# Palliative and End of Life Care Competencies Among Nurses in Surgical Transplant Units

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## ARTICLE INFO

## ABSTRACT

*Background: Palliative care is an essential part of modern healthcare. As communicable and non-communicable diseases increase and the population ages, the need for palliative care continues to grow. Nurses must therefore have strong competencies in providing this type of care. While palliative care is commonly associated with cancer patients, little research has examined the palliative care skills of nurses working in surgical transplant units. Purpose: This study aims to determine the palliative and end-of-life care competencies among nurses in surgical transplant units. Methods: A quantitative cross-sectional research design is employed. The data is collected from surgical transplant nurses using Microsoft Forms, specifically those related to Health and Social Care, Living Matters, Dying Matters, and the Palliative and End-of-life competency assessment tool, and distributed through the participants' personal email. Health and Social Care, Living Matters, Dying Matters, and Palliative and End-of-life competency tool. The t-test, ANOVA, Mann-Whitney U test, and Games-Howell post hoc test are utilized to analyze the results. Results: A total of 188 nurses in the surgical transplant unit participated in this study. Most of the participants were female (84.04%), aged 30 to 39 years (68.62 %), held a bachelor's degree (85.11%), and had over 11 years of experience (77.13%). Notably, 67.02% lacked formal training in palliative and end-of-life care. Competency scores were generally strong, with communication skills (mean=2.65) and symptom management (mean=2.58) rated highest. Competency varied significantly based on age, education, position, and training. The primary challenges include managing family dynamics (72.34 %) and lack of training 14.89%). Conclusion: The participants' palliative and end-of-life care competency across all measured domains is highly developed. Age, educational attainment, position, and training have a significant impact on nurses' competence. Family dynamics is identified as the primary challenge in dealing with palliative and end-of-life patients. Training and education are needed to improve staff competence and ensure high-quality palliative care.*

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## 1. INTRODUCTION

Care is fundamental to nursing, serving as its core principle (Adams, 2016). Identifying and addressing gaps in palliative and end-of-life care (PEOLC) competencies among nurses in surgical transplant units is critical for ensuring the delivery of high-quality, patient-centered care. Palliative care, defined as an approach aimed at enhancing the quality of life for patients with serious illnesses by addressing their physical, emotional, and spiritual needs, is increasingly recognized as an essential component of comprehensive healthcare (de Campos et al., 2022). However, significant deficiencies persist in the foundational knowledge and values that underpin effective palliative care delivery. The World Health Organization (WHO, 2020) reports that only 14% of patients globally who require palliative care receive appropriate interventions, highlighting a crucial gap in knowledge among healthcare professionals. This lack of awareness can lead to missed opportunities for necessary care, ultimately impacting patient outcomes and overall quality of life.

Effective communication is another cornerstone of high-quality palliative care; however, many nurses report feeling unprepared to engage in vital discussions regarding prognosis, treatment options, and end-of-life preferences (Brighton & Bristowe, 2016; Hendricks-Ferguson et al., 2015). Research by Hagan et al. (2018) underscores the need for specialized communication training, as the absence of formal education can hinder nurses' ability to provide meaningful emotional support during critical moments (Hagan et al., 2018). The complexity of these discussions necessitates not only an understanding of medical terminology but also the ability to empathize with patients and their families, fostering an environment where patients feel comfortable expressing their fears and desires. Evidence indicates that effective communication in EOLC significantly influences patient satisfaction and their overall experience of care (Anderson et al., 2019). Therefore, enhancing communication competencies among nurses is vital for improving the quality of palliative care provided in surgical transplant units.

Comprehensive assessment and individualized care planning are fundamental to effective palliative care delivery. However, many nurses in surgical transplant units encounter unique challenges that necessitate thorough assessments encompassing physical symptoms, psychological needs, and spiritual dimensions (Hagan et al., 2018). Studies indicate that nurses often lack the necessary training and tools to conduct these comprehensive evaluations effectively (Brohard, 2022). Frameworks such as the Northern Ireland Cancer Network (NICaN) have developed competency assessment tools to address these gaps, such as knowledge, skills, and attitudes, categorizing palliative and end-of-life care competencies across several key domains (HSC, 2016; NIPEC, 2020). Such structured frameworks are essential for helping nurses navigate the complexities of palliative care, providing clear guidelines for assessment and planning. In the absence of these tools, nurses may struggle to develop care plans that align with patients' values and preferences, potentially compromising the quality of care during critical periods.

