

Challenges Facing Hospital Based Nurses who Provide Palliative Care for Patients with Chronic and Serious Illness

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1. ABSTRACT

Background: Palliative care is an approach that improves the quality of patients' life and their families facing the problems associated with a life-threatening illness. Nurses are the largest regulated group of healthcare providers in palliative care provision. They are the primary providers of palliative care. Many nurses involved in palliative care face challenges to provide palliative care. **Aim:** Assess challenges facing hospital based nurses who provide palliative care for patients with chronic and serious illness. **Sample:** A convenience sample of 120 nurses, who provide palliative care at Dekernes General Hospital, affiliated to Ministry of health, Egypt. **Method:** A descriptive exploratory research design was used. **Tool:** One tool was used for data collection. Part 1: challenges facing nurses who provide palliative care related to nurses themselves. Part 2: challenges facing nurses who provide palliative care related to patients and their families. Part 3: challenges facing nurses who provide palliative care related to hospital system. In addition to nurses' demographic characteristics. **Results:** There are many challenges facing nurses who provide palliative care. Majority of these challenges related to patients and their families (76.2%). Half of these challenges related to nurses (52.8%). While, challenges related to hospital system (34.2%). **Conclusion:** According to the findings gathered in our study, it was concluded that, nurses indeed face numerous challenges in providing effective palliative care for patients with chronic and serious illness: the most challenges they themselves as nursing staff face is the work related load, followed by in adequate numbers / or shortage of nurses providing palliative care, then lack of communication between the nurses and patients/their family, and Lack of nurses' experience in providing palliative care for those types of patients. **Recommendation:** The hospital administrative authoritarians that are responsible for hiring and staffing nurses should make sure that nurses are well staffed and that they are not overworked to be able to provide effective palliative care for patients with chronic and serious illness

Keywords: Challenges, Nurses, Palliative Care, chronic illness.

2. Introduction:

According to the World Health Organization (WHO) list of global health priorities, non-communicable chronic diseases (NCCDs) such diabetes, cancer, dementia, and heart disease come in second place. Persons with NCCDs account for $\geq 70\%$ of all deaths worldwide. For patients with NCCDs, palliative care (PC) is crucial for both a decent life and a quality dying (Tziraki et al., 2020). PC is an approach that enhance the quality of life (QoL) for patients and their families facing the problems associated with a life-threatening illness, by preventing and relieving suffering through the early detection, careful assessment, and treatment of pain and other issues (physical, psychosocial, and spiritual) (Drageset et al., 2021).

Palliative care aims to improve the quality of life of patients and their family by reducing symptoms, managing the condition, and keeping a

balance between the discomfort caused by medical treatment and the disease's progression (Drageset et al., 2021). Palliative care services should be provided on at least two or three levels (palliative care approach, generalist palliative care, specialist palliative care). In all levels of palliative care, nurses play a crucial role in helping patients identify and achieve their final life objectives. They may also support patients in moving to the place where they choose to die, completing a task, or communicating vital information to loved ones (Hökkä, et al., 2020).

Many nurses involved in palliative care face challenges to provide palliative care as lack of awareness about palliative care, lack of effective communication between healthcare professionals and patients, limited palliative care resources, lack of sufficient research funding (Mayland, et al., 2021), lack of knowledge and education about

palliative care practices and referral policies, low availability of specialized palliative care and heavy financial constraints (Haines, et al., 2018).

2.1 Significance of the study

Palliative care is an important concept in nursing practice and it is necessary for a wide range of diseases. Palliative care should be a top priority in public health and disease management programs.

Many nurses involved in palliative care face challenges to provide palliative care as lack of awareness about palliative care, lack of effective communication between healthcare professionals and patients, limited palliative care resources, lack of sufficient research funding, lack of knowledge and education about palliative care practices and referral policies, low availability of specialized palliative care and heavy financial constraints.

