LINK MEDICAL JOURNAL
of Health and Community Research | LMJHCR

Volume 4, Issue 2, 2026
e-ISSN: 3007-3448
Open Access | CC BY 4.0
DOI: 10.61919/yrar1b55

Original Article

Knowledge and Attitudes of Nurses Regarding Palliative Care in a Tertiary Care Hospital in Lahore

Tasawar Batool[1], Aasma Raza[2], Shema Akram[2], Sobia Anum[2], Tasmia Fatima[2]

[1] Assistant Professor, School of Nursing, Green International University, Lahore, Pakistan.
[2] BSN Student, School of Nursing, Green International University, Lahore, Pakistan.

Corresponding Author: Tasawar Batool, Email: tasawarbatool@gmail.com

Received: 10 September 2026 Revised: 09 October 2026 Accepted: 12 October 2026 Published: 15 October 2026

How to Cite: Batool et al. 2026. Knowledge and Attitudes of Nurses Regarding Palliative Care in a Tertiary Care Hospital in Lahore. Link Medical Journal. (Oct. 2026), e273.

ABSTRACT

Background: Palliative care aims to alleviate physical, psychosocial and spiritual suffering among people living with serious illness. Nurses require relevant knowledge and appropriate professional attitudes to provide this care. Objective: To assess nurses' knowledge and attitudes regarding palliative care in a tertiary care hospital in Lahore, Pakistan. Methods: A descriptive cross-sectional survey was conducted among 40 nurses from medical, surgical and adult intensive care departments at Ali Fatima Hospital, Lahore, from February to May 2026. Knowledge was assessed with the Palliative Care Quiz for Nursing (PCQN) and attitudes with the Frommelt Attitudes Toward Care of the Dying Scale, Form B (FATCOD-B). Data were summarized using frequencies, percentages, means and standard deviations in SPSS version 25. Results: Thirty-six nurses (90.0%) were female, 31 (77.5%) were aged 21–30 years and 34 (85.0%) held a BSN qualification. Twenty-nine nurses (72.5%) reported no previous end-of-life care training and 26 (65.0%) had no previous end-of-life care experience. Twenty-one nurses (52.5%) were classified as having poor palliative care knowledge, compared with 19 (47.5%) with good knowledge; the mean score was 11.83 ± 1.41. Twenty-two nurses (55.0%) were classified as having negative attitudes and 18 (45.0%) as having positive attitudes; the mean attitude score was 100.42 ± 8.88. Conclusion: Substantial proportions of participants were classified as having poor knowledge and negative attitudes, alongside limited prior training and clinical exposure. These descriptive findings support more detailed assessment of institution-specific educational needs. Keywords: palliative care; nurses; knowledge; attitudes; end-of-life care; nursing education; Pakistan.

INTRODUCTION

Palliative care is an essential component of comprehensive healthcare for individuals and families facing life-threatening illness. The World Health Organization defines palliative care as an approach that improves quality of life through the prevention and relief of suffering by identifying, assessing, and treating physical, psychosocial, and spiritual problems. Globally, access to palliative care remains inadequate, and limited professional training continues to be an important barrier to its effective delivery (1).

Nurses have a central role in palliative and end-of-life care because they maintain sustained contact with patients and families and participate in symptom assessment, pain management, communication, emotional support, and coordination of care. Their knowledge and attitudes can therefore influence their preparedness and confidence in caring for patients with life-limiting illnesses. The Palliative Care Quiz for Nursing (PCQN) was originally developed by Ross, McDonald, and McGuinness as a standardized instrument for assessing nurses' knowledge of palliative care and identifying misconceptions relevant to clinical practice (2). Attitudes toward the care of dying patients have similarly been evaluated using the Frommelt framework, which was developed in the context of examining nurses' attitudes toward terminally ill individuals and their families (3).

Evidence from Pakistan indicates persistent variation in nurses' preparedness for palliative care. A study conducted among oncology nurses in tertiary care hospitals in Lahore reported that approximately half of participants had adequate palliative care knowledge, although positive attitudes were more frequent (4). Another study from a private-sector hospital in Lahore using the PCQN and Frommelt attitude measure identified important gaps in nurses' knowledge and demonstrated variability in attitudes toward palliative care (5). These findings indicate that deficiencies may persist even among nurses working in settings where patients with serious and life-limiting illnesses are routinely managed.

