

Assessment of Nurses' Performance Regarding Management of Patients on Mechanical Ventilator

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ABSTRACT

Background: Mechanical Ventilation is widely used in the Intensive Care Units worldwide for various emergency indications. So, nurses must be knowledgeable about the function and limitations of ventilator modes, causes of respiratory distress and dys-synchrony with the ventilator and appropriate management in order to provide high-quality patient-centered care. **Aim:** was to assess nurses' performance regarding management of patients on mechanical ventilator.**Subject and Methods:** Setting:the study was conducted in the Intensive Care Units (ICUs) at Mansura University Emergency Hospital. Design was descriptive design and including 60 nurses. Tools: Two tools were used for data collections: tool I: interview questionnaire sheet to assess nurses' demographic characteristics and nurses' information regarding management of patient on mechanical ventilator. Tool II: observational checklist for their practice. **Results:** showed that , 68.3% of nurses had unsatisfactory knowledge; all nurses in the study (100%) had unsatisfactory practice regarding the management of patients on the mechanical ventilation ;there was statistically significant relation between nurses' practice regarding the management of patients on the mechanical ventilator and their demographic characteristics in area of occupation and no correlation between nurses' knowledge and practice regarding the management of patients on the ventilator. **Conclusion:** Based on the study finding, the majority of nurses caring for the patients on mechanical ventilator had unsatisfactory knowledge and practice.**Recommendation:** Recommended that the nurses should be trained enough to give effective and safe care to such patients.

Key Words: mechanical ventilator, mechanical ventilation &nurses' performance.

INTRODUCTION

Mechanical ventilation (MV) is an essential method in the resuscitation and comprehensive treatment of critical care patients *Hong et al(2012)*. Mechanical ventilation is not curative but it means supporting patients until they recover the ability to breathe independently *Lewis et al (2011)*.

In Egypt, there are no available statistical reports about the incidence and prevalence of patients on mechanical ventilation as well as, there are no available statistical reports about the cases or the mortality rate among the patients on mechanical ventilator *Belal (2011)*. In intensive care units in Dakahlia Governorate 7717 Mechanically Ventilated patients were admitted in the ICUs during the period January 2014 to July 2014 *Health Information System (2014)*.

Many people may be familiar with ventilators in the hospital setting, such as the ICU where large complex are used *Saint Louis (2014)*. Mechanical ventilator support are to normalize arterial blood gases levels and acid-base imbalance by providing adequate ventilation and oxygenation *Grossabach et al (2013)*. In critical care, the indication for mechanical ventilation may be simply for the management of ventilator (pump) failure e.g. postoperatively or for drug intoxication. Often however, it is required for acute respiratory failure due to parenchymal lung disease *Patroniti (2011)*. Thoracic or abdominal surgery, drug overdose, neuromuscular disorders, inhalation injury, Chronic Obstructive Pulmonary Disease (COPD), multiple trauma, shock, multisystem failure and coma all may lead to respiratory failure and the need for mechanical ventilation *Smeltzer et al (210)*.

Many types of ventilators are available. The ventilator selected depends on the severity of breathing problem and the length of time ventilator support is needed *Workman and Ignatavicius (2010)*. The major types of mechanical ventilation are negative pressure and positive pressure ventilation. Negative pressure ventilation involves the use of chambers that encases the chest or body and surrounds it with intermittent sub-atmospheric or negative pressure. This type of ventilation is similar to normal ventilation in that decreased intra thoracic pressure produce inspiration and expiration is passive *Lewis et al (2007)*. In positive pressure ventilators, during mechanical inspiration, air is actively delivered to the patients' lungs under positive pressure. Exhalation is passive; it requires use of a cuffed artificial airway *Nair (2009)*.

