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# Knowledge, attitudes, and self-efficacy regarding palliative care among Palestinian nurses in intensive care units

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## Abstract

**Background** Palliative care is crucial for all intensive care unit (ICU) clinicians. However, its effective implementation is often challenged by insufficient training, high staff turnover, and limited resources, negatively affecting the quality of care. This study aimed to assess the knowledge, attitudes, and self-efficacy regarding palliative care among ICU nurses in hospitals in the West Bank.

**Methods** A cross-sectional study was conducted among 260 ICU nurses in governmental hospitals across the West Bank. Data were gathered between January and July 2024 through self-administered questionnaires, including the Palliative Care Quiz for Nurses (PCQN), the Frommelt Attitudes Towards Care of the Dying (FATCOD) scale, and the Palliative Care Self-Efficacy Scale (PCSES).

**Results** The findings revealed insufficient levels of palliative care knowledge ( $M = 6.6 \pm 2.6$  out of 20), positive/favorable attitudes ( $M = 94.1 \pm 2.9$  out of 150), and low self-efficacy in palliative care ( $M = 23.0 \pm 8.1$  out of 48) among nurses. Significant predictors of self-efficacy included ICU experience and marital status, with single nurses and more experience showing higher self-efficacy ( $p < 0.01$ ).

**Conclusion** This study highlights the pressing need for targeted interventions to address the gaps in palliative care knowledge and attitudes among ICU nurses. Implementing such initiatives could substantially improve the delivery of palliative care in resource-constrained settings, emphasizing the importance of action to promote better patient outcomes.

**Keywords** Attitudes, Knowledge, Palliative care, Self-efficacy

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## Introduction

Intensive Care Units (ICUs) are specialized environments focused on the care of critically ill patients who frequently endure both physical challenges, such as pain and fatigue, and psychological distress including anxiety and depression [1–3]. Alongside these challenges, patients may confront social and spiritual issues, such as fear of death and feelings of isolation. The families of ICU patients often experience significant psychological impacts as well, including anxiety and grief [4–7]. In this context, incorporating palliative care alongside curative treatments is essential for improving quality of life. It addresses patients' and their families' holistic physical, emotional, social, and spiritual needs [8].

Many efforts have been made to incorporate palliative care into healthcare systems [9]. Incorporating palliative care into ICU settings presents a significant challenge, as it often contrasts with the ICU's aggressive focus on life-saving interventions. While the ICU prioritizes curative approaches, palliative care emphasizes symptom management and enhancing quality of life [3, 10]. However, it is important to note that palliative care can be provided alongside curative treatments, with the goal of enhancing patient comfort and dignity, while still allowing for life-saving interventions [11]. Despite being recognized as a core competency for all ICU healthcare professionals, the effective delivery of palliative care is influenced by insufficient training, high healthcare provider turnover, and limited resources [3, 12, 13]. These factors collectively affect the provision of palliative care in ICU settings [3, 12, 13]. Knowledge, attitudes, and self-efficacy for ICU healthcare professionals, including nurses, are critical determinants of the quality of palliative care delivered [14–16].

Numerous studies indicated that nurses in ICU settings in resource-limited countries often lack adequate knowledge and skills in palliative care [17–22]. This underscores the urgent need for improved training and education in ICU settings. While ICU nurses usually understand the basic principles of palliative care, they often find the psychological aspects challenging even after training [22, 23]. Cultural, clinical, and institutional factors shape the nurses' attitudes toward palliative care in ICU settings, which collectively influence their ability and willingness to provide such care [24]. Nurses' personal and cultural beliefs about death, dying, and the value of life extension significantly influence in shaping their perspectives and attitudes toward palliative care [25–29]. ICU settings with a culture focused on aggressive, life-prolonging care may encounter resistance to integrating palliative care, nurses may feel more compelled to focus on curative measures rather than palliative care [30]. In contrast, cultures that emphasize comfort care and natural death may make nurses more

