



Palliative Care Issues and Challenges in Saudi Arabia: Knowledge Assessment Among Nursing Students

Omar Mohammad Khraisat, PhD, MSN, RN¹,
 Mahmoud Hamdan, MSN, RN, CPHQ, CLSSMBB²,
 and Mohannad Ghazzawwi, MSN, RN³

Abstract

Background: Nurses are the heart of the palliative care team who provide high standards of care since they spend the longest time with patients. However, lack of adequate knowledge of palliative care is considered as one of the main obstacles to palliative care improvement. **Aim:** A survey was conducted to assess Saudi nursing students' knowledge about palliative care. **Methods:** Using a descriptive design, 154 students who enrolled in first year and who will graduate within 1 year were surveyed in a nursing college located in Riyadh, the capital of Saudi Arabia. The Palliative Care Quiz for Nursing (PCQN) was used to assess students' knowledge. **Results:** The sample mean age was 22.1 (standard deviation (SD): 2.2), and most of the students were predominately female (93; 60.4%) and the majority were senior students who will be graduated within the current academic year (105; 68.2%). The total mean score of palliative care knowledge was low at 7.30 (SD: 0.56; range: 0-13), and the number of correctly answered statements ranged from 16 (10.4%, statement no. 7) to 91 (59.1%, statement no. 18). Eleven misconceptions about palliative care among participants are conceptually categorized into 3 categories: principle and philosophy of palliative care, pain and symptom management, and psychological and spiritual care. **Conclusion:** Integrating palliative care education within the nursing programs is the backbone to improve nursing students' knowledge, namely, in principles of palliative care and symptom management.

Keywords

knowledge, nursing students, palliative care, Saudi

Introduction

With an increased worldwide attention to integrate palliative care with health-care systems, the World Health Organization (WHO) declared that a public health strategy, education, and training are required for integrating palliative care with health-care systems.¹ Knowledge deficit of palliative care among nurses is well-documented and is considered one of the main barriers to provide high-quality palliative care.²⁻⁴ There is an agreement that nurses' deficient knowledge might relate to poor integration of palliative topic with the undergraduate nursing programs.^{5,6}

Nursing students are poorly educated regarding palliative care in undergraduate nursing curriculums.⁷ In addition, little attention is given to palliative care in most graduate nursing curricula, leaving advanced practice nurses poorly prepared to meet the needs of palliative care.⁷

Saudi Arabia is known to be culturally different from the West, where the concept of palliative care is originated. Two decades ago, palliative care services in Saudi Arabia were started at the King Faisal Specialist Hospital and Research Centre (KFSH&RC) in Riyadh by Dr Isbister; from that time, the field has slowly developed.⁷

Nurses are the heart of the palliative care team in providing high standards of care since they spend the longest time with patients.⁴ In Saudi Arabia, little is identified about palliative care among nursing students.^{1,8} Overall, the necessity for palliative care has increased significantly.^{5,6} There is a real need for palliative care in Saudi Arabia.^{1,8}

For instance, a study that investigated third-year diploma nursing students' (sample size [N]: 83) knowledge about palliative care in India showed a low level of knowledge, with low total mean scores (mean = 6.4 out of 20; standard deviation (SD): 1.6).⁹ The generalizability of these results might be limited because of small sample and single setting. Another study conducted in the United States revealed that students'

¹ Nursing College, Jerash University, Jerash, Jordan

² Nursing Department, King Saud Medical City, Riyadh, Kingdom of Saudi Arabia

³ Nursing Department, Almaarefa College, Riyadh, Kingdom of Saudi Arabia

Corresponding Author:

Omar Mohammad Khraisat, Nursing College, Jerash University, PO Box 26150, Jerash, Jordan.