There are various modes as: Controlled Mechanical Ventilation (CMV) , Assisted Mechanical Ventilation (AMV) ,Intermittent Mandatory ventilation (IMV) ,Synchronised Intermittent Mandatory ventilation (SIMV) ,Pressure-Support Ventilation (PSV) ,Assisted Spontaneous Breath (ASB) ,Positive End Expiratory Pressure (PEEP) ,and Continous Positive Airway Pressure (CPAP) *O'Higgins (2012)*. Mode of ventilation refers to the method of inspiratory support provided by the mechanical ventilator. It is the specific combination of breathing pattern and control

variables to deliver inspiration. Selection of mode is based on the clinician's familiarity and experience and the institutional preferences **Grossbach et al (2013)**.

Complications can occur at any stage of mechanical ventilation and are sometimes life threatening whereas commonly recognized complications of mechanical ventilation include airways complications, equipment failure, ventilator-induced lung injury, and ventilator-associated pneumonia **Afreedi et al (2009)**. Ventilator-associated pneumonia (VAP), sepsis, Acute Respiratory Distress Syndrome (ARDS), pulmonary embolism, barotrauma, and pulmonary edema are among the complications that can occur in patients receiving mechanical ventilation, whereas such complications can lead to longer duration of mechanical ventilation, longer stay in the ICU and hospital, increased healthcare costs, and increased risk of disability and death **Device-Associated Module (2014)**.

Weaning is the process of going from ventilatory dependence to spontaneous breathing and this process is prolonged by complications **Nair (2009)**. There are three methods followed for weaning. The first method ,Intermittent trials of spontaneous breathing on a T piece alternated with Mechanical ventilator supported muscle rest. Second method , Intermittent Mandatory ventilation (IMV) with a gradual reduction in the rate of mandatory breaths. Finally , Pressure-Support Ventilation (PSV)- method the amount of pressure used to augment spontaneous ventilation is gradually reduced **Afreedi et al (2009)**.

Nurses must be knowledgeable about the function and limitations of ventilator modes, causes of respiratory distress and dyssynchrony with the ventilator, and appropriate management in order to provide high-quality patient-centered care. Prompt recognition of problems and action by the nurse may resolve acute respiratory distress, dyspnea, and increased work of breathing and prevent adverse events **Grossbach et al (2013)**.

About 80% of patients in intensive care units are reported to require mechanical ventilation, and nursing care of patients receiving mechanical ventilation has become increasingly important. In the intensive care units, the nursing staff especially trained in basic knowledge and techniques of intensive care medicine provide the main care for critically ill patients, including airway care for patients requiring mechanical ventilation **Crimlisk et al (2006)**.

The nurse is usually the "first-line manager" challenged with patient- and ventilator-related problems. As a result, it is essential that nurses thoroughly understand the basics of ventilator support, including ventilator modes, settings, and alarms. It is also important to be skilled in promptly identifying and managing common patient and ventilator-related problems in order to provide optimal patient centered care and prevent complications. Prompt recognition of problems and action by the nurse may resolve acute respiratory distress, dyspnea, and increased work of breathing and prevent adverse events **Grossbach et al (2013)**.

AIM OF STUDY:

To assess nurses' performance regarding management of patients on mechanical ventilator.

Research Questions:

To achieve the above purpose of this study the following questions should be answered:-

- A. What is the nurses' level of knowledge and practice regarding management of patients on mechanical ventilator?
- B. Is there relationship between nurses' knowledge and practice regarding management of patients on mechanical ventilator?
- C. Is there relationship between nurses' knowledge and practice regarding management of patients on mechanical ventilator and their demographic data?

SUBJECT AND METHODS:

Research design:-

A descriptive study design was used.

Study subject:-

A convenient sample of all available nurses working in intensive care units in Mansoura University Emergency Hospital who caring patients on mechanical ventilator at the time of the study. Their number was 60 nurses.

Research setting:-

Intensive care units in Mansoura University Emergency Hospital.

