no new codes emerged from the data. We used MAXQDA 10 software for data management.

Trustworthiness of the data and the findings

The reliability of the data was investigated according to Guba and Lincoln's evaluative criteria (21). Both researchers had a prolonged engagement with the data, and enough time was spent on accurately collecting the data. The results were reviewed by the third researcher and one of the experts in the qualitative field. In this study, careful coding was provided with examples in the data collection and analysis stages. Moreover, to maintain transferability, a detailed description of the data collection process was provided. Finally, for the confirmability of the findings, several written reflections, codes, and extracted categories were investigated by two outside experts in the qualitative field.

Results

Participants' perceptions of the clinical learning environment in the oncology unit were categorized into four main categories, namely challenging encounters in the oncology unit, the need for preparation before attending the oncology unit, internal transcendence in the oncology unit, and professional role development (Table 1).

Challenging encounters

Challenging encounters in the oncology unit included perceptions, experiences, and emotions that needed special attention. Clinical education in an oncology unit was different from other learning environments for the participants. This difference was influential in their care provision and interactions with patients. This category includes four subcategories:

Table 1. Nursing students' perceptions of the clinical learning environment of the oncology unit

Main category	Sub-category
Challenging encounters	Identification with cancer patients
	Providing mental-religious-spiritual care
	Care delivery to patients unaware of their cancer diagnosis
	Care provision to terminally ill patients
Perceived needs	Availability of a safe environment
	Anxiety management in the oncology unit
Internal transcendence	Developing communications skills
	Valuing life opportunities
	Appreciating God for health
	Satisfaction with providing care to cancer patients
Professional role development	Specific empathetic nursing for cancer patients
	Taking oncology nurses as role models
	Professional knowledge of cancer nursing
	Professional suffering during care provision

Identification with cancer patients

Participants identified with cancer patients during their clinical course in the oncology unit. This identification was most obvious with patients of the same gender. Participants put themselves in the place of their patients and felt discomfort when they witnessed their suffering.

"My patient today was a 26-year-old girl with hair and eyebrow loss. In my opinion, it is very difficult for a girl to see herself in the mirror without hair. It was very painful for me." (P. 2)

"I had a very bad feeling during the bone marrow aspiration procedure for one of the patients. I felt as if the doctor was inserting the Jamshidi needle into my heart." (P. 4)

Providing mental-religious-spiritual care

Participants understood the need to provide spiritual and mental care and the necessity of paying special attention to patients' religious beliefs.

"Care provision in this ward should not focus on cancer treatment; rather, it should be focused on mental and spiritual care provision and morale boosting. Playing Quran recitation in this unit helped improve patients' mental health." (P. 19)

Care delivery to patients unaware of their cancer diagnosis

Patients' unawareness of their cancer diagnosis caused anxiety in some participants during care provision; consequently, they considered communication with these patients and providing care to them challenging experiences. They were concerned about the patient's awareness of their cancer diagnosis during care provision. Nonetheless, they accepted the reasons for not informing patients about cancer diagnosis and viewed it as a source

of peace and hope for the patients.

"Perhaps, the most difficult task is to communicate with a person unaware of their disease." (P. 6)

Care provision to terminally ill patients

Another challenging encounter for nursing students in the oncology unit was providing care to terminally ill patients. They noted that they experienced anxiety, despair, challenge, sadness, sorrow, and unpleasant feelings while providing care to these patients.

"Providing care to a 25-year-old terminally ill patient seriously affected me. At first, I didn't want to give him his medications, but then, I thought that I may have patients with more critical conditions in the future, so I should have the necessary readiness for giving medications and care to all patients and understand how to manage such situations." (P. 9)

Perceived needs

Participants expressed anxiety on the first day of their clinical education in the oncology unit. Consequently, they highlighted the need for preparation before attending this unit, a safe learning environment, and developing communication skills to have positive learning experiences. This category includes three subcategories:

Availability of a safe learning environment

Presence in the learning environment of the oncology unit was associated with anxiety for participants, particularly on the first day. However, adequate support from experienced nurses, effective nurse-student communication, acceptance of students by patients, and guidance by their clinical instructor turned the oncology unit into a safe and good learning environment for them.

