

Evaluation Of Nurses Practices Toward Patients With Tracheostomy In Respiratory Care Units In Baghdad Teaching Hospitals

مستشفيات بغداد التعليمية
بم الممارسات التمريضية

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الأهداف: تهدف الدراسة إلى تقويم ممارسات الممرضين لمرضى فتحة الرغامى في وحدة الإنعاش التنفسي في مستشفيات بغداد التعليمية وإيجاد الفروق المعنوية بين الممارسات الممرضين وبعض المتغيرات

المنهجية: دراسة وصفية أجريت على (100) ممرض وممرضة بدأت في الخامس عشر من تشرين الثاني 2011 ولغاية العشرون من آذار 2012، في خمسة مستشفيات وهي (مستشفى الجراحات التعليمي 24 ممرض، مستشفى بغداد التعليمي 26 ممرض، مستشفى الكاظمية التعليمي 17 ممرض، مستشفى اليرموك التعليمي 18 ممرض، ومستشفى الكرامة التعليمي 15 ممرض) في مدينة بغداد.

وتكونت الاستبانة من محورين حيث شمل المحور الأول المعلومات الديموغرافية والمكونة من 19 فقرة تكونت من الجنس والعمر والمستوى التعليمي ومكان العمل وسنين الخبرة والمحور الثاني تكون من 19 فقرة حول ممارسات الممرضين للعناية التمريضية المقدمة للمرضى فتحة الرغامى في وحدات الإنعاش التنفسي والعناية المركزة في بغداد واستعملت الباحثة الإحصاء الوصفي والاستدلالي في تحليل البيانات.

: أشارت نتائج الدراسة الحالية أن 51% من الممرضين هن إناث وغالبيتهم ضمن الفئة العمري 18 - 27 سنة ومعظم الممرضين هم خريجو معاهد ونسبة 53%، ومعظم العينة غير متزوجون بنسبة 51% وكانت 57% من العينة لديهم سنين خبره تتراوح من (1-5) سنة. وأشارت الدراسة إلى توافق عالي بين ممارسات الممرضين في وحدة الإنعاش التنفسي ووحدة العناية المركزة والتدريب العملي...

الاستنتاجات: نتائج الدراسة الحالية بينت. التي توافق عالي بين ممارسات الممرضين في وحدة الإنعاش التنفسي ووحدة العناية المركزة والتدريب العملي...

التوصيات: أوصت الدراسة بالعمل على تهيئة محاضرات مستمرة للممرضين، وضرورة اجراء دراسة اوسع وعينة اكبر

ABSTRACT:

Objectives: The study aims to evaluate the nurse's practices toward patients with Tracheostomy in respiratory care units, and to find out the significant differences between their practices and some variables.

Methodology: Descriptive analytical design of the study was conducting on 100 nurses, starting from November 15th 2011 to the March 20th 2012. The study was carried out of five hospitals: (24 nurses from Surgical specialties hospital, 26 nurse Baghdad teaching hospital, 17 nurse Al-kadhemia teaching hospital, 18 nurses from AL-Yarmook Teaching hospital, And AL-Karama Teaching hospital 15 nurse) in Baghdad city. The questionnaire was composed of two parts and introductory page that invite the nurses who participate in the study, **part one:** is demographic- characteristics sheet which consist of 19 items, which included Gender, age, level of education, workplace, and year of experiences

Part two: form questionnaire composed of (20) items of the practice nurse on the nursing care of the patient with Tracheostomy in a respiratory resuscitation unit..The researcher used the appropriate statistical methods in the data analysis, which included descriptive data analysis and inferential data analysis.

Results: The findings of present study revealed that 51% of the nurses were females, majority of them at age 18-27 years ago, most of the nurses were institute education graduated were of (53%), 51% of the nurses was single, 57% of the nurses was years of experience ,majority at (1-5) years of experience ,the results indicated that there were highly significant between nurse's practices and training course at $P \leq 0.05$.

