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Effect of Implementing Geriatric Palliative Care Guideline on Nurses Knowledge and Practices

Soad Hassan Abd Elhameed[1], Doaa Abd Elhameed Abd Elmawla[2]
[1,2] *Lecturer of Gerontological Nursing, Faculty of Nursing, Mansoura University, Egypt*

Abstract:
Background: *Palliative care is an approach that aims to optimize the quality of life of patients and their families facing the problems associated with life-threatening illness. One area that needs greater attention is the role of nurses in managing chronic illness by utilizing guidelines to measure palliative care needs and outcomes. Moreover, older patients need advance care planning and should be aware of their right to cease active treatment of medical problems to concentrate on palliative goals, emphasizing that comfort care will always be provided.*
Aim*: Determine the effect of implementing geriatric palliative care guideline on nurses' knowledge and practices.*
Design: *Quasi-experimental research design was used.*
Setting*: Medical and Intensive Care Units in Mansoura University Oncology Center and the Specialized Medical Hospital.*
Subjects*: The study subjects included 68 nurses, aged 20 year and more, had more than 1 year of experience, involved in direct care for the older adult patients and willing to participate in the study.*
Tools*: Three tools were used to collect the data namely nurses interview schedule sheet, nurses geriatric palliative care knowledge structured interview schedule and nurses geriatric palliative care practices checklist.*
Results*: The mean age of the study subjects was 25.34±3.69 year. The nurses total knowledge and practices scores increased significantly immediately and 2 months after geriatric palliative care guideline implementation (P=0.000). In addition, the nurses' total knowledge score was correlated significantly with their total practices score after the guideline implementation.*
Conclusion*: Implementation of the developed geriatric palliative care guideline affects significantly, and improved the nurses' total knowledge and practices scores.*
Recommendation*: The developed illustrated geriatric palliative care guideline booklet to be distributed to all nurses in Mansoura University Hospitals and Centers through the responsible personnel.*
Keywords: *Geriatric, palliative care, guideline, nurses, knowledge, practices.*

I. Introduction

Palliative care (PC) is a substantial public health issue due to population ageing, the growing number of older people in most societies and scanty attention to their complex needs[1]. It was defined as "An approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual"[2,3]. Pattern of disease in the last years of life are changeful, with more people dying from chronic debilitating conditions, such as cardiovascular disease, chronic obstructive pulmonary disease, diabetes, cancer and dementia. Since many of these illnesses often happen together among older people, this group extremely experiences multiplied health problems and disabilities. In the last year of life, they possess symptoms such as pain, anorexia, low mood, mental confusion, constipation, insomnia and problems with bladder and bowel control[4].

The national institute on aging data revealed that, 45% of the elderly dies in hospital, 24% die in a nursing home and 30% die at home. Therefore, palliative care services urgently need to be developed to meet the complex needs of older people. In addition, it is important to provide access to palliative care services in all settings. In confession of this, a multidisciplinary approach is a major advantage in the delivery of palliative care. Multidisciplinary in this case denotes nursing, medical, allied health practitioners and volunteers working altogether to improve the quality of care for terminally ill geriatric patients and those close to them[5,6].

Guideline is "an indication or outline of policy or conduct". According to this definition, nurses would use palliative care guidelines to determine their course of action and to help identify needed policy. It is essential to have adequate education to be able to explain the disease, treatment options, provide physical, emotional and spiritual support. Patient education related to their disease process is an essential aspect of the role of the nurse[7]. Moreover, the guide was produced to support managers, teams and individuals in identifying appropriate palliative care competences for use within their organization or workplace[2].

Knowledge and skills deficits are among the most common barriers to quality palliative care[8]. The lack of pain and symptom management is due, in part, to the lack of training physicians and nurses receive. They not taught how to address the suffering many face at the end of their lives. Their education and training fail to provide them with the skills, sensitivity, wisdom, and knowledge required to care effectively for dying people and their families[9,10]. This is a result of the limited and ineffective palliative care education in under-graduate, graduate, and post-graduate levels.

With an aging population, palliative and end of life care are recognized as key factors in the delivery of quality health care in the twenty-first century. Ensuring that services are prepared and available at the point of need is the responsibility of nurses[11]. Therefore, the value of palliative care to nurses who deliver majority of care to chronically ill geriatric patients is unquestionable, and there is a need to support and educate nurses for the provision of high quality palliative care. The first step in developing a strategy to support and educate nurses about palliative care is to assess their current knowledge and practices.