attuned to the benefits of palliative care [31, 32]. Also, hospitals with a more balanced approach, emphasizing both curative and comfort care, are more likely to foster positive attitudes toward palliative care [30, 33]. Nurses' religious perspectives also influence their perceptions on palliative care, especially regarding decisions about life support and end-of-life care. Some religious beliefs may prioritize continuing treatment at all costs, while others may encourage focusing on alleviating suffering and supporting a peaceful death [31, 34]. In certain healthcare settings, societal or institutional norms can place pressure on nurses to uphold life-saving interventions, making it more difficult for them to advocate for palliative care even when it is deemed more appropriate for the patient [35–37]. The clinical situation influences the nurses' attitudes, in cases where a patient has a poor prognosis and curative treatments are no longer effective, nurses are more likely to recognize the need for palliative care. However, in situations involving acute life-threatening conditions or younger patients, some nurses may experience difficulty shifting the focus to comfort care [38–40]. Nurses with advanced training in palliative care are more likely to hold positive attitudes and feel confident in providing palliative care within the ICU. Those who lack such training may be less comfortable with these practices, potentially lacking the skills and knowledge required for effective implementation [13, 41]. The level of institutional support significantly impacts nurses' ability to provide palliative care. ICUs that have formal palliative care teams, policies, and dedicated resources provide nurses with the support and empowerment to offer palliative care. In contrast, institutions lacking these resources may leave nurses feeling isolated and ill-equipped to integrate palliative care into their practice [13, 42]. Positive attitudes enhance patient care by promoting clear communication, timely symptom management, and family engagement, whereas negative attitudes may result in delayed palliative care referrals, excessive use of aggressive treatments, and inadequate pain [43]. However, Getie et al. [43] reported that one-third of nurses held an unfavorable attitude toward palliative care which highlights a need for further investigations on this topic.

Self-efficacy is another crucial factor influencing nurses' ability to provide palliative care, particularly in the high-stress environment of the ICU. In this context, self-efficacy refers to nurses' confidence in their ability to deliver palliative care effectively. Higher self-efficacy is associated with improved performance and enhanced motivation, which in turn fosters a sense of empowerment and resilience in delivering care [44]. Nurses with greater self-efficacy are better equipped to handle challenging situations, such as managing complex symptoms or communicating with families, ultimately leading to

improved clinical outcomes [45, 46]. However, self-efficacy can vary due to several modifiable factors, including knowledge and experience, and non-modifiable factors such as age and gender [44, 45, 47, 48].

Several barriers to delivering palliative care have been identified, including inadequate training, psychological stress, limited resources, and heavy workloads [49]. Staff shortage and ethical and cultural challenges added further complexity to nurses' attitudes, making care delivery even more difficult [40]. To enhance nurses' effectiveness and attitudes toward palliative care, it is crucial to tackle these barriers through improved training, increased emotional support, and the promotion of cultural sensitivity. These challenges are especially evident in Palestine, where the increasing prevalence of life-limiting illnesses and an overwhelmed healthcare system highlight an urgent need for palliative care. Previous studies in Palestine, where palliative care resources are limited and the quality of palliative education varies [9, 50] have highlighted significant gaps in nurses' knowledge, attitudes, and self-efficacy related to palliative care. These deficiencies directly impact nurses' quality of care [17, 50].

Additionally, a previous study identified age, gender, and the type of hospital wards as factors influencing palliative care knowledge among nurses in the West Bank, Palestine [17]. Given the limited understanding and negative perceptions surrounding palliative and end-of-life care, it is essential to implement improved training and supportive interventions. These measures will help reduce stress and enhance nurses' confidence and competence in providing high-quality palliative care [47]. Evaluating the factors influencing nurses' self-efficacy in delivering palliative care, particularly in ICU settings, is crucial. Assessing nurses' knowledge, attitudes, and self-efficacy in this area is essential for identifying gaps and guiding efforts to develop effective training programs. Therefore, this study aimed to evaluate the knowledge, attitudes, and self-efficacy of ICU nurses in the West Bank hospitals regarding palliative care, and determine the factors correlated with self-efficacy of palliative care.

