



Knowledge and Attitude Regarding End-of-Life Care among B.Sc. Nursing Students: A Descriptive Cross-Sectional Study

Priyanshu Chaubey¹, Vivek Giri², Ravi Kumar Gupta³, Devendra Kumar⁴

¹²³ B.Sc. Nursing Students, Galgotias School of Nursing, Galgotias University, Greater Noida, Uttar Pradesh, India

⁴ Assistant Professor, Medical-Surgical Nursing Department, School of Nursing, Galgotias University, Greater Noida, Uttar Pradesh, India

Corresponding author: Devendra Kumar, Assistant Professor, Medical-Surgical Nursing Department, School of Nursing, Galgotias University, Greater Noida, Uttar Pradesh, India

Abstract

Background: End-of-life care is an essential component of nursing practice and requires nurses to provide comprehensive physical, psychological, social, cultural, and spiritual support to patients and families. Adequate knowledge and a positive attitude among nursing students are important for compassionate and evidence-based care.

Objective: To assess the level of knowledge and attitude regarding end-of-life care among B.Sc. Nursing students, determine their association with selected demographic variables, and examine the relationship between knowledge and attitude.

Methods: A quantitative descriptive cross-sectional design was used among 100 B.Sc. Nursing students selected by convenient sampling. Data were collected using a demographic questionnaire, a structured knowledge questionnaire, and a five-point Likert attitude scale. Descriptive statistics, chi-square test, and Pearson correlation were used for analysis.

Results: Fifty-seven (57.0%) students demonstrated good knowledge and 43 (43.0%) demonstrated average knowledge. No respondent was classified as having poor knowledge. Seventy-two (72.0%) students demonstrated a positive attitude and 28 (28.0%) demonstrated a neutral attitude; none had a negative attitude. Knowledge was significantly associated with previous clinical exposure ($p < 0.001$), while no significant association was observed with age, gender, or year of study. Attitude was not significantly associated with the selected demographic variables. Knowledge and attitude showed a weak positive but non-significant correlation ($r = 0.132$, $p = 0.191$).

Conclusion: Most participants demonstrated good knowledge and a positive attitude toward end-of-life care. Strengthening formal end-of-life care education and providing structured clinical exposure may further improve students' preparedness for compassionate and evidence-based practice.

Keywords: end-of-life care; palliative care; nursing students; knowledge; attitude; clinical exposure.

1. Introduction

End-of-life care is an important component of contemporary nursing practice. It focuses on maintaining comfort, dignity, quality of life, and psychosocial and spiritual well-being when a person is approaching the end of life. Palliative and end-of-life care also includes support for families before and after the patient's death.¹⁻⁴

The increasing burden of cancer, cardiovascular disease, neurological disorders, chronic respiratory conditions, and other life-limiting illnesses has increased the need for nurses who are prepared to provide high-quality end-of-life care. Nurses frequently remain at the bedside and therefore play a central role in symptom assessment, pain management, communication, emotional support, family support, ethical decision-making, and coordination of multidisciplinary care.^{1,2}

For undergraduate nursing students, end-of-life care education is important because clinical competence involves not only curative treatment but also comfort-focused care, dignity, communication, cultural sensitivity, and support for patients and families. Previous research has indicated that structured education, clinical exposure, simulation, communication training, and palliative care teaching can improve students' preparedness and attitudes toward dying patients.⁸⁻¹⁰

Despite its importance, end-of-life care may receive limited attention within undergraduate curricula, and students may have limited direct exposure to terminally ill patients. Understanding students' current knowledge and attitudes can help nursing educators identify educational gaps and plan targeted teaching and clinical experiences. The present study therefore assessed knowledge and attitude regarding end-of-life care among B.Sc. Nursing students.

2. Objectives

1. To assess the level of knowledge regarding end-of-life care among B.Sc. Nursing students.
2. To assess the attitude regarding end-of-life care among B.Sc. Nursing students.
3. To determine the association between knowledge regarding end-of-life care and selected demographic variables.
4. To determine the association between attitude regarding end-of-life care and selected demographic variables.
5. To determine the relationship between knowledge and attitude regarding end-of-life care.

3. Materials and Methods

3.1 Research design and setting

A quantitative, descriptive cross-sectional research design was adopted. The study was conducted among B.Sc. Nursing students at the study institution affiliated with Galgotias University, Greater Noida, Uttar Pradesh, India.