International studies demonstrate similar concerns. Altarawneh et al. reported low palliative care knowledge and moderate attitudes among nurses caring for patients with cancer, with professional training, educational preparation, experience, and other demographic factors contributing to differences in scores (6). Lin et al. further demonstrated that nurses' knowledge and attitudes are relevant components of competence in palliative and end-of-life care (7). A study among nurses in Tigray, Ethiopia, similarly reported substantial differences in knowledge and attitudes and identified professional and educational factors associated with palliative care preparedness (8). More recent evidence has continued to demonstrate that knowledge and attitudes can vary considerably between nursing populations and clinical settings (9).

Pakistan-specific evidence also suggests that difficulties may extend beyond factual knowledge to communication, psychosocial care, attitudes toward dying patients, and confidence in end-of-life situations. Recent findings from critical care nurses in Pakistan identified stronger performance in some pain-related concepts but continuing gaps in psychosocial, ethical, and communication-related areas of palliative care (10). Such findings emphasize the importance of assessing knowledge and attitudes within specific institutional settings rather than assuming that general nursing education provides adequate preparation for all aspects of palliative care.

Evidence synthesis provides a broader context for interpreting findings from individual hospitals. In a systematic review and meta-analysis of PCQN-based nursing studies, Li et al. reported a pooled mean knowledge score of 9.68 (95% confidence interval 9.40–9.96), with particular weaknesses in psychological, spiritual and social care. Although the populations and methods varied across contributing studies, the review demonstrates that palliative care knowledge gaps extend beyond individual institutions (11). A mixed-studies review by Alshammari et al. examined nurses' knowledge, attitudes and beliefs in non-specialist palliative settings, reinforcing the need to attend to care context and interpersonal aspects of end-of-life nursing (12).

Educational exposure has emerged as a potentially modifiable aspect of preparedness, but its relationship with outcomes depends on study design. Chen et al. examined a continuing-education programme among a large sample of registered nurses in China, comparing participating and non-participating nurses using propensity-score matching rather than random allocation (13). The findings provide evidence relevant to educational planning, but should not be interpreted as demonstrating that training alone explains the results of a separate descriptive survey.

Recent research has also widened the range of professional settings in which palliative care competence is assessed. A survey of primary-care nurses by Masharipova et al. examined knowledge, attitudes and their relationship with evidence-based practice (14). A multicentre study of residency-trained nurses in China used the PCQN alongside attitude and death-related measures, demonstrating the relevance of instrument choice and population characteristics to interpretation (15). Contemporary Pakistan-based evidence includes a multi-hospital survey of nurses in Peshawar, emphasizing local variation and the value of context-specific assessment (16).

Evidence from oncology nursing in Nepal further illustrates why comparisons require careful attention to service setting: Thapa et al. assessed 125 oncology nurses with the PCQN and a Frommelt attitude measure (17). Separately, a mixed-methods investigation by Alshammari et al. identified communication about death and family-related interactions as challenging even when general attitudes appeared favorable (18). Together, these studies support assessing both knowledge and attitudes, while avoiding uncritical comparisons of raw scores or categorical labels across differently measured populations.

Differences in educational preparation, clinical experience, exposure to dying patients, and access to formal palliative care training may influence nurses' preparedness to provide appropriate care. However, knowledge and attitudes regarding palliative care among nurses in the selected tertiary care setting in Lahore required further assessment. Identification of these gaps can help inform nursing education and institutional professional-development priorities. Therefore, the objective of the present study was to assess the knowledge and attitudes of nurses regarding palliative care in a tertiary care hospital in Lahore, Pakistan.

MATERIALS AND METHODS

A quantitative cross-sectional survey was conducted among nurses working at Ali Fatima Hospital, a private tertiary care hospital in Lahore, Pakistan. Data collection was undertaken between February and May 2026. Nurses working in selected inpatient clinical departments, including medical wards, surgical wards, and the adult intensive care unit, were included in the study. A total of 40 nurses participated. Registered nurses involved in patient care, with more than three months of relevant clinical experience, who were available during the data-collection period and voluntarily agreed to participate were considered eligible. Nurses who were on leave during data collection, had worked in the hospital for less than three months, or were working in maternity units or operating theatres where they were not routinely involved in end-of-life care were excluded.

