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Key Words

Medical students, palliative care, WHO analgesic ladder

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Received: 10th October 2024

Accepted: 16th November 2024

Published: 31st December 2024

Citation: N. Tharana Shamim, C. Senthil and Valarmathi, 2024. Assessment of Cardiac Injury in Sepsis and Its Relation to in-Hospital Mortality: A Clinical Study. Res. J. Med. Sci., 18: 860-864, doi: 10.36478/makrjms.2024.12.860.864

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Knowledge and Perception of Medical Students and Interns Regarding Palliative Care in A Tertiary Care Centre: A Cross-Sectional Study

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Abstract

Palliative care is a holistic, patient-centered approach aimed at improving the quality of life of individuals suffering from life-threatening or chronic illnesses. It focuses on the early identification, impeccable assessment, and effective management of pain and other distressing physical, psychosocial, and spiritual symptoms. Beyond symptom control, palliative care provides emotional support, enhances communication, and helps patients and their families navigate complex medical decisions, ensuring dignity and comfort throughout the course of illness. It is applicable not only for patients with terminal conditions such as cancer but also for those with chronic, progressive diseases like heart failure, chronic kidney disease, neurological disorders, and advanced respiratory illnesses. In India, palliative care is still in its early stages, facing challenges such as a lack of knowledge, negative attitudes, and insufficient skills among healthcare providers. There is a need for more focus on palliative care in medical education. To assess knowledge and perception of medical students and interns regarding palliative care A cross-sectional study was conducted among 210 medical students, including interns, at a tertiary care center. Data were collected using a pre-structured questionnaire designed to assess participants' knowledge and perception of palliative care principles and practices. The responses were entered in excel sheet and analyzed using SPSS version 20. Among the participants, 85.8% correctly identified the primary goal of palliative care as improving quality of life. Most 85.4% recognized that it can be provided in hospitals, homes, and hospices. However, 54.7% were uncertain whether all cancer patients experience pain, indicating knowledge gaps. 96.2% identified Paracetamol as the main Step I drug, and 89.6% selected Tramadol for Step II in the WHO analgesic ladder. 60.4% agreed palliative care should begin at the time of diagnosis, reflecting partial understanding of early integration. Although a majority demonstrated foundational knowledge in palliative care, critical gaps exist, particularly in understanding symptom burden and timing of care. Educational interventions are needed to enhance comprehensive training in palliative medicine during medical schooling.

INTRODUCTION

Palliative care plays a vital role in enhancing the quality of life for patients facing life-limiting illnesses by addressing physical, psychological, social, and spiritual suffering^[1]. It ensures that patients receive compassionate, holistic care aimed at relieving distressing symptoms and providing emotional and psychosocial support to both patients and their families^[2]. Given the increasing burden of chronic, progressive, and terminal illnesses, the provision of effective palliative care has become an essential component of comprehensive healthcare. Understanding the importance, principles, and application of palliative care is crucial in ensuring dignified, patient-centered care that prioritizes comfort and quality of life over mere disease-oriented interventions^[3]. Improving palliative care requires addressing gaps in knowledge and changing attitudes among health care professionals. Research is needed to evaluate the effectiveness of current palliative care education and to identify the best strategies for integrating palliative care into healthcare practices^[4]. This research will contribute to the development of targeted educational interventions and strategies to improve the integration of palliative care into health care settings^[5]. By assessing the current level of knowledge, attitudes and practices, this study can inform the creation of standardized palliative care curricula and training programs^[6]. The expected outcomes of this study include a comprehensive assessment of palliative care knowledge, attitudes, among health care professionals and students. The findings will be used to develop recommendations for enhancing palliative care education and improving the delivery of palliative care services^[7-15].

Objectives: To assess knowledge and perception of medical students and interns regarding palliative care

MATERIALS AND METHODS

A cross-sectional study was conducted over a period of two months, from April 2025 to May 2025, at a tertiary care centre. The study included 210 participants, comprising medical students and interns. The sample size was calculated using the formula $n = Z^2pq/d^2$, where $p = 83.4$ (based on prior study findings), $q = 100 - p = 16.6$, $d = 5\%$, and $Z_{1-\alpha/2} = 1.96$. Substituting the values, the required sample size was found to be 210. A convenient sampling technique was employed to select the participants. Data were collected using a pre-tested structured questionnaire designed to assess knowledge, and perception of palliative care. The questionnaire included items related to the purpose and timing of palliative care, place of provision, symptom

recognition, and the WHO analgesic ladder. Data were analysed using descriptive statistics and presented as frequencies and percentages.

