

Knowledge, Attitude and Self-Efficacy of Internship Nursing Students Regarding Palliative Care of Elderly Patients

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Abstract:

Background: The field of palliative care is growing as the world population ages and burden of chronic diseases increases. Thus, one of the important factors influencing a successful delivery of palliative healthcare is the health care professionals' knowledge, attitudes, and self-efficacy. Nurses are the most valuable palliative care team members who address the physical, functional, social, and spiritual dimensions of care.

Aim of the study was to assess knowledge, attitude and self-efficacy of internship nursing students regarding palliative care of elderly patients.

Subjects & Methods: Research design: Descriptive design was utilized to carry out this study. **Setting:** This study was conducted at Zagazig University Hospitals, Sharkia Governorate, Egypt. **Subjects:** Simple random sample of 100 internship nursing students participated in the study.

Data collection tool: Four tools were used for data collection; (1) Self - Administered questionnaire Sheet which is composed of two parts: Demographic characteristics and student awareness regarding palliative care, (2) Palliative Care Quiz for Nursing, (3) Frommelt Attitude Toward the Care of the Dying Scale form B and (4) Palliative Care Self Efficacy Scale.

Results revealed that 67.00% of the studied internship nursing students had unsatisfactory knowledge about palliative care. Whereas, 61.00% of the studied internship nursing students had negative attitude toward the care of the dying and 49.00% of the studied internship nursing students had low self-efficacy in providing palliative care to elderly patients.

Conclusion: This study concluded that there were highly significant statistical positive correlation between the studied internship nursing students' total knowledge about palliative care, attitude toward the care of the dying and their self-efficacy.

Shimaa Mahmoud Zaki Hussein et. al

Knowledge, Attitude and Self-Efficacy of Internship Nursing Students Regarding Palliative Care of Elderly Patients

Recommendations: Tailored Educational interventions regarding palliative care of elderly patients for internship nursing students to improve their knowledge, attitude and self-efficacy.

Keywords: Attitude, Elderly, Internship nursing students, Knowledge, Palliative care, and Self-efficacy.

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Introduction

People worldwide are living longer. Every country in the world is experiencing growth in both the size and the proportion of older persons in the population. By 2030, 1 in 6 people in the world will be aged 60 years or over. At this time the share of the population aged 60 years and over will increase from 1 billion in 2020 to 1.4 billion. By 2050, the world's population of people aged 60 years and older will double (2.1 billion) (Mehanna, 2022).

Increasing life span means that more people have to face frailty due to the aging process, which increases the burden of chronic morbidity (such as cardiovascular disease, cancer, diabetes or dementia), as well as functional and cognitive impairments. Moreover, as the elderly suffer serious life-threatening chronic illnesses with a long dying phase, the need to establish a comprehensive geriatric approach to improve their quality of life and avoid any unnecessary suffering at the end of life is becoming increasingly important (Thi Thanh Vu et al., 2019).

Chronic illnesses and multi morbidity are associated with poor function, symptom burden, disability, and poor quality of life among affected older adults. Furthermore, the prevalence of neurocognitive disorders such as Alzheimer's disease and related dementias is expected to increase significantly in the coming decades. Palliative care is recognized as the standard of care for older adults with serious medical illness including those with multiple chronic conditions and a limited prognosis (Elhassan et al., 2023)

Palliative care is an approach that can identify and respond to the needs of patients and their families at the end of life. Nevertheless, only 37% of the countries of the world consider palliative care as a national policy and according to the World Health Organization, patients that need to palliative care include cardiovascular diseases (38.5%), cancer (34%), chronic pulmonary diseases (10.3%), HIV (5.7%), and diabetes (4.6%) (Dehghannezhad, 2021).

The development of Palliative Care (PC) all over the world has shown continuous and rapid progress on the delivery and improvement of PC. In 2011, more than half of the world's countries (58%) had at least one PC service, an increase of 21(<9%) from 2006; however, PC was only integrated into the mainstream of care in twenty countries (Alkhudairi, 2019).

Developing countries are in a huge and unmet need for PC services. Egypt as a country has an isolated PC provision with a patchy developmental scope of PC, limited numbers of hospice services (ratio of hospice-PC services to the population in Egypt are among the lowest in Africa and the Middle East), insufficient education and training of healthcare personnel on PC and absence of PC from the national healthcare agenda (Awny et al., 2022).