TOOLS:

Two tools were used in the study, as the following:

Tool 1: structured interview questionnaire sheet

It included two parts and was adopted from **Alomari (2012)**

Part (1): It consisted of demographic characteristics of nurses under study as age, gender, and years of experience, etc

Part (2): It included series of questions to assess nurses' knowledge related to mechanical ventilation. It was composed of 53 multiple choice questions that addressed the overall level of the nurse's knowledge about mechanical ventilation. It involved four categories as follows:- anatomy and physiology of respiratory system (5 questions), mechanical Ventilation (10 questions), complications of mechanical ventilation (5 questions) and management of patient on the mechanical ventilation (33 questions). Endo tracheal tube care (8 questions), oral and airway care (2 questions), chest physiotherapy care (2 questions), nursing care during suction (8 questions), nursing care during nutrition and fluid (3 questions), nursing care during humidifier (2

questions), nursing care during ventilator alarms (3 questions), nursing care during ventilator sterilization (3 questions) and nurses' patient communication (2 questions).

Scoring system:

Nurses' knowledge assessment sheet consisted of 53 multiple choice questions, the answer was evaluated using model key answer prepared by the researcher, where as the correct answer scored (1), and the incorrect answer scored (0), then scores were converted into a percent score. The nurse knowledge was considered satisfactory if the percent score was 80% or more and unsatisfactory if less than 80%.

Tool 2: Nurses practice observation checklist

It was used to assess nurses' practice regarding management of patients on mechanical ventilation. It was adopted from *Alomari(2012)and Said(2012)*, it included the following practices:-endo tracheal tube suction, endo tracheal tube care, arterial blood gases sample and oral care.

Scoring system:

For nurses' practice, the items were divided into correctly done scored (1) and not done scored (0), then frequency and percentage were given to correct and incorrect practice. The nurse practice was considered satisfactory if the percent score was 80% or more and unsatisfactory if less than 80%.

Validity & reliability:

Alpha cronbach's test was used to measure the internal consistency of the tools. The tools showed high reliability scores as follow;-

- Knowledge assessment form = 0.337
- Observational checklist= 0.801

Testing validity of the proposed tools using face and content validity.

Pilot study:

The pilot study was carried out on 10% of the total sample to evaluate the reliability and applicability of tools and to estimate the proper time required for the study used tool. Nurses who shared in the pilot study were included in the study and the final forms of tools were developed.

Ethical Considerations:

The verbal agreement for participation of the subjects was taken after aims of the study have been explained to them. The study interventions have no any harmful effect on participants and they were assured that the information collected would be treated confidentially and used for the research purpose only.

STATISTICAL DESIGN:-

The collected data were organized, categorized, analyzed and tabulated through a personal computer using statistical package for social sciences (SPSS). Data were presented using descriptive statistics in the form of frequencies and percentages, description of qualitative variables as mean, SD and range were also used, Statistical significance was considered at $P < 0.05$ and insignificance at $P > 0.05$. For comparison between groups the chi square (X^2) or Fisher exact test were used.

RESULTS:

Table (1): Shows that, regarding age more than half (55%) of the studied nurses were at age group 20-25 years, while 11.7% of them were at age group 35 years or more. Regarding gender, the majority of the nurses (96.7%) were female. In relation to marital status, more than half of study samples (53.3%) were married, while 46.7 of them were single. Regarding occupation, more than half of nurses in the study (56.7%) were staff nurses, while the minority of them (1.7%) were head nurses. As regards qualifications, more than one third of nurses in the study (36.7%) had nursing diploma, while 5% of them had nursing technical institute, diploma. Regarding years of experience, more than half of the nurses (55%) were less than 5 years, while 8.3% of them were 5 - <10 years. Related to training courses, more than half of nurses (58.3%) had not attended any training courses regarding mechanical ventilator.

Table (2): Clarifies that, , 68.3% of nurses had unsatisfactory knowledge regarding management of patient on mechanical ventilator, with mean \pm SD (36 ± 10.42).

Table (3): clarifies that, all nurses (100) had unsatisfactory practice regarding management of patient on mechanical ventilator.

Table (4): shows that, there were not statistically significant relations between nurses' knowledge regarding the management of patients on the mechanical ventilator and their demographic characteristics.