Forty nurses constituted the final analyzed sample. The survey was conducted in selected inpatient departments, and the analysis was confined to the participants who completed the study questionnaire. Data were collected through a structured questionnaire consisting of demographic information and adopted measures of knowledge and attitudes regarding palliative care. Demographic and professional variables included age, gender, educational qualification, years of professional experience, previous experience in providing end-of-life care, and previous training related to end-of-life care. Knowledge regarding palliative care was assessed using the Palliative Care Quiz for Nursing (PCQN) developed by Ross, McDonald, and McGuinness (2). The original PCQN is a 20-item instrument designed to evaluate nursing knowledge of palliative care and identify misconceptions relating to palliative care practice. Attitudes toward caring for dying patients were assessed using the Frommelt Attitudes Toward Care of the Dying Scale, Form B (FATCOD-B), based on the instrument developed by Frommelt to assess attitudes toward caring for terminally ill individuals and their families (3).

The knowledge measure was the 20-item PCQN, while the attitude measure was FATCOD-B. Reported knowledge outcomes comprised a total score and the study categories of good and poor knowledge; reported attitude outcomes comprised a total score and positive and negative attitude categories. The categorical groupings were used descriptively in the analyses.

Official authorization was obtained from the hospital administration before data collection. Eligible nurses were approached in their respective clinical departments and informed about the purpose and procedures of the study. Participation was voluntary, and informed consent was obtained before questionnaire completion. Participants were assured of confidentiality and anonymity and were informed of their right to withdraw from participation without penalty. Questionnaires were distributed during duty hours, adequate time was allowed for completion, and completed questionnaires were collected on the same day. Data were entered and analyzed using IBM SPSS Statistics version 25. Participant characteristics and reported knowledge and attitude categories were summarized as frequencies and

percentages. Knowledge and attitude scores were summarized as mean ± standard deviation. The total analyzed sample was 40 nurses. Findings are descriptive; no inferential association estimates are reported.

Hospital administrative authorization was obtained before data collection. Eligible participants were informed about the purpose and procedures of the survey, participation was voluntary, and informed consent was obtained before questionnaire completion. Participants were informed of confidentiality, anonymity and their right to withdraw without penalty.

RESULTS

A total of 40 nurses were included in the analysis. Most participants were aged 21–30 years (77.5%), while 20.0% were aged 30–40 years and 2.5% were older than 40 years. Females accounted for 90.0% of the study population. Most participants held a BSN qualification (85.0%), while 10.0% had a diploma and 5.0% had an MSN qualification.

Regarding clinical experience, 42.5% of nurses had two years or less of professional experience, 32.5% had 2–5 years, 20.0% had 6–10 years, and 5.0% had more than 10 years. Only 35.0% reported previous experience in providing end-of-life care, whereas 65.0% reported no such experience. Similarly, 27.5% had received previous end-of-life care training, while 72.5% had not received such training.

Table 1. Sociodemographic and Professional Characteristics of Participants (N = 40)

Characteristic	Category	Frequency (n)	Percentage (%)
Age	21–30 years	31	77.5
	30–40 years	8	20.0
	>40 years	1	2.5
Gender	Male	4	10.0
	Female	36	90.0
Educational qualification	BSN	34	85.0
	Diploma	4	10.0
	MSN	2	5.0
Professional experience	≤2 years	17	42.5
	2–5 years	13	32.5
	6–10 years	8	20.0
	>10 years	2	5.0
Previous end-of-life care experience	Yes	14	35.0
	No	26	65.0
Previous end-of-life care training	Yes	11	27.5
	No	29	72.5

Assessment of palliative care knowledge showed that 21 nurses (52.5%) were categorized as having poor knowledge, whereas 19 nurses (47.5%) were categorized as having good knowledge. The mean knowledge score was 11.83 ± 1.41. The difference between nurses categorized as having poor and good knowledge was relatively small, with poor knowledge exceeding good knowledge by 5 percentage points. Nevertheless, more than half of the sample fell into the poor-knowledge category.