Moreover, symptom management is a cornerstone of palliative care; however, many nurses report feeling ill-equipped to handle the multifaceted symptoms experienced by transplant patients (Kavalieratos et al., 2017). Research indicates that a significant number of nurses lack training in both pharmacological and non-pharmacological approaches to symptom management, which can lead to inadequate pain relief and diminished quality of life for patients (Connor, 2020). This gap not only affects physical comfort but also has profound implications for emotional and psychological well-being, as uncontrolled symptoms can lead to increased anxiety and depression among patients. Consequently, enhancing nurses' competencies in symptom management is critical for improving overall patient well-being in surgical transplant units.

Advance care planning (ACP) represents another vital area where gaps exist. ACP is crucial for ensuring that patients' wishes are respected throughout their treatment trajectory; however, many nurses express uncertainty about how to initiate and facilitate these discussions (Gustafson & Song, 2020). The literature frequently addresses general palliative care competencies but often neglects the specific challenges faced in surgical transplant settings, where patients may experience rapid health declines and complex decision-making scenarios (Wentlandt et al., 2017). This lack of focused training leaves nurses unprepared to engage patients in meaningful conversations about their care preferences, further complicating the palliative care landscape. Effective ACP discussions can lead to improved patient satisfaction and better alignment of care with patients' values and goals (Fried et al., 2002). Therefore,

specialized training in ACP is essential for nurses to effectively support patients and families during these critical conversations, ensuring that care is consistent with patients' wishes even as their health status changes.

There is paucity of published literature regarding palliative and end-of-life care competency and educational needs of surgical transplant nurses. Hence, addressing these gaps in competencies is vital for improving the quality of palliative care and enhancing patient satisfaction. In high-stress environments like surgical transplant units, where the complexity of patient needs is magnified, prioritizing the development of palliative care competencies among nursing professionals is imperative. This can be achieved through targeted educational initiatives, structured competency assessment tools, and ongoing professional development programs that emphasize the unique challenges of caring for transplant patients. By equipping nurses with the necessary knowledge and skills, healthcare institutions can foster a culture of compassionate, comprehensive care that not only enhances patient outcomes but also improves the overall experience of care for patients and their families.
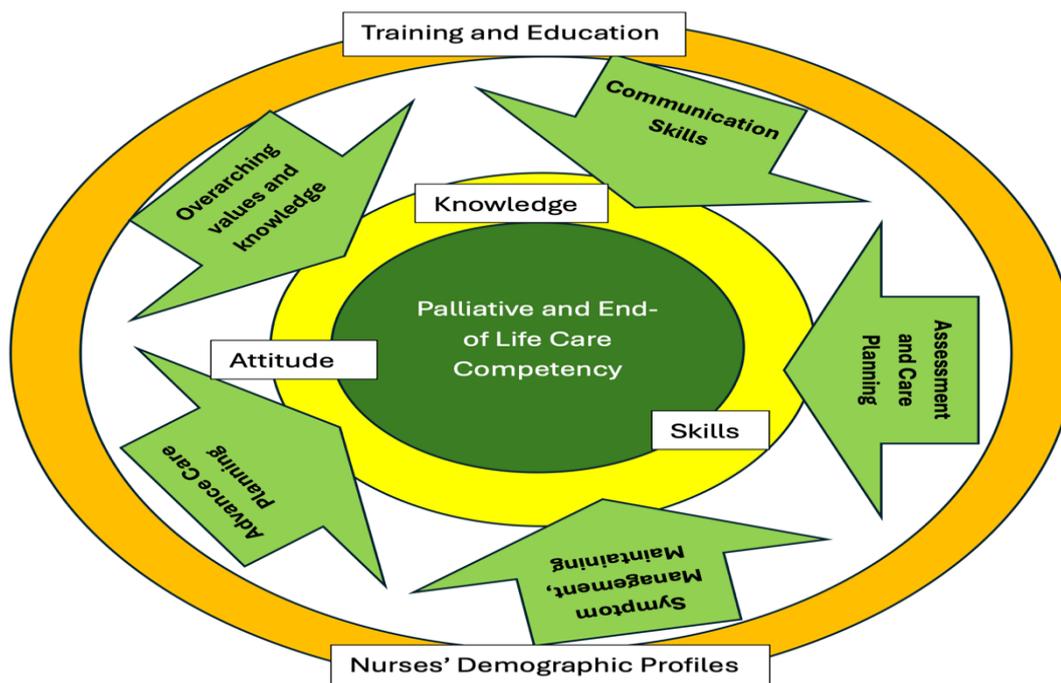
This study aims to determine the palliative care competencies among nurses in Surgical Transplant Units and propose a program to enhance the palliative and end-of-life care competencies of nurses. This study was conducted in a tertiary hospital in Abu Dhabi, as it has a specialized unit catering to diverse populations, and a palliative care specialist and other multidisciplinary teams are available and accessible. The findings of this research may influence training programs, policies, and impact patient care standards.