Table (5): shows that, there was statistically significant relation between nurses' practice regarding the management of patients on the mechanical ventilator and their demographic characteristics in area of occupation where at ($p < 0.05$).

Table (6): illustrates that, there was no correlation between nurses' knowledge and practice regarding the management of patients on the ventilator.

Table (1): Percentage distribution of the studied nurses according to their demographic characteristics (n=60)

Demographic characteristics	No	%
Age		
20- < 25y	33	55.0
25- < 30y	9	15.0
30- < 35y	11	18.3
35 - +	7	11.7
Gender		
Female	58	96.7
Male	2	3.3
Marital status		
Single	28	46.7
Married	32	53.3
Divorced	0	0
Widow	0	0
Job position		
Staff nurse	34	56.7
Nursing supervisor	25	41.7
Head nurse	1	1.7
Qualification		
Nursing diploma	22	36.7
Health technical institute	11	18.3
Nursing technical institute	3	5.0
Concession student	17	28.3
Bachelor of nursing	7	11.7
Years of experience		
Less than 5 years	33	55.0
5- < 10 years	5	8.3
10- < 15years	12	20.0
More than 15 years	10	16.7
Training courses regarding mechanical ventilator		
Yes	25	41.7
No	35	58.3

Table (2): percentage distribution of nurses' satisfactory knowledge regarding the management of patients on the mechanical ventilator (n=60).

Nurses' knowledge	Level of nurses' knowledge No=60						
	Satisfactory $\geq 80\%$		Unsatisfactory <80%		Range	Mean	SD
	No	%	No	%			
Anatomy & physiology of respiratory system	29	48.3	31	51.7	0-5	3.21	1.07
Mechanical ventilator	19	31.7	41	68.3	1-7	4.41	1.93
Complication of mechanical ventilator	33	55.0	27	45.0	0-5	1.96	2.09
Management of patient on mechanical ventilator	19	31.7	41	68.3	16-33	24.63	5.40
Total	19	31.7	41	68.3	21-52	36	10.42

Table (3): Percentage distribution of nurses' satisfactory practice regarding the management of patients on the mechanical ventilator (n=60).

Nurses' practices	Level of nurses' practice No=60						
	Satisfactory $\geq 80\%$		Unsatisfactory <80%		range	Mean	SD
	No	%	No	%			
Endotracheal tube suction	0	0	60	100	16-44	28.28	6.69
Endotracheal tube care	0	0	60	100	18-25	21.08	1.61
Arterial blood gases	9	15.0	51	85.0	20-29	23.93	2.32
Oral care	0	0	60	100	3-13	10.13	2.96
Total	0	0	60	100	71-106	83.48	10.10

Table (4): Relations between nurses' knowledge regarding management of patients on mechanical ventilator and their demographic characteristics (n=60).

Item	Mean \pm SD	Min-Max	Test of sig	P
Age				
20- < 25y	34.57 \pm 9.35	21-52	F=.757	.523
25- < 30y	40.44 \pm 13.04	21-52		
30- < 35y	36.09 \pm 10.97	24-52		
35 - +40y	36.85 \pm 11.52	21-52		
Gender				
Female	36.48 \pm 10.26	21-52	t=1.979	.053
Male	22 \pm 1.41	21-23		
Marital status				
Single	36 \pm 10.29	21-52	.247 .806	
Married	36 \pm 10.69	21-52		
Divorced	0	0		
Widow	0	0		
Job position				
Staff nurse	34.76 \pm 10.52	21-52	.714	.494
Nursing supervisor	38 \pm 510.29	24-52		
Head nurse	28	28-28		
Qualification				
Nursing diploma	33.68 \pm 9.46	21-52	.611	.657
Health technical institute	35.36 \pm 12.82	21-52		
Nursing technical institute	36.33 \pm 9.29	30-47		
Concession student	37.88 \pm 9.37	27-52		
Bachelor of nursing	39.57 \pm 13.12	24-52		
Years of experience				
Less than 5 years	34.57 \pm 9.35	21-52	1.728	.172
5- < 10 years	45.6 \pm 13.78	21-52		
10- < 15years	36.75 \pm 11.4	24-52		
More than 15 years	35 \pm 9.87	21-52		
Training courses regarding mechanical ventilator				
Yes	34.2 \pm 10	21-52	.946	.348
No	36.8 \pm 10.55	21-52		

*Statistically significant (<0.05)

Table (5): Relations between nurses' practice regarding management of patients on mechanical ventilator and their demographic characteristics (n=60).