Table 2. Knowledge Level Regarding Palliative Care (N = 40)

Knowledge level	Frequency (n)	Percentage (%)
Poor knowledge	21	52.5
Good knowledge	19	47.5
Total	40	100.0

Mean knowledge score: 11.83 ± 1.41

Assessment of attitudes demonstrated that 22 participants (55.0%) were categorized as having a negative attitude toward palliative care, whereas 18 nurses (45.0%) had a positive attitude. The mean attitude score was 100.42 ± 8.88. Negative attitudes therefore exceeded positive attitudes by 10 percentage points. Overall, the results indicated that gaps in both palliative care knowledge and attitudes were present among a substantial proportion of the participating nurses.

Table 3. Attitudes Toward Palliative Care (N = 40)

Attitude category	Frequency (n)	Percentage (%)
Negative attitude	22	55.0
Positive attitude	18	45.0
Total	40	100.0

Mean attitude score: 100.42 ± 8.88

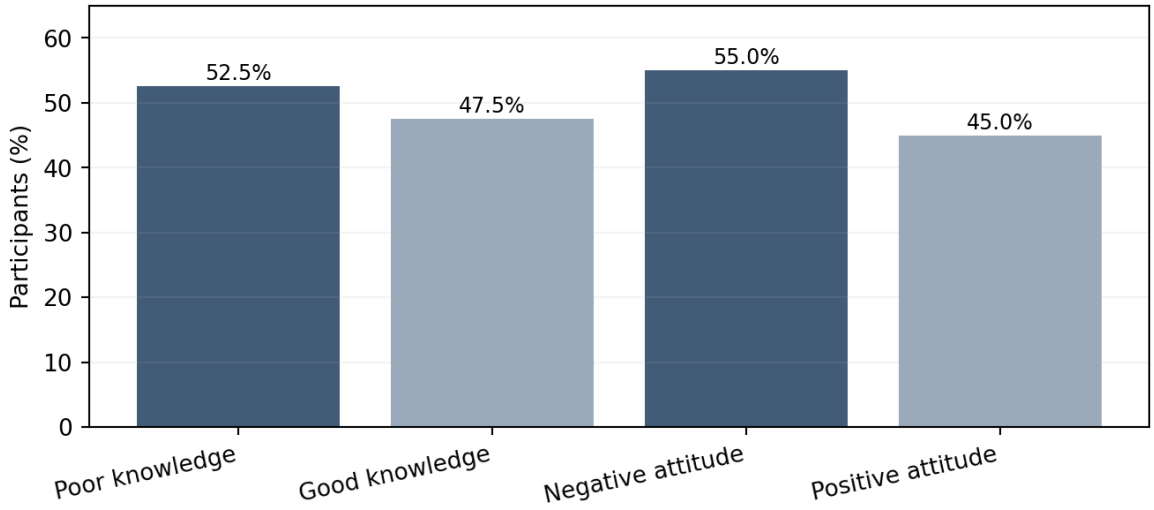


Figure 1. Distribution of reported palliative care knowledge and attitude classifications (N = 40).

Knowledge and attitude were assessed as separate outcomes; the figure does not represent individual-level joint classification.

DISCUSSION

The present study assessed nurses' knowledge and attitudes regarding palliative care in a tertiary care hospital in Lahore. Slightly more than half of the participating nurses (52.5%) were categorized as having poor knowledge of palliative care, while 47.5% had good knowledge. Similarly, 55.0% demonstrated a negative attitude and 45.0% demonstrated a positive attitude. These findings indicate that limitations in both knowledge and attitudes were present within the study population, although the proportions in the two categories were relatively close.

The knowledge findings are comparable with previous evidence from Lahore. Bibi et al. reported that approximately 50% of oncology nurses included in their study had adequate knowledge of palliative care, indicating that substantial knowledge gaps were present even among nurses working in settings with frequent exposure to patients with serious illness (4). Zubair and Kainat also identified limited palliative care knowledge among nurses in a private-sector hospital in Lahore using the PCQN (5). Taken together, these local findings suggest that insufficient palliative care knowledge may remain an important issue across different nursing populations in Lahore.