### *Conceptual Framework*

This research is grounded in the Health and Social Care, Living Matters, Dying Matters, and Palliative and End-of-life competency tool (HSC, 2016). The instrument utilized the NIPEC competency assessment framework (NIPEC, 2020). The Palliative and End-of-life Competency Tool is a collaborative initiative involving The Regional Palliative and End-of-Life Care Practice and Education Facilitator Group, the Northern Ireland Post Qualification Education & Training Partnership, The Living Matters Dying Matters Education Sub-group, and is facilitated by the Northern Ireland Practice and Education Council (NIPEC) along with the Northern Ireland Cancer Network (NICaN) Supportive and Palliative Care coordinators (HSC, 2016).

The competency consists of five domains developed by the Department of Health, UK National End of Life Care Strategy guidance document, *Core Competencies for End-of-Life Care, Training for Health and Social Care Staff.* The domains are: 1. Overarching Values and Knowledge, 2. Communication skills, 3. Assessment and Care Planning, 4. Symptom Management, Maintaining Comfort and Well-being, and 5. Advance Care Planning. Each domain has indicators to which competence is assessed. The overarching values and knowledge have five indicators. These are developing self and others, ethical understanding, audit, research, and practice development, support of self and others and leadership. Communication skills have three indicators which include open and sensitive communication, teamwork, and understanding grief. Holistic assessment, informed decision making, developing, implementing, and evaluating a management plan, and appropriate referral are the indicators for assessment and care planning, while Symptom management for symptom management, maintaining comfort and wellbeing domain. Lastly, there are two indicators for advance care planning, namely advance care planning and care of the patient after death. (**Figure 1**).

The tool is a self-assessment tool for practitioners to assess their development needs. The tool has 3 tiers. Tier 1 is for health practitioners who infrequently provide palliative and end-of-life care as part of their roles, such as midwives, paramedic staff, Registered nurses in a range of settings, social workers, General practitioners, and Hospital Physicians. Tier 2 is designed for staff who frequently provide palliative and end-of-life care as part of their roles, like Registered nurses in acute and community settings, Pharmacists, Chronic Disease Management practitioners, and Nursing Auxiliaries working in palliative and end-of-life care settings. Tier 3 is for Specialist practitioners in palliative and end-of-life care, such as Palliative Care Nurse Specialists, Specialist Palliative Care Physiotherapists, Specialist Palliative Consultants, and Specialist Pharmacists.

**Figure 1.** Proposed program to enhance the palliative and end-of-life care competencies of nurses

## 2. RESEARCH METHOD

### 2.1. Research design

This study employed a quantitative descriptive cross-sectional research design to determine surgical transplant nurses' palliative and end-of-life care competency. Descriptive research design is used to portray population characteristics or circumstances and/or the frequency with which certain phenomena occur (Polit & Beck, 2017).

### 2.2. Setting and samples

This study involved 188 nurses working in the specialized surgical transplant unit at Cleveland Clinic Abu Dhabi, a tertiary hospital and a recognized transplant center of excellence in the United Arab Emirates (UAE). Given the hospital's unique status as a leading institution for transplant care in the region, purposive sampling was employed to ensure that the participants were directly involved in transplant-related nursing care, thereby enhancing the relevance and specificity of the findings. Purposive sampling allows the researcher to identify and select the individuals (or group of individuals) that are knowledgeable about the phenomenon of interest by virtue of knowledge or experience (Etikan et al., 2016).