Item	Mean \pm SD	Min-Max	Test of sig	P
Age				
20 - < 25	83.06 \pm 10.51	71-106	1.024	.389
25- < 30	84.22 \pm 8.78	71-104		
30- < 35	80.63 \pm 9.102	71-104		
35 - +40	89 \pm 11.015	81-106		
Gender				
Female	83.74 \pm 10.13	71-106	1.067	.290
Male	76 \pm 7.07	71-81		
Marital status				
Single	82.50 \pm 10.35	71-106	.435 .665	
Married	84.34 \pm 9.95	71-106		
Divorced				
Widow				
Job position				
Staff nurse	84.79 \pm 10.22	71-106	4.560	.015*
Nursing supervisor	80.80 \pm 8.71	71-106		
Head nurse	106	106-106		
Qualification				
Nursing diploma	86 \pm 10.96	73-106	1.740	.154
Health technical institute	84.09 \pm 7.92	71-104		
Nursing technical institute	72.33 \pm 2.31	71-75		
Concession student	80.82 \pm 7.88	71-106		
Bachelorof nursing	85.85 \pm 14.06	71-106		
Years of experience				
Less than 5 years	83.06 \pm 10.5	71-106	.152	.928
5- < 10 years	84.80 \pm 12.17	71-104		
10- < 15years	82.58 \pm 8.23	71-104		
More than 15 years	85.30 \pm 11.01	73-106		
Training course regarding mechanical ventilator				
Yes	82.68 \pm 9.65	71-106	.512	.611
No	84.06 \pm 10.51	71-106		

*Statistically significant (<0.05)

Table (6): Correlation between nurses' knowledge and practice regarding the management of patients on the mechanical ventilator (n=60).

Item	Knowledge score	
	R	P
practice score	-.048	.713

DISCUSSION:

Mechanical ventilator is an artificial, external organ, which was conceived originally to replace, and later to assist, the inspiratory muscles. The primary function of mechanical ventilators is to promote alveolar ventilation and carbon dioxide (CO₂) elimination, but they are often also used for correcting impaired oxygenation which may be a difficult task *Patroniti (2011)*.

Nurses must be knowledgeable about the function and limitations of ventilator modes, causes of respiratory distress and dyssynchrony with the ventilator, and appropriate management in order to provide high-quality patient-centered care. Prompt recognition of problems and action by the nurse may resolve acute respiratory distress, dyspnea, and increased work of breathing and prevent adverse events *Grossbach et al (2013)*.

The aim of this study was to assess nurses' performance regarding management of patients on mechanical ventilator.

The results of the present study showed that, more than half of the nurses at age group 20-25 years, this is mainly because older nurses are usually assigned for administration jobs. The majority of nurses were female, because all nurses schools graduate only female nurses and male nurses are graduated from faculty of nurses only and this number is still much less than number of female nurses. More than half of nurses in the study were staff nurse and they had diploma of nursing. *Belal (2011)* who stated that, the highest percentages are diploma nurses and diploma with specialty. More than one third of nurses in the study had nursing diploma, this is due to the fact the older nurses usually travel to work abroad or shift to work in less effort . More than half of the study nurses were less than 5 years experience and more than half of nurses had not attended any training courses, because no or very little training courses were available for them and secondary most of them are busy with their families. *Belal (2011)*.revealed that one fifth of the nurses had experience in intensive care unit less than 5 years and more than two third of them had experience for 5 years to less 10 years in ICUs, this could be explained in light that the nature of ICUs as area of specialty necessitates a young qualified nurses