2.2 Aim of the study:

Assess challenges facing hospital-based nurses who provide palliative care for patients with chronic and serious illness.

2.3 Research questions:

What are the challenges facing nurses who provide palliative care for patients with chronic and serious illness?

3 Methodology

3.1 Research Design: A descriptive exploratory research design was utilized in the study.

3.2 Setting: The study was conducted at Dekernes General Hospital, affiliated to Ministry of health, Egypt.

3.3 Participants: A convenience sample of all available nurses (120) who provide care for patients with chronic and serious illness who need palliative care in Dekernes General Hospital.

3.4 Tools: One tool was used to collect the data for this study, was developed by the researcher after review of relevant recent literature (pasaol,2019) to assess challenges facing nurses who provide palliative care ,it consists of three parts:

Part one: Challenges facing nurses who provide palliative care for patients with chronic and serious illness related to nurses themselves:

Concerned with the factors that hinder the nurse to provide palliative care: included nurses 'concept of palliative care, nurses application of palliative care shortage of nurses, workload of nurses, lack of nurses experience, knowledge and skills regardless palliative care, proper communication between nurses and patient, nurses training of palliative care, financial and moral incentives for nurses who provide palliative care.

Part two: Challenges facing nurses who provide palliative care related to patients and their families:

Concerned with the factors that hinder patients and their significant to receive palliative care: included awareness of patients and their families of palliative care, communication between patients and nurses, psychological state of patients.

Part three: Challenges facing nurses who provide palliative related to hospital system:

Concerned with the factors that hinder hospital system to provide palliative care: included availability of the concept of palliative care in hospital, policies and procedures for palliative care, palliative care supplies, palliative care team and application of its specialties and communication skills.

In addition to demographic characteristics of nurses:

Concerned with personal data of the studied nurses: included nurses 'age, gender, educational level, years of experience in palliative care and palliative care training courses.

Scoring system:

The steps in the form of Yes and No. A correct step was scored 1; an incorrect one was scored zero. Scores of each item were summed up. *(Desalu et al., 2011; Rocha et al., 2009).

3.5 Method:

- An official approval for conducting the study was acquired from the Research Ethics Committee of Faculty of Nursing of Mansoura University.
- Permission to perform the study was obtained from hospital responsible authorities after accepting the official letter, describing the purpose and structure of the study.
- One tool of the study (part I,II,III in addition to demographic characteristics) was developed by the researcher based on recent relevant literature (pasaol, 2019) to assess challenges facing nurses who provide palliative care related to nurses themselves, patients and their families and hospital system.
- **Validity** :Tool was tested for content related validity by five experts (Jury) in the field of study, three nursing professors at faculty of nursing and two head nurses at dekernis hospital, they reviewed the tool for clarity, relevance, comprehensive and

applicability. Modifications were done accordingly.

- **Reliability** of the developed tool was estimated by Cronbach's Alpha test to measure the internal consistency of tools $r=0.7$.
- **Pilot study:** was conducted on 10%(12) participant of nurses to evaluate the applicability and clarity of the tool, estimate the time needed for data collection, and test the feasibility of conducting the research after analyzing the pilot study results, the needed modification were done accordingly, and included in sample .
- The researcher started data collection by introducing herself and outlining the goal of the study.
- Permission for voluntary participation was obtained from nurses after clear explanation of the purpose and nature of the study.
- Data was collected from nurses at different departments where provided care for patients using the questionnaire tool.
- Self-administrative sheet was offered to nurses for data collection in both Arabic and English.
- Data was collected over a three-month period, from the beginning of August to the end of October 2021.
- The researcher coded the questionnaire to assure the anonymity of the subjects.
- Finally, the researcher scored the responses, and compiled them for data analysis.

3.6 Ethical consideration and human rights:

- Consent was obtained from each participant in this study after explaining the study aim. Participants were assured that the information is confidential and used for study purpose only.
- The researcher emphasized the participation is absolutely voluntary and confidential.
- Anonymity and privacy was assured during the study.
- The participants had the right to withdraw from the study at any time without giving any reasons.
- Honest when dealing with nurses, his data and findings was assured.