Initially, the study aimed to utilize census or total enumeration, a method that involves collecting data from every member of the target population rather than selecting a subset (Polit & Beck, 2017; Singh & Masuku, 2014). This approach is particularly suitable for small populations, as it provides comprehensive data on all individuals within the population (Singh & Masuku, 2014). However, nurses who were on official leave at the time of data collection were excluded from participation. Despite efforts to recruit all eligible nurses, the target population size was not fully achieved due to logistical constraints.

To ensure the population's representation, the sample size was recalculated using the Raosoft Sample Size Calculator (2004), with a margin of error of 5%, a 95% confidence level, and a 50% response rate, based on the total number of nurses working in the surgical transplant units. The required sample size was determined to be 133 participants. The final number of responses in this study exceeded this requirement, ensuring robust statistical representation.

### 2.3. Measurement and data collection

The primary data collection tool will be the Palliative and end-of-life care competency tool endorsed by Living Matters Dying Matters Northern Ireland (HSC, 2016). This tool is adapted to fit the context of surgical transplant nurses in Abu Dhabi, ensuring its relevance to this specialized population's unique challenges and practices.

The research questionnaire comprises of 3 parts: Demographic Profile, self-administered competency checklist, and a question to capture the challenges of nurses delivering palliative and end-of-life care. Participants are provided with a list of predefined challenges derived from the literature (Brohard, 2022; Hagan et al., 2018; Özmen & Keskin, 2024), allowing them to select the options that best reflect their experiences. Additionally, they can choose "Others", which provides an open-text field for participants to describe challenges not included in the predefined list. This approach ensures that the tool is both structured and flexible, enabling participants to share their unique perspectives while maintaining alignment with existing evidence-based findings.

The tool adopted the NIPEC framework in the competency assessment tool and assesses competencies across five key domains: Overarching Values and Knowledge, Communication Skills, Assessment and Care Planning, Symptom Management, Maintaining Comfort and Wellbeing, and Advance Care Planning (HSC, 2016). The respondents perform self-assessment and answer each subcategory with 1 (needs a lot of development), 2 (needs some development), or 3 (Is well developed). This competency assessment tool aims to identify the learning and development requirements of nurses. The instrument has been validated and is esteemed for its efficacy in assessing palliative care competencies in Northern Ireland. This research utilizes it to guarantee a thorough and contextually pertinent evaluation of nurses' abilities and competencies in delivering palliative care. According to Connolly et al. (2016), this competency assessment tool is designed to define core competencies in palliative and end-of-life care that are universal across health disciplines. Further, it outlines specific competencies bespoke to the unique roles of nurses. Moreover, it is also intended to guide the development of professional training programs (Connolly et al., 2016).

The survey tool is transcribed in Microsoft forms and emailed to participants' institutional email addresses. Data is collected over three weeks, from February 5 to 20, 2025, immediately after receiving the IRB approval.

### 2.4. Data analysis

Descriptive Statistics is used to show the profile of the participants (age, gender, highest educational attainment, position, years of experience, and training). Welch's ANOVA and Mann-Whitney U test is used to examine whether there are significant differences in palliative care competencies based on demographic variables such as age, gender, and work experience (Polit & Beck, 2017). Games-howell post hoc test is also used to analyze the difference between two means (Shingala & Rajyaguru, 2015).

### 2.5. Ethical considerations.

Ethical approval is sought from the hospital's Ethics Review Committee before commencing the study with approval number: B-2025-001. Permission to use of the Palliative and End-of life care competency tool was sought through email correspondence (nican.office@hscni.net). All participants were provided with detailed information about the nature, purpose and potential risks of the research, in accordance with the ethical principles of respect for autonomy and informed consent (Beauchamp & Childress, 2019). Participants' identities and responses are kept anonymous and confidential. The data is extracted coded and stored securely, accessible only to the primary investigator. Participation in the study is voluntary, and participants can withdraw at any time without any consequences or impact on their professional standing. The study ensures that no harm, psychological or physical, is inflicted on participants. Sensitive questions are handled with care, and support services were provided when needed. All data collected is used solely for the purposes of this research. By following these research methods and ethical guidelines, the study aims to provide a comprehensive and responsible assessment of palliative care competencies among

## 3.   RESULT AND DISCUSSION

A total of 188 surgical transplant unit nurses met the inclusion and exclusion criteria. Majority of participants were female (84.04%) and predominated by 30-39 years age group, comprising 68.62 %. Most of the participants have bachelor's degree (85.11%). Participants with 16 years and more represents 44.15 % while 32.98 % of them have worked for 11 to 15 years. Among the participants, 70.74 % are staff nurses; more than one-third (67.02 %) of the nurses did not attend training related to palliative and end-of-life care (**Table 1**).