3.2 Participants and sampling

The study included 100 B.Sc. Nursing students. Participants were selected using a convenient sampling technique. Students who met the eligibility criteria and consented to participate were included.

3.3 Data collection instruments

Data were collected using three components: (1) a structured demographic questionnaire covering age, gender, year of study, religion, residence, previous formal education regarding end-of-life care, previous clinical exposure to terminally ill patients, and source of information; (2) a structured knowledge questionnaire consisting of 15 scored items, with one mark for each correct response and zero for an incorrect response; and (3) a five-point Likert attitude scale covering perceptions and readiness to provide end-of-life care. The knowledge score was interpreted as poor (0–5), average (6–10), and good (11–15).

3.4 Data collection procedure

After obtaining the necessary administrative permission and informed consent, the questionnaires were administered to eligible students. Participants completed the instruments independently, and completed responses were collected for analysis. The data were coded and analyzed using descriptive and inferential statistics.

3.5 Data analysis

Frequency, percentage, mean, and standard deviation were used for descriptive analysis. Chi-square tests were used to determine associations between knowledge or attitude levels and selected demographic variables. Pearson's correlation coefficient was used to assess the relationship between knowledge and attitude scores. Statistical significance was considered at $p < 0.05$.

3.6 Ethical considerations

Participation was voluntary. Informed consent was obtained from participants, confidentiality was maintained, and collected information was used for research purposes. Institutional administrative permission was obtained before data collection.

4. Results

A total of 100 B.Sc. Nursing students participated in the study. The largest age group was 20–22 years (67.0%), followed by 17–19 years (19.0%) and 23–25 years (14.0%). Forty participants (40.0%) were male and 60 (60.0%) were female. Sixty participants (60.0%) reported previous clinical exposure to terminally ill patients, while 40 (40.0%) reported no such exposure.

Knowledge level	Frequency (n)	Percentage (%)
Poor	0	0.0
Average	43	43.0
Good	57	57.0
Total	100	100.0

Table 1 shows that 57 (57.0%) students had good knowledge and 43 (43.0%) had average knowledge. No participant was classified as having poor knowledge.

Attitude level	Frequency (n)	Percentage (%)
Negative	0	0.0
Neutral	28	28.0
Positive	72	72.0
Total	100	100.0

Table 2 demonstrates that 72 (72.0%) participants had a positive attitude and 28 (28.0%) had a neutral attitude. None of the participants demonstrated a negative attitude.

The mean knowledge-level category score reported in the thesis dataset was 2.57 ± 0.498 , while the mean attitude-level category score was 2.72 ± 0.451 . These values are consistent with the predominance of good knowledge and positive attitude categories.

Variable	Test	Statistic	p-value
Age vs. knowledge	Chi-square	$\chi^2=0.627$	0.731
Gender vs. knowledge	Chi-square	Not significant	>0.05
Year of study vs. knowledge	Chi-square	Not significant	>0.05
Clinical exposure vs. knowledge	Chi-square	Significant	<0.001
Gender vs. attitude	Chi-square	$\chi^2=0.670$	0.413
Clinical exposure vs. attitude	Chi-square	$\chi^2=0.300$	0.585
Knowledge vs. attitude	Pearson correlation	$r=0.132$	0.191

Knowledge was significantly associated with previous clinical exposure ($p < 0.001$). No statistically significant association was observed between knowledge and age ($p = 0.731$), and the thesis reported no significant associations with gender or year of study. Attitude was not significantly associated with gender ($p = 0.413$) or previous clinical exposure (p

= 0.585), and no significant association was reported with the other selected demographic variables. Pearson correlation demonstrated a weak positive, non-significant relationship between knowledge and attitude ($r = 0.132$, $p = 0.191$).

5. Discussion

The present study found that 57.0% of B.Sc. Nursing students had good knowledge regarding end-of-life care, while 43.0% had average knowledge. This indicates a generally satisfactory knowledge base but also identifies a substantial proportion of students who may benefit from additional education. The findings are relevant because nurses require knowledge of symptom management, pain relief, communication, ethical responsibilities, psychosocial support, spiritual care, and family support to provide comprehensive end-of-life care.^{1,2}

A positive attitude was identified in 72.0% of participants, while 28.0% had a neutral attitude. The absence of a negative attitude is encouraging and suggests that students generally recognize the importance of compassionate care for dying patients. However, a neutral attitude in more than one-quarter of participants indicates a potential need for structured learning experiences that build confidence, communication skills, and emotional preparedness.