3.7 Statistical analysis:

All statistical tests were conducted using SPSS for windows version 25.0 (SPSS, Chicago, IL). Continuous data were normally distributed and were expressed in mean \pm standard deviation (SD). Categorical data were expressed in frequency and percentage. Pearson correlation analysis was used for assessment of the inter-relationships among quantitative variables. To identify the independent predictors of the challenges domains multiple linear regression analysis was used after testing for normal distribution, normality, and analysis of variance for the full regression models were done. Statistical significance was set at $p<0.05$.

4. Results:

Table (1) represents nurses' demographic characteristics, it reveals that 45.9% of the studied nurses were aged from 30 to less than 40 years, 43.3% of them were aged less than 30 years, but 10.8% of them were aged from 40 to 50 years with a mean age of 31.233 ± 6.634 . The female gender represented 86.7% of the studied nurses. Regarding the educational level, 39.2% of the studied nurses had a bachelor's degree in nursing, while 7.5% of them were post-graduates. Concerning the years of experience, 36.7% of the studied nurses had less than 5 years of experience, 28.3 had 5 to less than 10 years of experience, and only 7.5 had 15 to less than 20 years of experience with a mean of 8.300 ± 5.225 . Concerning the previous training course attendance, 83.3% of the studied nurses hadn't attended any training courses.

Table (2) shows the challenges facing the nurses who provided palliative care for patients with chronic and serious illnesses. It reveals that 84.2% of the studied nurses agree that the workload of nurses affected the provision of palliative care, and 75.8% reported that there is a shortage of nurses providing palliative care. 72.5% of the studied nurses reported that there is not enough time for the nurses to provide palliative care and 84.0% agreed that lack of nurses' experience and training affects the provision of palliative care with mean \pm SD 7.391 ± 2.005 .

Table (3) represents the challenges facing nurses who provided palliative care related to the patients and their families. In this table, 75.0% of the studied nurses agreed that patients are aware of their rights and duties while they are in the hospital. It is obvious that 69.2%, 57.5% and 59.2% reported that the patients are aware of their conditions, there was a communication between the patients/their families and the nurses who provided palliative

care, and patients and their families still often avoid talking about death or related issues respectively. Also, 76.7% found that the patients' financial capacity influenced the provision of palliative care and 84.2% of them agreed that the psychological state of patients affects the provision of palliative care with mean \pm SD 4.033 \pm 1.371.

Table (4) shows the challenges facing the nurses who provided palliative care related to the hospital system, it is obvious that 75.8% of the studied nurses agreed that there is a shortage of palliative care supplies, and 74.2% agreed that there is a chronic shortage of nurses which affects the provision of palliative care. Also, 92.5% of studied nurses disagreed about the presence of financial support by the hospital to attend training programs for palliative care; hospital policy motivates and encourages nurses to provide palliative care with mean \pm SD 11.84 \pm 4.056.

Table (5) shows the palliative care challenges facing nurses related to nurses were reported by 52.8% of them, with mean \pm SD 7.391 \pm 2.005. Also, the challenge facing them related to patients and their families was reported by 67.2% with mean \pm SD 4.033 \pm 1.371. Finally, the challenges facing them related to the hospital system were reported by 65.8% with mean \pm SD 11.84 \pm 4.056.

Table (6) reveals that the relation between challenges facing nurses, patients and their families and the hospital system. This table clarifies a significant relation between challenges facing nurses & challenges facing patients' families (0.000**). Also, the relation between challenges facing nurses & challenges of the hospital system (0.000**). But there is no relation between challenges facing patients' families & challenges of the hospital system (0.350).

