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A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE REGARDING NURSING MANAGEMENT OF PATIENTS WITH CHEST TUBE DRAINAGE AMONG STAFF NURSES WORKING AT TERTIARY CARE HOSPITAL, JODHPUR

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ABSTRACT

INTRODUCTION: *A chest tube is a hollow, flexible tube placed into the chest. It acts as a drain. Chest tubes drain blood, fluid, or air from around the lungs, heart, or oesophagus. The tube around the lung is placed between the ribs and into the space between the inner lining and the outer lining of the chest cavity or the pleural space. It is done to allow the lungs to fully expand. It is also known as bulau drain or an intercostal catheter.*

AIM OF THE STUDY: *Assess the knowledge and practice regarding nursing management of patients with chest tube drainage among staff nurses working at tertiary care hospital, Jodhpur.*

MATERIAL AND METHOD: *A descriptive study was carried out on 60 staff nurse working in ICU's of M.D.M hospital, Jodhpur. Samples were selected by using non probability purposive sampling technique. Data was collected using structured knowledge questionnaire and practice checklist were analyzed by using descriptive and inferential statistics.*

RESULT: *The findings of the study reveals that 55% ICU staff nurses had average knowledge, with mean knowledge score 14.47 with SD ± 4.68, while majority of ICU staff nurses (96.67%) had good level of practice, (3.33%) had average level of practice, with mean practice score 13.93 with SD ±1.41 regarding nursing management of patients with chest tube drainage. It was found that there was no significant correlation found between level of knowledge and practice among ICU staff nurses regarding nursing management of patients with chest tube drainage. However there was no significant association found between level of knowledge and practice with selected socio demographic variables except their total clinical experience.*

CONCLUSION: *It can be reiterated that ICU staff nurses have average knowledge and good level of practice regarding nursing management of patients with chest tube drainage as per current research recommendations. They require simulated practices, CNE and Role play to enhance their knowledge and practice regarding nursing management of patients with chest tube drainage.*

KEY WORDS: *Knowledge, Practice, Staff nurses, Chest tube drainage, Patient care.*

INTRODUCTION & BACKGROUND OF THE STUDY

The pleural cavity is a fluid filled space that surrounds the lungs. It is found in the thorax, separating the lungs from its surrounding structures such as the thoracic cage and inter costal space, the mediastinum and the diaphragm. The pleural cavity is bounded by a double layered serous membrane called pleura**.** The pleurae are two layers of serous membrane that form the boundaries of the pleural cavity. There are two types of pleura; parietal and visceral. The pleural cavity containing a small amount of pleural fluid which lies between the parietal and visceral layers of pleura. The function of the pleura is to allow optimal expansion and contraction of the lungs during breathing.

Respiratory system plays a crucial role in delivering oxygen to the cells of our body. The cells of our body require a continuous supply of oxygen, without this oxygen we would die within a minutes. Every day we breathe about 20,000 times. All of this breathing couldn't happen without help from the respiratory system. At the same time our heart should beat (without fail) 35 million times a year. Every beat should move oxygen enriched blood throughout our system. Therefore, no stretch to say that, the function of our heart and lungs is vital for a healthy and productive life. Conditions affecting the thoracic cavity range from acute problems to long term

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chronic disorders. Many of these disorders are serious and often life threatening. Supporting the structure and function of the heart and lungs is a matter of life and death.

There is need for this study as the researcher had previous experience of critical care nurse and also as a P.G. student when I was posted in hospitals for clinical duties, there were many patients suffering from lungs problem and having chest drainage. It was found that, People living with chest drainage require special care by maintain full aseptic technique.

It was observed that staff nurses are playing essential role in management of chest tube care but there is still chance for complications due to some lacuna's such as heavy duties, shortage of staff, limited resources and lack of CNE programme aseptic technique was not used by nurses many a times. The color and amount of fluid was also not documented properly. Some nurses don't know about chest tube clamping and reason behind it.

There was gap in the knowledge of the nurses regarding nursing management of patients with chest tube drainage on the following sections: need and procedure of insertion, purpose of water seal in a chest tube, correct height of drain, complication of improper placement, chest tube clamping and removal, pain management, documentations; color, consistency and amount of drain.