Concerning the total level of nurses' knowledge regarding mechanical ventilation, this study revealed that more than half of nurses had unsatisfactory total level of knowledge regarding the care of patients on mechanical ventilator. This might be due to that lack of training courses conducted in intensive care units (ICUs). Also, the wide

base for nurses' education was nursing diploma and there nurses did not study intensive care in nursing school. Even in faculty of nursing the study of ventilation was very few study without clinical training. This result of study is in the same line with **KA et al. (2013)** whose results revealed that majority of the 50 nurses (66%) had poor knowledge, 32% nurses had average knowledge and only one subject (2%) had good knowledge regarding mechanical ventilation.

Concerning total nurses' practice regarding care of patients on mechanical ventilator, this study revealed that, all nurses had unsatisfactory practice regarding the care of patients on ventilator. This could be attributed to the unsatisfactory knowledge of the studied nurses which reflects negatively on their practices, in addition to lack of orientation program prior to work in ICU and shortage of staff nurses specially with Bachelor degree in nursing which lead to work over load in these units. Moreover, unavailability of guideline books, lack of interest, lack of motivation and insufficient financial reward to the nurses, lack of in-service training course and lack of job description. All these contributed to the unsatisfactory practice level of nurses regarding care of patient on mechanical ventilator.

The result of present study agree with **Sharma et al. (2014)** who stated that nursing personnel had poor practices regarding endo tracheal suctioning during pre-implementation phase.

This study agrees with **Said, (2012)** who found that out of 30 nurses 10 (33%) wash hands before endotracheal suctioning (ETS), 20 (66.7%) maintain the sterility of the suction catheter until its insertion into the airway. Twenty five (83.3%) wear sterile gloves during suctioning. Only 10 (33.3%) participants washed their hands, 8 (26.7%) maintain cleanness of patient environment. Also, **Sabet & Hadian, (2013)** also reported that, nurses' performance in endotracheal suction was poor..

This result disagrees with **Youssef et al., (2013)** who stated that all studied subjects were had an unsatisfactory practice level in relation to documentation, while most of the studied subjects got unsatisfactory practice level in relation to withdrawal technique and" the same result agree with. The authors attributed that to lack of in-service training course.

This result is in agreement with **Said, (2012)** who stated that nurses in his study did suctioning and gave chest care every two hours. Nurses would remove oral secretions from patients at the same time that they were suctioning sputum.

All nurses had unsatisfactory practice in area of hand washing before oral care and positioning patient in semi recumbent position. This finding is similar with **Said, (2012)** results he stated that only 30% of nurses position patients in a semi recumbent position during oral care, he found that only 10 (33.3%) did hand washing before and 13 (43.3%) did hand washing after oral care to a patients.

As regards the relationship between nurses' knowledge and practices, there were no statically significant relation. Although, (68.3%) the majority of the nurses had unsatisfactory knowledge and (100%) all nurses had unsatisfactory practices, this is the majority still these was no significant direct relation between knowledge and practice ($R = -.048$) and ($P = .713$). This is might be attributed to the fact that practice depends more on experience training and imitation i.e. the nurse may have very good knowledge about the importance of suction of airway but she can not do it correctly.

Moreover, the relation between nurses' performance (knowledge and practice) and their demographic characteristic regarding to caring of patients on mechanical ventilator was also investigated.

The study findings reveled that there was no statistically significant relationship between nurses' knowledge regarding the management of patients on the mechanical ventilator and their demographic characteristics. This finding is supported by **Gomes, (2010)** who stated that, the difference in the mean average score knowledge of ICU trained nurses and non ICU trained nurses was very similar demonstrating no statistically significant difference in the knowledge of the two groups of nurses. He stated that a weak correlation between working years in ICU and knowledge was found, but this correlation may be clinically insignificant. Also, **Suhara et al (2010)** who assessed the knowledge of staff nurses on mechanical ventilation and found that there was no significant association between knowledge scores of staff nurses in relation to their demographic variables. Mean while, **Said, (2012)** found that, there was no association between knowledge and years of working experience (p-value 0.34), ICU training (p-value 0.64) and level of education (p-value 0.55).