Table (7) clarifies the relation between challenges facing nurses and demographic characteristics. This table clarifies that a significant association documented between challenges facing nurses with their age (0.000**), educational level, (0.029*), years of experience (0.001*) and also the previous training course attendance (0.000**).

Table (8) clarifies the relation between the challenges facing patients and their families and the nurses' demographic characteristics. This table shows a significant relation between challenges facing patients and their families with age (0.000**) and years of experience (0.000**).

Table (9) shows the relation between the challenges facing the hospital system and the nurses' demographic characteristics. This table

clarifies a significant relation between challenges of the hospital system with age (0.050*) and their previous training course attendance (0.011*).

Table (10) shows the relation of total challenges facing nurses, challenges of patients and their families, and the challenges of the hospital system. This is clear that a significant association was documented between challenges of the hospital system with age (0.000**), years of experience (0.037*), and Previous training course attendance (0.001*).

5. Discussion

To the best of our knowledge, palliative care is an approach that improves the quality of patients life and their families who are facing problems associated with chronic illness (Radbruch et al., 2020). More recently, the palliative approach to care has been used to alleviate suffering, enhance quality of life, include patients in their care, potentially prolong life, and strive a comfortable death. (Bazargan, Cobb, Assari, & Kibe, 2021).

The present study involved 120 nurses who provide palliative care for patients with chronic and serious illnesses in Dekernes general hospital to investigate the challenges and challenges of palliative care delivery. These challenges were assessed concerning the nurses, patients and their relatives, and the hospital system.

Concerning the nurses' demographic characteristics, it was clarified that the mean age of the studied nurses was 31 years, and the majority of them were females. This might be due to the nature of nursing activities that require young nurses to provide a better quality of care and a good ability to tolerate the workload.

Also, the traditional working styles and job descriptions in Egypt necessitate the young nurses to directly deal with patients, and after getting older, they would be responsible for managerial duties. The reason for the increased percentage of females is that the majority of nurses in Egypt are female for years and their numbers are still greater than males in nursing fields until ten years ago. Also, the act of nursing itself is naturally a feminine activity and those females have historically represented dominance in this profession.

This is supported by Khalil, (2018) who conducted a study at Cairo University Hospital in Egypt and found that most of the studied nurses were female, and aged between 20 and 25 years with a mean of 28.4 years. Conversely, In Iraq, Na'el and Mohammed, (2019) found that most of their study nurses were males, and two-thirds of

them were aged between 20 to 29 years. They demonstrated that the nature of work in the Iraqi hospitals recommends young male nurses to provide care. Regarding the educational level, more than one-third of the studied nurses had a bachelor's degree with an experience of fewer than 5 years. This result could be because nowadays the faculties of nursing provide the health agencies with large numbers of graduated nurses than those nursing diplomas and technical institutes of nursing.

This is in agreement with **Awad, and Hewi, (2020)** who found that more than one-third of their studied nurses were bachelor's graduates, whereas the least percentage were nurses with master's degrees, with less than 5 years of experience. Conversely, in Egypt **Mohamed, Mosbeh, and Mohamed, (2018)** exposed that more than half of nurses had technical institutes, and two-thirds of nurses had a nursing diploma.

In this study, these challenges were studied regarding the nurses, patients and their relatives, and the hospital system perspectives. Firstly, concerning challenges facing nurses in relation to the nurses themselves, more than half of these nurses reported challenges. This was because they weren't familiar with the concept of palliative care; they also didn't apply PC, also the lack of time to provide PC, and the workload they face.

This is congruent with **Etafa et al., (2020)**, as they highlighted a gap in nurses' knowledge about palliative care. Also, **Fadhil, Lyons, and Payne, (2017)** in Egypt stated that Palliative care training is not required as part of graduate or undergraduate professional education, and most current residency programs in cancer, general medicine, and pediatrics do not include palliative care in their core curriculum. Only a small number of medical and nursing schools contain palliative care curricula.

