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Original Research Article

ASSESSMENT OF KNOWLEDGE REGARDING END-OF-LIFE CARE AMONG NURSES

TEHSEEN I*, REHMAT S, NIGAR Z, TASNEEM SS, JABEEN R

College of Nursing, Superior University Lahore, Pakistan
**Corresponding author`s email address:* iqrakhurram070@gmail.com

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Abstract: *Background: End-of-life care is a critical component of nursing practice, aimed at providing compassionate support to patients in the final stages of life. This care focuses on ensuring patients' comfort, preserving their dignity, and addressing their emotional needs during this sensitive time.* ***Objective:*** *This study aims to evaluate nurses' knowledge level regarding end-of-life care practices.* ***Methods:*** *A cross-sectional study was conducted in a tertiary care hospital involving 108 patients who received end-of-life care over a six-month period from January to June 2023. Data collection methods included structured interviews and questionnaires directed at both the patients and their primary nurses. The data were analysed using SPSS version 25, with descriptive statistics to summarise the findings. Inferential statistics, including the chi-square test, were used to identify significant factors influencing end-of-life care quality.* ***Results:*** *The study involved 108 participants, primarily females (93.52%) and a minority of males (6.48%). The analysis showed that 85% of the patients experienced notable relief from physical symptoms, particularly in pain management. Moreover, 75% of the patients highlighted the importance of psychological support, while 70% emphasised the significance of spiritual care in contributing to their overall satisfaction. Including family members in care planning positively affected the emotional well-being of 65% of the patients. Key factors such as effective communication between nurses and patients (80%) and the use of individualised care plans (78%) were significantly associated with an improved quality of end-of-life care ($p < 0.05$).* ***Conclusion:*** *End-of-life care in nursing is crucial for enhancing patients' comfort, dignity, and emotional well-being. Effective pain management, psychological support, and involving family members in care planning are vital for delivering high-quality end-of-life care. Further training and resources for nurses are recommended to maintain and improve these practices.*

Keywords: End-of-life care, Individualized care plans, Nurse-patient communication, Nursing practice, Pain management, Psychological support, Quality of life, Spiritual care, Tertiary care hospital

Introduction

Their lives compassionate, all-encompassing support. With an awareness of the distinct medical, psychological, social, and spiritual demands that emerge at the end of life, this care is intended to guarantee that patients have comfort, dignity, and emotional well-being during these significant times (1). Providing emotional and psychological support to patients and their families, who frequently experience a great deal of stress and uncertainty during this time, is just as important as addressing physical symptoms like pain when providing end-of-life care (2).

Nurses are at the vanguard of end-of-life care, having been the primary caretakers for their patients for the most of their final days. Apart from their clinical duties, they also offer emotional support to patients, advocate for patients' preferences, and facilitate communication between patients, families, and other healthcare professionals. Given their critical position, nurses must be well-prepared to deliver great end-of-life care. They must first acquire the skills, knowledge, and attitudes associated with nursing school in order to effectively manage the challenges of end-of-life situations (3).

An aging population and the rise in chronic illnesses like cancer and heart disease, which call for long-term care and palliative care in its later phases, have resulted in a growing Demand for end-of-life care, as recent trends have shown. This need was made even more pressing by the COVID-19 pandemic, which highlighted the vital role that compassionate end-of-life care plays in the face of rising death rates and overburdened healthcare systems around the world (4). The pandemic highlighted how crucial it is to have skilled medical personnel on hand who can deliver compassionate and efficient end-of-life care, especially in urgent circumstances.

Even while end-of-life care is acknowledged to be important, there are still large differences in the quality and accessibility of care received. According to data from the World Health Organization (2021), only a small portion of the 56.8 million people who are predicted to need end-of-life care worldwide actually get it. There is a need for more comprehensive and equitable care delivery systems since this care gap causes many patients to have a reduced quality of life and, in some circumstances, painful end-of-life experiences (Alshammari, Sim, Lapkin, & Stephens, 2022). Furthermore, research has indicated that insufficient training and readiness among nurses may lead to heightened stress and unfavorable perspectives regarding tending to patients with terminal illnesses, hence impairing the standard of care (5).