## Methods

### Design, population, and sampling

This study used a cross-sectional design and included all governmental hospitals in the West Bank. The study included all governmental hospitals to obtain a comprehensive and representative sample of ICU nurses within the public healthcare system. Governmental hospitals serve a large and diverse patient population, offering valuable insights into the practices and challenges faced by nurses in these settings. By encompassing all such hospitals, the study captures a broad range of experiences and perspectives, thereby enhancing the generalizability and relevance of the findings within the public healthcare

sector. Fourteen governmental hospitals employed a total of 405 nurses in ICUs [51]. Also, all nurses working in the ICUs were recruited. The ICUs included two wards: medical and surgical. Participants were selected using a convenience sampling technique. An online sample size calculator (<http://www.raosoft.com>) was used to determine the required sample size, adopting a significance level of 0.05, a confidence interval of 99%, and a response distribution of 50%. The 99% confidence level was chosen to provide a higher level of certainty in the results.

This calculation determined that a sample size of 252 participants was required. To account for potential attrition, an additional 10% was added, resulting in a final target sample of 277 nurses. In total, 260 out of 277 nurses completed the questionnaires, yielding a response rate of 93.9%.

The inclusion criteria included ICU nurses with at least a nursing diploma and at least one year of experience in ICU settings. This experience ensures that participants have gained sufficient exposure and familiarity with the critical care environment. Nurses with at least one year of experience are likely to have encountered a diverse range of medical conditions, patient complexities, and high-pressure situations, giving them a deeper understanding of the intricacies of patient care in the ICU [52, 53]. This level of experience helps ensure that participants can provide informed and relevant insights, thus enhancing the quality and reliability of the study's findings. Furthermore, it establishes a baseline of competence and expertise, ensuring that participants are well-prepared to engage with the study's focus, whether it involves palliative care, clinical decision-making, or other ICU-related topics.

The exclusion criteria eliminated part-time nurses and those with less than one year of ICU experience, ensuring that only those with sufficient exposure to ICU patients were included in this study.

### Instrumentation

The following instruments were used for collecting data: socio-demographic characteristics including age, gender, educational level, and marital status after reviewing relevant literature [17, 36]. Professional characteristics included total nursing experience, ICU experience, palliative care certification, training in palliative care, and experience with dying patients after reviewing relevant literature [17, 36].

Palliative care knowledge was assessed using the 20-item Palliative Care Quiz for Nursing (PCQN) [54]. The PCQN is divided into three subscales: philosophy and principles of palliative care (4 items), psychosocial and spiritual care in end-of-life (EOL) (3 items), and management of pain and other symptoms (13 items). Responding to each item was with True, False, or Don't

Know. Correct answers received one, while incorrect or Don't Know received zero (0)". Individual scores were summed to create an overall score ranging from 0 to 20, with higher scores indicating greater knowledge. The mean of the scale (10) served as the cutoff point, where scores below 10 reflected insufficient knowledge, and scores above 10 indicated sufficient knowledge [55]. The original scale is valid and reliable with a Cronbach's alpha of 0.78 [54]. This tool has been used in Arab countries, such as Jordan, where it demonstrated a Cronbach's alpha of 0.72 [55]. In this study, the Cronbach's alpha was 0.79.

Attitudes toward palliative care were assessed using the Frommelt Attitudes Toward Care of the Dying (FAT-COD) scale [56]. The scale consists of 30 statements, evenly split between 15 positive and 15 negative items. Participants rate their attitudes using a 5-point Likert scale, with negative items reversed for scoring. An overall score ranges from 30 to 150, with higher scores indicating more favorable attitudes toward end-of-life (EOL) care. The score was calculated based on the mean (90), with scores above the mean reflecting positive or favorable attitudes, and scores below the mean indicating negative or unfavorable attitudes [57, 55]. Also, the attitudes were positive/favorable if participants gained a score more than 50% of the total attitudes score, while a total score  $\leq 50\%$  was considered negative attitudes toward EOL care [57]. The original scale showed a satisfactory Cronbach's alpha of 0.75 [58]. This tool has been used in Arab countries, such as Jordan, where it demonstrated a Cronbach's alpha of 0.82 [55]. In this study, Cronbach's alpha was 0.81.