On completing this study, regarding challenges facing nurses in relation to the patients and their relatives, more than two-thirds of these nurses reported challenges. This may be because the patients were not familiar with the concept of PC, consider PC a burden on their families, insufficiency of their financial capacity, and their psychological states. In a study conducted by **Felipe Silva, Silva Fhon, Partezani Rodrigues, and Pecchi Leite, (2021)** nurses reported challenges in relation to the patients and their relatives. These challenges were referred to as lack of knowledge among the caregivers of patients receiving palliative care, psychological burdens, and stigma.

Furthermore, regarding challenges facing nurses in relation to the hospital system, more than two-thirds of these nurses reported challenges. This may be because of the unavailability of policies in the hospital, the inadequacy of supplies, lack of means to obtain information and training for the nurses and lack of financial support from the hospital.

In Saudi Arabia, **Krakauer, Al-Shammary, Duraisamy, Rassouli, and Fadhil, (2022)** demonstrated the lack of national policies on palliative care, the lack of availability of opportunities for physicians and other healthcare professionals to practice and train, the understaffing of existing palliative care services, the lack of opioid analgesics, and the lack of knowledge of palliative care among general public and policy-makers.

In short, these challenges may have been related to other factors, so, it necessitated us to study the relationship between these challenges each other, as well as with the demographic data of nurses. This study depicted that the challenges faced by the nurses were positively correlated to those in relation to the patient and the health system. This may be due to the nurses' greatest roles in providing care for the patients and their dependency on the hospital facilities and means of training and putting policies.

In their systematic review, **Mascio, Best, Lynch, Phillips, and Jones, (2021)** confirmed that nurse provision of palliative care is influenced by a variety of personal, organizational, and patient-related factors. Additionally, this study also showed that the nurses' ages, educational levels, and years of experience were significantly correlated to the challenges of PC. Conclusively, nurses enact a crucial role in caring for patients with chronic and serious illnesses. Overcoming challenges in the provision of PC could greatly improve the quality of end-of-life care for those patients.

6. Conclusion

According to the findings gathered in our study, it was concluded that, nurses indeed face numerous challenges in providing effective palliative care for patients with chronic and serious illnesses: the most challenges they themselves as nursing staff face is the work-related load, followed by inadequate numbers / or shortage of nurses providing palliative care, then lack of communication between the nurses and patients/their family, and Lack of nurses' experience in providing palliative care for those types of patients.

7.Recommendations

1. The hospital administrative authoritarians that are responsible for hiring and staffing nurses should make sure that nurses are well staffed and that they are not overworked to be able to provide effective palliative care for patients with chronic and serious illness
2. The hospital or the management should create a good environment that supports and practices effective communication to the nurses to ensure that they are adequately prepared for the possible dilemmas and experiences likely to be witnessed during palliative care

8.Acknowledgments

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Table (1) Demographic Characteristics of the Nurses (N=120)

Items	No	%
Age group		
▪ < 30 years	52	43.3
▪ 30 : < 40 years	55	45.9
▪ 40 : 50 years	13	10.8
Mean ± SD	31.233 ± 6.634	
Gender		
▪ Male	16	13.3
▪ Female	104	86.7
Educational level		
▪ Nursing school	27	22.5
▪ Technical nursing institute	37	30.8
▪ Nursing bachelor	47	39.2
▪ Post graduate	9	7.5
Years of experience		
▪ < 5 years	44	36.7
▪ 5 : < 10 years	24	20
▪ 10 : < 15 years	34	28.3
▪ 15 : < 20 years	18	15
Mean ± SD	8.300 ± 5.225	
Previous training course attendance		
▪ Yes	20	16.7
▪ No	100	83.3

Table (2) Challenges Facing Nurses who Provide Palliative Care for Patients with Chronic and Serious Illness (N=120):