The current findings are also broadly consistent with international evidence. Altarawneh et al. reported low palliative care knowledge among nurses caring for patients diagnosed with cancer and identified differences according to educational, training, experience, and professional characteristics (6). Zeru et al. similarly reported variable levels of knowledge and attitudes among nurses and emphasized the importance of education and clinical exposure in improving preparedness for palliative care (8). More recently, Rafiee et al. demonstrated that nurses' knowledge and attitudes toward palliative care remain variable and can be influenced by professional and educational factors (9).

The findings can additionally be interpreted alongside systematic evidence. Li et al. synthesized PCQN scores across nursing studies and found an overall pooled mean of 9.68, with lower performance in psychosocial, spiritual and social domains (11). The mean score of 11.83 observed in the present study is descriptively higher than that pooled estimate, but formal comparison would be inappropriate without establishing matching scoring procedures, sampling differences and study-level uncertainty. Particularly, a single mean score cannot identify which PCQN domains were most challenging for the Lahore sample.

A mixed-studies review of non-specialist palliative care settings emphasized that beliefs and attitudes are embedded within clinical practice environments rather than being reducible to factual knowledge alone (12). Such evidence is pertinent to the present medical, surgical and intensive care sample, but the present questionnaire findings do not measure observed quality of patient care or determine whether particular attitudes translated into clinical behaviours.

An important contextual finding in the present study was the limited exposure to formal end-of-life care preparation. Nearly three quarters of participants (72.5%) had not received previous end-of-life care training, while 65.0% had no previous experience in providing end-of-life care. Although the cross-sectional design does not allow these factors to be interpreted as causes of poor knowledge or negative attitudes, the findings identify a potentially important educational gap. Lin et al. highlighted the relevance of knowledge and attitudes to nurses' competence in palliative and end-of-life care, supporting the importance of structured preparation for nurses working with seriously ill patients (7).

The attitude findings differed from some previous studies in which a larger proportion of nurses demonstrated favorable attitudes. Bibi et al., for example, reported positive attitudes toward palliative care among a considerably larger proportion of oncology nurses in Lahore (4). Differences between findings may be related to clinical setting, professional experience, previous palliative care exposure, educational background, or differences in the populations studied. The current sample was predominantly young, and 42.5% had two years or less of professional experience, potentially reflecting a nursing population with relatively limited exposure to complex end-of-life situations.

Evidence from Pakistan also suggests that overall attitude scores may conceal difficulties in specific aspects of palliative care. Recent work among critical care nurses has identified favorable responses toward family involvement alongside continuing discomfort with death-related communication and some aspects of end-of-life care (10). Such findings highlight the importance of addressing communication, psychological preparedness, family-centered care, and ethical aspects of end-of-life nursing in addition to factual knowledge.

Research in other professional contexts emphasizes the importance of distinguishing education from causal explanation. In a large Chinese nursing study, Chen et al. used propensity-score matching to compare nurses with and without exposure to a continuing-education programme (13). This observational approach provides more analytic leverage than a simple descriptive distribution, yet residual confounding remains possible. Here, the proportions without training and without end-of-life experience are important contextual descriptors; they cannot establish that lack of exposure caused the knowledge and attitude patterns.

Masharipova et al. investigated knowledge and attitudes alongside evidence-based practice in primary-care nurses (14). Xia et al. used several palliative-care and death-attitude measures among residency-trained nurses across five tertiary hospitals in Chongqing (15). Both studies illustrate how professional context and measurement selection shape the questions that an assessment can answer. Consequently, the Lahore findings are best interpreted as an institution-specific profile, not a standardized estimate that can be ranked directly against scores in other countries. Recent research from Peshawar also points to the need for locally relevant assessment across Pakistan, rather than assuming that national nursing populations are homogeneous (16). Oncology-nursing findings from Nepal provide a regional point of comparison, but instrument variants, clinical roles and scoring thresholds need to be considered before comparing category percentages (17). Cross-setting differences can inform hypotheses for future work; they are not evidence that one workforce has intrinsically stronger or weaker palliative care competence.

Professional communication deserves particular attention. In a sequential explanatory mixed-methods study, Alshammari et al. found that nurses could report generally favorable attitudes while identifying difficulties related to conversations about death, interactions with families and emotional responses (18). The current study does not include domain-specific attitude results or qualitative accounts, but those findings support the rationale for future item-level assessment and context-sensitive educational interventions.