The Palliative Care Self-Efficacy Scale (PCSES) was developed by Phillips et al. to measure nurses' self-efficacy in providing palliative care [59]. This 12-item scale includes two subscales: one assessing the perceived capacity to address patients' EOL care concerns, and the other evaluating the ability to respond to patients' EOL symptoms. Participants rated their self-efficacy using a 4-point Likert scale with the following response options: need further basic instruction; confident of performing with close supervision/coaching; confident of performing with minimal consultation; and confident of performing independently. The total score ranges from 12 to 48, with higher scores indicating a greater self-efficacy toward providing palliative care. The mean of the scale (30) served as the cutoff point, where scores below the mean indicated low self-efficacy, while scores above the mean indicated high self-efficacy. The original scale demonstrated strong validity and reliability, with a Cronbach's alpha of 0.92 for the overall scale [59]. In this study, a Cronbach's alpha for the scale was 0.90.

### **Ethical considerations**

Ethical approval for the study was obtained from the Palestine Ahliya University with the approval number (CAMS/CCNA/8/124). Participants were informed about the study's purpose, potential risks, and the voluntary nature of participation. Informed consent was obtained from all participants prior to their involvement, ensuring that they understood their rights and could withdraw from the study at any time without consequence. To emphasize confidentiality, participants were instructed not to write their names or any personal information, ensuring that their responses would not be linked to their identity. This approach encourages participants to provide honest and accurate answers, rather than tailoring their responses to what they believe is expected or socially acceptable. Additionally, data were securely stored on a password-protected site accessible only to the research team.

### **Data collection procedure**

After obtaining approval from the relevant institutional review boards, some researchers visited hospitals and met with the head nurses of the ICUs. During these meetings, the researchers explained the study's objectives and requested lists of nurses working in these units along with their work schedules to aid recruitment. The English version of the instruments was used for collecting data. The researchers distributed paper-based questionnaires to eligible nurses who agreed to participate, along with unmarked return envelopes. Participants were instructed to place the completed questionnaires in designated collection boxes, which one of the researchers retrieved one week after distribution. Additionally, one team member administered the questionnaires in person and collected them a week later.

### **Data analysis**

Data were rigorously analyzed using the IBM SPSS version 26. The data were checked for outliers, missing values, and normality using the Kolmogorov–Smirnov test, which indicated that the data were normally distributed, with no outliers or missing values. Descriptive statistics, including mean, median, and standard deviation, were used to summarize numerical data, while frequencies and percentages were calculated for categorical data. Multiple linear regression was used to identify the predictors of self-efficacy among participants. Also, the t-test and Scheffe post hoc test were used to examine the differences in self-efficacy based on demographic and professional characteristics. The significance level was set at  $p \leq 0.05$ .

**Table 1** Demographic and professional characteristics of the participants (N= 260)

Variable	Categories	N	(%)
Age	20–29 years	81	31.2
	30–39 years	95	36.5
	40–50 years	60	23.1
	More than 50 years	24	9.2
Gender	Male	172	66.2
	Female	88	33.8
Educational level	Diploma	60	23.1
	Bachelor	171	65.8
	Master and above	29	11.2
Marital status	Married	162	62.3
	Single	98	37.7
Experience in nursing care	Less than five years	70	26.9
	5–10 years	66	25.4
	11–15 years	65	25.0
	Above 15 years	59	22.7
Experience in ICU	Less than five years	63	24.2
	5–10 years	103	39.6
	11–15 years	58	22.3
	Above 15 years	36	13.8
Training in palliative care	No	248	95.4
	Yes	12	4.6

**Table 2** Knowledge, attitudes, and self-efficacy of palliative care among the nurses

Variables	Min.	Max.	M	SD
Knowledge	1.00	13.0	6.6	2.6
Attitudes	82.9	108.2	94.1	2.9
Self-efficacy	12.0	48.0	23.0	8.1