Challenges	Yes		No	
	No	%	No	%
Nurses are aware of palliative care.	55	45.8	65	54.2
Nurses have a misunderstanding about palliative care.	58	48.3	62	51.7
Nurses apply palliative care in the hospital.	52	43.3	68	56.7
Nurses' attitudes toward palliative care are negative.	60	50	60	50
Nurses lack confidence in promoting palliative care.	50	41.7	70	58.3
There is a shortage of nurses providing palliative care.	91	75.8	29	24.2
Nurses are too busy to have enough time to listen to patients' needs because they are taking care of many patients.	33	27.5	87	72.5
The workload of nurses affects the provision of palliative care.	101	84.2	19	15.8
There is communication between the nurses and patients/their families.	83	69.2	37	30.8
The continuous or temporary absence of nurses affects the provision of palliative care?	62	51.7	58	48.3

Nurses are afraid that they are unable to deal with the emotional reactions of patients after they inform them about their condition.	72	60	48	40
Nurses avoid discussing the deterioration of the patient's condition.	45	37.5	75	62.5
Lack of nurses' experience in palliative care.	84	70	36	30
Nurses are trained to provide palliative care.	60	50	60	50
Nurses are provided with up-to-date palliative care information and skills.	52	43.3	68	56.7
There are books/scientific research recommendation for palliative care that help nurses learn.	50	41.7	70	58.3
The nurses strive to know all that is new about palliative care.	80	66.7	40	33.3
Mean ± SD	7.391 ± 2.005			

Table (3) Challenges Facing Nurses who Provide Palliative Care related to Patients and their Families (N=120):

Patients and their relatives Challenges	Yes		No	
	No	%	No	%
Patients are aware of their rights and duties while they are in the hospital.	90	75	30	25
Patients are aware of them condition.	83	69.2	37	30.8
Patients\their families are aware of palliative care.	61	50.8	59	49.2
Patients\their families have a misunderstanding about palliative care.	58	48.3	62	51.7
There are cultural issues that affect their perception and responses to treatment.	62	51.7	58	48.3
Patients have been unable to express treatment.	60	50	60	50
There is communication between patients\their families and nurses who provide palliative care.	69	57.5	51	42.5
Patients and their families still often avoid talking about death or related issues.	71	59.2	49	40.8
Patients' financial capacity influences the provision of palliative care.	92	76.7	28	23.3
The psychological state of patients affects the provision of palliative care.	101	84.2	19	15.8
Mean ± SD	4.033 ± 1.371			

Table (4) Challenges Facing Nurses who Provide Palliative care related to Hospital System (N=120):

Hospital System Challenges	Yes		No	
	No	%	No	%
The concept of palliative care is known and available in the hospital.	56	46.7	64	53.3
There are policies and procedures for palliative care in the hospital.	46	38.3	74	61.7
The hospital applies policies for palliative care.	26	21.7	94	78.3
The hospital doesn't pay attention to palliative care.	55	45.8	65	54.2
The hospital focus on acute treatment more than palliative care.	52	43.3	68	56.7
There is a shortage of palliative care supplies.	91	75.8	29	24.2
There is a palliative care team in the hospital.	45	37.5	75	62.5
There is clear specialization for each member of the palliative care team.	47	39.2	73	60.8
The specialties of the palliative care team are applied.	26	21.7	94	78.3
There is communication between the palliative care team.	41	34.2	79	65.8
There is communication between the palliative care team and the patients\their families.	35	29.2	85	70.8
There are recommendations\ scientific researches supporting palliative care.	46	38.3	74	61.7
The hospital provides opportunities for nurses to update their palliative care knowledge and skills.	39	32.5	81	67.5
The hospital provides multiple means for nurses to obtain information as the library or the internet.	36	30	84	70
The hospital provides financial support to attend training programs for palliative care.	9	7.5	111	92.5
There is a continuous evaluation system for the nurses who provide palliative care in the hospital.	31	25.8	89	74.2
Hospital policy motivates and encourages nurses to provide palliative care.	17	14.2	103	85.8
There is chronic shortage of nurses which affects the provision of palliative care.	89	74.2	31	25.8