Conclusions: the results of study concluded that the nurses have highly significant between nurse's practices and training course

Recommendation: The study recommends to preparing programmed lectures for the nurses ,and need for a broader study and a larger sample

Keywords: patient, Tracheostomy, respiratory care units, nurse's practices

INTRODUCTION

Tracheostomy is performed in about 11% of intensive care unit (ICU) ,patients It may benefit patients who need prolonged mechanical ventilation, because tracheostomy allows the patient to speak, facilitates oral feeding, provides a more secure airway than a trans-laryngeal tube, and increases the patients' mobility .(1,2)

A Tracheostomy is an opening in the anterior wall of the trachea inferior to the cricoids cartilage. Made surgically or percutaneously, it provides tracheal access for airway management via

a temporary or permanent tracheostomy tube. Patients with tracheostomies are not limited to critical care settings and can be found in all nursing units. Provide tracheostomy care every 4 to 8 hours. (3)

Care for a patient with a tracheostomy is vital because inappropriate or inadequate care may lead to complications and even death. During the postoperative period, nursing care focuses on reestablishing the patient's physiologic equilibrium, alleviating pain, preventing complication, and teaching the patient self-care. A tracheostomy is used to bypass an upper airway obstruction, to allow removal of tracheobronchial secretions, to permit the long-term use of mechanical ventilation, to prevent aspiration of oral or gastric secretions in the unconscious or paralyzed patient (by closing off the trachea from the esophagus), and to replace an endotracheal tube. (4) Aims of the study is to evaluate nurses practices toward patients with tracheostomy in RCU at Bagdad Teaching Hospitals. To finding out the significant differences between nurses practices

METHODOLOGY

Descriptive analytical design of the study starting from November 15th 2011 to 20th March 2012, in order to identify the nurses practices toward patients with tracheostomy. A non-probability (purposive) sample of 100 nurses, working at respiratory care unite / intensive care unit\ in Bagdad Teaching Hospitals. The present study was carried out in the Medical City and Al-Karrama Teaching Hospitals. Surgical specialties hospital, Al-kadhemia teaching hospital, AL-Yarmook Teaching hospital. The questionnaire was composed of two parts and introductory page that invite the nurses who participate in the study. **Part I:** Demographic characteristics Sheet: It was consisted of 9 items which included: Gender, age, level of education, workplace, and year of experiences.

Part II: Included checklist format consists of (19) items were concerning nurses practices for Tracheostomy patient in respiratory care unit (R.C.U.) and intensive care unit (ICU) in Bagdad Teaching Hospitals. This item were rated on scale of that (always, sometime, never) and the score rated (3) for always, (2) for (some time) and (1) for never. Face validity of the instrument was established through a panel of (7) expert. They were (5) faculty members specialized in medicine and (2) expert specialized in nursing. These experts had more than 10 years of experience in their Jobs. The researcher used the appropriate statistical methods in the data analysis, which include the following:

1- Descriptive data analysis: this approach was performed through the determination of: Frequencies (F), and Percentage (%).