The need for palliative care has increased significantly with the global rise in occurrences of chronic diseases such as cancer (Eleke et al., 2020). Palliative care can be provided throughout the continuum of illness and concurrently with disease directed treatment. The palliative it is integral part of oncology care according to according to last recommendations of American cancer Society and European Society of Medical Oncology palliative care skill set includes physical and psychological symptoms management, communication, social and spiritual support, Palliative care is most effective when considered early in the treatment plan of the disease (Spoozak& Scarborough,2019).

Nursing students, who will be future nurses, should be well educated to deliver quality palliative care. In general, lack of knowledge is a vital obstacle in providing palliative care. Many studies investigating the palliative care knowledge of undergraduate nursing students revealed that knowledge is still inadequate (Aboshaiqah, 2020).

In addition, nurses' attitudes towards caring for the dying also influence the quality of palliative care. There were some studies investigating nursing students' attitudes towards caring for the dying, but the results were varied from unfavorable to favorable across different countries. These varied results might be due to that many factors influence the participants' attitudes towards caring for dying patients such as level of education, education in palliative care, previous experience in caring for dying patients, attitudes towards death, cultural contexts and religious belief (Zhou et al., 2021).

Nurses, as well as other health care providers, need training and education about palliative care to achieve desired goals. The attitudes of nurses toward palliative care are influenced by experiences, knowledge, beliefs, and training. In addition, nurses' attitude and knowledge of palliative care reflect the awareness and competence of nurses' performance to provide high-quality palliative care (ELSayed et al., 2021).

Nurses' palliative care knowledge, attitudes toward death and dying, and level of self-efficacy can affect the quality of EOL care provided. Previous studies have demonstrated gaps in knowledge, moderate attitudes, and low-self efficacy toward palliative care among nurses. Self-efficacy is an individual's confidence in skills and perceived ability to perform behavior. It is considered an important predictor of palliative care quality. Therefore, understanding the factors affecting self-efficacy toward palliative care among nurses is necessary to ensure the quality of palliative care (Kim et al., 2020).

Shimaa Mahmoud Zaki Hussein et. al
Knowledge, Attitude and Self-Efficacy of Internship Nursing Students Regarding Palliative Care of Elderly Patients

Nurses play an important role in palliative care. In addition to the conventional nursing duties of observing and recording symptoms and management, they also provide emotional support to elderly ill patients and their families, through a series of roles. Nurses are given palliative care must first develop a relationship of trust to relate with patient and family member, promote hope for patient, pain and symptoms management by medication and non-pharmacological method as meditation, breathing exercise and skin care, maintain dignity and self-esteem by providing spiritual care, prevent feeling of isolation, use gentle touch during care, support family member provides information about home care services (Hassan et al., 2016).

Significance of the study

In Egypt, life expectancy increased and the proportion of the elderly population (65+) has also been increasing and is expected to reach 12.3 per cent in 2050. As a result of that, there will be more chronic and degenerative diseases which terminated in end-stage illness. The development of chronic and degenerative diseases will generate an enhanced need for palliative care (World Health Organization, 2015). Only a few healthcare providers have adequate knowledge of palliative care, so, it is important to integrate palliative care into the health unites. Nurses are often unqualified to care for patients with terminal or chronic, serious disease. The lack of proper training and knowledge in palliative care nursing can produce negative attitudes that can affect elderly patients' care outcomes (El-Sayad & Shaala, 2021). Previous Egyptian studies documented that nursing students had unsatisfactory knowledge and poor attitudes regarding elderly palliative care. Hence, this study will be conducted to provide internship nursing students with elderly palliative care to improve their knowledge, attitudes and self-efficacy.

Aim of the Study

The current study aimed to assess knowledge, attitude and self-efficacy of internship nursing students regarding palliative care of elderly patients.

Research Questions:

1. What is the level of knowledge of internship nursing students regarding palliative care of elderly patients?
2. What is of attitude of internship nursing students toward palliative care of elderly patients?
3. What is the level of self-efficacy of internship nursing students in providing palliative care of elderly patients?

Subjects and Methods

Study Design

This descriptive study design was utilized to conduct the current study.

Shimaa Mahmoud Zaki Hussein et. al
Knowledge, Attitude and Self-Efficacy of Internship Nursing Students Regarding Palliative
Care of Elderly Patients
Setting

This study was conducted at Zagazig University hospitals at Sharkia Governorate, Egypt.

Sample

The sample of this study included 100 internship nursing students.