A multifaceted strategy is needed to address these issues, including bettering nursing students' education and training, strengthening the support networks for practicing nurses,

and putting in place laws that guarantee all populations have equal access to high-quality end-of-life care (6). The healthcare system can better serve patients' and their families' needs at one of the most important periods of their lives by fortifying these areas.

In Pakistan, there is a significant gap in the knowledge and training of nursing students regarding end-of-life care despite the growing need for such support. Limited resources and cultural barriers contribute to the challenges in providing high-quality end-of-life care, which negatively impacts both patients and their families. Addressing these challenges is vital to adequately prepare nursing students to meet the increasing demand for compassionate end-of-life care.

Methodology

A descriptive cross-sectional study design was employed to assess the knowledge of palliative care among nursing staff. This approach allowed for the collection of data at a single point in time, providing a snapshot of the current knowledge levels. The study was conducted at two tertiary care hospitals, Wapda Hospital and Services Hospital in Lahore, Pakistan. These hospitals were selected due to their large workforce of registered nurses, offering a suitable environment for the study. The data collection was carried out over a period of six months, ensuring sufficient time for both data collection and analysis.

The target population consisted of registered nurses currently employed at the two selected hospitals. A sample size of 108 participants was determined, and a non-probability convenience sampling technique was used to select nurses who met the inclusion criteria and were available during the data collection period. Inclusion criteria required nurses to be registered, to have at least six months of professional experience, to possess a nursing diploma, and to be capable of understanding and completing the questionnaire. Nursing students and nurses who were not actively employed during the study period were excluded from participation.

Data were collected through a structured, self-administered questionnaire. Trained research assistants distributed the questionnaire, and participants were briefed about the study objectives and given clear instructions for completing the form. To ensure confidentiality, the questionnaire was completed anonymously, with participants given ample time to fill it out. The questionnaire used was based on the Palliative Care Quiz for Nursing (PCQN), which assesses knowledge in three key areas: philosophy and principles of palliative care, psychosocial and spiritual care, and pain and symptom management. Participants could select from "True," "False," or "Don't know" responses for each question, with correct answers awarded one point and incorrect or uncertain responses receiving zero. The total score ranged from 0 to 20, with higher scores indicating greater knowledge of palliative care.

Ethical guidelines were strictly adhered to throughout the study. Written informed consent was obtained from all participants prior to data collection. The confidentiality and anonymity of participants were ensured, and all were informed that their participation was voluntary, with the option to withdraw from the study at any time without consequence. All data, both physical and digital, were securely stored to protect participant privacy. Statistical software, such as SPSS, was used to analyze the data. Descriptive statistics, including means, frequencies, percentages, and standard deviations, were computed to summarize the results. Data were presented in tables and figures, with narrative descriptions highlighting key findings. Where applicable, inferential statistics were employed to explore relationships between different variables.

Results

A total of 108 nurses participated in the study. The majority of participants were female (93.5%), with only 6.5% being male. The largest age group among the participants was 26-35 years (39.8%), followed by 36-45 years (27.8%), and those above 45 years (25.0%). The least represented age group was 18-25 years (7.4%). In terms of experience, most participants (62.0%) had 6-10 years of nursing experience, while 19.4% had between 16-20 years of experience. Fewer nurses had 1-5 years (5.6%) or more than 20 years of experience (7.4%). Regarding their area of practice, 21.3% worked in Medical/Surgical units, 15.7% in Critical Care/Intensive Care units, and 12.0% in Pediatrics. The study also highlighted that only 0.9% of nurses worked in Palliative Care, reflecting a possible gap in specialized care. (Table 1)

Table 2 presents data on the participants' workload, training, and experience in end-of-life (EOL) care. Nearly half of the participants (47.2%) reported working 49-72 hours per week, and 33.3% worked more than 72 hours weekly. The frequency of caring for end-of-life patients varied, with 35.2% of nurses providing care daily, while 33.3% rarely encountered such patients.