RESULTS AND DISCUSSIONS

The study was conducted among 210 medical students including interns in a Tertiary Care Centre. Among the study participants 46.7% were males and 52.8% were females.

The majority of participants (85.8%) correctly identified improving quality of life as the primary goal of palliative care, showing good conceptual understanding. However, only 60.4% were aware that palliative care should begin from the time of diagnosis, indicating a gap in knowledge regarding early integration. A large number of students (54.7%) were uncertain whether all cancer patients experience pain, pointing to the need for better training in symptom burden.

Regarding the WHO analgesic ladder, 96.2% correctly chose Paracetamol for Step I and 89.6% identified Tramadol for Step II, suggesting a strong foundational understanding. Yet, 31.1% of students were unaware of morphine's role in relieving cancer pain, and 36.3% incorrectly identified addiction as its most common adverse effect, reflecting lingering misconceptions about opioid use. Most students (85.4%) recognized that palliative care can be delivered in multiple settings (hospital, hospice, home), which is promising in the context of India's evolving home-care models.

The findings indicate a generally positive attitude and perception toward palliative care among medical students and interns. A significant majority (79.2%) disagreed with the misconception that palliative care cannot be practiced alongside conventional therapy, reflecting good awareness of integrated care models. Nearly all participants (98.1%) affirmed that patients have the right to know about their illness, and 99% agreed that family involvement is crucial in care-highlighting strong ethical and holistic values.

While 68.9% believed that palliative care helps modify patient hopes-shifting from cure to comfort-around one-third (30.7%) remained uncertain, suggesting a need for deeper conceptual understanding. The topic of euthanasia showed mixed attitudes: 71.9% agreed it can be considered for seriously ill patients, while 27.4% remained unsure, reflecting ethical ambivalence or lack of clarity.

Encouragingly, 98.1% supported the inclusion of palliative care in the undergraduate medical curriculum, showing openness to formal education in this field. Furthermore, over half (57.1%) disagreed with the idea that hospital care is necessary for end-of-life patients, indicating a shift toward acceptance of home or hospice-based care as viable alternatives.

Table 1 : Knowledge related to Palliative Care

Question	Response Options	Frequency n	Percentage %
Purpose of palliative care	To improve quality of life	182	85.8
	To treat pain	26	12.3
	To prolong life	3	1.4
	To hasten death	1	0.5
	Don't know	0	0.0
Where palliative care should be provided	Hospital	181	85.4
	Home	1	0.5
	Hospice	1	0.5
	All the above places	28	13.2
	Don't know	2	1.0
When should palliative care begin?	From the time of diagnosis	128	60.4
	After all treatments failed	64	30.2
	Terminal stage	8	3.8
	Don't know	12	5.7
Do all cancer patients experience pain?	Yes	38	17.9
	No	58	27.4
	Don't know	116	54.7
In WHO ladder, Paracetamol is the main drug in	Step I	204	96.2
	Step II	4	1.9
	Step III	3	1.4
	Don't know	1	0.5
In WHO ladder, the main Step II drug is	Tramadol	190	89.6
	Brufen	3	1.4
	Paracetamol	3	1.4
	Ketorolac	15	7.1
	Don't know	0	0.0
Morphine is given to relieve	Cancer pain	142	67.0
	Breathlessness	3	1.4
	Pain in non-cancerous diseases	1	0.5
	Don't know	66	31.1
Main adverse effect of oral morphine	Addiction	77	36.3
	Vomiting	72	34.0
	Constipation	62	29.2
	Drowsiness	1	0.5