Sample size calculation

Percent of fair knowledge level about palliative care in nurses was (5%), improved after implementation of intervention program to be (18.3%), (El Sayad & Shaala, 2021) with confidence level 95% , power of study 80%. Expected 10% drop out in participants. Sample size calculated using open EPI is 100 participants.

Tool of data collection

Four tools were used for collection of data. **Tool I:** Self - Administered questionnaire Sheet to assess internship nursing students' personal data. It consisted of two parts; demographic characteristics and student awareness regarding palliative care.

Tool II: Palliative Care Quiz for Nursing (PCQN) (Ross et al., 1996)

This tool was developed by **Ross, McDonald and McGuiness, 1996**. It was used in Arabic form to assess knowledge and identify misconceptions about palliative care nursing. It consisted of 20-item true, false, and 'I don't know'. The test consists of four items about philosophy and principles, thirteen items about pain and symptom management, and three items about the psychosocial aspects of care. Total scores on the PCQN ranged from 0 to 20, as answers are coded as 1 for a correct answer, and 0 for an incorrect or 'I don't know' responses. A higher score corresponds with more knowledge. Correct responses were summed up to get a total knowledge scores for each participant. Total score for all questions reached 20 grades. The knowledge scores were classified into Satisfactory if the percent score was more than 70% and unsatisfactory if the percent score was 70% or less.

Tool III: Frommelt Attitude Toward the Care of the Dying Scale form B (FATCOD-B) (Frommelt, 1991):

This tool was developed by **Frommelt, 1991**. It was used in Arabic form to assess students' attitudes toward caring for dying patients. It is a 30-item tool using a 5-point Likert scale. The instrument includes 15 positively worded statements (items 1, 2, 4, 10, 12, 16, 18, 20, 21, 22, 23, 24, 25, 27, and 30) and 15 negatively worded statements (items 3, 5, 6, 7, 8, 9, 11, 13, 14, 15, 17, 19, 26, 28, and 29). There are six dimensions of the scale, as follow; Fear/Malaise (Items 1, 3, 5, 7, 8, 13, 14, 15, and 26), Care of the Family (Items 4,16, and 22), Communication (Items 2, 6, 11, 27, 28, and 30), Family as Caring (Items 12,18, and 20), Relationship (Items 9, 10, 17, 21, and 29) and Active Care (Items 19, 23, 24, and 25). **FATCOD-B** consists of 30 items on a 5-

Knowledge, Attitude and Self-Efficacy of Internship Nursing Students Regarding Palliative Care of Elderly Patients

point Likert scale Ranging from 1 to 5, where 1 = “strongly disagree”, 2 = “disagree”, 3 = “uncertain”, 4 = “agree”, 5 = “strongly agree”. Positive items are scored one (strongly disagree) to five (strongly agree). Scores are reversed for negative items. The total grade was ranged from 30 to 150 grades and FATCOD-B was considered positive if the percent score was more than 60% and negative if the percent score 60% or less. A higher score indicates a more positive attitude toward caring for this patient population while a lower score reflect a more negative attitude.

Tool IV: The Palliative Care Self Efficacy Scale (PCSES) (Phillips et al., 2011):

This tool was developed by Phillips et al., 2011. It was used to assess the perceived capacity to provide palliative care. The PCSES is a validated 12-item scale has two subscales designed to measure participant’s perceived self-efficacy to handle psychosocial support (6 items, items 1–6) and symptom management of palliative care(6 items, items 7–12). The total number of questions is 12, each item is closed-ended with the choice of four interval levels of confidence for the participant. Participants are asked to rate their perceived capacity to successfully perform each task using a 4-point Likert scale (1 = need further basic instruction; 2 = confident to perform with close supervision/coaching; 3 = confident to perform with minimal consultation; or 4 = confident to perform independently”. The total grade was ranged from 12 to 48 grades and PCSES was considered high if the percent score was 70% or more, moderate if the percent score was 50% to 70% and low if the percent score less than 50%. The higher scores indicate a higher perceived capacity toward palliative care.

Content validity and reliability of the tool

For testing face and content validity of the study tool, three experts from the departments of Community Health Nursing at the Faculty of Nursing, Zagazig University, the department of Gerontological Nursing at the Faculty of Nursing, Mansoura University and the department of Community Medicine at the Faculty of Medicine, Zagazig University revised it and some modifications were done according to their opinions. The reliability of the tools was tested by Cronbach's Alpha as follow.