"These days are very difficult, but the nurses' and our instructor's good conduct reduces my anxiety and the difficulties of this clinical course." (P. 38)

Anxiety management in the oncology unit

Participants' perceptions of attending an oncology unit included fear and anxiety of dealing with cancer patients, witnessing dying patients, observing diagnostic and therapeutic procedures, and causing injury to patients. Their previous experiences and attitudes toward cancer also added to their anxiety. However, they gradually coped with their conditions in the oncology unit by interacting with patients and receiving education from their instructors.

"I had no mental perception of this unit, and attending this unit was like a nightmare for me. I was always afraid of it." (P. 5)

Developing communications skills

The opportunity to develop communication skills was one factor that turned oncology unit attendance into a

pleasant experience. Participants reported experiences such as facing cultural conflicts, communication with patients who were unaware of their cancer diagnosis or experienced grief or depression, and the necessity to provide stronger emotional support to female patients.

“Interaction with cancer patients is difficult; you can’t easily communicate with them. Especially, female patients need stronger support.” (P. 16)

Internal transcendence in the oncology unit

Participants reported that attending an oncology unit was associated with changes in their beliefs, emotions, and internal transcendence. This category includes three subcategories:

Valuing life opportunities

Participants’ perceptions showed that their attendance at the oncology unit was associated with valuing life opportunities more. Witnessing patients’ and their families’ patience in overcoming life difficulties, pain, and suffering helped participants reflect on their values and beliefs. Moreover, patients and their families, who hoped for recovery and attempted to maintain their morale to survive, drew the participants’ attention to the value of life.

“Witnessing patients’ conditions affects me greatly and makes me understand the necessity to value life opportunities.” (P. 14)

Appreciating God for health

Witnessing patients’ and their families’ pain and suffering helped participants remember God’s favors and be thankful to him. Participants’ experiences showed that they considered health as God’s gift. To appreciate this favor, they attempted to provide care to patients.

“I feel I should do my best for these patients to thank God for my health.” (P. 12)

Satisfaction with providing care to cancer patients

Witnessing the effort, hope, kindness, and admiration of patients’ family members gave participants a sense of satisfaction with care provision. Moreover, patients’ prayers and gratitude for the nurses’ and participants’ care services enhanced participants’ satisfaction. Such satisfaction was associated with greater motivation for providing care and developing knowledge during participants’ clinical courses in the oncology unit.

“This patient’s frequent praying for whatever I did made me feel really good.” (P. 21)

Professional role development

Presence at an oncology unit had positive and negative effects on participants’ professional role development and their professional image. Their experiences showed that

they modeled the role of oncology nurses, developed their professional knowledge, and experienced professional suffering during their clinical course in the oncology unit. This category includes four subcategories:

Specific empathetic nursing for cancer patients

Participants’ experiences showed that they acquired a good understanding of the necessity for empathetic nursing in the oncology unit. They reported that during their clinical course in this unit, they learned skills such as active listening, patient stress management, patient confidence improvement, and patient suffering reduction. They perceived that empathy for cancer patients was different from sympathy for other patients.

“We need to provide care with the highest precision. Empathy with these patients is different from those in other wards.” (P. 15)

Taking oncology nurses as role models

Participants selected nurses with good clinical practice as their role models. The characteristics of these nurses were resilience under challenging situations, provision of complex care services, hopefulness and high morale in care provision, adequate professional knowledge, and considerable communication skills. Oncology nurses’ good practice and engagement in the teaching-learning process also gave participants good learning experiences.

“Today, the nurse performed excellent practice for patient care; I decided to be like that nurse if I wanted to become an oncology nurse.” (P. 22)

Professional knowledge of cancer nursing

Participants’ experiences showed that adequate professional knowledge was associated with quality care provision and patient trust in nurses. Participants’ successful communication with patients encouraged them to develop their professional knowledge. Moreover, participants recognized that they needed to strive to develop their professional knowledge about cancer while attending the oncology unit.

“I found that I should perform tasks very carefully based on professional knowledge because care provision in this unit is very sensitive, and the first mistake can be the last. I better understood the necessity of being precise and knowledgeable at work.” (P. 14)

Professional suffering during care provision

Participants experienced suffering in the oncology unit. Nurses’ psychological vulnerability, as well as patients’ and families’ pain, suffering, and problems, were associated with the sense of participants’ weakness and reduced motivation for working in this unit.

