

## Evaluation of Nurses Performance of Standardized Palliative Care for Oncology Children

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### Abstract

**Background:** Standardized Palliative Care (SPC) is an approach that improves the quality of life of pediatric patients and their families facing problems associated with life-threatening illness. **Aim of the Study:** Evaluate nurses' performance of standardized palliative care for oncology children, through: Assessing knowledge, and practice of nurses regarding SPC for oncology children. **Research design:** Descriptive design was used for conducting this study; **a purposive sample** consisted of 65 nurses who were providing palliative care for oncology children and oncology children participated in this study. **Setting:** This study was conducted in the Out-patients and In-patients Pediatric Department at Children's Hospital affiliated to Ain Shams University and Department of Oncology Children at Menoufiya University Hospital. **Data collected** through using five tools including: I: Interview questionnaire which consisted of 2 parts: Part1: Nurses' socio demographic characteristics and children characteristics. Part2: nurses' knowledge level. II: Observation checklist to evaluate nurses' practice. III: Palliative Performance Scale to assess nurses' performance regarding application scale. IV: Resource Utilization Groups - Activities of Daily Living Scale to assess the level of functional dependence for providing palliative care. V: Pain scale to assess pain. **Results:** Most of the studied nurses had good knowledge towards SPC, but one third of them had training of palliative care, and most of them had competent practice towards SPC. There was significant relation between nurses' total knowledge and their total practice regarding SPC for oncology children ( $P < 0.05$ ). **Conclusion:** Most of the studied nurses have a good knowledge and majority of them have competent performance about standardized palliative care for oncology children. **Recommendations:** From finding of this study, it was recommended that educational programs and courses for nurses who work in pediatric oncology units about palliative care.

**Keywords:** Standardized palliative care, nurse's performance, oncology children.

### Introduction

Childhood cancer occurs anywhere in the body, including the blood and lymph node system, brain and spinal cord Central Nervous System (CNS), kidneys, and other organs and tissues, begins when healthy cells change and grow out of control. In most types of

cancer, these cells form a mass called a tumor. Although advances in treatment have increased the overall 5 years survival rate for childhood cancers to approximately 80%, cancer is still the second leading cause of death in children aged from 8-18 years old (*American Society of Clinical Oncology, 2018*).

Palliative care for oncology children includes physical, psychological, educational, social, and spiritual goals and is provided concurrently with disease-modifying therapies or as the main goal of care. This care aims to enhance life, decrease suffering, optimize function, and provide opportunities for personal and spiritual growth (*Curcio, 2017*).

**According to the World Health Organization (2017)**, SPC is an approach that improves the quality of life of patients and their families facing the problems 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. Optimal care of children with cancer involves the individualized blending of care directed at the underlying illness and the physical, emotional, social, and spiritual needs of the child and family with continuous reevaluation and adjustment.

Palliative oncology nurses are specialized professional nurses who play a crucial role in providing care, support, and education to children and their families who have a variety of cancer diagnoses, serve as a consistent presence throughout the duration of their treatment. Their care should be directed towards following the therapeutic regimen to improve the quality of children's life (*Hagmann et al., 2018*).

Standardized palliative care nurse has a basic knowledge skill set imperative to assist patients with the utmost care and compassion care for affirming life and regarding dying as a normal process; neither hastens nor postpones death;

offers a support system to help persons live as actively as possible until death; and offers a support system to help families cope during the child's illness and in the bereavement (*Dahlin, 2015*).

### **Significance of the Study:**

Standardized palliative care involves all-inclusive, competent and compassionate care to children living with cancer and their family members, targeted at preventing and relieving suffering for those children with life-threatening illness. Palliative care is an essential part of cancer control for children, more than 90% of patients with problems in the advanced stages of cancer need palliative care, with access to palliative and quality care more than 80% of children with cancer can survive, living full and healthy lives (*World Health Organization, 2017*).

Standardized palliative care for oncology children takes a whole-family approach that concluded the need for the promotion of humanized specialized palliative care trained nurses to help boost delivery of quality palliative care services in all care settings. Therefore, this study was done to evaluate nursing performance of standardized palliative care for oncology children throughout their life threatening illness that is important for supporting and caring of children in their final stage of cancer whether cancer is incurable or terminal.

### **Aim of the Study**

#### **The aim of study was:**

Evaluate nurse's performance of standardized palliative care for oncology children, through:

- Assessing knowledge of nurses about standardized palliative care for oncology.