Educational interventions may therefore be important in strengthening palliative care preparedness. Nursing curricula and continuing professional-development programs should provide structured education in palliative care principles, symptom management, communication, psychosocial support, family-centered care, and end-of-life nursing. Clinical exposure under appropriate supervision may further help nurses translate theoretical knowledge into practice. Institutional workshops, case-based learning, simulation, and continuing nursing education may be useful approaches, although their effectiveness should be evaluated in appropriately designed intervention studies. Potential programme components include fundamental palliative-care concepts, management of pain and distressing symptoms, communication about serious illness, culturally sensitive family engagement, psychosocial and spiritual support, and supervised reflection on clinical experiences. Simulation, case discussion and interdisciplinary teaching may be appropriate formats for evaluation, but the current cross-sectional survey did not test their impact. Any future programme should use prespecified outcomes and, where feasible, a comparative evaluation design.

The study has several limitations. The single-hospital sample of 40 nurses restricts generalizability and precision. The predominantly young and early-career composition of the sample may differ from other clinical workforces. The cross-sectional design does not establish cause and effect, and the descriptive analysis did not assess relationships between training, experience, knowledge and attitudes. Questionnaire-based scores do not directly measure clinical performance. Interpretation of the categorical outcomes also depends on the underlying scoring and classification rules, which should be stated explicitly for reproducibility.

The interpretation of categorical knowledge and attitude findings is particularly sensitive to the choice of scoring thresholds and instrument versions. Unspecified cutoffs limit direct replication and comparison across study settings. In addition, limited detail about recruitment, sample-size rationale and missing-item procedures constrains assessment of selection and measurement bias. These limitations reinforce the need for transparent methods reporting in subsequent studies.

Despite these limitations, the findings provide institution-specific evidence of gaps in nurses' preparedness for palliative and end-of-life care and reinforce the importance of structured palliative care education within nursing training and professional development.

CONCLUSION

The study identified gaps in both knowledge and attitudes regarding palliative care among nurses working in the selected tertiary care hospital in Lahore. Poor knowledge was observed in 52.5% of participants, while 55.0% were categorized as having negative attitudes. Most nurses had not received previous end-of-life care training, and a majority reported no previous experience in providing end-of-life care. These findings support the need for greater emphasis on palliative care education, structured clinical exposure, and continuing professional development to strengthen nurses' preparedness and confidence in caring for individuals with life-limiting illnesses and their families.

RECOMMENDATIONS

Palliative and end-of-life care should receive greater emphasis in undergraduate nursing education and continuing professional-development programs. Healthcare institutions should provide structured training addressing palliative

care principles, symptom management, communication with patients and families, psychosocial support, and end-of-life nursing. Opportunities for supervised clinical exposure to palliative care should be strengthened to improve practical preparedness. Future studies should include larger samples from multiple public and private healthcare institutions, clearly document instrument scoring and classification thresholds, and examine factors associated with nurses' knowledge and attitudes using appropriate inferential analyses. Future research should document questionnaire scoring and classification thresholds, use larger and more diverse nursing samples, and examine relationships between professional characteristics and study outcomes using design-appropriate statistical analyses. Educational initiatives informed by the present descriptive findings should be evaluated prospectively rather than assumed to be effective.

DECLARATIONS

Author Contributions:	Concept: SA; Design: AR; Data Collection: Sa, TF; Analysis: SA; Drafting: SA, AR, TF
Ethical Approval:	The institution responsible for ethical review was Green International University, Lahore, Pakistan.
Informed Consent:	Written informed consent was obtained from all participants before enrolment.
Conflict of Interest:	The authors declare no conflict of interest.
Funding:	No external funding was received for this study.
Data Availability:	De-identified data may be available from the corresponding author on request, subject to participant consent and institutional confidentiality requirements.
Acknowledgments:	None.
AI Declaration:	Generative AI tools were used solely for language and grammatical refinement. The authors verified the final manuscript and remain fully responsible for its accuracy, integrity, and scientific content.

REFERENCES

1. World Health Organization. Palliative care. Geneva: World Health Organization; 2020.

2. 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. doi:10.1111/j.1365-2648.1996.tb03106.x.