“I cannot work in the oncology unit. Such conditions ruin your perception of yourself as a nurse.” (P. 6)

Discussion

This study reveals students' perceptions and experiences of challenging encounters and the need to prepare nursing students for learning in the clinical learning environment of the cancer ward. Moreover, students' reflections showed the effects of clinical education in this ward on professional role development and personal growth in undergraduate nursing students. The findings revealed that students had both positive and negative clinical education experiences in this ward (22). Nursing students may experience negative feelings and attitudes in caring for cancer patients. In this regard, preparing students for education and care in this ward is necessary to develop empathy, improve communication skills, and enhance knowledge (23-25).

In this study, nursing students' perceptions were grouped into four main categories as follows.

Challenging encounters

Providing care to patients with cancer and dying patients is very difficult (26). Our participants' experiences showed that they attempted to identify with cancer patients in painful encounters to understand their sorrow and grief. The management of such situations was challenging for the participants and was associated with negative and difficult educational experiences. Previous studies have likewise shown that during care provision to cancer patients, students experience emotional distress, fear, and uncertainty (12,13). Effective management of emotions and feelings through reflective journaling and information provision about nurses' experiences can considerably affect students' attitudes in these situations (12). Another challenge was feeling unable to provide mental-religious-spiritual care to cater to the patient's needs. Similarly, Kalkim et al report that meeting patients' different needs in the oncology unit is a challenging responsibility for care providers. The nursing curriculum should promote nursing students' competence in spiritual care provision (27). Our participants also reported unpleasant experiences in providing care to patients unaware of their cancer diagnoses, patients with terminal conditions, and dying patients, which is in line with the findings of several previous studies (12,28,29). These findings highlight the necessity of strong support for nursing students (15) and educational courses on palliative and terminal care (16).

Perceived needs

The study findings also showed that students needed to receive preparations before attending the oncology unit and needed a safe learning environment with an instructor's guidance and supervision during patient care. Previous studies also highlighted the necessity of nurses' or instructors' support for students and managing their emotions during patient care (12,15). A psychologically safe environment, adequate support, and

constructive feedback can give students a sense of safety when facing clinical challenges (30). Our participants also reported anxiety about attending the oncology unit. Similarly, previous studies reported students' fear and anxiety about providing care to cancer patients (7,12,29). Such anxiety can partly be due to the public attitude to the cancer ward. In Iran, people have negative attitudes toward the cancer ward and believe it is an untreatable disease (31). Along with our participants' anxiety about attending the oncology unit, such attitudes and beliefs highlight the necessity of students' mental preparation before their clinical course in an oncology unit. The findings of the present study also showed the need for developing students' communication skills for attending the oncology unit. Mirlashari et al (12), Charalambous and Kaite (29), Sanford et al (28), and Jang et al (32) reported similar findings. Problems in communication between healthcare providers and patients can be associated with inadequate care provision and undermined patient trust in healthcare providers' abilities. Therefore, quality education about communication skills should be provided to students who attend the oncology unit (29). Students' successful communication with patients can result in positive experiences in an oncology unit.

Internal transcendence

We also found that witnessing patients' and family members' hope and attempts for survival was associated with participants valuing their lives and appreciating God for their health. In response to God's gift of health, participants attempted to provide effective services to patients and were satisfied with the care provided and their own healthy bodies. Abu Sharour et al showed that despite the suffering associated with witnessing multiple deaths, oncology nurses were satisfied with their performance in providing care to critically ill patients (33). Yu et al also reported that putting oneself in the patient's shoes is a strong predictor of satisfaction with compassion and care for patients with cancer (34). Oncology nurses in another study by Wentzel and Brysiewicz also reported resilience and satisfaction with compassion and care for cancer patients as the outcomes of working in the oncology unit (35).