- Assessing practice of nurses regarding standardized palliative care for oncology children.

#### **Research Questions:**

- Do the nurses having an appropriate background about standardized palliative care for oncology children?

- Do the nurses having competent practice about standardized palliative care for oncology children?

#### **Subjects and Methods Research Design:**

A descriptive design was utilized in the present study.

#### **Research Setting:**

This study was conducted in both out-patients and in-patients pediatric department at Children's Hospital affiliated to Ain Shams University and department of Oncology Children at Menoufiya University Hospital.

#### **Subject:**

A purposive sample consisted of 65 nurses who are providing palliative care for oncology children working in the previously mentioned settings were included in this study.

#### **Tools of data collection:**

The data was collected using the following tools:

#### **I-Interview Questionnaire**

It was designed by the researcher in the light of relevant literature. It was written in a simple Arabic language to suit understanding level of the study subjects. It consisted of two parts to assess the following data:

**Part 1:** Demographics data Demographic characteristics of the studied nurses such as: Age, marital status and level of education, job position, qualification, years of experience and attendance of previous training programs.

Characteristics of children such as: age, gender, educational level, residence area, stage of illness (early diagnosis, treatment stage, end of life stage).

**Part 2:** Nurse's knowledge regarding standardized palliative care which composed of (32) multiple choice questions.

#### **Scoring system:**

Answers of nurses were scored and accordingly each point of the "correct" answers was scored by one score, and zero pointed to the "incorrect" answers.

Total score (100%) of questions were collected and accordingly scores of nurses' knowledge were categorized as follows:

- Good knowledge scored 75% and more of total score.

- Average knowledge scored 50-75% of total score.

- Poor knowledge scored less than 50% of total score.

**II- Observation Checklist:**

This tool was adapted from *Cleeland, (2016)* which categorized as the following:

1- Nursing practice of standardized palliative care regarding: Assessing physical health needs of oncology children. This observational checklist consists of (13) steps.

2- Nursing practice of standardized palliative care regarding: Symptoms management for oncology children and consisted of (18) steps.

**Scoring system:**

Each step of observational checklist was scored as the following: (1) for competent and (0) for incompetent.

The total practice (100%) for studied nurses was categorized as the following:

- Competent (more than 85%) of total score.
- Incompetent (less than 85%) of total score.

**III- Palliative Performance Scale:**

It was adapted from *Anderson et al., (1996)*, to assess nurses' performance regarding application palliative performance scale for assess current and future needs and preferences across all domains of care as: (Ambulation, Activity & Evidence of disease, Self-Care, Intake, and Conscious level).

**Scoring system:**

The total score (100%) of scale was divided into:

- Stable stage: 70-100% of total score.
- Transitional stage: 40-60% of total score.
- End –of –Life stage: 30% of total score.

**IV- Resource Utilization Groups - Activities of Daily Living (RUG-ADL) scale in palliative care outcome:** It was adapted from *Clapham and Holloway, (2014)*. To assesses the level of functional dependence for providing palliative care and consisted of two domains movement (bed mobility, ability to use toileting, ability to transfers) and eating.

**Scoring system:**

Total score is 19 by collecting degree of each domain and categorized degree of dependence on palliative care as follows :

- Score of 4-5 refer to independent and routine check up.
- Score of 6-13 refer to requires assistance on eating, for immobility, may be at risk of falls.
- Score of 14-17 refer to dependent on caregiver for eating, greater risk of falls and unable to movement.
- Score of 18-19 refer to requires continuous assistance for all care and eating from caregiver, greater risk of pressure areas.

**V- Wong – Baker Face Pain Scale:** It was adopted from *(Wong and Baker, 1988)*.

**Scoring system:**

The total score of scale indicate level of palliative care provided for control pain was divided into :

- Unsatisfactory palliative care: 1 score.
- Little bit satisfactory palliative care: 2 scores.
- Very satisfactory palliative care: 3 scores.

**VI-Behavioral Pain Assessment Scale (FLACC):** To measure of (Face, Legs, Activity, Cry, Consolability) characteristics.

This scale adopted from *Merkel, Voepel-Lewis and Malviya, (1997)*.

**Scoring system:**

The total score of scale collected from each category for evaluate level of palliative care provided for control pain was divided into:

- Relaxed and comfortable = 0 score.
- Mild discomfort = 1–3 scores.
- Moderate pain = 4–6 scores.
- Severe discomfort or pain or both = 7–10 scores.