Scales	Cronbach's Alpha	Interpretation
(PCQN)	0.870	Good reliability
(FATCOD-B)	0.892	Good reliability
(PCSES)	0.912	Excellent reliability

Shimaa Mahmoud Zaki Hussein et. al
Knowledge, Attitude and Self-Efficacy of Internship Nursing Students Regarding Palliative
Care of Elderly Patients
Pilot study

A pilot study was done on 10 internship nursing students (10% of the sample) to estimate the reliability of tool parameters by Cronbach's Alpha. Also, it was done to test the applicability of tool, the arrangement of items, and clarity of questions and to estimate the time needed for each questionnaire. They were excluded from the sample.

Administrative and ethical considerations

The study was approved by the Ethical Committee of the Faculty of Nursing, Zagazig University. Official permission was taken from the director of Technical Institute of Nursing Zagazig University. Informed consent was taken from every internship nursing student participated in the study after explanation of the purpose and nature of the study. They were notified that they could withdraw at any stage of the research. Also, they were assured that the information would be confidential and used for scientific research purposes only.

Filed of work

Once permission was granted to proceed with the study, the researcher started to prepare a schedule for collecting the data. The fieldwork was carried out within the period of six months, starting from the beginning of October 2023 up to the end of March 2024. First, the researcher met with the students in the orientation program for a week, then divided the students into five groups, each group containing 20 students. Each group was allocated one day per week from 12 pm to 2 pm.

Statistical analysis:

Data collected from the studied sample was revised, coded, and entered using Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. Data were presented using descriptive statistics in the form of frequencies, percentages, and Mean SD. A correlation coefficient "Pearson correlation" is a numerical measure of some type of correlation, meaning a statistical relationship between two variables. A t test is a statistical test that is used to compare the means of two groups. Chi-square (χ^2) is a statistical test used to determine the relationship between categorical variables. Linear regression is a statistical method used to model the relationship between a dependent variable and one or more independent variables. **Significance of the results;** Highly significant at p-value < 0.01, Statistically significant was considered at p-value < 0.05, Non-significant at p-value \geq 0.05.

Results:

Table (1): Regarding demographic characteristics of the studied internship nursing students in the study sample, 74.0% of the studied internship nursing students aged 20 years, with mean age 19.74 ± 0.44 years, with 75.0% of them are female. In addition, 71.0% of the studied internship nursing students are rural residents. Moreover, nearly 32.0% of the student's fathers have

intermediate education and 54.0% of them are employee. Also, 44.0% of the student mothers have intermediate education and nearly 72.0% of their mothers are not worked. Regarding family income, 68.0% of the students' family have enough income. Additionally, 100.0% of them have a computer or smartphone. Concerning crowding index, 39% of them have from 1 to 2 person / room.

Table (2) shows that the mean PCQN score of the studied internship nursing students in providing palliative care to elderly patients was 9.10 ± 2.04 . The highest knowledge domain was that of management of pain and other symptoms domain (mean 5.68 ± 1.99), followed by philosophy & principle of palliative care domain (mean 1.97 ± 0.76). On the other hand, the lowest one was that of psychosocial & spiritual care domain (mean 1.45 ± 0.82).

Figure (1) illustrates that 67.00% of the studied internship nursing students had unsatisfactory knowledge about palliative care. While, only 33.00% of them had satisfactory knowledge about palliative care.

Table (3) shows that the mean FATCOD-B score of the studied internship nursing students in providing palliative care to elderly patients was 105.4 ± 32.17 . The highest attitude domain was that of fear/malaise domain (mean 28.12 ± 7.3), While, the lowest one was that of family as a caring domain (mean 11.84 ± 3.6).

Figure (2) shows that 61.00% of the studied internship nursing students had negative attitude toward the care of the dying. While, 39.00% of them had positive attitude toward the care of the dying.

Table (4) reveals that the mean PCSES score of the studied internship nursing students in providing palliative care to elderly patients was 27.24 ± 14.27 . The highest self-efficacy domain was that of psychosocial support domain (mean 13.76 ± 4.6), While, the lowest one was that of symptoms management domain (mean 13.48 ± 3.9).

Figure (3) illustrates that 49.00% of the studied nursing internship students had low self-efficacy. While, only 14.00% of them had high self-efficacy.

Table (5) clarifies that there were highly statistically significant relations between the studied internship nursing students' total knowledge about palliative care and family income ($p \leq 0.001$). Additionally, there were statistically significant relations with their sex ($p \leq 0.05$).