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The hospital provides enough nurses to provide palliative care.	19	15.8	101	84.2
The hospital takes the nurses' opinion in making decisions about palliative care.	23	19.2	97	80.8
The hospital provides the nurses with a financial incentive to encourage them to provide palliative care.	6	5	114	95
Mean ± SD	11.48±4.056			

Table (5) Palliative Care Challenges Facing Nurses related to Nurses, Patients and their Families and the Hospital System:

Palliative care challenges	Mean±SD	Yes%	No%
palliative care challenges related to nurses	7.391±2.005	52.8%	47.2%
palliative care challenges related to patients and their families	4.033±1.371	67.2%	32.8%
palliative care challenges related to the hospital system	11.84±4.056	34.2%	65.8%

Table (6) Relation between Challenges Facing Nurses, Patients and their Families and the Hospital System.

Variables	r	p
Challenge facing nurses & challenges facing patients and their families	0.420	0.000**
Challenge facing nurses & challenges of the hospital system	0.472	0.000**
Challenges facing patients and their families & challenges of the hospital system	0.086	0.350

Table (7) Relation between Challenges Facing Nurses & the Nurses' Demographic Characteristics:

Items	Mean ± SD	Significance
Age group		F=9.757
▪ < 30 years	1.672 ± 0.231	p=0.000**
▪ 30 : < 40 years	7.600 ± 2.165	
▪ 40: 50 years	5.230 ± 1.091	
Gender		t=0.901
▪ Male	7.812 ± 2.509	p=0.369
▪ Female	7.326 ± 1.922	
Educational level		F=3.122
▪ Nursing school	1.737 ± 0.334	p=0.029*
▪ Technical nursing institute	1.528 ± 0.251	
▪ Nursing bachelor	2.337 ± 0.340	
▪ Post graduate		
Years of experience		F=6.301
▪ < 5 years	1.529 ± 0.230	p=0.001*
▪ 5 : < 10 years	2.448 ± 0.499	
▪ 10 : < 15 years	1.558 ± 0.267	
▪ 15 : < 20 years	2.338 ± 0.551	
Previous training course attendance		t=3.610
▪ Yes	7.110 ± 1.911	p=0.000**
▪ No	8.800 ± 1.908	

t refers to independent t test, F refers to one way ANOVA test, * refers to significance if p- value is less than 0.05, ** refers to highly significance if p- value is less than 0.001.

Table (8) Relation between Challenges Facing Patients and their Families & the Nurses' Demographic Characteristics:

Items	Mean ± SD	Significance
Age group		F=14.438
▪ < 30 years	3.596 ± 1.208	p=0.000**
▪ 30 : < 40 years	4.672 ± 1.277	
▪ 40: 50 years	3.076 ± 1.187	
Gender		t=-1.283
▪ Male	3.625 ± 1.857	p=0.202
▪ Female	4.096 ± 1.281	

Educational level <ul style="list-style-type: none"> ▪ Nursing school ▪ Technical nursing institute ▪ Nursing bachelor ▪ Post graduate 	<p>4.000 ± 1.176</p> <p>4.027 ± 1.518</p> <p>3.978 ± 1.451</p> <p>4.444 ± 0.881</p>	<p>F=0.295</p> <p>p=0.829</p>
Years of experience <ul style="list-style-type: none"> ▪ < 5 years ▪ 5 : < 10 years ▪ 10 : < 15 years ▪ 15 : < 20 years 	<p>3.500 ± 1.171</p> <p>4.166 ± 1.239</p> <p>4.764 ± 1.280</p> <p>3.777 ± 1.592</p>	<p>F=6.521</p> <p>p=0.000**</p>
Previous training course attendance <ul style="list-style-type: none"> ▪ Yes ▪ No 	<p>4.500 ± 1.100</p> <p>3.940 ± 1.405</p>	<p>t=1.680</p> <p>p=0.096</p>

t refers to independent t test, F refers to one way ANOVA test, * refers to significance if p- value is less than 0.05 , ** refers to highly significance if p- value is less than 0.001.