**Operational design:  
Preparatory phase**

It included reviewing of related literature and theoretical knowledge of various aspects of the study using books, articles, internet periodicals and magazines was done to develop the study

tools and to get acquainted with the various aspects of the research problem.

**Content validity & reliability**

It was be done based on result of pilot study and ascertained by a jury of three expertise from Professors of Pediatric Nursing, to review the tools for clarity, relevance, comprehensiveness, understandable and applicability. For reliability test –retest was done.

**Exploratory Phase:**

A pilot study was carried out during September 2017 involving 10% (6 palliative nurses) of total study sample. The result of the data obtained from the pilot study helped in removing of some repeated questions related to nurse's knowledge factors and motivation factors because they have the same meaning and to avoid duplication of questions and so the pilot study was included in the study.

**Field of work:**

The actual field work of the study was carried out from the first of October 2017 up to March 2018 (6 months) the researcher was available in the study setting 5 days/week (Tuesday and Wednesday) to collect data. By rotation from out-patients and in-patients pediatric department Children's Hospital affiliated to Ain Shams University and department of oncology children at Menoufiya University hospital from 9 am to 4 pm. The nurses were interviewed individualized groups (for 45-60 minutes).

The researcher started the interview by introducing herself to nurses,

giving them clear and brief idea about the aim of the study and its expectation to each nurse before starting the interview. Then each nurse was interviewed to answer the questionnaire about palliative knowledge to fulfill sheet take (15: 30 minutes), and to assess their practice using observational checklists take 15 minute, 20 minute for scales as (PPS, RUG-ADL, pain scale) by observation studied nurses during providing scale for oncology children.

#### **Administrative Design:**

An official permission to carry out study was obtained from Director of Children's Hospital- Ain Shams University and department of Oncology Children at Menoufiya University Hospital through an issued letter from the Dean of Faculty of Nursing Ain Shams University. The researcher was explaining the aim of study and the expected out comes.

#### **Ethical Considerations:**

Ethical approval was obtained from the Scientific Ethical Committee of

Faculty of Nursing Ain-Shams University .In addition all gathered data was used for the research purpose only; the aim of the study was explained to the directors of the previously mentioned settings. And they were assured that the study was harmless and their participation were voluntary and they had the right to withdraw from the study at any time and without given any reason. They were assured that confidentiality was guaranteed. Ethics, values, culture and beliefs were respected.

#### **Data Analysis**

The data obtained was organized, analyzed, and presented in the form of tables and figures using the Statistical Package for Social Sciences (SPSS) version 20. Qualitative variables was presented in the form of frequencies and percentages; quantitative variables was presented in the form mean and SD. Qui square and fishers tests were used to test the significance of results obtained. Statistical significant difference was considered at  $P < 0.05$  and insignificant at  $P > 0.05$ .

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**Results**


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**Table (1): Number and percentage distribution of studied nurses according to their demographic characteristics.**

Nurses' characteristics	Total number = 65	
	NO	%
<b>Age/ years</b>		
- 20 – 30	65	100
<b>Place of working</b>		
- Ain Shams University		
Children's Hospital	36	55.4
- Children's Hospital in Monofiya University	29	44.6
<b>Qualification</b>		
- Nursing diploma degree.	21	32.3
- Technical Health Institute Diploma.	25	38.5
- Bachelor of nursing	19	29.2
<b>Job position</b>		
- Staff nurse	60	92.3
- Nursing supervisor	5	7.7
<b>Years of experience</b>		
- 5 < 10 years	45	56.7
- 10 < 15 years	6	21.8
- 15 years & more	14	21.5
<b>Mean ± SD</b>	<b>14.9 ± 4.2</b>	

Table (1): Shows that all studied nurses aged ranged between 20 to 30 years old, more than half of them (55.4%) were working in Ain Shams University, Children's Hospital, most of studied nurses (92.3%) were staff nurse and more than half of them had 5 to 10 years of experience in caring of oncology children.