Email: khraisat111@hotmail.com

knowledge about palliative care tended to increase as they progressed toward the end of their study program.¹⁰ However, it was still considered to be limited and inadequate to allow them to provide a high standard of care once they graduated from nursing school.¹⁰ Another study conducted in Lebanon to assess nurses' knowledge about palliative care found that those nurses without an educational background (eg, teachers and this may be because they have long theoretical experience) have better knowledge of palliative care.¹¹ In addition, a considerable number of nurses erroneously believed that the main goal of palliative care is to prolong patients' lives and that palliative care could make patients feel hopeless and depressed.¹¹ This study recruited a large number of nurses (sample size [N]: 956) to reply to a specially developed questionnaire; however, the study instrument was not empirically tested for reliability or validity. Further, the results of the study of Chari et al⁶ indicated average or poor knowledge of palliative care in final-year students of bachelor of nursing science (BSc), which improved after the intervention of the palliative workshop.⁶

Knowledge deficiency appears not to be exclusive to nursing students; a study was conducted among medical students to investigate the palliative care knowledge.¹² In this study, (sample size [N]: 176), medical students completed the study questionnaire. About 50% of participants considered that the content of palliative care was moderate, and they also tended to have poor knowledge. Further, only 14% of the participants were able to answer 6 or 7 out of the 8 questions related to palliative care.¹² Additionally, a study was conducted in Manipal University among (sample size [N]: 326) undergraduate nursing students. In all, 61.7 % of students feel that resuscitation is appropriate in advanced metastatic cancer; 67.5 % of students feel that all dying patients need palliative care and most of the students think that palliative care is equivalent to pain medicine, geriatric medicine, and rehabilitation medicine; 89% of students think that morphine causes addiction in palliative care setting; and 60.7% of students feel that prognosis should only be communicated to the family.¹³

Furthermore, many studies showed that nurses working in nursing homes, pediatric, and critical care units also lack the knowledge required to provide palliative care.¹⁴⁻¹⁶ Two of these studies^{14,16} used the Palliative Care Quiz for Nursing (PCQN) to assess knowledge, which is a validated assessment of nurses' knowledge regarding palliative care. Both studies reported that nurses had insufficient knowledge regarding the principles and practice of palliative care.^{14,16}

In Saudi Arabia, the palliative care concept was not familiar for most nurses.⁸ Majority of nurses provided physical care at the end-of-life stage to keep the body intact, and some nurses highlighted that dying patients did not feel pain to be treated and did not have emotions to be supported.^{8,16}

Thus, in Saudi Arabia, limited evidence exists to assess the nursing students' knowledge about palliative care. This study aimed to assess Saudi nursing students' knowledge about palliative care.

Methods

Sample

A descriptive design was used to assess Saudi nursing students' knowledge about palliative care. The study was conducted over a period of 4 months in a nursing college located in Riyadh, the capital of Saudi Arabia. The inclusion criteria for this study were nursing students who were studying a bachelor degree and were able to understand written English.

To assess the knowledge of palliative care effectively, the sample was drawn based on seniority—first-year nursing students are considered the juniors and the students who will graduate within the current academic year are considered the seniors. The estimated sample size of 150 was calculated using the Power Primer.¹⁷

Institutional review board approval was obtained from the selected nursing college. The participants were informed that their participation was voluntary, and it is their right to withdraw from the study at any time without penalty and that all information obtained would be treated confidentially and anonymously. Additionally, permission to use the questionnaire was obtained from PCQN authors.

Data Collection

The English version of PCQN was used to measure participants' knowledge of palliative care that was developed by Ross, McDonald, and McGuinness in 1996.¹⁸ The English version of PCQN was used because English is the teaching language of nursing colleges in Saudi Arabia. The PCQN comprises 20 questions; the responses being true, false, or don't know. For each completed questionnaire, the total score was calculated (the sum of the number of the correctly answered items). This score can theoretically range from 0 (minimum score) to 20 (maximum score). However, PCQN has 3 subscales (theoretical categories) that include the following categories: philosophy and principles of palliative care (items 1, 9, 12, 17), pain and symptom management (items 2-4, 6-8, 10, 13-16, 18, 20), and psychosocial and spiritual care (items 5, 11, 19).