2. Inferential data analysis: Analysis of variance.

RESULTS**Table 1- Demographic Characteristics of the study samples**

No.		NO.	%
1	Gender		
1.1	Male	49	49.0
1.2	Female	51	51.0
	Total	100	100.0
2	Age (year)		
2.1	18-27 years	45	45.0
2.2	28-37	31	31.0
2.3	38-47	18	18.0
2.4	48 years and over	6	6.0
	Total	100	100.0
3	Marital status		
3.1	Single	51	51.0
3.2	Married	45	45.0
3.3	Divorced	1	1.0
3.4	Widowed	3	3.0
	Total	100	100.0
4.	Level of education		
4.2	Secondary	25	25.0
4.3	Institute	53	53.0
4.4	College	22	22.0
	Total	100	100.0
5	Nurses Income		
5.1	Sufficient	38	38.0
5.2	Burley Sufficient	20	20.0
5.3	Not Sufficient	42	42.0
	Total	100	100.0
6	Variables		
6	Year of Experiences	NO.	%
6.1	1-5 years	57	57.0
6.2	6-10 years	18	18.0
6.3	11-15 years	17	17.0
6.4	16-20 years	2	2.0
6.5	21-25 years	4	4.0
6.6	26-30 years	2	2.0
	Total	100	100.0
7	Training Course		
7.1	Yes	87	87.0
7.2	No	13	13.0
	Total	100	100.0
8	Setting of Training Course:NO.87		
8.1	In Iraq	83	95.4
8.2	Out of Iraq	4	4.6
	Total	87	100.0
9	Subjects of Training Course: NO.87		
9.1	Infection Control	29	33.3
9.2	Respiratory Recitation	26	29.7
9.3	First Aid	11	12.6
9.4	Ventilator System	9	10.4
9.5	Rehabilitation of spinal cord Injury	5	5.7
9.6	Documentation	2	2.3
9.7	Sterilization	4	4.5

9.8	Psychological support	1	1.5
	Total	87	100.0

Table 1 presented that 51% of nurses were females at age between 18-27 years ago, 51% of them were single, 53% of nurses were institute graduated in education, 42% not sufficient their income, 57% of nurses have 1-5 year of experiences, many of them have training course majority of training in Iraq for infection control.

Table 2: Mean and Standard Deviation of Nurses Practices to Tracheostomy Care

Items of Nurses Practices		Mean	SD.	Ass.
1-	Prepare needed equipment	1.92	.5573	Poor
2-	Hand Washing	1.740	.4408	Poor
3	Put on clean gloves;	1.290	1.423	Poor
4-	Administer adequate warmed humidity in tracheostomy care	1.230	1.043	Poor
5-	Place the tracheostomy care equipment on the over-the-bed table and prepares the equipment	1.270	.4462	Poor
6	Soak inner cannula in peroxide, rinse with saline solution or replace with a new cannula.	1.4	.9372	Poor
7	Take the tape around the back of the patient neck and thread it through the opposite opening of the outer cannula ' Bring both ends around so that they meet on one side of the neck. Tighten the tape until only two fingers can be comfortably inserted under it	1.57	.4975	Poor
8	Cleans the stoma	1.2	.6415	Poor
9	sterile tracheostomy dressing, fitting it securely under the twill tapes and flange of tracheostomy	1.150	.3588	Poor
10	The tracheostomy dressing is changed as needed to keep the Skin clean and dry.	1.160	1.022	Poor
11	Provide adequate ventilation, employing resuscitation measures when necessary.	1.110	1.003	Poor
12	Dry the skin and outer cannula surfaces by patting them Lightly dry gauze	1.080	.2726	Poor
13	Maintain cuff around tube	1.080	.2726	Poor
14	Administer prescribed oxygen and monitor oxygen saturation	1.110	1.003	Poor
15	Monitor for cyanosis	1.070	.2564	Poor
16	Use sterile technique when suctioning and performing tracheostomy care	1.7	0.843	Poor
17	teach the patient and family strategies to prevent infection when performing tracheostomy care	1.69	.4648	Poor
18	Monitored vital signs.	1.43	.4975	Poor
19	The nurse keeps paper and pencil or a Magic Slate and the call light within the patient's reach to ensure a means of Communication.	1.96	.1969	Poor

M.S= Mean of score S.D= Standard deviation Low level = less than 2 , fail=2-2.5, good: 2.6-3

Table 2 presented that all practical items related to tracheostomy care have poor level

Table 3 : Analysis of Variance for nurses practices and their variables.