Professional role development

Study findings also showed that clinical encounters in the oncology unit affected nursing students' professional role development. Sanford et al. likewise showed that clinical encounters and close interactions with cancer patients were associated with positive care-related experiences for students (28). Providing care to patients with cancer is a complex process that needs considerable professional knowledge and skills. Moreover, due to their encounter with care provision problems and their need for knowledge development, the present study participants were

required to develop their knowledge and performance. In line with this finding, a previous study by Kav et al reported students' desire to develop their knowledge about cancer (36). Our findings likewise showed that perceiving nurses with good professional knowledge and performance as role models had significant positive effects on professional role development among nursing students, which is consistent with Mirlashari et al (12), Charalambous and Kaite (29), and Kav and colleagues' studies (36).

Study findings also revealed that clinical education in the oncology unit was associated with understanding the need for empathetic nursing in this unit. Participants' experiences showed the importance of patients' need for being heard and understood. In line with these findings, Kearsley and Lobb showed that students valued simply talking with patients and listening to them to reduce their fear and apprehension (37). This finding is attributable to the fact that through reflective writing, students in the present study received feedback and education about empathetic care in the oncology unit from their clinical instructors. Hence, they had positive learning experiences in care provision to cancer patients. Previous studies reported that reflective writing could develop students' empathy (38,39).

We also found that nursing students had negative experiences and emotions about care provision to terminally ill patients, which negatively affected their professional performance and their decision about working in an oncology unit in the future. Findings also revealed that treatment failure, encountering patients' sorrow and grief, and ineffective coping with these problems were associated with a sense of insufficiency for students and adversely affected their professional roles. These findings may be due to the inability to provide optimal professional care based on the existing clinical and contextual conditions (12). Hanzeliková Pogrányivá et al. also reported the negative emotional consequences of care provision to dying patients and the need for prior preparation for effective coping (40).

This study was conducted on 5th-semester nursing students in clinical training in cancer and palliative care clinical wards in Iran, and it was the first time for the students to attend the clinical learning environment. Therefore, it is suggested to conduct studies on nursing students in higher semesters with previous preparation and experience in this clinical learning environment. It was determined that the students' oncology care competency was not at the desired level, which should be improved. Therefore, it is recommended that changes should be made to the curricula and training programs. Moreover, students should be supported by instructors and oncology nurses.

This study was conducted using the reflective diaries of bachelor nursing students in a seven-day clinical course.

Participants' characteristics and the length of their course in the oncology unit might have affected their perceptions.

Conclusion

In developing clinical education programs for nursing students in oncology units, careful attention should be paid to the unique characteristics of this unit, students' attitudes toward attending this ward, clinical instructors' role as a facilitator in challenging conditions, and students' communication skills for establishing effective communication with patients with cancer and those in terminal conditions. Different educational strategies should be used in clinical nursing education in the oncology unit to facilitate nursing students' challenge management and coping skills in response to unpleasant experiences.

The study findings suggest that students need psychological preparation and familiarization to attend the cancer unit so that students also have a positive learning experience and can benefit from learning in this environment.

Acknowledgements

The authors would like to express their sincere gratitude to the Nursing and Midwifery Care Research Center and all the students who helped carry out this research. The authors would like to thank the Research Deputy of Isfahan University of Medical Sciences for their support

Authors' Contribution

Conceptualization: Elaheh Ashouri, Maryam Bagheri.

Data curation: Elaheh Ashouri.

Formal analysis: Elaheh Ashouri, Maryam Bagheri.

Funding acquisition: Elaheh Ashouri, Akram Mohammadi Pelarti.

Investigation: Elaheh Ashouri.

Methodology: Maryam Bagheri.

Project administration: Elaheh Ashouri.

Resources: Elaheh Ashouri.

Software: Maryam Bagheri.

Supervision: Maryam Bagheri.

Validation: Elaheh Ashouri, Maryam Bagheri.

Visualization: Maryam Bagheri, Akram Mohammadi Pelarti.

Writing—original draft: Elaheh Ashouri.

Writing—review & editing: Maryam Bagheri.

Competing Interests

No potential conflict of interest relevant to this article was reported.

Ethical Approval

The Ethics Committee of Isfahan University of Medical Sciences, Isfahan, Iran, approved this study (code: IR.MUI.RESEARCH.REC.1397.303). The participants were informed about the study's purposes, the confidentiality of data, and the right to withdraw from the study without experiencing any negative outcome. Their written informed consent was then obtained.