Aim of the study:

This study was conducted in order to determine the effect of implementing geriatric palliative care guideline on nurses' knowledge and practices.

Research hypotheses:

Nurses' knowledge and practices will be improved after geriatric palliative care guideline implementation.

II. Materials And Method

Materials:

Study design: A Quasi- Experimental research design was used.

Setting: The study was carried out in the Medical and Intensive Care Units of Mansoura University Oncology Center and The Specialized Medical Hospital.

Subjects: The study subjects comprised all nurses in the above settings who had more than 1 year of experience, involved in providing direct care for geriatric patients and willing to participate in the study. They amounted 68 nurses.

Tools: Three tools were used to collect the necessary data

Tool I: Nurses interview schedule sheet:

This tool was developed by the researchers and consisted of two parts: **Part I**: Nurses' socio-demographic characteristics. It included data such as age, educational level, job title, unit and years of working experience. **Part II**: Palliative care guideline questionnaire that included awareness of palliative care guidelines and the need for palliative care training.

Tool II: Nurses geriatric palliative care knowledge structured interview schedule:

This tool was developed by the researchers after reviewing of the relevant literature. It was used to assess the nurses' knowledge about palliative care to geriatric patients. It covers six domains; physical aspects of care, psychological aspect of care, social aspect of care, spiritual and cultural aspect of care, care of imminently dying patient, ethical and legal aspect of care. Each correct answer take one grade, while wrong or did not know was scored zero. The scores obtained for each set of questions was summed up to get the total scores for patient's knowledge. The total score was computed out of 104. High mean score indicates a better level of nurses' knowledge.

Tool III: Nurses geriatric palliative care practices checklist:

This tool was developed by the researchers after reviewing of the relevant literature. It was used to assess nurses' practices about palliative care to geriatric patients. It covers six domains; physical aspects of care (include items related to managing pain, dyspnea, nausea and vomiting, anorexia, constipation, diarrhea, and fatigue in a timely, safe and effective manner), psychological aspect of care, social aspect of care, spiritual and cultural aspect of care, care of imminently dying patient and ethical and legal aspect of care. Responses to each item were either done or not done, where not done take a score of zero and done take a score of one. The total score was computed out of 142. High mean score indicates a better level of nurses' practices.

Method:

1. Official letters were issued to the directors of The Oncology Center Mansoura University and The Specialized Medical Hospital to obtain their approval in order to collect the necessary data.
2. Study tools I (Nurses' interview schedule sheet), tool II (Nurses' geriatric palliative care knowledge structured interview schedule and tool III (Nurses' geriatric palliative care practices checklist) were developed by the researchers after reviewing the relevant literature.
3. Study tools II and III were tested for content validity by a jury of five experts in the related fields of the study. The necessary modifications were carried out accordingly.
4. A pilot study was conducted on 10 nurses at Specialized Medical Hospital to ascertain the clarity and applicability of the study tools, also to estimate the approximate time needed to complete the study tools. In light of the findings of the pilot study, the necessary modifications were done. Then, the tools were put into their final form.
5. According to the schedule designed by the researchers, the researchers assessed nurses' knowledge and practices about palliative care after explanation the aim of the study to collect the necessary data using the study tools.
6. The researchers based on review of the current literature developed the geriatric palliative care guideline. It was accomplished through the following steps:

a. Determination of the need and scope of guideline: The needs were identified from the information gathered by the researchers through assessment of the actual nursing practice provided to geriatric patients facing the problems associated with life-threatening illness.
b. Establishment of guidelines development group: Two academic experts from Gerontological care nursing were responsible to review the guideline draft, the evidence review, and drawing up appropriate recommendations.
c. Identification of guidelines' purpose and target audience: The guideline aimed to improve nurses' knowledge and practices related to palliative care, meet needs of geriatric patients facing the problems associated with life-threatening illness.
d. Systematic searches and literature review: Systematic literature search undertaken to identify evidence of clinical guidelines. The guidelines development group reviewed the evidence based nursing recommendations for patients focuses on improving the symptoms, dignity and quality of life of people approaching the end of their lives and support for their families and friends [1,12,13,14,15, 16, 17, 18, 19].
e. Evaluation of the evidence and grading guideline recommendations: Quality of evidence was assessed as very low, low, moderate, or high [20].The following letters (A, B, C, D) beside each recommendation used for rating the quality of the evidence. Strength of recommendations was designated as strong or weak. Strong recommendations are those where the tradeoff of risk and benefit is clear enough. While, weak recommendations are those where the tradeoff between risk and benefit is less clear [21]