Table (6) declares that there were highly statistically significant relations between the studied internship nursing students' total attitude toward the care of the dying and their sex ($p \leq 0.001$). Additionally, there were statistically significant relations with their residence and family income ($p \leq 0.05$).

Table (7) indicates that there were statistically significant relations between the studied internship nursing students' total self-efficacy and their sex and family income ($p \leq 0.05$).

Table (8) displays that, there were highly significant statistical positive correlation between the studied internship nursing students total knowledge about palliative care, attitude toward the care of the dying and their self-efficacy with $p < 0.01$.

Table (1): Demographic characteristics of the studied nursing internship students (n=100).

Items	N	%
Age (Year)		
19	26	26.0
20	74	74.0
\bar{x} S.D 19.74±0.44		
Sex		
Male	25	25.0
Female	75	75.0
Residence		
Rural	71	71.0
Urban	29	29.0
Educational level of the father		
Does not read & does not write	8	8.0
Read & write	18	18.0
Basic education	14	14.0
Intermediate education	32	32.0
University education or higher	28	28.0
Father's profession		
Not working	2	2.0
Worker	44	44.0
Employee	54	54.0
Educational level of the mother		
Does not read & does not write	12	12.0
Read & write	14	14.0
Basic education	8	8.0
Intermediate education	44	44.0
University education or higher	22	22.0
Mother's profession		
Not work	72	72.0
work	28	28.0
Family income		
Not enough	26	26.0
Enough	68	68.0
Sufficient and increases	6	6.0
Have a computer or smartphone		
Yes	100	100.0
No	0	0
Crowding Index		
<1	33	33
1 - 2	39	39
>2	28	28
\bar{x} S.D 1.47±0.16		

Table (2): Domains of palliative care knowledge among the studied internship nursing students (n=100).

PCQN sub- domains	mean \pm SD
Philosophy & principle of palliative care	1.97 \pm 0.76
Psychosocial & spiritual care	1.45 \pm 0.82
Management of pain and other symptoms	5.68 \pm 1.99
Over all scores	9.10 \pm 2.04

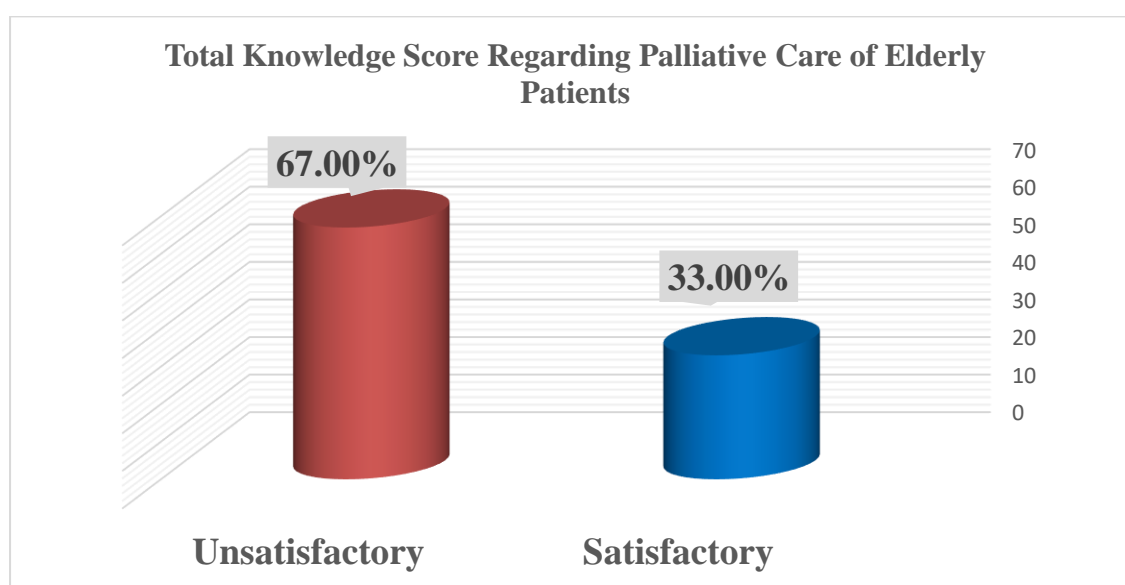


Figure (1): Total score of palliative care knowledge of the studied internship nursing students (n=100).

Table (3): Domains of attitude toward the care of the dying of the studied internship nursing students (n=100).