Funding

This study was supported by the Research Deputy of Isfahan University of Medical Sciences (grant No. 297095).

References

1. Woo MWJ, Li W. Nursing students' views and satisfaction of their clinical learning environment in Singapore. *Nurs Open*. 2020;7(6):1909-19. doi: [10.1002/nop2.581](https://doi.org/10.1002/nop2.581).
2. Kalhor N, Khodabakhshi-Koolaei A. Explanation of spiritual experiences of mothers of cancer children: a descriptive phenomenological study. *J Qual Res Health Sci*. 2020;9(3):200-10. doi: [10.22062/jqr.2020.91514](https://doi.org/10.22062/jqr.2020.91514).
3. Mishra SI, Rishel Brakey H, Kano M, Nedjat-Haiem FR, Sussman AL. Health related quality of life during cancer treatment: perspectives of young adult (23-39 years) cancer survivors and primary informal caregivers. *Eur J Oncol Nurs*. 2018;32:48-54. doi: [10.1016/j.ejon.2017.11.007](https://doi.org/10.1016/j.ejon.2017.11.007).
4. Harden K, Price D, Duffy E, Galunas L, Rodgers C. Palliative care: improving nursing knowledge, attitudes, and behaviors. *Clin J Oncol Nurs*. 2017;21(5):E232-E8. doi: [10.1188/17.cjon.e232-e238](https://doi.org/10.1188/17.cjon.e232-e238).
5. Smith-Han K, Martyn H, Barrett A, Nicholson H. "That's not what you expect to do as a doctor, you know, you don't expect your patients to die." Death as a learning experience for undergraduate medical students. *BMC Med Educ*. 2016;16:108. doi: [10.1186/s12909-016-0631-3](https://doi.org/10.1186/s12909-016-0631-3).
6. Inayat S, Younas A, Sundus A, Khan FH. Nursing students' preparedness and practice in critical care settings: a scoping review. *J Prof Nurs*. 2021;37(1):122-34. doi: [10.1016/j.profnurs.2020.06.007](https://doi.org/10.1016/j.profnurs.2020.06.007).
7. Martí-García C, Ruiz-Martín L, Fernández-Alcántara M, Montoya-Juárez R, Hueso-Montoro C, García-Caro MP. Content analysis of the effects of palliative care learning on the perception by nursing students of dying and dignified death. *Nurse Educ Today*. 2020;88:104388. doi: [10.1016/j.nedt.2020.104388](https://doi.org/10.1016/j.nedt.2020.104388).
8. Naderi S, Zaboli R, Khalesi N, Nasiripour AA. The role of medical students in patient safety: a qualitative study. *J Qual Res Health Sci*. 2020;9(3):166-76. doi: [10.22062/jqr.2020.91510](https://doi.org/10.22062/jqr.2020.91510).
9. Lee JJ, Clarke CL, Carson MN. Nursing students' learning dynamics and influencing factors in clinical contexts. *Nurse Educ Pract*. 2018;29:103-9. doi: [10.1016/j.nepr.2017.12.003](https://doi.org/10.1016/j.nepr.2017.12.003).
10. Wang Y. Nursing students' experiences of caring for dying patients and their families: a systematic review and meta-synthesis. *Front Nurs*. 2019;6(4):261-72. doi: [10.2478/fon-2019-0042](https://doi.org/10.2478/fon-2019-0042).
11. Mirzaei R, Borhani F, Fasihi Harandi T. Nursing students' perception of clinical learning environments: a qualitative study. *J Qual Res Health Sci*. 2020;4(1):1-11.
12. Mirlashari J, Warnock F, Jahanbani J. The experiences of undergraduate nursing students and self-reflective accounts of first clinical rotation in pediatric oncology. *Nurse Educ Pract*. 2017;25:22-8. doi: [10.1016/j.nepr.2017.04.006](https://doi.org/10.1016/j.nepr.2017.04.006).
13. Kapucu S, Bulut HD. Nursing students' perspectives on assisting cancer patients. *Asia Pac J Oncol Nurs*. 2018;5(1):99-106. doi: [10.4103/apjon.apjon_44_17](https://doi.org/10.4103/apjon.apjon_44_17).
14. Khoshkesht S, Mardanian Dehkordi L, Nikbakht Nasrabadi A. Experience of nursing students in the first exposure to the patient under chemotherapy. *Iran J Nurs Res*. 2020;15(1):19-28. [Persian].
15. Lian Z, Skytt B, Li C, Engström M. Nursing students' reflections on caring for end-of-life patients in a youth volunteer association. *Nurse Educ Pract*. 2019;34:204-9. doi: [10.1016/j.nepr.2018.12.006](https://doi.org/10.1016/j.nepr.2018.12.006).
16. O'Connor B. CARES: competencies and recommendations for educating undergraduate nursing students preparing nurses to care for the seriously ill and their families. *J Prof Nurs*. 2016;2(32):78-84. doi: [10.1016/j.profnurs.2016.02.008](https://doi.org/10.1016/j.profnurs.2016.02.008).