**Table 1**. Profile of the Participants

| Variables | Categories | Frequency (n=188) | Percentage |
|---|---|---|---|
| Gender | Male | 30 | 15.96 |
| | Female | 158 | 84.04 |
| Age | <30 years old | 10 | 5.32 |
| | 30-39 years old | 129 | 68.62 |
| | 40-49 years old | 44 | 23.40 |
| | 50 years old and above | 5 | 2.66 |
| Highest | Diploma | 22 | 11.70 |
| Nursing Degree | Bachelors | 160 | 85.11 |
| Attained | Master's and Doctorate | 4 | 2.13 |
| Total Work | 5 years and below | 2 | 1.06 |
| Experience | 6-10 years | 3 | 1.60 |
| | 11-15years | 62 | 32.98 |
| | 16 years and above | 83 | 44.15 |
| Position | Staff nurse | 133 | 70.74 |
| | Charge nurse | 15 | 7.97 |
| | Practical nurse | 40 | 21.28 |
| Training | With training | 62 | 32.98 |
| | With no training | 126 | 67.02 |

The participants demonstrated well-developed competencies in palliative and end-of-life care across all five domains. As shown in Table 2, Communication Skills (M = 2.65), Symptom Management, Maintaining Comfort and Well-being (M = 2.58), and Advance Care Planning (M = 2.52) all received high mean scores. Overarching Values and Knowledge also showed a well-developed level of competence (M = 2.36). Among the domains, Assessment and Care Planning had the lowest mean score (M = 2.07), although it remains within the "well-developed" category. Overall, these results indicate that nurses possess strong foundational skills necessary for providing quality palliative and end-of-life care.

**Table 2.** Participants' Palliative and End-of-Life Care Competencies

| Domain | Mean | Standard Deviation | Qualitative Interpretation |
|---|---|---|---|
| Overarching Values and Knowledge | 2.36 | 0.55 | Well developed |
| Communication Skills | 2.65 | 0.466 | Well developed |
| Assessment and Care Planning | 2.07 | 0.47 | Well developed |
| Symptom Management, Maintaining Comfort and Well-being | 2.58 | 0.556 | Well developed |
| Advance Care Planning | 2.52 | 0.522 | Well developed |

Palliative and end-of-life care competency domains vary when grouped according to profile variables. There is no statistically significant difference between male and female participants across all domains of palliative care and end-of-life care competence. On the other hand, there is a statistical difference across various age groups in overarching values, knowledge, and advanced care planning, while no disparity in communication skills, assessment, and care planning, or symptom management. Post-hoc analysis results indicate that nurses aged 30-39 exhibit superior competence in overarching values and knowledge (mean difference = 0.451) and advance care planning (mean difference = 0.342) compared to nurses aged 40-49. Highest nursing degree attained, work experience, position, and training show statistically significant differences between participants with and without training in all domains of their palliative and end-of-life care competencies. Post-hoc analysis indicates that nurses holding master's or doctoral degrees exhibit superior abilities across all areas compared to those with bachelor's or diploma degrees mean difference (**Table 3**).

**Table 3** Significant Participants' Palliative and End-of-Life Care Competencies when grouped according to Gender, Age, Highest Nursing Degree Attained, Position, and Training

| Demographic Profile | Domain | t Value | p-Value |
|---|---|---|---|
| Gender | Overarching Values and Knowledge | 2331 | 0.886 |
| | Communication Skills | 2231 | 0.607 |
| | Assessment and Care Planning | 2242 | 0.638 |