The mean score of the PCQN subscales was calculated for each by summing the scores of each item belonging to the subscale and dividing this by the number of items. The PCQN's internal consistency of 0.78 is considered high.¹⁸ A pilot study was conducted with a sample of nursing students to evaluate the clarity and appropriateness of the instrument to Saudi Arabian culture. Reliability of PCQN was Cronbach α 0.70. In addition, information on participants' demographics was collected such as age, gender, level at school, and whether they have received palliative education or not.

Data Analysis

Data were analyzed using SPSS version 17 for windows (SPSS Inc, Chicago, Illinois). Data were screened for mistake entry and missing data and outliers. There were no missing values

and outliers. The results were processed using descriptive statistics (frequency, arithmetic mean, and SD).

Results

The sample consisted of (sample size [N]: 154) nursing students, with mean age of 22.1 years (SD: 2.2). Participants were predominately female (93; 60.4%) and the majority were senior students who will be graduated within the current academic year (105; 68.2%). The mainstream of 120 (77%) participants reported having received no education about palliative care, as shown in Table 1.

Knowledge About Palliative Care

The total mean score of knowledge was low at 7.30 (SD: 0.56; range: 0-13). The number of correctly answered items ranged from 10.4% on item 7 to 59.1% on item 18, as shown in Table 2. The items 18, 2, 4, and 20 had the most correct answers 59.1%, 55.8%, 52.6%, and 46.8%, respectively. All of these items belong to the pain and symptom management conceptual category. Although nursing students' performance on these selected items were satisfactory, overall performance of other items of philosophy and principles of palliative care and psychosocial and spiritual care were not satisfactory.

The total mean score for the pain and symptom management category (13 items) was low at 1.89 (SD: 0.78) of a maximum score of 13. The mean scores on the other 2 conceptual categories were even lower: on psychological and spiritual care (3 items), 1.74 (SD: 0.84) of 3 (maximum score), and on the philosophy and principles of palliative care (4 items), 2.22 (SD: 0.85) of 4 (maximum score). Table 2 shows that only 3 items were correctly answered by more than 50% of students, while the other 17 items were answered correctly by fewer than 47% of students.

The results of this study show that nursing students have insufficient knowledge about palliative care in Saudi Arabia. For example, they believed that the extent of a disease could determine the method of pain management (item 3, false), that loss of a distant relation is easier to resolve than the loss of one that is close or intimate (item 19, false), and that a placebo is effective in treating pain (item 13, false). In addition, (89.6%) students believed that addiction is highly possible when morphine is used for a long period (item 7, false).

In Table 3, the top 11 misconceptions about palliative care among participants are presented. It is clear that students' most common misconceptions are not limited to 1 aspect of palliative care but fall into all 3 conceptual categories: principle and philosophy of palliative care, pain and symptom management, and psychological and spiritual care.

Discussion

This is the first survey carried out in Saudi Arabia to assess nursing student's knowledge about palliative care. The findings of the study demonstrated that nursing students have

Table 1. Sociodemographics of Participants.^a

Variable	No.	%
Age		
Mean (SD)	22.1	2.2
Gender		
Male	61	39.6
Female	93	60.4
Level at school		
Junior (first-year nursing student)	49	31.8
Senior (will graduate within the year)	105	68.2
Whether received palliative care education or not?		
Yes	34	33
No	120	77

Abbreviation: SD, standard deviation.