Grade	Quality of evidence
A	Further research is very unlikely to change our confidence in the estimate of effect
B	Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate
C	Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate
D	Any estimate of effect is very uncertain

f. Formulation the guideline draft: It was covered information about geriatric palliative care and clinical practice guideline recommendations based on current evidence.
g. Guideline evaluation: After formulating the framework of the guideline, the developed guideline was evaluated by 5 clinical experts in the related fields and modifications were made accordingly.

7. The developed palliative care guideline was implemented for small groups (3 to 8) in the previous settings. It was conducted in three sessions within one week for each group. Each session took about 30 to 40 minutes.
8. The sessions conducted in morning and afternoon shift after finishing the routine care.
9. Each nurse in the study subjects received printed guideline to attract her attention, motivate her and support her teaching and practicing.
10. Sessions done by using lectures and discussion. Teaching materials included power point presentation using lab top, illustrated picture, and videos.
11. Reassessment of each study subjects was done immediately and two months after the guideline implementation using the study tool II and III to evaluate the effect of the proposed implemented guideline.
12. Data collection covered a period of four months, started from the first of August 2015 to the end of November 2015

Ethical considerations:

Verbal consent was obtained from the study nurses after explanation of the purpose of the study. Anonymity and privacy of the nurses and confidentiality of the collected data were maintained. The right to withdraw at any time was assured.

Statistical analysis:

Data was analyzed using PC with statistical package for social science (SPSS) version 16. The 0.05 and 0.01 levels was used as the cut off value for statistical significance and the following statistical measures were used; descriptive statistics (Count, percentage, mean, SD) and analytical statistics (student t-test, paired sample t-test, ANOVA test of significance and Spearman's correlation coefficient). In the results $(p)^1$ comparing before and immediately after guideline implementation, while $(p)^2$ comparing before and 2 months after guideline implementation among the study subjects.

III. Results

Table I shows that, the age of the study subjects ranged from 20 to 34 years, with a mean age of 25.34 ± 3.69 years. Concerning level of education, 60.3% of the study subjects were technical degree, while 39.7% were BSc nurses, and the majority of them were staff nurses. As regards to years of experience, more than half of the study subjects (58.8%) had from one to less than five years.

Table (I): Distribution of the study subjects according to their socio-demographic characteristics

Socio-demographic characteristics	N= 68	%
Age (in years)		
20-	36	52.9
25-	21	30.9
30+	11	16.2
Mean ± SD	25.34 ± 3.69	
Educational level		
Technical nursing institute	41	60.3
Baccalaureate degree (BSc)	27	39.7
Job		
Staff nurse	55	80.9
Head nurse	13	19.1
Unit		
Ward	37	54.4
ICU	31	45.6
Years of working experience		
1-	40	58.8
5-	22	32.4
10+	6	8.8
Mean ± SD	4.54 ± 3.01	

Figure I shows that more than quarter (27.9%) of nurses aware of geriatric palliative care guideline, while all study nurses expressed the need for more training about palliative care.

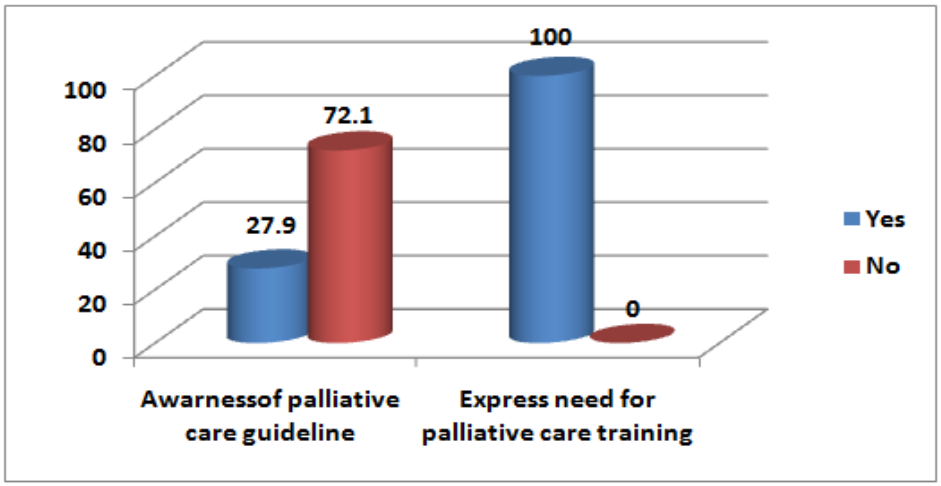

Figure I: Awareness of geriatric palliative care guideline and the need for palliative care training among the study subjects

