Original Article

Assessment of Nurses' Practice Related to Managing Patients with Dyspnea at Emergency Units at Port Said hospitals

Mariam Sabry Shehab
Department of Medical Surgical Nursing, Faculty of Nursing, Port Said University, Egypt

Hayat Abd-Elkader
Department of Medical Surgical Nursing, Faculty of Nursing, Port Said University, Egypt

Noha Mohamed Ibrahim
Department of Medical Surgical Nursing, Faculty of Nursing, Port Said University, Egypt

Correspondence: Mariam Sabry Shehab Department of Medical Surgical Nursing, Faculty of Nursing, Port Said University, Egypt E-mail: samoha201029@yahoo.com

Abstract

Aim of this study : This study was aiming to Assess nurses' practice related to managing patients with dyspnea at emergency units at port said hospitals.
Research design: descriptive study design was used.
Setting: The study was conducted at emergency units at Alamerie and Alzohor hospitals at Port Said city.
Subject: The study involved all available nurses' worked in emergency units at Alamerie and Alzohor hospitals about (50 nurse).
Tool of data collection: Data were collected using nurses' dyspnea managing observation checklist.
Results: Total mean practice score regarding management of patients with dyspnea were un satisfactory.
Conclusion: Nurse's level of practice in assessing physical assessment parameters was un satisfactory in all items.
Recommendation: The study recommended continuous educational programs should be planned on regular basis to nurses' managing patients with dyspnea for enhancing nurses' practice and to achieve high quality of care.

Key Words: dyspnea, nurses, practice, management, care, assessment.

Introduction

Dyspnea is a complex symptom that involves an uncomfortable sensation related to breathing or an awareness of breathing, which can be highly distressing for both patients and caregivers. Dyspnea, or breathlessness, has been described as simply ''difficulty breathing.'' However, from the perspective of a patient with dyspnea, it is likened to suffocating, or feeling like ''a fish out of water (Nauck & Alt-Epping 2008, Jaturapatporn et al, 2010). Dyspnea can be acute, with a rapid and sudden onset requiring emergency care, or chronic, with a more gradual onset that worsens over time and causes a person to seek care when it interferes with normal activity (Joyce et al, 2010),

Prevalence of dyspnea is linked to a number of previous risk factors, such as a history of smoking, asthma, COPD, cardiac disease (especially HF), environmental exposures (asbestos, dust from coal, cotton, or grain), lung cancer, lung radiation, anxiety, fatigue, and low performance status, with higher prevalence in individuals with more risk factors (3). Patients who experience dyspnea are at higher risk for depression and have poorer health related QOL (Janssen et al., 2010, Voll-Aanerud et al., 2010).

Most patients who report dyspnea also report pain and fatigue, regardless of their underlying diagnosis, and the intensity of dyspnea is significantly higher in patients closer to death

(Solano et al., 2006, Tishelman et al., 2007). These prevalence statistics and risk factor data highlight that dyspnea is present in a variety of disease states at various stages of illness and is frequently associated with other psychological symptoms such as anxiety, pain, and depression.

The pathophysiology of dyspnea is multifactorial and includes neurophysiological and affective components (O'Donnell et al., 2007, Mahler 2006). The neurophysiological component begins with chemoreceptor detection of hypoxia and/or hypercapnia, which stimulates the transmission of afferent nerve impulses to the central nervous system (CNS) (Mahler 2006, Thomas 2009). In the CNS, these impulses are processed and trigger efferent nerve impulses to the chest wall and diaphragm and signal respirations to increase (Mahler 2006, Thomas 2009).

Nurses play a vital role in management of dyspnea through nursing practice, research, and patient education. However, many common nursing interventions for management of dyspnea are based on tradition or expert opinion and have not been subjected to scientific examination (Humphris, & Masterson, 2000). Nursing involves caring and supporting patients, and allows opportunities for trust to develop between the patient and the nurse. These patient-nurse interactions are an important aspect of managing patients with dyspnea. A thorough nursing assessment and measurement of systemic observations allows the nurse to gain an understanding of how patients are managing their breathlessness (Brooker, 2004).

This study aimed to assess nurses' practice related to managing patients with dyspnea at emergency units at Port Said hospitals.

Research Question

What is the practice of nurses' related to managing patients with dyspnea at emergency units at Port Said hospitals?

Methodology

A descriptive design was used in this study.

Study Settings and population

The present study was conducted in emergency units at Alamerie and Alzohor hospitals at Port Said city. The study population included all available nurses' worked with patients with dyspnea at emergency units at at Alamerie and Alzohor hospitals at Port Said city. About (50) nurse.

Instrument of data collection

Data were collected by using a tool that consisted of two parts. Part 1 includes question for eliciting information on socio-demographic characteristics of the sample and consisted of (10) items. Part 2 includes the Nurses' dyspnea management performance (observational checklist)that it was developed by Brunner & Suddarth's (2003) and was adopted and modified by the researcher to assess nurses practice related to care of patients with dyspnea. It consisted of two columns ;(done and not done).