M: Mean; SD: Standard Deviation

**Results**

The demographic of participants is shown in Table 1. Out of the 260 participants, the majority were male (n = 172, 66.2%), while 88 (33.8%) were female. Most participants held bachelor’s degrees (n = 171, 65.8%) and were married (n = 162, 62.3%). The largest age group was 30–39 years (n = 95, 36.5%). Most participants had more than five years of nursing experience (n = 190, 73.1%) and

**Table 4** Differences in self-efficacy according to marital status and experience in ICU

Variable	M(SD)	Statistical test		
		t-test	p. value	
Marital status	Married	21.5(8.0)	7.110	0.001**
	Single	25.3(7.8)		

ICU-specific experience (n = 197, 75.8%). Additionally, nearly all participants (n = 248, 95.4%) had not received any palliative care training.

As explained in Table 2, the knowledge mean score was 6.6 ± 2.6 out of 20, which indicated insufficient knowledge levels. The attitudes mean score was 94.1 ± 2.9 out of 150, suggesting a positive/favorable attitudes toward palliative care. Also, (62.3%) held favorable attitudes toward EOL caring. Regarding self-efficacy, the mean score was 23.0 ± 8.1 out of 48, reflecting a low self-efficacy level.

A multivariable regression analysis was used to assess the predictors of self-efficacy, where the independent variables (knowledge, attitudes, age, gender, educational level, marital status, experience in ICU, and training experience in palliative care) were entered into the model of predictors. The overall model was statistically significant (R = 0.361, R<sup>2</sup> = 0.131, adjusted R<sup>2</sup> = 0.092, F (251, 8) = 4.085, p < 0.001), indicating that the model explained 13.1% of the variance in self-efficacy. The findings revealed that marital status and ICU experience were significant positive predictors of self-efficacy among ICU nurses in palliative care (B = 0.207, p = 0.001; B = 0.249, p < 0.001, respectively) (Table 3).

The t-test was used to compare self-efficacy between groups, and the results indicated that single participants had significantly higher self-efficacy than married participants (p < 0.05) (Table 4). The Scheffe post hoc test showed that nurses with 5 years of experience and more in the ICU reported significantly higher self-efficacy than those with less than five years (p < 0.05) as shown in Table 5.

**Table 3** Predictors of self-efficacy of palliative care: multiple linear regression

Predictor	B	Beta	t-test	p. value	95.0% Confidence interval	
					Lower bound	Upper bound
Knowledge	-0.024	-0.008	-0.129	0.897	-0.394	0.345
Attitudes	-0.044	-0.016	-0.263	0.793	-0.373	0.285
Age	0.283	0.033	0.555	0.580	-0.722	1.288
Gender	-0.026	-0.002	-0.026	0.980	-2.038	1.986
Educational level	0.610	0.043	0.721	0.472	-1.058	2.278
Marital status	2.875	0.207	3.471	0.001**	1.244	4.507
Experience in ICU	2.051	0.249	4.137	0.000**	1.075	3.028
Training experience in palliative care	-1.584	-0.065	-1.076	0.283	-4.483	1.315

CI = Confidence Interval, b = Unstandardized beta, B = Standardized beta

\* Significant at p ≤ 0.05.; \*\* Significant at p ≤ 0.01

**Table 5** Differences between nurses in self-efficacy according to experience in ICU: Scheffe's test

Variable	Academic rank		Less than five years	5–10 years	11–15 years	Above 15 years
		Mean	19.3	23.3	24.5	25.8
Self-efficacy	Less than five years	19.3		0.017*	0.005**	0.001**
	5–10 years	23.3			0.853	0.444
	11–15 years	24.5				0.883
	Above 15 years	25.8				