Table II illustrates nurses' knowledge about palliative care before, immediately, and two months after geriatric palliative care guideline implementation. The table reveals that, all items and total knowledge scores of the study subjects increased significantly immediately and 2 months after guideline implementation (P=0.000).

Table (II): Nurses knowledge about palliative care before, immediately, and two months after geriatric palliative care guideline implementation

Palliative care knowledge	Before	Immediately	After 2 months	t-test (p)[1]	t-test (p)[2]
	Mean ± SD	Mean ± SD	Mean ± SD		
Introduction about PC	3.51± 1.28	6.64 ±0.99	5.89 ±0.78	41.61 (0.000)*	26.77 (0.000)*
Physical aspect	35.39±5.43	49.76±3.19	48.55±3.23	44.93 (0.000)*	41.54 (0.000)*
Psychological aspect	4.48±0.82	7.35±0.62	6.75±0.72	52.08 (0.000)*	33.17 (0.000)*
Social aspect	3.75±0.66	5.69±0.78	5.58±0.65	35.31 (0.000)*	40.86 (0.000)*
Spiritual & cultural aspect	2.60±0.67	4.73±0.82	4.08±1.11	51.50 (0.000)*	21.88 (0.000)*
Care of imminently dying patient	2.81±0.79	6.73±0.31	5.83±0.44	39.42 (0.000)*	25.98 (0.000)*
Ethical and legal aspect	2.91±0.91	4.83±0.80	4.705±0.65	60.41 (0.000)*	33.43 (0.000)*
Total knowledge score	55.47±9.95	85.102±6.705	81.42±6.39	70.812 (0.000)*	55.54 (0.000)*

**Significant at P≤ 0.05*

Table III reveals that, the mean scores of total and all dimensions of palliative care practices were improved significantly among the study subjects immediately and two months after the guideline implementation (P=0.000).

Table (III): Nurses practices about palliative care before, immediately, and two months after geriatric palliative care guideline implementation

Palliative care Practices	Before	Immediately	After 2 months	t-test(p)[1]	t-test(p)[2]
	Mean ± SD	Mean ± SD	Mean ± SD		
Physical aspect	41.36±7.503	67.602±5.66	64.91±5.202	106.93 (0.000)*	75.34 (0.000)*
Psychological aspect	5.73±1.26	9.77±1.44	9.16±1.19	52.66 (0.000)*	38.21 (0.000)*
Social aspect	2.17±0.38	4.83±0.92	4.69±0.69	24.62 (0.000)*	28.69 (0.000)*
Spiritual & cultural aspect	1.25±0.44	3.04±0.21	3.00±0.00	36.31 (0.000)*	33.08 (0.000)*
Care of imminently dying patient	3.75±1.11	6.07±1.11	5.89±0.92	40.65 (0.000)*	33.66 (0.000)*
Ethical and legal aspect	3.36±0.59	5.25±0.44	4.91±0.54	47.82 (0.000)*	25.37 (0.000)*
Total practices score	57.64±10.32	95.83±8.14	92.57±8.15	88.39 (0.000)*	90.23 (0.000)*

**Significant at P≤ 0.05*

Table IV shows a significant increase in the total score of knowledge (P=0.000) and practices (P=0.000) with increasing age of the study subjects 2 months after geriatric palliative care guideline implementation. BSc nurses have higher knowledge and practices scores than technical nurses and the differences were statistically significant (P=0.021 and P=0.000 respectively). Furthermore, years of working experience affect significantly nurses knowledge and practices scores (P=0.000 and P=0.000 respectively). Nurses working in ICU reported higher knowledge and practices scores than those in the ward with significant difference between them (P=0.030 and P=0.035).

Figure II shows a significant positive correlation between the total knowledge and practices score about palliative care 2 months after guideline implementation (P=0.000).