| | | | |
|---|---|---|---|
| | Symptom Management, Maintaining Comfort and Wellbeing | 2134 | 0.382 |
| | Advance Care Planning | 2365 | 0.985 |
| Age | Overarching Values and Knowledge | 8.86 | 0.002 |
| | Communication Skills | 3.13 | 0.061 |
| | Assessment and Care Planning | 2.81 | 0.078 |
| | Symptom Management, Maintaining Comfort and Wellbeing | 1.65 | 0.223 |
| | Advance Care Planning | 3.61 | 0.04 |
| Highest Nursing Degree Attained | Overarching Values and Knowledge | 24.3 | <.001 |
| | Communication Skills | 21.4 | <.001 |
| | Assessment and Care Planning | 26.3 | <.001 |
| | Symptom Management, Maintaining Comfort and Wellbeing | 33.5 | <.001 |
| | Advance Care Planning | 28.8 | <.001 |
| Total Work Experience | Overarching Values and Knowledge | 75.64 | <.001 |
| | Communication Skills | 75.64 | 0.002 |
| | Assessment and Care Planning | 75.64 | 0.002 |
| | Symptom Management, Maintaining Comfort and Wellbeing | 75.64 | 0.017 |
| | Advance Care Planning | 75.64 | 0.003 |
| Position | Overarching Values and Knowledge | 25.8 | <.001 |
| | Communication Skills | 25.5 | <.001 |
| | Assessment and Care Planning | 28.7 | <.001 |
| | Symptom Management, Maintaining Comfort and Wellbeing | 19.7 | <.001 |
| | Advance Care Planning | 16.7 | <.001 |
| Training | Overarching Values and Knowledge | 1184 | <.001 |
| | Communication Skills | 2641 | <.001 |
| | Assessment and Care Planning | 3037 | 0.012 |
| | Symptom Management, Maintaining Comfort and Wellbeing | 2821 | 0.002 |
| | Advance Care Planning | 2072 | <.001 |

Among the challenges that nurses encounter in providing palliative and end-of-life care, 136 participants (72.34 %) cited family dynamics, followed by lack of knowledge and training (14 %). Emotional overload, heavy workload, coordinating care with other healthcare providers, no experience in palliative care, culture barrier, and time constraint from high nurse-patient ratio are scored less than 3% (**Table 4**).

**Table 4.** Challenges Encountered by Participants when Providing Palliative and End-of-Life Care

| Categories | Frequency (n=188) | Percentage |
|---|---|---|
| Emotional overload | 6 | 3.19 |
| Heavy workload | 5 | 2.66 |
| Lack of resources | 1 | 0.53 |
| Unresolved pain and suffering | 2 | 1.06 |
| Family dynamics (Dealing with patient family) | 136 | 72.34 |
| Lack of knowledge and training | 28 | 14.89 |
| Coordinating care with other healthcare providers | 5 | 2.66 |
| No experience | 3 | 1.60 |
| Culture barriers | 1 | 0.53 |
| Time constraint from high nurse-patient ratio | 1 | 0.53 |

The study's findings indicate that, from a sample of n=188, majority of participants were female, mid-career professionals aged 30 to 39, and possessed a bachelor's degree. The outcome illustrates the gender distribution within the nursing profession. The nursing profession is predominantly female and is recognized as a stereotype within the field (Teresa-Morales et al., 2022). A significant proportion of the participants had considerable working experience, with 44.15% having worked for 16 years or

more, and 32.98% having worked for 11-15 years. This indicates that the participants were experienced nursing professionals. This result agrees with Price and colleagues in 2017 that experience matters. Nurses with more than 10 years of experience perceived themselves as more competent in providing end-of-life care (Price et al., 2017). The majority of participants in the study were Staff Nurses (70.74%), which may indicate a potential sampling bias toward nurses in direct care roles. However, this limitation was addressed by including Practical Nurses (21.28%), who are actively involved in direct patient care despite having a more restricted scope of practice. Their inclusion ensures a more comprehensive representation of nursing roles, particularly in contexts where practical nurses play a vital part in delivering patient care.

Remarkably, the majority of nurses in this survey did not participate in training pertaining to palliative and end-of-life care. Hao et al. (2021) underscored the necessity for training programs to enhance nurses' attitudes towards death (Hao et al., 2021). Furthermore, the demographic characteristics of nurses, specifically female gender and possession of a bachelor's or master's degree, are significant predictors of proficiency in palliative care (Nie et al., 2025). Consequently, the findings of this study indicate that the nurses in the surgical transplant unit exhibit qualities necessary for delivering proficient patient care.