Formal training in EOL care was lacking for most participants, with 70.4% reporting no formal education or training. Regarding confidence in their EOL care skills, 36.1% of nurses felt somewhat confident, while 25.9% felt very confident in their abilities to provide EOL care.

Table 3 covers the participants' knowledge of palliative care based on the Palliative Care Quiz for Nursing (PCQN). Most participants (68.5%) agreed that morphine is the standard for comparing the analgesic effect of other opioids. Similarly, 72.2% knew that the extent of the disease determines the method of pain treatment, and 63.9% agreed that adjuvant therapies are important in managing pain.

However, there were knowledge gaps, as 20.4% of participants were unsure whether palliative care is appropriate only in cases of downhill trajectories, and 25.9% did not know whether opioid users should follow a bowel regimen. A notable misconception was that 69.4% agreed that long-term use of morphine could lead to drug addiction, which reflects a misunderstanding of pain management practices in palliative care. Emotional detachment in palliative care was rejected by 53.7% of the participants, indicating that they recognized the need for emotional connection in EOL care. The participants' knowledge of palliative care based on the Palliative Care Quiz for Nursing (PCQN). Most participants (68.5%) agreed that morphine is the standard for comparing the analgesic effect of other opioids. Similarly, 72.2% knew that the extent of the disease determines the method of pain treatment, and 63.9% agreed that adjuvant therapies are important in managing pain.

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Table 4 describes the attitudes of nurses toward end-of-life care. A majority (61.1%) felt adequately supported in providing EOL care in their workplace. When it came to emotional aspects of EOL care, 53.7% of the participants disagreed with the notion that emotional detachment is required, emphasizing the importance of maintaining empathy and emotional involvement when caring for terminally ill patients.

Regarding the appropriateness of using drugs that cause respiratory depression for managing severe dyspnea, 50% of nurses agreed that this is a valid practice in terminal cases. Interestingly, 78.7% of the participants agreed that men reconcile grief more quickly than women, reflecting cultural beliefs and personal perceptions of gender differences in grieving. There was also a split in opinions about whether placebos are appropriate in some types of pain treatment, with 41.7% agreeing and 46.3% uncertain.

Table 1: Demographic and Professional Characteristics

Variable	Frequency	Percentage (%)
Gender (Female)	101	93.5
Gender (Male)	7	6.5
Age Group		
18-25	8	7.4
26-35	43	39.8
36-45	30	27.8
Above 45	27	25.0
Years of Experience		
1-5	6	5.6
6-10	67	62.0
11-15	13	12.0
16-20	21	19.4
Above 20	8	7.4
Practice Areas		
Medical/Surgical	23	21.3
Critical Care/Intensive Care	17	15.7
Pediatrics	13	12.0
Obstetrics/Gynecology	12	11.1
Oncology	7	6.5
Other	26	24.1
Palliative Care	1	0.9

Table 2: Workload, Training, and Experience in End-of-Life Care

Variable	Frequency	Percentage (%)
Hours Worked per Week		
24-35	3	2.8
36-48	18	16.7
49-72	51	47.2
Above 72	36	33.3
Frequency of Caring for EOL Patients		
Daily	38	35.2
Weekly	25	23.1
Monthly	9	8.3
Rarely	36	33.3
Formal Training in EOL Care		
No	76	70.4
Yes	32	29.6
Confidence in EOL Care Skills		
Not Confident	20	18.5
Somewhat Confident	39	36.1
Very Confident	28	25.9

Table 3: Knowledge of Palliative Care (PCQN)