The researcher found limited knowledge and practice among ICU staff nurses in many aspects of chest drain management and have opted this to enhance the knowledge and practice of nurses regarding the care of chest tube drainage.

OBJECTIVES OF THE STUDY

- To assess the knowledge of the staff nurses regarding nursing management of patient with chest tube drainage.
- To assess the practice of staff nurses regarding nursing management of patient with chest tube drainage.
- To find out the association between knowledge and practice with selected socio demographical variables.
- To determine the correlation between the knowledge and practice of staff nurses regarding nursing management of patient with chest tube drainage.

OPERATIONAL DEFINITION

- **ASSESS:** In this study, assess is a critical analysis of systematic and organized collection of objectives data using self-structured knowledge questionnaire and practice checklist which are helpful to identify and define the level of knowledge and self-reported practice of staff nurses regarding nursing management of patients with chest tube drainage.
- **KNOWLEDGE:** In this study, knowledge is the response of staff nurses about information regarding nursing management of patients with chest tube drainage gained in terms of scores through self-structured knowledge questionnaire.
- **PRACTICE:** In this study, practice refers to self-reported practice of staff nurses that used by them for nursing management of patients with chest tube drainage which gained in terms of scores through practice checklist.
- **NURSING MANAGEMENT:** In this study, nursing management is the required knowledge and practice related to chest tube drainage care.
- **CHEST TUBE DRAINAGE**: In this study, chest tube drainage refers to a hollow, flexible tube placed into the chest, which acts as a drain. Chest tube drains abnormal collection of blood, fluid or air around lungs, heart and esophagus.
- **STAFF NURSES:** In this study, the staff nurses who are qualified registered and working in Intensive Care Units of tertiary care hospital, Jodhpur.

ASSUMPTION

- Staff nurses may have some knowledge regarding nursing management of patients with chest tube drainage.
- The knowledge and practice regarding nursing management of patients with chest tube drainage may vary with selected socio demographic variables.

HYPOTHESIS

- $\mathbf{H_0}$: There is no significant difference in knowledge and practice scores regarding nursing management of patient with chest tube drainage among staff nurses.
- $\mathbf{H_1}$: There is significant difference in knowledge and practice scores regarding nursing management of patient with chest tube drainage among staff nurses.
- $\mathbf{H_2}$: There is significant association between knowledge and practice levels with selected socio demographic variables.

DELIMITATION

- The study will be limited to the staff nurse posted in the ICU's of MDM Hospital Jodhpur.

RESEARCH METHODOLOGY

- **RESEARCH APPROACH**

Quantitative research approach is considered appropriate for the present study.

- **RESEARCH DESIGN**

Non Experimental Descriptive research design was adopted for this study.

RESEARCH VARIABLE

- **Research variable**

In this study the research variables is knowledge and practice of staff nurse regarding nursing management of patients with chest tube drainage.

- **Demographic variable**

In this study the demographic variables are Age, Gender, Professional Qualification, Total Clinical Experience, Total

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ICU Experience and Continuing Nursing Education Programme.

POPULATION

Staff nurse working in MDM hospital Jodhpur

STUDY SAMPLE

Staff nurses working in ICU's of M.D.M. hospital.

SAMPLING SIZE

In this study, the sample consist 60 staff nurse.

SAMPLING TECHNIQUE

Non-probability purposive sampling technique was used for this study.

RELIABLITY OF THE TOOL

The reliability was established by the "Test retest method" by using "Karl Pearson's Corelation Coefficient" formula and it is found to be reliable (as "r-value for knowledge was + 0.7909" and for practice + 0.8981.)

MAJOR FINDING OF THE STUDY

Table 1 Depicted that staff nurse participated in the study, majority of Age 26-30 (27, 45%), Gender Male (40, 66.67%), Professional Qualification GNM (48, 80%), Duration of total clinical experience up to 5 years (26, 43%), Duration of total clinical experience in ICU up to 5 years (45, 75%), Any continuing nursing education attended regarding chest tube drainage management Yes (32, 53.33%).