^aN = 154.

insufficient knowledge about the core, philosophy, and principles of palliative care. Their knowledge was severely poor, as evidenced by the very low average PCQN mean score—7.30 (SD: 0.56); previous studies reported higher means.^{2,13} In addition, 15 items were answered correctly by <40%. The results revealed that nursing students participating in the study held a considerable number of misconceptions about palliative care. For example, they believed that the use of placebo is effective in pain management; they associated the severity and extent of disease with the selection of the pain treatment method, and they believed that emotional detachment is a prerequisite for the provision of palliative care services. The results of this study were consistent with study of Al Khalailah and Al Qadire in which pain management needs knowledgeable and trained nurses.¹⁹ Because nursing students are the nurses of the forthcoming, it is important to ensure that students are adequately educated about pain management in nursing schools.¹⁹

The results of this study were partially consistent with previous studies in regard to low knowledge level.^{5,6} However, some aspects were different, which might be associated with the status of palliative care in Saudi Arabia. In this study, nursing students' knowledge mean score was lower than reported from other parts of the world.^{2,5,6} Additionally, nursing students were not familiar with the concept, and misconceptions related to pain management, principles, and philosophy of palliative care were prevalent. This can be explained by the fact that, in Saudi Arabia, structured palliative care programs for nursing profession are not available.⁸ On top, palliative care services are limited to some hospitals as training courses.⁸ Further research to examine the availability, adequacy, distribution, and need for palliative care in Saudi Arabia is strongly recommended.

Another explanation for this low mean score of knowledge could be the lack of education content about palliative care in nursing curricula. Previous studies have reported inadequate education about palliative care in nursing schools' curriculums.^{2,5,6} Moreover, using the English version of the questionnaire could hinder nursing students' understanding of some items; although all words are thought to be open to

Table 2. Descriptive Results of Students' Answers on the PCQN.

Item		Item Nursing Students' Answers	
		Correct Frequency (%)	Wrong Frequency (%)
1	Palliative care is only appropriate in situations where there is evidence of a downward trajectory or deterioration (F)	41 (26.6)	113 (73.4)
2	Morphine is the standard used to compare the analgesic effect of other opioids (T)	86 (55.8)	68 (44.2)
3	The extent of the disease determines the method of pain treatment (F)	23 (14.9)	131 (85.1)
4	Adjuvant therapies are important in managing pain (T)	81 (52.6)	73 (47.4)
5	It is crucial for family members to remain at the bedside until death occurs (F)	45 (29.2)	109 (70.8)
6	During the last days of life, drowsiness associated with electrolyte imbalance may decrease the need for sedation (T)	31 (20.1)	123 (79.9)
7	Drug addiction is a major problem when morphine is used on a long-term basis for the management of pain (F)	16 (10.4)	138 (89.6)
8	Individuals who are taking opioids should also follow a bowel regime (T)	63 (40.9)	91 (59.1)
9	The provision of palliative care requires emotional detachment (F)	33 (21.4)	121 (78.4)
10	During the terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment of severe dyspnea (T)	54 (35.1)	100 (64.9)
11	Men generally reconcile their grief more quickly than women (F)	33 (21.4)	121 (78.4)
12	The philosophy of palliative care is compatible with that of aggressive treatment (T)	50 (32.5)	104 (67.5)
13	The use of placebos is appropriate in the treatment of some types of pain (F)	29 (18.8)	125 (81.2)
14	High-dose codeine causes more nausea and vomiting than morphine (T)	52 (33.8)	102 (66.2)
15	Suffering and physical pain are synonymous (F)	43 (27.9)	111 (72.1)
16	Demerol is not an effective analgesic for the control of chronic pain (T)	51 (33.1)	103 (66.9)
17	The accumulation of losses renders burnout inevitable for those who work in palliative care (F)	27 (17.5)	127 (82.5)
18	Manifestations of chronic pain are different from those of acute pain (T)	91 (59.1)	63 (40.9)
19	The loss of a distant relationship is easier to resolve than the loss of one that is close or intimate (F)	25 (16.2)	129 (83.8)
20	Pain threshold is lowered by fatigue or anxiety (T)	72 (46.8)	82 (53.2)

Abbreviations: F, False; T, True.

Table 3. Common Student Misconceptions About Palliative Care.