Before the conduction of the study, an official letter was sent from the faculty of nursing to the selected for the study hospitals. The director of each hospital was contacted and informed about the study in order to obtain permission to include the nurses' on the present research.

Ethical Considerations

Purpose and expected outcomes of the study were explained to each study subject, who were asured that all the gathered data will be used for the research purpose only, they were informed that the study was harmless and that their approval to participate is a prerequisite in order to be included in the study. Subjects were assured that they could quit/withdraw whenever they wanted.

The operational design of the current study included the preparatory phase, content validity, pilot study and field work.

Statistical Design

The collected data organized, tabulated and statistically analyzed using statistical package for social science (SPSS) version 16 for windows, running on IBM compatible computer.

Qualitative data (categorical data) were expressed as relative frequency (number) and percent distribution, and for comparison between groups, the Chi square. For interpretation of results, the p value ≤ 0.05 was considered significant

Results

Table (1) shows the socio-demographic characteristics of studied nurses. Most of the studied nurses had 20 years and less than 30 years (86.0%). As regard graduation about half of them had secondary diploma (50.0%). As regard years of experience about half of them had three to five years of experience (46.0%).

More than half of studied nurses said that they; did not have any previous training course about management of dyspnea while two third of them had protocol about management of dyspnea. On the other hand most of them mentioned that the number of died cases related to dyspnea was (86.0%). Also about (82.0%) said that they observed by supervisors.

Table (2) shows nurses level of practice in assessing physical assessment parameters. This table illustrate that nurse's level of practice in assessing physical assessment parameters was un satisfactory in all items.

Table (3) shows level of practice in nursing intervention for dyspnea. This table illustrate that nurse's level of practice in nursing intervention for dyspnea was satisfactory as regard administer prescribed oxygen therapy(100%) and administer prescribed opioids via oral route(72%), while it was not satisfactory for other studied items.

Table (4) shows correlation between total practice scores and socio-demographic characteristics. This table illustrate that; there was highly, statistically significant correlation between total practice score and level of education, attending training programs and presence of died cases related to dyspnea at the (0.01) level. Also there was statistically significant correlation between total practice and age, presence of protocol and observation by supervisors at the (0.05) level. On the other hand there was no statistically significant correlation between total practice score and their years of experience and marital status.

Discussion

In the present study they were included 50 nurses, most of them were females and between 20 to 30 years old. The majority of nurses had a secondary degree of nursing education (diploma) and the majority of them had three to five years of experience.

Regarding the training program, it was found that; more than half of studied nurses said that they; did not have any previous training course about management of dyspnea. These results agree with Abbas, (2014) who mad study entitled nursing intervention for management of patient with dyspnea at emergency units in Baghdad hospitals. Also agree with Brooker, (2004) that indicates the most of nurses have not training session for management of dyspnea for patients at the emergency unit, while two third of them had protocol about management of dyspnea. On the other hand the number of died cases related to dyspnea was (86.0%). Also about (82.0%) was observed by supervisors.

Concerning practice of nurses in physical assessment parameters; the results reveals that all items were un satisfactory such as assessment of Symptom intensity, distress, and interference with activities, auscultation of lung sound, assessment of fluid balance, measurement of dependent edema (circumference of lower extremities), measurement of abdominal girth, temperature, skin color, sputum quantity and character and cough. This result was due to lack of training programs done for nurses which focus on the importance of assessment was done for patient before management.

Table (1)Distribution the nurses by their characteristics. (N=50)

Items		N.	%
Age	< 20 years	2	4.0
	20 to 30 years	43	86.0
	>30	5	10.0
sex	female	47	94.0
	male	3	6.0
Hospital	Alzohor	20	40.0
	Alamiree	30	60.0
Social state	married	43	86.0
	single	5	10.0
	divorced	2	4.0
Graduation	diplom	25	50.0
	Technical institution	23	46.0
	bachelor	2	4.0
Experience	>3years	14	28.0
	3-5years	23	46.0
	<5years	13	26.0
Training	yes	23	46.0
	no	27	54.0
Protocol	yes	37	74.0
	no	13	26.0
Died cases	yes	43	86.0
	no	7	14.0
Observed by supervisor	yes	41	82.0
	no	9	18.0

Table (2) Distribution of the nurses according to their level of practice in physical assessment parameters (N=50)

Items		N.	%
Symptom intensity, distress, and interference with activities	Not satisfactory	47	94.0
	Satisfactory	3	6.0
auscultation of lung sounds	Not satisfactory	45	90.0
	Satisfactory	5	10.0
assessment of fluid balance	Not satisfactory	46	92.0
	Satisfactory	4	8.0
measurement of dependent edema (circumference of lower extremities)	Not satisfactory	47	94.0
	Satisfactory	3	6.0
measurement of abdominal girth	Not satisfactory	45	90.0
	Satisfactory	5	10.0
temperature	Not satisfactory	45	90.0
	Satisfactory	5	10.0
skin color	Not satisfactory	46	92.0
	Satisfactory	4	8.0
sputum quantity and character	Not satisfactory	46	92.0
	Satisfactory	4	8.0
cough	Not satisfactory	45	90.0
	Satisfactory	5	10.0