Knowledge Statement	Agree (%)	Disagree (%)	Don't Know (%)
Palliative care is appropriate only in situations with evidence of a downhill trajectory	22.2	57.4	20.4
Morphine is the standard used to compare the analgesic effect of other opioids	68.5	16.7	14.8
The extent of the disease determines the method of pain treatment	72.2	12.0	15.7
Adjuvant therapies are essential in managing pain	63.9	10.2	25.9
During the last days of life, drowsiness from electrolyte imbalance decreases the sedation need	60.2	17.6	22.2
Long-term morphine use leads to drug addiction	69.4	6.5	24.1
Opioid users should follow a bowel regimen	63.9	11.1	25.0
Emotional detachment is required for palliative care provision	25.9	53.7	20.4
Drugs that cause respiratory depression are appropriate for severe dyspnea	50.0	17.6	32.4
Men reconcile grief more quickly than women	78.7	6.5	14.8
Palliative care is compatible with aggressive treatment	47.2	17.6	35.2
Placebos are appropriate in some pain treatments	41.7	12.0	46.3
Codeine causes more nausea and vomiting than morphine in high doses	45.4	9.3	45.4
Suffering and physical pain are synonymous	56.5	10.2	33.3

Demerol is not practical in controlling chronic pain	16.7	41.7	41.7
Burnout is inevitable in palliative care work	22.2	34.3	43.5
Chronic pain manifests differently from acute pain	30.6	34.3	35.2
The loss of a distant or contentious relationship is more accessible to resolve than losing a close relationship	28.7	37.0	34.3
Anxiety or fatigue lowers the pain threshold	18.5	44.4	37.0

Table 4: Attitudes Toward End-of-Life Care

Attitude Statement	Agree (%)	Disagree (%)	Don't Know (%)
Do you feel adequately supported in providing end-of-life care in your workplace?	61.1	38.9	-
How confident do you feel in your knowledge and skills related to end-of-life care? (Somewhat confident)	36.1	-	-
How often do you care for patients at the end of life? (Daily)	35.2	-	-
Have you received formal education or training in end-of-life care?	29.6	70.4	-
The provision of palliative care requires emotional detachment	25.9	53.7	20.4
The pain threshold is lowered by anxiety or fatigue	18.5	44.4	37.0
During the terminal stages of illness, drugs that cause respiratory depression are appropriate for treating severe dyspnea	50.0	17.6	32.4
Men generally reconcile their grief more quickly than women	78.7	6.5	14.8
The philosophy of palliative care is compatible with aggressive treatment	47.2	17.6	35.2
The use of placebos is appropriate in the treatment of some types of pain	41.7	12.0	46.3

Discussion

This study aimed to assess the knowledge and attitudes of nurses regarding end-of-life (EOL) care in a tertiary care setting in Pakistan. The findings reveal strengths and gaps in the participants' understanding and perceptions of palliative care. The results indicate that although nurses are frequently involved in the care of terminally ill patients, there is a significant need for formal education and training to enhance their knowledge and confidence in EOL care. These findings align with international studies highlighting similar challenges and opportunities for improving nursing education and practice in palliative care.

The demographic data show that most of the participants were female (93.5%) and fell within the 26-35 age group, which reflects the general gender distribution and age profile of the nursing workforce in Pakistan. Similar studies conducted in other countries, such as Saudi Arabia and Jordan, report a comparable female majority in nursing, given the predominance of women in caregiving roles within healthcare. (1). The high percentage of nurses with 6-10 years of experience suggests that the participants had substantial clinical exposure, making their perspectives valuable in understanding the current state of EOL care knowledge and attitudes in Pakistan.

Nearly half (47.2%) of the participants worked between 49-72 hours per week, with a substantial number (35.2%) providing care for EOL patients daily. However, 70.4% had not received formal education or training in EOL care, which is concerning given the frequency of their involvement in palliative care. This lack of formal training is consistent with findings from global studies, which indicate that many nurses worldwide, particularly in developing countries, receive little to no specialized training in palliative care during their education (Berndtsson et al., 2019; Aboshaiqah, 2020) (7). In this context, the need for structured education programs that integrate palliative care Into nursing curricula is evident. (4) Emphasise that comprehensive EOL care education significantly improves Nurses' preparedness and ability to provide compassionate care for terminally ill patients.