**Table (2): Number and percentage distribution of studied children according to their demographic characteristics.**

Children' characteristics	Total number = 65	
	No	%
<b>Age/ years</b>		
< 6	13	20
6 - < 12	43	66.2
12 - < 18	9	13.8
<b>Mean ± SD</b>	<b>5.86 ± 4.4</b>	
<b>Gender</b>		
Male	30	46.2
Female	35	53.8
<b>Level of education</b>		
pre nursery stage	28	43.1
Nursery stage	13	20
Primary education stage	14	21.5
Preparatory education stage	7	10.8
Secondary education stage	3	4.6
<b>Residence</b>		
Rural	28	43.1
Urban	37	56.9

Table (2): Revealed that most (66.2%) of the studied children their age was (6- < 12) years old, more than half (53.5%) of them were females, also nearly half (43.1%) of studied children had pre nursery stage of education and more than half (56.9%) of them lives in urban residence.

**Table (3): Number and percentage distribution of studied nurses according to their knowledge standardized palliative care.**

Items	Total number = 65			
	Correct		Incorrect	
	NO	%	No	%
Definition	42	70.8	23	35.3
Goal	47	72.3	18	27.6
Indication	57	87.3	8	12.3
Time of starting palliative care	50	76.9	15	23

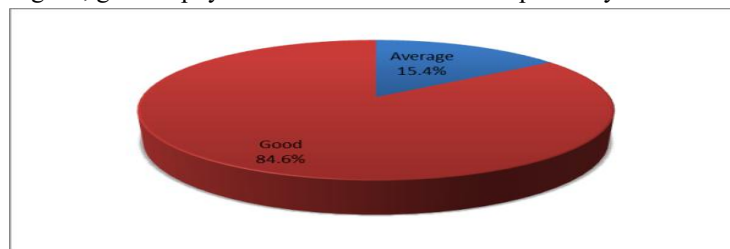
Table (3): shows that (70.8%, 72.3%, 87.7% and 76.9%) of studied nurses had correct knowledge regarding definition, goal, indication and time of palliative care respectively.



**Table (4): Number and percentage distribution of studied nurses according to their practice regarding assessment of symptoms for oncology children in SPC.**

Nurses' assessment of oncology symptoms	Total number = 65			
	Competent		Incompetent	
	No	%	No	%
Respiratory assessment	65	100	0	0
Mouth and nose	65	100	0	0
Skin and hair	65	100	0	0
Eye assessment	65	100	0	0
Ear	61	93.8	4	6.2
Cardiovascular system	50	76.9	15	23.1
Gastrointestinal system	64	98.5	1	1.5
Urinary system	56	89.2	9	10.8
Hematological	53	81.5	12	18.5
Bone and motor system	60	92.3	5	7.7
Neurological effects	60	92.3	5	7.7
General physical health	63	96.9	2	3.1
Emotional status	62	95.4	3	4.6

Table (4): Shows that (100%) of all studied nurses had competent assessment regarding respiratory, mouth and nose, skin and hair and eye assessment. And (93.8%, 76.9%, 98.5%, 89.2%, 81.5%, 92.3%, 92.3%, 96.9% and 95.4%) of studied nurses had competent assessment regarding ear, cardiovascular, gastrointestinal, urinary, hematological, bone and motor, neurological, general physical health and emotion respectively.



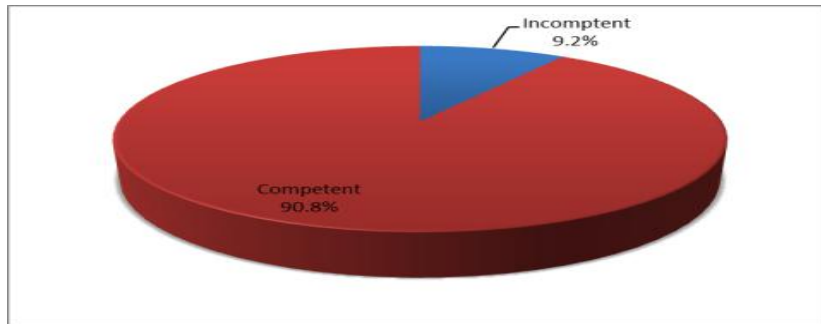
**Figure (1): Percentage distribution of studied nurses according to their total knowledge regarding standardized palliative care for oncology children.**

Figure (1): revealed that most (84.6%) of the studied nurses have good knowledge about standardized palliative care for oncology children