Table (9) Relation between Challenges Facing the Hospital System & the Nurses' Demographic Characteristics:

Items	Mean ± SD	Significance
Age group <ul style="list-style-type: none"> ▪ < 30 years ▪ 30 : < 40 years ▪ 40: 50 years 	<p>6.423 ± 3.917</p> <p>6.236 ± 4.285</p> <p>3.461 ± 2.696</p>	<p>F=3.020</p> <p>p=0.050*</p>
Gender <ul style="list-style-type: none"> ▪ Male ▪ Female 	<p>6.875 ± 4.349</p> <p>5.884 ± 4.015</p>	<p>t=0.909</p> <p>p=0.365</p>
Educational level <ul style="list-style-type: none"> ▪ Nursing school ▪ Technical nursing institute ▪ Nursing bachelor ▪ Post graduate 	<p>5.518 ± 3.796</p> <p>5.648 ± 3.713</p> <p>6.617 ± 4.484</p> <p>5.888 ± 4.075</p>	<p>F=0.577</p> <p>p=0.631</p>
Years of experience <ul style="list-style-type: none"> ▪ < 5 years ▪ 5 : < 10 years ▪ 10 : < 15 years ▪ 15 : < 20 years 	<p>6.795 ± 4.168</p> <p>5.708 ± 4.534</p> <p>6.264 ± 3.620</p> <p>4.055 ± 3.472</p>	<p>F=2.087</p> <p>p=0.106</p>
Previous training course attendance <ul style="list-style-type: none"> ▪ Yes ▪ No 	<p>8.100 ± 3.918</p> <p>5.600 ± 3.972</p>	<p>t=2.575</p> <p>p=0.011*</p>

t refers to independent t test, F refers to one way ANOVA test, * refers to significance if p- value is less than 0.05 , ** refers to highly significance if p- value is less than 0.001.

Table (10) Relation of Total Challenges Facing Nurses, Challenges of Patients and their Families, Challenges of the Hospital System, and the Nurses' Demographic Characteristics.

Items	Mean ± SD	Significance
Age group <ul style="list-style-type: none"> ▪ < 30 years ▪ 30: < 40 years ▪ 40: 50 years 	<p>17.730 ± 4.781</p> <p>18.509 ± 6.297</p> <p>11.769 ± 3.767</p>	<p>F=8.162</p> <p>p=0.000</p> <p>**</p>
Gender <ul style="list-style-type: none"> ▪ Male ▪ Female 	<p>18.312±6.915</p> <p>17.307± 5.601</p>	<p>t=0.647</p> <p>p=0.519</p>

Challenges Facing Hospital Based Nurses who provide. . . .

Educational level <ul style="list-style-type: none"> ▪ Nursing school ▪ Technical nursing institute ▪ Nursing bachelor ▪ Post graduate 	15.925 ± 5.615 17.351 ± 4.230 18.191 ± 6.654 18.444 ± 5.854	F=0.978 <i>p</i> =0.406
Years of experience <ul style="list-style-type: none"> ▪ < 5 years ▪ 5 : < 10 years ▪ 10 : < 15 years ▪ 15 : < 20 years 	17.704 ± 5.133 18.458 ± 6.399 18.264 ± 5.338 13.888 ± 6.276	F=2.917 <i>p</i> =0.037 *
Previous training course attendance <ul style="list-style-type: none"> ▪ Yes ▪ No 	21.400 ± 4.750 16.650 ± 5.648	t=3.517 <i>p</i> =0.001 *

t refers to independent t test, F refers to one way ANOVA test, * refers to significance if p- value is less than 0.05 , ** refers to highly significance if p- value is less than 0.001.