Table 2 : Perception about Palliative Care

Statement	Response	Frequency (n)	Percentage (%)
Palliative care cannot be practiced in conjunction with conventional therapy	Agree	11	5.2
	Uncertain	33	15.6
	Disagree	168	79.2
Patient has the right to know about his/her disease	Agree	208	98.1
	Uncertain	4	1.9
	Disagree	0	0.0
Palliative care aims to modify hopes of the patient	Agree	146	68.9
	Uncertain	65	30.7
	Disagree	1	0.5
Family members are involved in patient care	Agree	208	99.0
	Uncertain	1	0.5
	Disagree	1	0.5
Euthanasia can be considered for seriously ill patients	Agree	151	71.9*1
	Uncertain	58	27.4
	Disagree	3	1.4
Palliative care can be included in the undergraduate curriculum	Agree	208	98.1
	Uncertain	2	1.4
	Disagree	1	0.5
End-of-life patients need hospital care	Agree	44	20.8
	Uncertain	47	22.2
	Disagree	121	57.1

The present study highlights the current level of knowledge and perception regarding palliative care among medical students and interns in a tertiary care setting, revealing both encouraging awareness and persistent knowledge gaps.

When compared to a similar cross-sectional study conducted by Kumar *et al.* (2019) among medical students in a medical college in Puducherry, several key differences emerge. In Kumar's study, only 46.4% of participants recognized improving the quality of life as the primary purpose of palliative care, whereas in the current study, a significantly higher proportion (85.8%) identified it correctly. This suggests a positive shift in the awareness of the core objectives of

palliative care among students.

Regarding the timing of palliative care initiation, 84.2% of participants in the Puducherry study were unaware that palliative care can be provided from the time of diagnosis of a life-threatening illness. In contrast, 60.4% of participants in the current study acknowledged that palliative care should begin at the time of diagnosis. This represents an improved understanding of early integration of palliative care—a practice supported by global evidence for better quality of life throughout the disease trajectory.

Similarly, awareness about the settings where palliative care can be delivered showed notable improvement. While only 45% in the earlier study

believed that palliative care can be provided across hospitals, hospices, and homes, a much higher proportion (85.4%) in this study recognized the flexibility of care settings, which is particularly important in the Indian context where home-based and community models are increasingly emphasized. With regard to adverse effects of morphine, both studies found that addiction was perceived as the most common side effect-reported by 47.5% in the previous study and 36.3% in the present study. However, this study also showed awareness of other important adverse effects such as vomiting (34%) and constipation (29.2%), indicating a broader understanding of opioid-related symptom profiles, though misconceptions around addiction still prevail. The integration of palliative care with conventional therapy was poorly understood in the Puducherry study, where 62.3% believed the two cannot be provided together. Encouragingly, this study observed that 79.2% disagreed with that notion, correctly recognizing that palliative care can and should be practiced alongside curative or life-prolonging treatments-an essential principle in modern palliative medicine.

Attitudes towards end-of-life care settings also differed significantly. While nearly three-fourths (74.7%) of the participants in the Kumar et al. study believed that hospital-based care is necessary for terminal patients, only 20.8% in the present study agreed. A majority (57.1%) disagreed with the necessity of hospital care at end-of-life, suggesting a growing recognition of home and hospice-based care as viable and often preferable alternatives.

Overall, the findings from this study reflect a gradually improving level of knowledge and perception towards palliative care among medical students. However, critical gaps remain-particularly in the understanding of symptom management, opioid pharmacology, and the importance of early integration. These insights underscore the need for formal inclusion of palliative care in undergraduate medical curricula and greater clinical exposure during training.

CONCLUSION

This study highlights both strengths and gaps in the knowledge of palliative care among medical students. While pharmacologic knowledge is relatively strong, conceptual understanding-especially regarding the timing, purpose, and holistic nature of care-requires improvement. Integrating palliative care principles early into undergraduate curriculum and clinical postings may enhance student preparedness to deliver compassionate, competent, and comprehensive care for patients with chronic and terminal illnesses.

Recommendations:

- Clinical exposure to palliative care is needed to reduce the gap between Textbook
- knowledge and Practical knowledge.
- Incorporating palliative care principles early in medical education possibly through
- mandatory rotations or focused modules.
- Case-Based Learning: Use patient scenarios and OSCEs to teach communication, end-of-life care, and opioid use

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