## Discussion

This study examined knowledge, attitudes, and self-efficacy toward palliative care among ICU nurses. Our study revealed that participants reported insufficient knowledge about palliative care, which is consistent with earlier studies in other resource-limited countries [46, 55, 57, 60–62]. This result could be due to inadequate clinical education, training, and resources, which left the participants underprepared and lacking confidence [18, 20, 60, 63]. This study is one of the few in the West Bank to highlight the knowledge gap in palliative care among critical care nurses. It challenges the assumption that ICU nurses have a greater understanding of this topic, revealing significant deficiencies in their palliative care knowledge [18]. Low knowledge levels underscore the need for targeted educational interventions and comprehensive training on palliative care. While the positive impact of these interventions on nurses' knowledge is well-documented, they often fail to translate into improved clinical practice, particularly in care delivery and patient outcomes, when implemented in isolation [64]. Thus, these interventions should be integrated with innovative assessment methods. Additionally, a comprehensive approach—incorporating ongoing education, interdisciplinary collaboration, public awareness, and system support—is essential for effectively implementing these advancements and enhancing patient outcomes [20, 64, 65].

Our study found that ICU nurses had positive/favorable attitudes toward palliative care. This study recorded the lowest scores among ICU nurses compared to a national study [17] and international studies [55, 61, 66, 67]. The relatively low attitude scores could be due to lack of palliative care experience and resources, and the perceived insensitivity of ICU nurses to death and dying [66]. However, our sample showed a promising attitude as most participants believed caring for dying patients is a valued cultural and religious practice that should not be avoided [39, 67]. Unfortunately, this promising attitudes may not always translate into positive attitudes, often due to inadequate training [68]. Formal palliative care education tends to help nurses navigate their way to care for dying patients with more positive attitudes and are more likely to help implementing palliative care practices effectively [68, 69]. Personal experiences with death played a significant role in shaping nurses' attitudes

toward palliative care, highlighting the importance of a strong support system [69]. Cultural factors, especially in Arab Middle Eastern regions where discussing death is often considered taboo, might influence perceptions and attitudes toward palliative care [66]. In contrast, Arab culture encourages the participation of family members in the care of a dying relative, which reflects the nurses' strong acceptance of this practice [55]. The scarcity of palliative care training further complicates the situation. Educational initiatives and interventions should enhance knowledge and shift attitudes by directly addressing these cultural views on palliative care [54]. By understanding and empathizing with these cultural influences, nurses can more effectively communicate the benefits of palliative care for patients and their families, fostering a more positive perspective.

Our study found that participants exhibited low self-efficacy in providing palliative care. A previous study reported low to moderate self-efficacy among Indonesian nurses [63]. Sinaga et al. [70] reported moderate self-efficacy among South Korean nurses. However, Arli demonstrated contrasting results, suggesting high self-efficacy among Turkish nurses [71]. Another study contextualized these findings, proposing that Turkish ICU nurses may still engage confidently and maintain positive attitudes toward palliative care despite knowledge gaps [72]. The variation in self-efficacy levels between countries could be attributed to several factors such as the availability of national resources, including financial support and healthcare infrastructure, the maturity of educational and training programs, and the institutional support for palliative care. For example, countries with more comprehensive palliative care training programs and resources may have nurses with higher self-efficacy, as they are better prepared to manage complex patient needs. In contrast, countries like Palestine, where access to such resources is limited, may experience lower self-efficacy levels among ICU nurses due to insufficient training and support.

Our study revealed no significant correlations between knowledge, attitudes, and self-efficacy in palliative care, which is inconsistent with earlier studies [15, 67, 70, 73]. This finding reflects the role of knowledge and attitudes in palliative care. When limited knowledge of palliative care is combined with negative attitudes, it reflects deep-rooted misconceptions and stigmas. This is evident in the varying perceptions of palliative care, which

is often seen primarily as a service for terminally ill or dying cancer patients [74]. To enhance the effectiveness of palliative care, mass media campaigns and community initiatives that address public misconceptions should be implemented. Bridging the knowledge gap and reshaping societal perceptions are crucial for meaningful progress in this field.