3. 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. doi:10.1177/104990919100800509.

4. Bibi F, Kausar S, Hussain HN, Kouser S, Khan S. Oncology nurses' knowledge, attitude and practices towards palliative care in tertiary care hospitals of Lahore, Pakistan. Rawal Med J. 2020;45(1):66-70.

5. Zubair K, Kainat A. Nurses knowledge and attitude about palliative care in a private sector hospital Lahore, Pakistan. International Journal of Healthcare Professions. 2024;1(3):37-42. doi:10.71395/ijhp.1.3.2024.37-42.

6. Altarawneh WM, Masa'deh R, Hamaideh SH, Saleh AM, Alhalaiqa F. Nurses' knowledge, attitudes and practices towards palliative care provided to patients diagnosed with cancer. PLoS One. 2023;18(10):e0289317. doi:10.1371/journal.pone.0289317.

7. Lin HY, Chen CI, Lu CY, Lin SC, Huang CY. Nurses' knowledge, attitude, and competence regarding palliative and end-of-life care: a path analysis. PeerJ. 2021;9:e11864. doi:10.7717/peerj.11864.

8. Zeru T, Berihu H, Gerensea H, Teklay G, Teklu T, Gebrehiwot H, et al. Assessment of knowledge and attitude towards palliative care and associated factors among nurses working in selected Tigray hospitals, northern Ethiopia: a cross-sectional study. Pan Afr Med J. 2020;35:121. doi:10.11604/pamj.2020.35.121.17820.

9. Rafiee S, Azizi-Fini I, Banihashemi ZS, Yadollahi S. Knowledge and attitude towards palliative care and associated factors among nurse: a cross-sectional descriptive study. BMC Nurs. 2024;23:947. doi:10.1186/s12912-024-02598-1.

10. Mulazim S, Raffia, Bilal M, Suleman, Khan N, Danish M, et al. Evaluation of knowledge and attitudes toward palliative care among critical care nurses in tertiary hospitals of South Punjab, Pakistan. J Health Wellness Community Res. 2025;3(16):e943. doi:10.61919/04je9970.

11. Li L, Wang F, Liang Q, Lin LW, Shui XL. Nurses knowledge of palliative care: systematic review and meta-analysis. BMJ Support Palliat Care. 2023. doi:10.1136/spcare-2022-004104.

12. Alshammari F, Sim J, Lapkin S, Stephens M. Registered nurses' knowledge, attitudes and beliefs about end-of-life care in non-specialist palliative care settings: a mixed studies review. Nurse Educ Pract. 2022. doi:10.1016/j.nepr.2022.103294.

13. Chen X, Zhang Y, Arber A, Huo X, Liu J, Sun CH, et al. The training effects of a continuing education program on nurses' knowledge and attitudes to palliative care: a cross sectional study. BMC Palliat Care. 2022. doi:10.1186/s12904-022-00953-0.

14. Masharipova A, Nurgaliyeva N, Derbissalina G. Primary care nurses' knowledge of palliative care, attitude towards caring for dying patients, and their relationship with evidence-based practice. Nurs Pract Today. 2024. doi:10.18502/npt.v11i2.15411.

15. Xia W, Yang XH, Huang SS, Li T, Wang X, Feng W. Residency-trained nurse' knowledge and attitude towards palliative care in a specific region of China: a cross-sectional study. BMC Palliat Care. 2025. doi:10.1186/s12904-025-01960-7.

16. Hassan S, Sohail M, Khan M, Ullah I, Khan H, Nasib S, et al. Knowledge and attitude of nurses regarding palliative care: a cross-sectional study of various tertiary care hospitals, Peshawar, Pakistan. J Health Wellness Community Res. 2025. doi:10.61919/6m1eb675.

17. Thapa U, Panthi S, Neupane L. Oncology nurses' knowledge and attitude towards palliative care. Nepal J Cancer. 2023. doi:10.3126/njc.v7i1.60025.

18. Alshammari F, Sim J, Lapkin S, McErlean G. Registered nurses' attitudes towards end-of-life care: a sequential explanatory mixed method study. J Clin Nurs. 2023. doi:10.1111/jocn.16787.