The participants possess advanced competencies in palliative and end-of-life care across all assessed domains. Kirkpatrick et al. (2017) asserted that a robust palliative care competency is a prerequisite for delivering high-quality palliative nursing care (Kirkpatrick et al., 2017). Moreover, competency-based evaluation can revolutionize educational programs, hence enhancing health outcomes (Health Service Excecutive, 2014; International Council of Nurses, 2022).. This study evaluates the domains of palliative care competency, which include overarching values and knowledge, communication skills, evaluation and care planning, symptom management, maintenance of comfort and wellbeing, and advance care planning. These themes align with the palliative core skills established by the Health Service Executive in Dublin (Health Service Executive, 2014). The competency domains also align with the palliative care competency framework established in India (Atreya et al., 2019). Participants in this study exhibit a robust understanding and application of the fundamental ideas and information related to palliative and end-of-life care. The lower mean score in the domain of evaluation and care planning suggests a probable necessity for further development or specialized training in this area. Competency evaluation is utilized to discover developmental deficiencies among nursing professionals (Health Service Executive, 2014).

The findings of this study demonstrate that surgical transplant nurses can deliver safe and high-quality patient care. Despite the predominance of female participants, this study reveals no significant difference in the provision of palliative and end-of-life care between males and females. This refutes the assertion made by Nie and colleagues (2021) that femininity serves as a robust predictor of nurses' proficiency in delivering palliative care. Conversely, this study found considerable diversity in competency domains with respect to age. This study demonstrates that age, educational attainment, position, and training significantly influence nurses' abilities in palliative and end-of-life care. This partially corroborates the findings of Nie and colleagues in 2021, which indicate that nurses with bachelor's and master's degrees exhibit superior palliative care competencies (Nie et al., 2025).

The delivery of palliative and end-of-life care presents significant challenges. This study identified family relations and interactions with patient families as the primary challenge in delivering palliative and end-of-life care within the surgical transplant unit. The result aligns with the assertion of Ozem and associates that communication with patients and families is rated above medium level among the obstacles faced by nurses in palliative care institutions (Özmen & Keskin, 2024). Similarly, a study identified that communication and collaboration among patients, nurses, and families constitute the foremost obstacle for nurses in delivering optimal palliative care (Rubbai et al., 2024).

The present study revealed that 14.89% of participants cited insufficient knowledge and training, indicating a necessity for enhanced educational and training initiatives in palliative care. Wenlandt and colleagues (2017) emphasized the need for education in palliative care provision for solid organ transplant patients. Similarly, several studies showing that there are knowledge gaps and lack of training in providing palliative and end-of-life care (Brohard, 2022; Hagan et al., 2018; Utami & Putri, 2022). In addition, Aldridge and colleagues (2016) reported that a lack of adequate education and training, including an inadequate size of the palliative medicine-trained workforce, remains a barrier to palliative care provision (Aldridge et al., 2016). This necessitates the development of strategies for managing family dynamics, which may be included into palliative care training and support programs. Furthermore, enhanced access to palliative care training is crucial to rectify the knowledge deficit indicated by participants.

Ultimately, a thorough training program is essential for enhancing the provision of palliative and end-of-life care. The suggested program is detailed in Table 5. The program encompasses a needs

assessment, an educational component utilizing several pedagogical approaches, a mentorship initiative, and easily accessible resources. It explicitly tackles family dynamics, gives continuing education opportunities, executes a comprehensive evaluation process, and provides ways to alleviate emotional stress, with the objective of equipping nurses with the information, skills, and support necessary to administer high-quality palliative care. Existing training programs on palliative and end-of-life care exhibit inconsistencies in their content (White et al., 2014). Notwithstanding this reality, training and competency-based education continue to be the benchmark for enhancing service and patient outcomes. In 2018, Hagan and colleagues emphasized that nurses must possess competence in palliative care, irrespective of their unit.

## 4. CONCLUSION

The findings of this study indicate that nurses possess well-developed competencies across all domains of palliative and end-of-life care, reflecting a strong foundation in knowledge, communication, symptom management, and advance care planning. Although all domains met the "well-developed" level, assessment and care planning emerged as the area with the lowest mean score, suggesting opportunities for targeted improvement. Variations in competency were influenced by factors such as age, educational attainment, professional experience, and prior training, highlighting the importance of continuous learning and structured capacity-building programs. Overall, the results emphasize the need to further strengthen palliative care education and training to ensure consistently high-quality care across diverse clinical settings.

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