Table 2 Depicted that level of knowledge regarding nursing management of patients with chest drainage, the major findings are (55%) of staff nurses had average knowledge, the remaining (35%) had poor knowledge, (8.33%) had good knowledge and (1.67%) had excellent knowledge. The mean of the level of knowledge regarding nursing management of patients with chest drainage is 14.47 with SD ± 4.68.

Table 3 Depicted that level of practice of staff nurses regarding nursing management of patients with chest tube drainage. The majority of staff nurses (96.67%) had good level of practice, (3.33%) had average level of practice and (0.00%) had poor level of practice. The mean level of practice regarding management of patients with chest drainage is 13.93 with SD ±1.41

Table 4 Depicted that there was no significant correlation found between level of knowledge and practice regarding nursing management of patients with chest tube drainage among staff nurses at P (<0.05) level of significance.

Table 1. Frequency and percentage distribution of demographic variables among staff nurse (N=60)

S. No.	Socio-demographic variable		Frequency	Percentage
1.	Age in years	Below or equal to 25 years	6	10
		26 – 30 year	27	45
		31 – 35 year		
		36 years and above	19	31.67
			8	13.33
2.	Gender	Male	40	66.67
		Female	20	33.33
3.	Professional Qualification	G.N.M	48	80
		B.Sc. Nursing	03	05
		P.B. B.Sc. Nursing	09	15
4.	Duration of total clinical experience	Up to 5 years	26	43.33
		6-10years	19	31.67
		11-15years	10	16.67
		16years and above	05	08.33
5.	Duration of total clinical experience in ICU	Up to 5 years	45	75
		6 – 10 years	11	18.33
		11 – 15 years	03	05
		16 years and above	01	1.67
6.	Any continuing nursing education attended regarding chest tube drainage management	Yes	32	53.33
		No	28	46.67

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Table 2. Level of knowledge of the staff nurse regarding nursing management of patients with chest tube drainage. (n=60)

Level of knowledge	Range of score	Frequency (f)	Percentage(%)
Poor	Below 12	21	35.00
Average	13 – 19	33	55.00
Good	20 – 23	5	8.33
Excellent	More than 23	1	1.67
Mean		14.47	
SD		4.68	

Table 3. Level of practice of the staff nurse regarding nursing management of patients with chest tube drainage. (n=60)

Level of practice	Range of score	Frequency (f)	Percentage (%)
Poor	1 - 5	0	0.00
Average	6 - 10	2	3.33
Good	11 - 15	58	96.67
Mean		13.93	
SD		1.41	

Table 4.Correlation between the level of knowledge and practice of staff nurses regarding nursing management of patients with chest tube drainage (n = 60)

	Mean	SD	R value	P value	Remark
Knowledge	14.47	4.69			NS
Practice	13.93	1.41	0.6031	0.647187	NS

DISCUSSION

The hypothesis made in the study is, there is significant association between the level of knowledge and practice with selected socio – demographic variables regarding nursing management of patients with chest tube drainage among staff nurse at the level of $P \leq 0.05$. The study findings reveal that all the demographic variables were not significant except total clinical experience with the level of knowledge and practice regarding nursing management of patients with chest tube drainage.

- The two assumptions were made in this study. The first one was the finding of the study reveals that nursing students may have average knowledge and good level of practice regarding nursing management of patients with chest tube drainage.
- Similar studies were also done in different parts of the country and same results were found that all the healthcare workers were having average knowledge regarding nursing management of patients with chest tube drainage and all its aspects.
- The second assumption was knowledge and practice regarding nursing management of patients with chest tube drainage vary with only one single socio demographic variable was significant among ICU staff nurse.

CONCLUSION

The finding raised concerns about all aspects of nursing management of patients with chest tube drainage and results showed considerable average knowledge and good level of practice about various aspects of nursing management of patients with chest tube drainage. This study has made some progress in establishing the current status of ICU staff nurse knowledge and practice and is able to provide a framework for developing nursing students for future practices. They require workshop, seminar, training programme can be organized for ICU staff nurses regarding nursing management of patients with chest tube drainage.

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