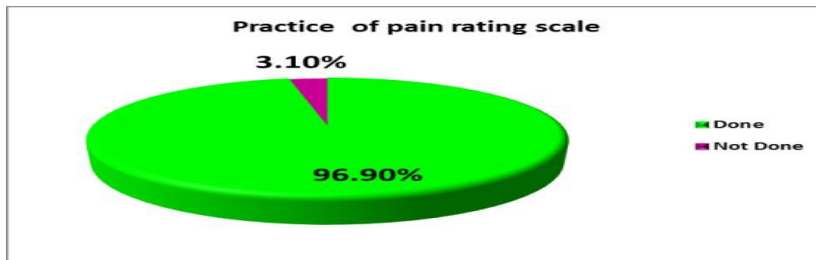
**Figure (2): Percentage distribution of studied nurses according to their total performance of palliative care performance scale.**

Figure (2): illustrated that most (78.5%) of the studied nurses' were competent regarding using palliative performance scale and (21.5%) of them incompetent in using palliative care performance scale.



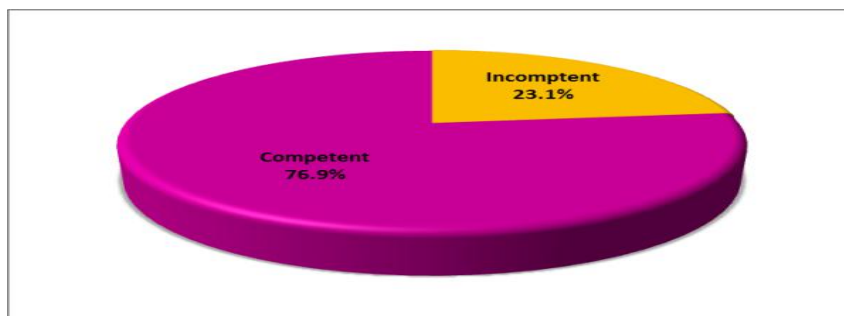
**Figure (3): Percentage distribution of studied nurses according to their total performance of activities of daily living scale.**

Figure (3): shows that most (90.8%) of the studied nurses competent regarding using activities of daily living scale and (9.2%) of them incompetent in using activities of daily living scale.



**Figure (4): Percentage distribution of studied nurses according to their total practice of pain scale for oncology children**

Figure (4): show that most (96.90%) of the entire studied nurses had done practice regarding pain scale for oncology children.



**Figure (5): Percentage distribution of studied nurses according to their total performance regarding palliative care of oncology children**

Figure (5): shows that (76.9%) of studied nurses regarding total performance of palliative care for oncology children were competent.

**Table (5): Relation between nurses' total knowledge and their total performance regarding palliative care for oncology children.**

Nurses' total knowledge	Nurses' total performance			
	Incompetent		Competent	
	No	%	No	%
Average	5	50	5	50
Good	10	18.2	45	81.8
Fisher's Exact Test	<b>P = 0.043*</b>			

\*Statistical significant difference

Table (5): Show that there was significant relation between nurses' total knowledge and their total performance regarding palliative care for oncology children ( $P < 0.05$ ).

**Table (6): Relation between nurses' characteristics and their total performance regarding palliative care for oncology children.**

Nurses' characteristics	Nurses' total performance				Chi-square	
	Incompetent		Incompetent		X <sup>2</sup>	P value
	NO	%	NO	%		
<b>Place of working</b>						
- Ain Shams University Children's Hospital	12	33.3	24	66.7	Fisher's	0.039*
- Children's Hospital in Monofia University	3	10.3	26	89.7		
<b>Qualification</b>						
- Nursing diploma degree.	6	28.6	15	71.4	9.409	0.015*
- Technical Health Institute Diploma.	9	36	16	64		
- Bachelor of nursing	0	0	19	100		
<b>Job position</b>						
- Staff nurse	15	25	45	75	Fisher's	0.582
- Nursing supervisor	0	0	5	100		
<b>Years of experience</b>						
- 5 < 10 years	3	21.4	11	88.6	0.396	0.941
- 10 < 15 years	1	16.7	5	83.3		
- 15 years & more	11	24.4	34	75.6		
<b>Attained previous training program about palliative care.</b>						
- Yes	3	10.3	26	89.7	Fisher's	0.039*
- No	12	33.3	24	66.7		

\*Statistical significant differences

Table (6): shows that there were a significant relation between nurses' characteristics and their total performance regarding place of working, qualification and attained previous training program

## Discussion

Standardized palliative care for oncology children focuses primarily on anticipating, prevention, diagnosis, and treating symptoms experienced by children with a serious or life-threatening illness and helping them and their families to do medically important decisions (*Dumanovsky et al., 2016*).