Statement	Conceptual Category
Drug addiction is a major problem when morphine is used on a long-term basis for the management of pain (F). Statement no. 7	Pain and symptom management
The extent of the disease determines the method of pain treatment (F). Statement no. 3	Pain and symptom management
The loss of a distant relationship is easier to resolve than the loss of one that is close or intimate (F). Statement no. 19	Psychological and spiritual care
The use of placebos is appropriate in the treatment of some types of pain (F). Statement no. 13	Pain and symptom management
During the last days of life, drowsiness associated with electrolyte imbalance may decrease the need for sedation (T). Statement no. 6	Pain and symptom management
The provision of palliative care requires emotional detachment (F). Statement no. 9	Philosophy and principles of palliative care
Men generally reconcile their grief more quickly than women (F). Statement no. 11	Psychological and spiritual care
Palliative care is only appropriate in situations where there is evidence of a downward trajectory or deterioration (F). Statement no. 1	Philosophy and principles of palliative care
Suffering and physical pain are synonymous (F). Statement no. 15	Pain and symptom management
It is crucial for family members to remain at the bedside until death occurs (F). Statement no. 5	Psychological and spiritual care

Abbreviations: F, False; T, True.

misinterpretation, an Arabic version of the questionnaire is recommended for future work in the field.

However, it was still considered to be limited and not adequate to enable them to provide high standards of care once they graduated from nursing school.¹⁰

Limitations

There are some limitations to this study. First, the sample was recruited based on convenience sampling; hence, the participants who completed the survey might not entirely reflect the knowledge of those who did not. This reduces the possibility of

generalizing the implications of the study. Second, this study was limited to 1 college located in Riyadh, the capital of Saudi Arabia, which limits the external validity of the findings.

Conclusion

The main aim of this study was to assess nursing students' knowledge about palliative care. According to the results presented, it is noticeable that students' knowledge was inadequate regarding the philosophy and principle of palliative care as shown by the low average for PCQN score. This result is similar to Ronaldson et al's study in 2015.⁸ This study used the same research instrument to evaluate students' knowledge regarding palliative care.⁸ In addition, this study displays that the students had a large number of misconceptions of palliative care.⁸ Additionally, nursing students believed that palliative care is only appropriate for advanced illness and deteriorated cases.⁸ This conclusion was also confirmed by another research study.¹⁹

Remarkably, in this study, the number of nursing students who received palliative education was lower than the number of students who did not. However, the lack of knowledge about palliative care among students could be a result of insufficient palliative nursing teaching in the curriculum in Saudi Arabia. Previous scholars stated that the number of educational hours in palliative care nursing was inadequate.^{10,11}

In this study, the nursing course content was not evaluated. However, 77% of students reported that during their study, they did not receive palliative care education. This finding emphasizes the need for palliative care nursing education integrated within the nursing programs. Hence, in order to improve students' knowledge of palliative care, course content should cover the principles of palliative care. For example, these principles may consist of pain management and symptom control and psychological and spiritual care. Moreover, there are many studies that highlighted the importance of palliative care education to improve nursing practice.^{6,12,13,20}

Thus, the impact of inadequate knowledge about palliative care nursing will affect nursing quality of care in the future in Saudi Arabia. In summary, there were significant differences in the mean score of PCQN for prior palliative care education among nursing students. One explanation is that those students came from different years of study. It is recommended that palliative care education should be a requirement through including it as a part of the BSN courses. This can be achieved by including palliative care topics in all specialized nursing courses. More research should be carried out to assess the course content of palliative care education in the nursing curriculum to improve nursing knowledge about palliative care, namely, in Riyadh, Saudi Arabia.

Acknowledgment

The authors would like to thank all who assisted in this study.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was funded by Jerash University.