FATCOD-B sub- domains	mean \pm SD
Fear/Malaise	28.12 \pm 7.3
Care of the family	12.24 \pm 2.1
Communication	21.72 \pm 5.6
Family as a caring	11.84 \pm 3.6
Relationship	16.72 \pm 4.7
Active Care	13.4 \pm 3.6
Total scores	105.4 \pm 32.17

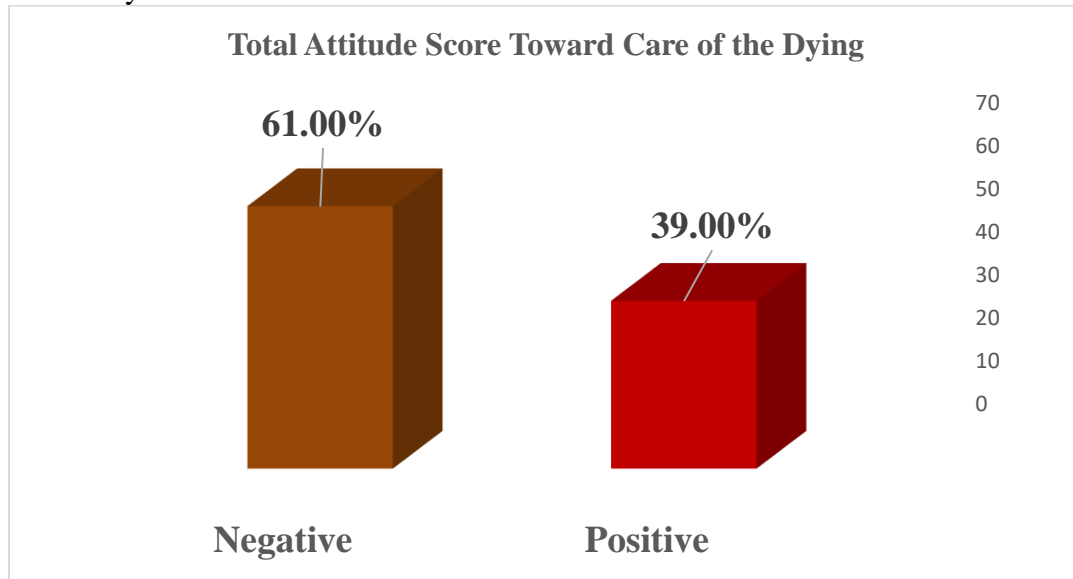


Figure (2): Total attitude toward of internship nursing students toward care of the dying (n=100).

Table (4): Domains of self-efficacy of the studied internship nursing students (n=100).

PCSES sub- domains	mean \pm SD
psychosocial support	13.76 \pm 4.6
symptoms management	13.48 \pm 3.9
Total scores	27.24 \pm 14.27

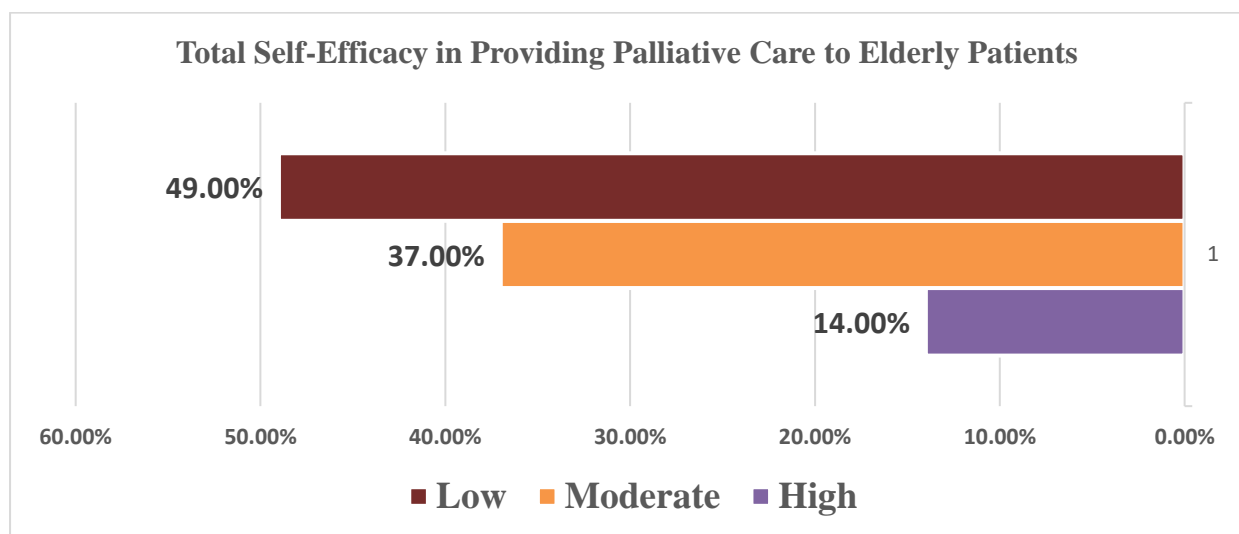


Figure (3): Total self-efficacy of the studied internship nursing students in providing palliative care to elderly patients (n=100).