Regarding to characteristics of the study nurses the finding of the present study showed that their age range between 20 to 30 years old and more than half of them had 5 to 10 years of experience in caring of oncology children. This finding is in disagreement with *Turan, Mankan & Polat (2017)*, who stated in a study entitled “Opinions of Nurses about Palliative Care” that, the majority of the nurses surveyed was 30 years of age or older, and has a bachelor degree, and most of them was working at the profession for 10 years .

The findings of the present study pointed out that more than three quarters of studied nurses did not attained previous training program about palliative care. This finding was contrary to the finding of *Turan, Mankan & Polat (2017)* who report that, most of the nurses surveyed has received training about palliative care, and that less than half received this training in undergraduate education. It was found that most of the nurses who trained about palliative care and majority deemed the education

about palliative care ( $P < 0.05$ ). On the other hand there were no significant relation between nurses' characteristics and their total performance regarding job position and years of experience ( $P > 0.05$ ). adequate. This finding could be due to lack of palliative care proactive education in current hospital. While these findings were contrary to those of *Turgay's (2010)*, who had a study entitled “Opinions of Health Personnel about Palliative Care” and found that the majority of health care workers had no training on the palliative care, and it was also reported that the knowledgeable ones had acquired this during their college education. As level of education had a significant effect on knowledge level of nurses about palliative care. From the researcher point of view this could be due to limited attention to nurses, continuing education or training programs especially about end of life care.

The result of the present study revealed that more than half of studied nurses had 5 to 10 years of experience in caring oncology children. This result was supported by *Collins & Small (2019)*, had a study entitled “The Nurse Practitioner Role is Ideally Suited for Palliative Care Practice” found that most of nurse practitioners had 10 or more years working in palliative specialty settings. While these findings were contrary to those of *Patricia et al. (2018)*, who carried out a study entitled “The Hospice and Palliative Care Advanced Practice Registered Nurse Workforce” and reported more than half had 0 to 5 years of experience as a registered nurse in palliative care advanced practice.

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The current study revealed that most of studied nurses are staff nurse, and having technical health institute diploma. This could be due to preference of bachelor degree nurses to work at private hospitals and travel abroad, and when working in the governmental hospitals, bachelor degree nurses work as a head nurses not as bedside nurse. Findings of the present study are in agreement with that of *David & Banerjee (2010)*, who carried out a study, entitled “Effectiveness of Palliative Care Information Booklet in Enhancing Nurses 'Knowledge” and found that the majority of the nurses work as general practitioners, having diploma degree.

According to characteristics of studied children the finding of the present study revealed that most of the studied children their age were (6- < 12) years old. In the same context, *Linder, Al-Qaaydeh & Donaldson (2018)*, stated in a study entitled “Symptom Characteristics among Hospitalized Children and Adolescents with Cancer” that the most of children participants aged from 7-18 years.

According to nurses' knowledge regarding standardized palliative care, the result of the present study revealed that three quarters of studied nurses had correct knowledge about definition of palliative care. As the ability of the nurse to deliver effective palliative care “from the researcher's point of view” depends on their ability to diagnose the symptoms and the needs of the patient. This finding could related to better knowledge about palliative care is associated with a more positive attitude by nurses, with communication skills, empathy, and symptom management acquired from nurses' experiences in their work for caring of oncology children. As well, nurses in the current study knows that palliative care is required for patients in all disease stages “starting from the time

of diagnosis”, including those undergoing treatment for curable illnesses; those living with chronic diseases; and those who are at the end of life, this finding supported by *Harden et al. (2017)*, who carried out a study entitled “Palliative care: Improving Nursing Knowledge, Attitudes, and Behaviors” and reported that most of studied nurses had correct knowledge about palliative care for caring of pediatric patients. While these findings were contrary to those of *Karkada, Nayak & Malathi (2011)*, who carried out a study, entitled “Awareness of Palliative Care among Diploma Nursing Students” and revealed that, the minority of studied nurses were aware of the term palliative care.

As regard to studied nurses' total knowledge regarding palliative care, the result of the present study revealed that, most of the studied nurses have good knowledge about standardized palliative care for oncology children. This finding could relate to acquired experience from frequent caring of oncology children, and this result ensures the readiness of these nurses to understand and acquire all aspects of palliative care (recognize needs to overcome the knowledge deficit) and to participate in training courses and educational programs focusing on palliative care. This finding supported by *Morsy, Elfeky & Mohammed (2014)*, who carried out a study entitled “Nurses' Knowledge and Practices about Palliative Care among Cancer Patient in a University Hospital – Egypt ” revealed that more than half of the studied nurses had satisfactory total knowledge scores about palliative care.