References

1. Youssef HA, Mansour MA, Al-Zahrani SM, et al. Prioritizing palliative care: assess undergraduate nursing curriculum, knowledge and attitude among nurses caring end-of-life patients. *EJAE*. 2015;2(2):90-101.
2. Callahan MF, Breakwell S, Suhayda R. Knowledge of palliative and end-of-life care by student registered nurse anesthetists. *AANA J*. 2011;79(suppl 4):S15-S20.
3. Fallon M, Hanks G, Hanks GWC. *ABC of Palliative Care*. 2nd ed. London, UK: Library of Congress; 2006.
4. Prem V, Karvannan H, Kumar SP. Study of nurses' knowledge about palliative care: a quantitative cross-sectional survey. *Indian J Palliat Care*. 2012;18(2):122-127. doi:10.4103/0973-1075.100832.
5. Ayed A, Sayej S, Harazneh L, Fashafsheh I, Eqtaif F. The nurses' knowledge and attitudes towards the palliative care. *JEP*. 2015; 6(4):22-28.
6. Chari S, Gupta M, Choudhary M, Sukare L. Knowledge and attitude of nursing students towards palliative care: role of focused training. *IJBR*. 2016;7(9):629-632.
7. Stjernsward J, Foley KM, Ferris FD. The public health strategy for palliative care. *J Pain Symptom Manag*. 2007;33(5):486-493.
8. Alshaikh Z, Alkhodari M, Sormunen T, Pernilla H. Nurses' knowledge about a palliative care in an intensive care unit in Saudi Arabia. *ME-JN*. 2015;9(1):7-13. doi:10.5742/MEJN.2015.92614.
9. Karkada S, Nayak BS, Malathi. Awareness of palliative care among diploma nursing students. *Indian J Palliat Care*. 2011; 17(1):20-23. doi:10.4103/0973-1075.78445.
10. Wallace M, Grossman S, Campbell S, et al. Integration of end-of-life care content in undergraduate nursing curricula: student knowledge and perceptions. *J Prof Nurs*. 2009;25(1):50-56. doi: 10.1016/j.profnurs.2008.08.003.
11. Abu-SaadHuijer H, Abboud S, Dimassi H. Palliative care in Lebanon: knowledge, attitudes and practices. *Int J Palliat Nurs*. 2009; 15(7):346-353.
12. Hesselink BM, Pasman HR, van der WG, Soethout MB, Onwuteaka-Philipsen BD. Education on end-of-life care in the medical curriculum: students' opinions and knowledge. *J Palliat Med*. 2010;13(4):381-387. doi:10.1089/jpm.2009.0291.
13. Sakshi S, Naveen SS, Asha K. Palliative care awareness among Indian UG health care students: a need's assessment study to determine incorporation of palliative care education in UG medical, nursing and allied health education. *Ind J Palliat Care*. 2010; 16(3):154-159.
14. Knapp CA, Madden V, Wang H. Pediatric nurses' knowledge of palliative care in Florida: a quantitative study. *Int J Palliat Nurs*. 2009;15(9):432-439. doi: 10.1089/jpm.2009.0146.
15. Nordgren L, Olsson H. Palliative care in a coronary care unit: a qualitative study of physicians and nurses perceptions. *J Clin Nurs*. 2004;13(2):185-193.

16. Ronaldson S, Hayes L, Carey M, Aggar C. A study of nurses' knowledge of a palliative approach in residential aged care facilities. *Int J Older People Nurs.* 2008;3(4):258-267.
17. Cohen J. Power primer. *Am Psychol Assoc.* 1992;112(1):155-159.
18. Ross MM, McDonald B, McGuinness J. The palliative care quiz for nursing (PCQN): the development of an instrument to measure nurses' knowledge of palliative care. *J Adv Nurs.* 1996;23(1):126-137.
19. Al Khalaileh M, Al Qadire M. Pain management in Jordan: nursing students' knowledge and attitude. *BJN.* 2013;22(21):34-40.
20. Adriaansen M, vanAchterberg T. The content and effects of palliative care courses for nurses: a literature review. *Int J Nurs Stud.* 2008;45(3):471-485.