Table (3) Distribution of the nurses according to their level of practice in nursing intervention for dyspnea (N=50)

Items		N.	%
Administer prescribed anxiolytic medications as indicated for anxiety or panic associated with dyspnea.	Not satisfactory	42	84.0
	Satisfactory	8	16.0
Assist with relaxation techniques, guided imagery.	Not satisfactory	45	90.0
	Satisfactory	5	10.0
Administer prescribed bronchodilators and corticosteroids (obstructive pathology)	Not satisfactory	22	44.0
	Satisfactory	28	56.0
Administer prescribed diuretics and monitor fluid balance	Not satisfactory	27	54.0
	Satisfactory	23	46.0
Administer prescribed oxygen therapy via nasal cannula, if tolerated; masks may not be well tolerated.	Not satisfactory	0	00.0
	Satisfactory	50	100.0
Administer prescribed opioids via oral route (morphine sulfate is used most commonly)	Not satisfactory	36	72.0
	Satisfactory	14	28.0
Provide air movement in the patient's environment with a portable fan.	Not satisfactory	32	64.0
	Satisfactory	18	36.0
Teach patient and family to implement energy conservation measures.	Not satisfactory	40	80.0
	Satisfactory	10	20.0
Place needed equipment, supplies, and nourishment within reach.	Not satisfactory	35	70.0
	Satisfactory	15	30.0
patient and family instructions should include anticipation and management of crisis situations.	Not satisfactory	34	68.0
	Satisfactory	16	32.0
Patients and families should be instructed about medication administration for dyspnea.	Not satisfactory	29	58.0
	Satisfactory	21	42.0
condition changes that should be reported to the healthcare provider and nurse, and strategies for coping with increased symptoms as the disease progresses.	Not satisfactory	40	80.0
	Satisfactory	10	20.0
The patient and family reassured that the symptom can be effectively managed at home with the need for activation of the emergency medical services or hospitalization and that a nurse will be available at all times via telephone or to conduct a visit.	Not satisfactory	47	94.0
	Satisfactory	3	6.0

Table (4) correlation between total practice and socio-demographic characteristics (N=50)

Total Practice	Correlation	Items
.293(*)	r	Age
.039	p	
-.110	r	Sex
.447	p	
.210	r	Hospital
.143	p	
.209	r	Experience
.146	p	
.369(**)	r	Education
.008	p	
.226	r	marital state
.115	p	
.589(**)	r	training program
.000	p	
.356(*)	r	Protocol
.011	p	
.367(**)	r	died cases
.009	p	
.341(*)	r	Observed by supervisor
.015	p	

Also it was observed from the results of this study that; there was satisfactory level in only two items of nurse's practice in nursing intervention for dyspnea, administer prescribed oxygen therapy and administer prescribed opioid via oral route. But there was unsatisfactory level in the other items. This result id agree with Abbas, (2014) who mentioned that; the results of his study reveals that evaluation of relative sufficiency was low on most items of nursing intervention for dyspnea. On the other hand disagree with Shiber and Santana, (2006) which indicated that the most of the items related to management of dyspnea for patient at the

emergency units was moderate level mean of score.

The results indicated that; there was highly, statistically significant correlation between total practice score and level of education, attending training programs and presence of died cases related to dyspnea at the (0.01) level. These results agree with Loeb, (2004) which indicated that there is significant association between training session of sample and their level of education and nurses' practice. Also there was statistically significant correlation between total practice and age, presence of protocol and observation by supervisors at the (0.05) level.
These results agree with Shahin et al. (2012), Mohamed & Wafa, (2011) and Penland, (2010). All of them found that there was a statistical significance relation between nurses' practice and educational level of participant.

These results disagree with Abbas, (2014) who indicated that there is no significant association between ages and nurses practice score. On the other hand there was no statistically significant correlation between total practice score and their years of experience and marital status. These results agree with Abbas, (2014) who indicated that there is significant association between nurses' years of experience and nurses practice score.

Conclusion

The study concluded that the most of the nurses who worked in emergency units have inadequate nursing practice skills in managing patient with dyspnea.

Recommendations

In the light of the findings of the current study the following recommendations are suggested:

- Special training program designed and constructed for nurses in this area to reinforce their practical skills.
- Upgrading nurses' practice about caring of patient's with dyspnea through encourage nurses attend national and international workshop about caring patients with dyspnea.
- Release hand book for nurses' practices concerning with management a dyspnea for patient at the emergency units, it included brief explain with text and pictures

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