The result of the present study illustrated that more than half of the studied nurses had competent practice regarding symptoms assessment for oncology children in standardized palliative care. This finding could be

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related to effect of nurses' knowledge regarding palliative care on oncology children and repeated daily palliative care for oncology children. In the same context, In the United States, *Ferrell et al. (2010)*, who carried out a study entitled “The Preparation Of Oncology Nurses in Palliative Care” had analyzed the data on palliative care education in nursing between 2000 and 2010, and determined that most of studied nurse had competent practice in symptoms assessment for pediatric oncology during the course of the disease.

The finding of the current study revealed that, most of the studied nurses had competent practice regarding symptoms management as gastrointestinal, respiratory and genitourinary problems. It could be related to studied nurses had competent assessment of symptoms and address child's needs. This finding was in accordance with *Ke et al. (2019)*, who mentioned in a study entitled “Perceived Quality of Palliative Care in Intensive Care Units among Doctors and Nurses in Taiwan” that more half of studied nurses provided competent palliative care in symptom management.

The result of the present study illustrated that more than three quarters of studied nurses competent regarding using palliative care performance scale. This finding could be related to competent practice of palliative care. This result was disagreement with *Myers et al. (2015)*, who carried out a study entitled “Palliative Performance Scale and Survival among Outpatients with Advanced Cancer” and found that less than half of studied nurses had competent using palliative performance scale.

The finding of the current study revealed that, majority of studied nurses

competent regarding using resource utilizing group –activities of daily living scale. This result was in accordance with *Amano et al. (2017)*, who carried out a study entitled “C-Reactive Protein: Symptoms and Activity of Daily Living in Patients with Advanced Cancer Receiving Palliative care”, found that more than half of studied nurses had competent using resource utilizing group –activities of daily living scale.

The finding of the current study revealed that, majority of the entire studied nurses had competent practice regarding using of pain scale for oncology children. This finding could be related to studied nurses possess the skills, knowledge techniques, thinking ability and values that are required in using pain scale. This finding was in accordance with *Turrillas, Teixeira and Maddocks (2019)*, who reported in a study entitled “A Systematic Review of Training in Symptom Management in Palliative Care within Postgraduate Medical Curriculums” that most of studied nurses had competent practice for using pain scales. Moreover, this finding was in accordance with *Thomas, Phillips & Hamilton (2018)*, who found out in a study entitled “Pain Management in the Pediatric Palliative Care Population ” that most of studied nurses had competent practice in using pain scales.

Concerning the finding of the current study total performance of more than three quarters of studied nurses were competent regarding palliative care for oncology children. It could be related to ability of studied nurses to apply knowledge and build interpersonal relationships with child and family , also their ability to ensure and deliver high quality nursing This findings was in accordance with *Youssef et al (2015)*, who carried out a study entitled “Prioritizing Palliative Care: Assess

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Undergraduate Nursing Curriculum, knowledge and Attitude among Nurses Caring End-of-Life Patients” and found that above half of studied nurse had competent performance for palliative care.

The finding of the current study revealed that, there were a significant relation between nurses' characteristics and their total performance regarding place of working, qualification and attained previous training program about palliative care. These findings are contrary to those of *Roe & Lennan (2014)*, who carried out a study entitled “Role of Nurses in The Assessment and Management of Chemotherapy- Related Side Effects in Cancer Patients” and found that, the negative association of age, gender, work experience, experience of caring oncology children, and duration of training with nurses’ knowledge due to palliative care is a novice discipline, this indicate that practice is the best way for acquiring knowledge.

### **Conclusion**

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Upon the findings of the current study, concluded that most of the studied nurses have good knowledge about standardized palliative care and majority of them have competent performance about standardized palliative care for oncology children.

### **Recommendations**

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▪ Educational programs and courses for nurses who work in pediatric oncology units about palliative care to update their knowledge and practice toward care of oncology children and their parents.

▪ Guidelines regarding palliative care should be available in oncology department.

▪ Further studies are needed to support and educate nurses about palliative care to assess their current knowledge and practice.

▪ Further studied needed to evaluate effect of nurses applying SPC on quality of life for oncology children.

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