Previous clinical exposure was significantly associated with knowledge, supporting the importance of experiential learning. Direct exposure to terminally ill patients can help students connect theoretical principles with real clinical situations and may improve understanding of symptom control, communication, family support, and professional responsibilities. The study's findings are also consistent with the broader literature emphasizing the role of education and clinical experience in palliative and end-of-life care preparedness.^{6, 8-10}

The correlation between knowledge and attitude was weak and not statistically significant ($r = 0.132$, $p = 0.191$). This suggests that knowledge alone may not determine students' attitudes. Attitudes may also be influenced by clinical experiences, emotional preparedness, cultural beliefs, communication confidence, previous personal experiences with death, and the quality of educational support. Therefore, end-of-life care education should combine knowledge-based teaching with simulation, reflective activities, communication training, and supervised clinical exposure.

6. Implications for Nursing Education and Practice

- End-of-life and palliative care concepts should be integrated systematically into undergraduate nursing education.
- Structured clinical exposure to terminally ill patients should be provided under appropriate supervision.
- Simulation, case-based learning, role play, and communication exercises should be used to strengthen students' confidence.
- Faculty should emphasize ethical decision-making, dignity, cultural sensitivity, symptom management, and family communication.
- Periodic assessment of students' knowledge and attitudes can help identify educational gaps.

7. Limitations

The study was conducted among 100 B.Sc. Nursing students from a single institution, which limits generalizability. The cross-sectional design assessed participants at one point in time and cannot establish causality. Convenient sampling may introduce selection bias. Data were collected using self-administered instruments and may therefore be influenced by recall or social-desirability bias. The study assessed knowledge and attitude but did not directly measure clinical competence or actual end-of-life care practices.

8. Conclusion

The study demonstrates that most B.Sc. Nursing students had good knowledge and a positive attitude regarding end-of-life care. Previous clinical exposure was significantly associated with knowledge, highlighting the value of experiential learning. However, knowledge and attitude were not significantly correlated, indicating that educational interventions should address both cognitive and affective domains. Strengthening curriculum content, communication training,

simulation, and supervised clinical exposure may improve students' readiness to provide dignified, compassionate, and evidence-based end-of-life care.

9. References

1. World Health Organization. Palliative care. Geneva: World Health Organization; 2020.
2. Ferrell BR, Coyle N, Paice JA, editors. Oxford Textbook of Palliative Nursing. 5th ed. New York: Oxford University Press; 2020.
3. International Council of Nurses. The ICN Code of Ethics for Nurses. Geneva: ICN; 2021.
4. World Health Assembly. Strengthening of palliative care as a component of comprehensive care throughout the life course. WHA67.19. Geneva: World Health Organization; 2014.
5. Ministry of Health and Family Welfare, Government of India. National Programme for Palliative Care: Operational Guidelines. New Delhi: Government of India; 2012.
6. Khosla D, Patel FD, Sharma SC. Palliative care in India: current progress and future needs. Indian J Palliat Care. 2012;18(3):149-154.
7. National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care. 4th ed. Richmond, VA: National Coalition for Hospice and Palliative Care; 2018.
8. Potter PA, Perry AG, Stockert PA, Hall AM. Fundamentals of Nursing. 11th ed. St. Louis: Elsevier; 2023.
9. Polit DF, Beck CT. Nursing Research: Generating and Assessing Evidence for Nursing Practice. 11th ed. Philadelphia: Wolters Kluwer; 2021.
10. Frommelt KH. The effects of death education on nurses' attitudes toward caring for terminally ill persons and their families. Am J Hosp Palliat Care. 1991;8(5):37-43.
11. World Health Organization. Integrating palliative care and symptom relief into primary health care. Geneva: World Health Organization; 2018.
12. Lewis SL, Bucher L, Heitkemper MM, Harding MM, Kwong J, Roberts D, editors. Medical-Surgical Nursing: Assessment and Management of Clinical Problems. 12th ed. St. Louis: Elsevier; 2023.
13. International Association for Hospice and Palliative Care. Global consensus-based palliative care definition. Houston: IAHPC; 2018.
14. Connor SR, editor. Global Atlas of Palliative Care. 2nd ed. London: Worldwide Hospice Palliative Care Alliance; 2020.
15. National Institute for Health and Care Excellence. End of life care for adults: service delivery. NICE guideline NG142. London: NICE; 2019.