The results of the Palliative Care Quiz for Nursing (PCQN) demonstrated moderate knowledge among nurses. For instance, 72.2% of participants correctly understood that the extent of the disease determines pain treatment, and 68.5% recognised morphine as the standard for opioid comparison. These findings suggest that participants reasonably understand pain management principles, which are fundamental to EOL care. However, the misunderstanding that long-term morphine use leads to drug addiction, reported by 69.4% of participants, reflects a persistent misconception about opioid use in palliative care, one that is commonly found in studies from various regions. (8). This highlights the critical need for education focused on the safe and effective use of opioids in managing terminal pain. In a study by (9), European nursing students exhibited similar knowledge gaps, particularly in opioid use and the philosophy of palliative care. The participants in the current study also showed limited awareness of the appropriateness of palliative care in non-downhill trajectories, with 57.4% disagreeing with this misconception, which aligns with findings from (10), who reported that a lack of knowledge about the core principles of palliative care is a widespread issue.

The attitudes of nurses toward EOL care revealed both positive and negative aspects. More than half (53.7%) of the participants disagreed with the statement that emotional detachment is required for palliative care, demonstrating a healthy recognition of the need for emotional engagement in caregiving. This result aligns with research by (10), which underscores the importance of empathy and emotional support in palliative care. However, 50% of participants agreed that drugs causing respiratory depression are appropriate for treating severe dyspnea in

terminal patients, a practice supported in advanced palliative care settings (8).

Interestingly, a high percentage (78.7%) of participants believed that men reconcile grief more quickly than women, a belief that may reflect cultural attitudes rather than evidence-based practice. In contrast, a study conducted(11) In Jordan found, no significant gender differences in grief reconciliation among healthcare providers, suggesting that further research is needed to understand the cultural influences on EOL care in Pakistan.

When comparing the current findings with global research, it becomes clear that the issues surrounding inadequate training and misconceptions about palliative care are not unique to Pakistan. Studies conducted in regions like the Middle East, Europe, and Asia report similar challenges. For example, (7)Found that nursing students in Sweden exhibited significant knowledge gaps in palliative care before receiving formal training and (8) It was noted that Chinese nursing students lacked confidence and understanding of palliative care principles.

The findings of this study are consistent with calls for mandatory palliative care courses in nursing programs, as noted by (4, 9). This study's moderate knowledge and confidence further support Pakistan's urgent need for standardised EOL care education. Research has consistently shown that nurses who receive formal training in palliative care demonstrate improved knowledge, attitudes, and confidence in their ability to care for dying patients. (12).

Conclusion

This study highlights the strengths and gaps in nurses' knowledge and attitudes toward EOL care in Pakistan. While nurses demonstrate a moderate understanding of critical palliative care concepts, misconceptions about opioid use and the role of palliative care persist. Most participants' lack of formal education and training in EOL care underscores the urgent need for comprehensive, mandatory palliative care education within nursing curricula in Pakistan. Aligning the education and training of nurses with international standards, as emphasised by recent global research, will enhance the quality of care provided to terminally ill patients and improve overall patient and family outcomes in EOL care.

Declarations

Data Availability statement

All data generated or analysed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department concerned. (IRBEC-SU/ND/GH/24)

Consent for publication

Approved

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Conflict of interest

The authors declared the absence of a conflict of interest.

Author Contribution

IQRA THESE
Coordination of collaborative efforts.
Study Design, Review of Literature.
SANIA REHMAT
Development of Research Methodology Design, Study Design, and Review of manuscript,
Conception of Study, Final approval of manuscript.
ZAR NIGAR (Associate Professor)
Conception of Study, Manuscript revisions, critical input.
Coordination of collaborative efforts.
SYEDA SIDRA TASNEEM (Director)
Coordination of collaborative efforts.
RUBINA JABEEN (Principal)
Coordination of collaborative efforts

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