Table (5): Relation between demographic data of the studied internship nursing students and their total knowledge about palliative care

Demographic characteristics	Mean \pm SD	Test P value
Age:		t. test
19	4.42 \pm 1.67	0.956
20	5.02 \pm 1.86	0.084
Sex:		t. test
Male	4.05 \pm 2.5	3.244
Female	5.23 \pm 2.03	0.024*
Residence:		t. test
Rural	4.28 \pm 1.55	0.815
Urban	5.22 \pm 1.90	0.062
Family income:		Anova
Not enough	3.44 \pm 1.51	3.474
Enough	4.80 \pm 1.13	0.009**
Sufficient and increase	5.01 \pm 0.95	

Table (6): Relation between demographic characteristics of the studied internship nursing students and their total attitude toward the care of the dying.

Demographic characteristics	Mean \pm SD	Test P value
Age:		t. test
19	103.11 \pm 33.25	0.250
20	100.53 \pm 31.01	0.113
Sex:		t. test
Male	78.41 \pm 14.34	3.140
Female	97.08 \pm 18.70	0.009**
Residence:		t. test
Rural	82.35 \pm 30.68	2.645
Urban	73.63 \pm 35.31	0.023*
Family income:		Anova
Not enough	74.35 \pm 9.22	2.990
Enough	79.47 \pm 15.71	0.012*
Sufficient and increase	92.13 \pm 8.03	

Table (7): Relation between demographic characteristics of the studied internship nursing students and their total self-efficacy.

Demographic characteristics	Mean ± SD	Test P value
Age:		t. test
19	25.65±13.21	0.961
20	27.15±15.54	0.068
Sex:		t. test
Male	17.24±6.84	2.706
Female	20.48±8.73	0.015*
Residence:		t. test
Rural	28.22±14.62	1.002
Urban	26.01±14.11	0.083
Family income:		Anova
Not enough	16.47±3.59	3.001
Enough	20.20±9.01	0.018*
Sufficient and increase	25.22±2.33	

Table (8): Correlation between total knowledge about palliative care, attitude toward the care of the dying and total self-efficacy.

Items	Spearman's rank correlation coefficient		
	Total knowledge	Total attitude	Total self-efficacy
Total knowledge		r. 0.722 p. 0.002**	r. 0.572 p. 0.004**
Total attitude	r. 0.722 p. 0.002**		r. 0.605 0.003**
Total self-efficacy	r. 0.572 p. 0.004**	r. 0.605 0.003**	

Discussion

Palliative care (PC) is a vital part of the responses needed to address the outcomes of cancer and other non-communicable diseases such as chronic pain, terminal illnesses, and end-of-life situations. Until today, there is a significant lack of access to PC in most developing countries, where the majority of the global population lives. Deficiencies in nurses' knowledge, attitudes and self-efficacy in providing palliative care exacerbate the lack of access to PC and end-of-life care

(EOLC) in these countries (Muliira et al. 2023). Therefore, the current study aimed to assess knowledge, attitude and self-efficacy of internship nursing students regarding palliative care of elderly patients.

Regarding the first research question of what is the level of knowledge of internship nursing students regarding palliative care of elderly patients, the existing study results clarified that the students had unsatisfactory knowledge about palliative care. This might be attributed to the low level of education about palliative care among most of them plus living in rural areas which are characterized by low medical services and low socioeconomic status that makes access to health information difficult to accomplish. Addition to the underdevelopment and unpopularity of palliative care in Egypt, where palliative care is given less emphasis than other nursing specializations.

These findings are consistent with a cross-sectional study conducted in Saudi Arabia by (Aboshaiqah, 2020) indicated poor palliative care knowledge. Also, the participants lacked palliative care knowledge in terms of palliative care principles and philosophy, management of pain and other symptoms and psychosocial and spiritual care. Similarly, another study in Addis Ababa, Ethiopia carried out by Gedamu et al. (2019) indicated that the majority of nurses (73.5%) had poor knowledge towards PC. Moreover, another study in Sri Lanka carried out by Wijesinghe et al. (2023) showed that more than half of the study nurses had inadequate knowledge regarding palliative care.