Our study revealed that more ICU experiences and single nurses had more self-efficacy in palliative care. This contrasts with findings from other studies [15, 67, 73]. The discrepancy in self-efficacy predictors may be attributed to the work context in the West Bank. One possible explanation is that the nurses with more experience are more familiar with palliative nursing practices and have more skills and competencies [75]. Additionally, married nurses may have increased personal and interpersonal responsibilities within their families than singles, which could negatively impact their self-efficacy [76]. These findings underscore the importance of context-specific interventions for improving healthcare outcomes in challenging environments like the West Bank. These results highlight critical areas for potential intervention to enhance self-efficacy in palliative care among ICU nurses, mainly focusing on supporting married nurses and those with less ICU experience and promoting higher educational achievements. Also, providing targeted support for nurses with recent experience and strong social networks can significantly enhance their self-efficacy and the quality of the palliative care they provide [77].

### Strengths and limitations of the study

This study is one of the few conducted in the West Bank, but it has several limitations. The cross-sectional design restricts the ability to establish cause-and-effect relationships among the study variables. Additionally, the reliance on self-reported data may introduce biases. A convenience sampling method was used, which limited the study sample to governmental hospitals and may impact the generalizability of the findings. Therefore, randomization is recommended for future studies. Additionally, part-time nurses were excluded from the sample, so including these nurses in future research would be beneficial. It is also suggested that future studies employ a longitudinal design to explore how knowledge and attitudes influence nurses' self-efficacy in providing palliative care.

### Implications for practice

The identified gaps in critical knowledge, attitudes, and self-efficacy among ICU nurses in the West Bank regarding palliative care underscore the urgent need for targeted interventions. To empower nurses to provide compassionate and effective care for vulnerable patients, it is essential to address these gaps through comprehensive

education, supportive work environments, and culturally sensitive approaches. This also emphasizes the importance of commitment and collaboration in advancing palliative care, inspiring action to ensure that every patient receives the dignity and comfort they deserve at the end of life.

Training healthcare professionals, particularly nurses, in palliative care is essential. A combination of theoretical and practical training can enhance nurses' knowledge and cultivate positive attitudes toward this type of care. Educating nurses in palliative care necessitates significant efforts that employ diverse learning strategies, including interactive learning, role-play, and re-demonstrations.

Policymakers should establish national strategic plans and policies concerning palliative care and implement these initiatives across all hospitals in the West Bank. It is essential for healthcare professionals, particularly nurses, to possess adequate knowledge in this field. Therefore, there is a pressing need to integrate and emphasize all aspects of palliative care, including its philosophy and principles, as well as the psychosocial and spiritual dimensions, alongside pain and symptom management, to improve the quality of patient care.

Integrating palliative care into university nursing education curricula and incorporating it into ongoing professional development for nurses in hospitals is essential. This strategy will enhance nurses' clinical competencies and empower them to deliver comprehensive and effective care.

### Conclusion

Nurses had low knowledge and negative attitudes about palliative care, but they had moderate self-efficacy in palliative care. The findings revealed that ICU experience and marital support are crucial predictors of self-efficacy, suggesting that personalized and context-specific strategies could significantly enhance the delivery of palliative care in resource-limited settings. These findings emphasize the importance of improving palliative care training and resources and addressing the moral distress experienced by ICU nurses, which can enhance the quality of palliative and end-of-life (EOL) care.

### Abbreviations

EOL End of life  
ICU Intensive care unit

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### Author contributions

B.A. and A.B. designed the study and provided the data. M.M and A.A. conducted data analyses, prepared tables. All authors wrote the main manuscript text and A.B. supervised the study and provided valuable comments during the drafting of the manuscript. M.M., A.A. and A.S. edited the manuscript and provided valuable comments. All authors reviewed and approved the manuscript.

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## Data availability

The datasets generated and/or analyzed during the current study are not publicly available but are available from the corresponding author on a reasonable request.

## Declarations

### Ethics approval and consent to participate

Approval was obtained in accordance with the Declaration of Helsinki from the Helsinki Committee in Palestine, and the Institutional Review Board (IRB) at the Palestine Ahliya University with the approval number (CAMS/CCNA/8/124). Participants provided informed written consent. Confidentiality of the data was maintained throughout data collection and analysis.

### Consent for publication

Not applicable.

### Clinical trial number

Not applicable.

### Competing interests

The authors declare no competing interests.

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