Table (IV): Relation between socio-demographic characteristics of the study subjects and total knowledge and practices score 2 months after geriatric palliative care guideline implementation

Socio-demographic characteristics	Total knowledge score	Total practices score
	After 2 months	After 2 months
	Mean ± SD	Mean ± SD
Age (in years)		
20-	76.55±2.80	86.22±3.85
25-	84.61±3.63	97.09±3.76
30+	91.27±2.61	104.73±3.84
Test of significance	F=114.09 (0.000)*	F=119.67 (0.000)*
Educational level		
Technical institute	77.19±3.14	87.31±4.67
Baccalaureate degree (BSc)	87.85±4.37	100.56±5.30
Test of significance	t=11.68 (0.021)*	t=10.83 (0.000)*
Years of working experience		
1-	77.20±3.29	87.10±4.52
5-	86.09±4.05	99.22±4.98
10+	92.50±2.94	104.67±4.22
Test of significance	F=77.04 (0.000)*	F=70.35 (0.000)*
Unit		
Ward	79.89±5.34	90.67±7.31
ICU	83.25±7.12	94.83±8.64
Test of significance	t=2.22 (0.030)*	t=2.15 (0.035)*

**Significant at P≤ 0.05*

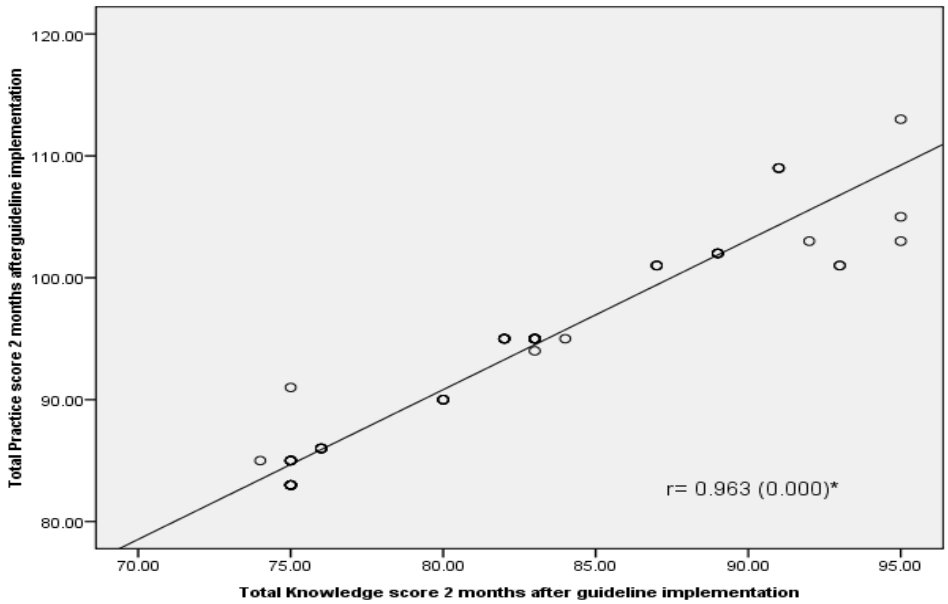

Figure II: Correlation between total knowledge and practices scores of the study subjects about palliative care 2 months after guideline implementation

IV. Discussion

The numbers of persons with a dangerous or life threatening illness continue to expand because of an aging population and advances in technology that permit increased longevity. In order to mend quality of life during life threatening illness, an increasing number of palliative care programs should developed. The Guidelines help nurses provide key elements of palliative care in the absence of palliative care programs. [14] It is one way to assure care is provided consistently and is based on current evidence. According to this, nurses would use palliative care guidelines to determine their course of action and to help identify needed policy. Moreover, guidelines provide a systematic approach for specific patient care situations as providing care at end of life [6].

The present study is conducted to develop palliative care guideline for nurses based on the review of the literature, evidence base, and expert consensus and to determine the effect of implementing this guideline on nurses' knowledge and practices regarding palliative care for older adult patients. The developed guideline is intended to serve as a comprehensive description of what constitutes comprehensive high-quality palliative care services, as well as a resource for nurses addressing the palliative care needs of geriatric patients and their families.

This study included 68 nurses who involved in direct care for geriatric patients with life threatening illness. The mean age of the study subjects was 25.34 ± 3.69 years. More than half of the study subjects had from 1 to less than 5 years of experience, also held a technical degree, while more than one third of them had BSc degree. This helped them to become more trained in caring for older adults with life threatening illnesses and acquire recent knowledge about palliative care of geriatric patients and their families. Studies conducted in Egypt by Wahdan (2014)[22] and in Ethiopia by Kassa et al (2014)[23] showed the same findings.