17. Bulman C, Schutz S. *Reflective Practice in Nursing*. John Wiley & Sons; 2013.
18. Jho MY. Effects of writing reflective journal on meta-cognition and problem-solving ability in nursing students taking a fundamental nursing skills course applying blended learning. *J Korean Acad Fundam Nurs*. 2016;23(4):430-9. doi: [10.7739/jkafn.2016.23.4.430](https://doi.org/10.7739/jkafn.2016.23.4.430).
19. Sandars J. The use of reflection in medical education: AMEE Guide no. 44. *Med Teach*. 2009;31(8):685-95. doi: [10.1080/01421590903050374](https://doi.org/10.1080/01421590903050374).
20. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today*. 2004;24(2):105-12. doi: [10.1016/j.nedt.2003.10.001](https://doi.org/10.1016/j.nedt.2003.10.001).
21. Squires A, Dorsen C. Qualitative research in nursing and health professions regulation. *J Nurs Regul*. 2018;9(3):15-26. doi: [10.1016/s2155-8256\(18\)30150-9](https://doi.org/10.1016/s2155-8256(18)30150-9).
22. Kutlutürkan S, Kırcı K, Öztürk ES. Nursing students' attitudes towards cancer and affecting factors in Turkey: A descriptive study. *Journal of Human Sciences*. 2023 Apr 19;20(2):143-55. doi: [10.14687/jhs.v20i2.6339](https://doi.org/10.14687/jhs.v20i2.6339).
23. Arda Sürücü H, Anuş Topdemir E, Baksı A, Büyükkaya Besen D. Empathic approach to reducing the negative attitudes of nursing undergraduate students towards cancer. *Nurse Educ Today*. 2021;105:105039. doi: [10.1016/j.nedt.2021.105039](https://doi.org/10.1016/j.nedt.2021.105039).
24. Zhou Y, Li Q, Zhang W. Undergraduate nursing students' knowledge, attitudes and self-efficacy regarding palliative care in China: a descriptive correlational study. *Nurs Open*. 2021;8(1):343-53. doi: [10.1002/nop2.635](https://doi.org/10.1002/nop2.635).
25. Delli Poggi A, Pintus G, Dionisi S, Di Simone E, Giannetta N, Di Muzio M, et al. Impact of nursing students on the quality of care perceived by patients: a systematic review of the literature. *Eur Rev Med Pharmacol Sci*. 2021;25(6):2711-25. doi: [10.26355/eurrev_202103_25434](https://doi.org/10.26355/eurrev_202103_25434).
26. Enjoo SA, Amini M, Tabei SZ, Mahbudi A, Kavosi Z, Saber M. The main indicators for Iranian hospital ethical accreditation. *J Adv Med Educ Prof*. 2015;3(3):117-32.
27. Kalkim A, Sagkal Midilli T, Daghan S. Nursing students' perceptions of spirituality and spiritual care and their spiritual care competencies: a correlational research study. *J Hosp Palliat Nurs*. 2018;20(3):286-95. doi: [10.1097/njh.0000000000000446](https://doi.org/10.1097/njh.0000000000000446).
28. Sanford J, Townsend-Rocchiccioli J, Quiett K, Trimm D. "I see my mother's face": student nurse experiences caring for cancer patients. *Eur J Oncol Nurs*. 2011;15(1):46-52. doi: [10.1016/j.ejon.2010.05.010](https://doi.org/10.1016/j.ejon.2010.05.010).
29. Charalambous A, Kaité C. Undergraduate nursing students caring for cancer patients: hermeneutic phenomenological insights of their experiences. *BMC Health Serv Res*. 2013;13:63. doi: [10.1186/1472-6963-13-63](https://doi.org/10.1186/1472-6963-13-63).
30. Young JE, Williamson MI, Egan TG. Students' reflections on the relationships between safe learning environments, learning challenge and positive experiences of learning in a simulated GP clinic. *Adv Health Sci Educ Theory Pract*. 2016;21(1):63-77. doi: [10.1007/s10459-015-9611-3](https://doi.org/10.1007/s10459-015-9611-3).
31. Badihian S, Choi EK, Kim IR, Parnia A, Manouchehri N, Badihian N, et al. Attitudes toward cancer and cancer patients in an urban Iranian population. *Oncologist*. 2017;22(8):944-50. doi: [10.1634/theoncologist.2017-0073](https://doi.org/10.1634/theoncologist.2017-0073).
32. Jang KI, Yoo YS, Roh YS. Development and effectiveness of an oncology nursing standardized patient simulation program for nursing students. *Korean J Adult Nurs*. 2019;31(6):595-604. doi: [10.7475/kjan.2019.31.6.595](https://doi.org/10.7475/kjan.2019.31.6.595).
33. Abu Sharour L, Suleiman K, Yehya D, Al-Kaladeh M, Malak M, Subih KM, et al. Nurses' students' attitudes toward death and caring for dying cancer patients during their placement. *EuroMediterranean Biomed J*. 2017;12(40):189-93. doi:

- 10.3269/1970-5492.2017.12.40.
34. Yu H, Jiang A, Shen J. Prevalence and predictors of compassion fatigue, burnout and compassion satisfaction among oncology nurses: a cross-sectional survey. *Int J Nurs Stud.* 2016;57:28-38. doi: [10.1016/j.ijnurstu.2016.01.012](https://doi.org/10.1016/j.ijnurstu.2016.01.012).
 35. Wentzel DL, Brysiewicz P. A survey of compassion satisfaction, burnout and compassion fatigue in nurses practicing in three oncology departments in Durban, South Africa. *Int J Afr Nurs Sci.* 2018;8:82-6. doi: [10.1016/j.ijans.2018.03.004](https://doi.org/10.1016/j.ijans.2018.03.004).
 36. Kav S, Citak EA, Akman A, Erdemir F. Nursing students' perceptions towards cancer and caring for cancer patients in Turkey. *Nurse Educ Pract.* 2013;13(1):4-10. doi: [10.1016/j.nepr.2012.05.010](https://doi.org/10.1016/j.nepr.2012.05.010).
 37. Kearsley JH, Lobb EA. "It is not a disease we treat, but a person": medical students' reflections on their first rotations to an oncology and palliative care unit. *J Palliat Care.* 2013;29(4):232-6.
 38. Bas-Sarmiento P, Fernández-Gutiérrez M, Baena-Baños M, Romero-Sánchez JM. Efficacy of empathy training in nursing students: a quasi-experimental study. *Nurse Educ Today.* 2017;59:59-65. doi: [10.1016/j.nedt.2017.08.012](https://doi.org/10.1016/j.nedt.2017.08.012).
 39. Yang N, Xiao H, Cao Y, Li S, Yan H, Wang Y. Does narrative medicine education improve nursing students' empathic abilities and academic achievement? A randomised controlled trial. *J Int Med Res.* 2018;46(8):3306-17. doi: [10.1177/0300060518781476](https://doi.org/10.1177/0300060518781476).
 40. Hanzeliková Pogrányivá A, García-López MV, Conty Serrano MR, López Davila Sánchez B, Barriga Marín JM, Martín-Conty JL. [Nursing students' reflections on the death process]. *Enferm Glob.* 2014;13(33):145-56.

© 2023 The Author(s); Published by Kerman University of Medical Sciences. This is an open-access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.