variables	Nurses Practices	Sum of Squares	df	Mean Square	F	Sig. P 0.05
Year of experience	Between Groups	24.743	20	1.237	.797	.710
	Within Groups	122.697	79	1.553		
	Total	147.440	99			
Training course	Between Groups	51.375	20	2.569	3.602	.000
	Within Groups	56.335	79	.713		H.S.
	Total	107.710	99			
Setting of training	Between Groups	2.046	18	.114	2.898	.001
	Within Groups	2.667	68	.039		
	Total	4.713	86			H.S.
Subject of training	Between Groups	49.345	18	2.741	.879	.604
	Within Groups	212.057	68	3.118		
	Total	261.402	86			
Level of education	Between Groups	11.034	20	.552	1.215	.265
	Within Groups	35.876	79	.454		
	Total	46.910	99			
income	Between Groups	14.367	20	.718	1.326	.188
	Within Groups	42.793	79	.542		
	Total	57.160	99			

Df= degree freedom, Sig= significance, F= F-statistics

Table 3 shows that there were highly significant between nurses practices and training course and the setting of the training at $P \leq 0.05$

Table 4: Association between nurses' gender and their practices

Nurses practices	F	Sig. P 0.05	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	3.358	.050	.563	98	.575	.70708	1.25636
Equal variances not assumed		S.	.559	87.111	.577	.70708	1.26438

Df= degree freedom, Sig= significance, F= F-statistics,

Table 4 presented that there were significant differences between gender of the nurses and nurses practices at **P 0.05** level.

DISCUSSION

Socio-demographic characteristics of the nurses in the present study was (49%) were male, the majority of them (45%) were at age (18 - 27), , most of nurses were medical institute education graduated were of (53%), concerning number of years of practice in work (57%) has (1 – 5) years concern type of training course (33.3%) have infection control course.

There are large differences in tracheostomy management, especially in cuff-management, tracheostomy tube change, and decannulation. This survey indicates the need for tracheostomy-management guidelines.(2)

The losing the ability to communicate is incredibly stressful for a patient with a tracheostomy tube. Nonverbal inter- vent ions that can help facilitate communication include sign language, gestures, lip reading, pointing, facial expressions, or eye blinking. Use simple devices, such as pencil and paper, magic slates, magnetic boards with plastic letters, symbol boards, and flashcards to help the patient communicate. (4, 1.)

The patient requires continuous monitoring and assessment. The newly made opening must be kept patent by proper suctioning of secretions. After the vital signs are stable, the patient is placed in aseml-Fowler's position to facilitate ventilation, promote drainage, minimize edema, and prevent strain on the suture lines. Analgesia and sedative agents must be administered with caution because of the risk of suppressing the cough reflex.(5)

Cleaning and disinfection or sterilization of patient care equipment should not be carried out in the ICU. Used equipment should be sent to the Sterile Service Department or designated reprocessing area. Disinfection and Sterilization of Medical Equipment.(7,8)

The tracheal suctioning is performed when adventitious breath sounds are detected or whenever secretions are obviously present. Unnecessary suctioning can initiate bronchospasm and cause mechanical trauma to the tracheal mucosa.. (9)

All equipment that comes into direct contact with the patient's lower airway must be sterile to prevent overwhelming pulmonary and systemic infections. In mechanically ventilated patients, an in-line suction catheter may be used to allow rapid suction when needed and to minimize cross-contamination of airborne pathogens. An in-line suction device allows the patient to be suctioned without being disconnected from the ventilator circuit. Use an aseptic technique when suctioning and cleansing tracheostomy tubes. A disposable inner cannula, if used, must be replaced daily.

There were highly significant between nurses practices and training course and the setting of the training at $P \leq 0.05$ level(table3)

Finding was supporting by (10) who stated that training the nurses increases the knowledge's and practices.

CONCLUSION:

All nurses practices tracheostomy care have poor level in applying and there were significant differences between nurses practices and their training course.

RECOMMENDATION:

- 1- Conduct other study to include more nurses and to find more demographics characteristics and relationships
- 2- Activation the continues education about important nursing management in critical care unit and prevent complication which resulted from bad practice.
- 3- Increase nurses training outside Iraqi concerning in critical and respiratory care.

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