The present study revealed that, there was statistically significant relationship between nurses' practice regarding the management of patients on the mechanical ventilator and their demographic characteristics in area of occupation where at ($p < 0.05$).

The present study showed that, there was no correlation between nurses' knowledge and practice regarding the managing patients on the ventilator. This finding is supported by **Sharma et al. (2014)** the results of the present study showed no significant relationship between knowledge and practice of nurses regarding endotracheal suction.

CONCLUSION:

Based on the study findings of the present study, it can be concluded that : nurses had unsatisfactory knowledge and practice regarding mechanical ventilator. There was no correlation between nurses' knowledge and practice regarding the management of patients on the ventilator. There was no statistically significant relationship between nurses' knowledge regarding the management of patients on the mechanical ventilator and their demographic characteristics. There was statistically significant relationship between nurses' practice regarding the management of patients

on the mechanical ventilator and their demographic characteristics in the area of occupation.

RECOMMENDATIONS:

The study recommended the following :

- 1- *Continues orientation and periodic in-service training program for nurses in ICU regarding caring of patients on mechanical ventilator for continuous updating their knowledge.*
- 2- *Developing a simplified and comprehensive booklet including guidelines about nursing care of patients on mechanical ventilator.*
- 3- *Close supervision and teaching on spot during work is needed to ensure that quality of care is provided by nurses caring of patients on mechanical ventilator.*
- 4- *Developing a nursing protocol for infection control, following aseptic techniques during care of patients on mechanical ventilator.*
- 5- *Further studies is recommended to evaluate the reflection of in-service training program regarding care of patients on mechanical ventilator on nurses' performance and consequently on the patients' outcome.*

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تقييم أداء الممرضات تجاه رعاية المرضى المتصلين بجهاز التنفس الصناعي

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الخلاصة

يتم استخدام التهوية الميكانيكية على نطاق واسع في وحدات العناية المركزة في جميع أنحاء العالم لمؤشرات الطوارئ المختلفة. لذلك، يجب أن تكون هيئة التمريض على دراية بالوظيفة والقيود المفروضة على وسائط التنفس الصناعي وأسباب الضائقة التنفسية مع جهاز التنفس الصناعي، والإدارة الملائمة من أجل توفير جودة عالية لمريض الرعاية. وعلي الممرضة الاعتراف الفوري بالمشاكل والعمل على حل الضائقة التنفسية الحادة. وكان الهدف من هذه الدراسة هو تقييم أداء الممرضات تجاه المرضى المتصلين بجهاز التنفس الصناعي الميكانيكي التي أجريت بمستشفى الطوارئ بالمنصورة. وكان تصميم البحث وصفي. العينة. وقد تم اختيار 60 ممرضة من العاملين بجامعة المنصورة مستشفى الطوارئ. وتضمنت أدوات لجمع البيانات استمارة الاستبيان واستمارة ملاحظة. وأظهرت النتائج أن يوجد علاقة بين مهارات التمريض ومستوى الوظيفة، كما أشارت إلى عدم وجود ارتباط بين المعرفة هيئة التمريض والممارسة فيما يتعلق بالرعاية التمريضية التي تقدم لمريض جهاز التنفس الصناعي. وخلصت الدراسة إلى أن جميع الممرضين والممرضات في حاجة إلى تحسين أدائها خلال رعاية المرضى على التنفس الصناعي الميكانيكي وأوصت الدراسة أن ينبغي تدريب هيئة التمريض بقدر كافي لتقديم الرعاية فعالة وآمنة لهؤلاء المرضى.

الكلمات الإرشادية: - التنفس الصناعي الميكانيكي و التهوية الميكانيكية و أداء الممرضات