It is essential for nurses to have adequate knowledge about palliative care to meet health needs of geriatric patients with chronic illnesses and to provide physical, emotional and spiritual support. Nurses might be better prepared to meet this if they were familiar with guidelines and instruments to measure palliative care needs/outcomes [6]. Study on nurses in Qatar by Al-Kindi et al., (2014)[24], who found a clear deficiency in formal palliative care education among the nurses and attributed this to the fact that formal PC service was established only recently in Qatar. This is in accordance with the results of the present study where all study nurses expressed the need for more education about palliative care and only one quarter aware of palliative care guidelines. This may be related to this area of patients care not taught in the nursing curriculum in the majority of nursing institution in Egypt.

In this respect, the findings of the present study revealed significant improvement in total knowledge score immediately after guideline implementation and slightly decreased at 2 months evaluation which confirms the importance of continuous training to improve nurses' knowledge about palliative care. This may be attributed to the hypothesis that nurses' knowledge score after guideline implementation will be improved, and also justified by the fact that, more than one third of the study subjects had BSc degree which help them to easily acquired recent knowledge about palliative care. This is in accordance with a study carried out in Egypt, which concluded large positive change in palliative care knowledge post the program implementation [22]**.** A study done in London by Addington-Hall et al., (2006) [25] reported the success of palliative care program across networks and resulted in improvement in nurses' competencies and knowledge regarding palliative care. Moreover, studies conducted in India by Kumar et al., (2011)[26], in Germany by Pelayo et al., (2011)[27] and in USA by Behr (2014)[28] reported the effectiveness of the palliative care training on knowledge among health care providers.

Providing palliative care begins with educating staff, particularly nurses, who are not prepared to provide optimal palliative care[29]. Continuing education helps in improving clinical practice, as the fact that the knowledge acquisition played an essential role in motivating nurses to practice well. Similar finding was reported in the present study, which showed significant positive change in total practice score after palliative care guideline implementation. In addition, a significant strong positive correlation between nurses' knowledge about palliative care and their practices after the guideline implementation was found. This results supported by Wahdan (2014)[22] in Egypt which reflect the improvement of total practice score among the studied subjects following intervention regarding palliative care in relation to pre program and nurses reported considerable increase in their abilities to address the psychosocial and spiritual needs of patients and families and to manage pain and other physical symptoms.

The current study revealed positive association of nurses' age, period of working experience and nurses' knowledge and practice. It means that when the nurses' age or years of working experience increase, their knowledge and practice scores also increased. This may be due to the acquiring of new information during years of working. This is consistent with Ayed et al., (2015)[30] in Palestine and contradict with Kassa et al., (2014)[23] who found negative association between age, gender, and experience with nurses' knowledge about palliative care. The contradiction in the results may be attributed to the differences in the characteristics of the studied samples. Moreover, nurses who had BSc degree had a higher knowledge score compared with technical nurses. The reason for this attributed to high qualified nurses are able to understand information in better way than those. Ayed et al., (2015)[30] support this finding.

After completing this research, it can be noticed that, delivering palliative care to geriatric patients, dying patients is a present and future challenge. There are several obstacles to implementing palliative care in the hospitals. These include inadequate communication among decision makers and lack of agreement goals of care, lack of health care provider training and poor understanding of palliative care services. Therefore, it is important to encourage nurses and other health care professionals to implement and use of palliative care guidelines to ensure a peaceful, dignified death with symptoms well managed and support the family and caregivers of the older patients.

V. Conclusion

In this study implementation of the developed geriatric palliative care guideline proved to be effective in improving the nurses knowledge and practices. A higher mean score of knowledge and practices was found in nurses with advanced age and in those with higher education. Moreover, a significant positive correlation was found between the nurses knowledge their practices after the guideline implementation.

VI. Recommendations

1. The developed illustrated geriatric palliative care guideline booklet to be distributed to all nurses in Mansoura University Hospitals and Centers through the responsible personnel.
2. The Departments of Nursing in higher education institutions in Egypt should incorporate courses related to palliative care issues into the curriculum to strengthen their graduates' level of understanding.
3. Nurses should engage in research and education that demand to improve their knowledge and practices about palliative care.

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