Regarding the second research question (What is attitude of internship nursing students toward palliative care of elderly patients), the existing study results clarified that the students had negative attitude toward the care of the dying person. This might be attributed to the unavailability/lack of PC education and training in students' curricula. In the same vein, a study of Jiang et al. (2019), which carried out in China, reported negative attitudes among nursing students.

Controversy, a descriptive study conducted in China by Zhou et al. (2021) found that the most nursing students had positive attitude towards death and caring for the dying person. This discrepancy between findings might be attributed to educational, religious and cultural differences across nations and it can be traced back to the long history of development of palliative care research and policies in these countries.

Regarding the third research question (What is the level of self-efficacy of internship nursing students in providing palliative care to elderly patients), the study results found that the students had low mean self-efficacy scores. This may be attributed to the poor knowledge and functional aspects of palliative care among Egyptian nurses, In addition to their negative attitude towards palliative care. In agreement with this finding, the study in China carried out by Zhou et al. (2021), reported low level of self-efficacy about palliative care among nursing students.

A statistically significant positive correlation between knowledge, attitude and self-efficacy was confirmed in the present study. This might be due to correct knowledge is the basis and reflection for any attitude and lead to improving self-efficacy. In the same vein, the previous Egyptian study of **El-Sayad and Shaala, (2021)** revealed that there were significant positive correlation between mean total score of nurses' knowledge and attitude toward palliative care and also showed that there were significant positive correlations between mean total score of nurses' knowledge and self-efficacy toward palliative care

The results of the present study identified statistically significant relations between students' family income and their total scores of knowledge, attitude and self-efficacy. This result might be attributed to that enough family income may have provided a good environment for education, which ultimately led to an increase in the knowledge level of the individual. In the same vein, a large cross-sectional study conducted in India by **Ranga et al. (2023)** found that there was a significant correlation between the family income of the participants and their palliative care knowledge scores. Moreover, **Hatkehlouei et al. (2024)** who indicated that monthly family income had a significant positive correlation with nursing students' palliative care knowledge.

According to the study results, there were statistically significant relations between gender as being female and knowledge, attitude and self-efficacy of the students. This result might be attributed to the fact that female students were more empathetic and emotionally delicate, whereas male students had a lower level of nursing professional identity. This can also be explained from a feminist perspective as women are more compassionate to the dying patient and try harder to help. Also, this might be related to the small number of male students in the sample.

Consistently, the study of **Dimoula et al. (2019)** in Greece; **Zahran et al. (2022)** in Jordan and **Esther et al. (2024)** in Rajiv Gandhi University of Health University, India revealed that female gender was important and a significant positive predictor for a more positive attitude towards palliative the care of the dying patients compared to male students. Contrarily, the study of **Toqan et al. (2023)** who conducted a study in West Bank, Palestine revealed that there was a correlation between the female gender and knowledge about palliative care and demonstrated that female nurses had higher levels of palliative care knowledge in comparison with male counterparts.

The current study results revealed that residence in rural areas has statistically significant relation with student's attitude toward the care of the dying. This might be attributed to that most families in rural Egypt are extended families which includes grandparents with stronger family ties. The family forms a large part of the care team, and family caregivers often assist nurses in performing activities such as bathing, feeding, and even administering oral medications. Consequently, they developed more positive attitudes towards end-of-life care. This finding is supported by **Gelegjamts et al. (2020)** who conducted a study in Mongolia and revealed that housing type was found to be a predictor of attitudes towards the care of the dying as living in

countryside or Gers, which are the traditional Mongolian housing, was a significant predictor of positive attitudes towards EOL care.

Conclusion

On the light of results of the current study, it was concluded that more than two third of the studied internship nursing students had unsatisfactory knowledge about palliative care and negative attitude toward the care of the dying. Moreover, nearly half of the studied internship nursing students had low self-efficacy. Furthermore, the current study revealed that there were highly significant statistical positive correlation between the studied internship nursing students' total knowledge, attitude toward the care of the dying and their self-efficacy in providing palliative care to elderly patients.

Recommendations

Tailored Educational interventions regarding palliative care of elderly patients for internship nursing students to improve their knowledge, attitude and self-efficacy. As well as, further research studies are required for the palliative care field.

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