



Research Paper

# A Study To Assess The Effectiveness Of Structural Teaching Programme On Knowledge Of Standard Protocol Regarding Care Of Patient With Central Venous Pressure Line Among B.Sc. Nursing Student In Selected Nursing College Of Rajasthan

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## ABSTRACT

**Introduction:** A central line commonly called a vascular access device (VAD) or central venous catheter (CVC) is a temporary or long term intravenous catheter. There are several reasons for the insertion of a central venous line which include monitoring central venous pressure in critically ill patients, rapid administration of intravenous fluid, administration of drugs therapy and to administration of parenteral nutrition, to diagnose of cardiac failure & general condition of patients.

**Objective:** The purpose of the study is to evaluate the effectiveness of structural teaching programme on knowledge of standard protocol regarding care of patient with central venous pressure line among B.Sc. Nursing student.

**Research Approach:** An evaluatory approach was used for the study and a total of 60 students were selected through non-probability convenient sampling technique.

**Result:** It was found out that pre test knowledge score observed to be 20 (33.3%) had poor knowledge, 35 (58.4%) had average knowledge and 05(8.3%) had good knowledge. After the STP was given to the students than again post test was conducted with the same knowledge questionnaire, it can be clearly seen that 45 (75%) had good knowledge, 15(25%) had average knowledge.

**Keywords:** Central pressure line, B.Sc nursing students, structured teaching programme.

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## I. Introduction

Central venous line have been a mainstay of modern medicine for decades, widely used across all medical specialties from cardiology to oncology, from the emergency department to the intensive care unit. Central line mainly inserted in right atrium. A medical practitioner inserts the central venous pressure line via the internal jugular, sub-clavian or femoral veins using strict aseptic technique. It represent the filling pressure of the right ventricle and indicates the ability of the right side of heart to manage the fluid load in the circulatory system. The role of nurse is very important at the inserting a central venous line nurse has to ensure that patient is not taking any medication to prevent or treat blood clots, such as warfarin, heparin

## II. Background Of Study

It is one of the hemodynamic measurement technique used to measure the pressure in the right atrium or within the vena cava. The insertion of central-venous-pressure Line is a highly invasive procedure, so a decision to insert such a device should take into account the patient's condition symptoms and illness. The device play an important part in the patient's recovery as it can aid diagnosis and treatment. At the same time, the use of such devices can put the patient at risk of the complication. The nurse has a vital role to play in helping to safeguard the patient against the potential risks associated with central venous lines.

## NEED OF THE STUDY

Central Venous pressure line is widely used in critically ill patients throughout the developed world. Approximately 5 million central line are used in the United States each year. Each year in the United States, approximately 80,000 central venous catheter -associated Blood Stream Infections (BSIs) occur in patients in ICUs and up to 250,000 occur throughout the health care system. Increased use of central venous catheter over the past 20 years has been associated with at least a doubling of resultant central venous catheter -associated bacteremia. Previously peripheral line were used for fluid administration and for drug therapy but as technology is advanced the central venous line is came in existence for monitoring of the central venous pressure in acutely ill patients to quantify fluid balance, long – term intravenous antibiotics, parenteral nutrition especially in chronically ill patient, Pain medications, Chemotherapy, Peripheral blood stem cell collections, Dialysis, Frequent blood draws.

## OBJECTIVE

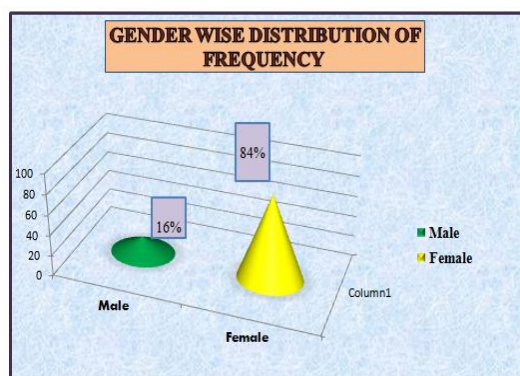
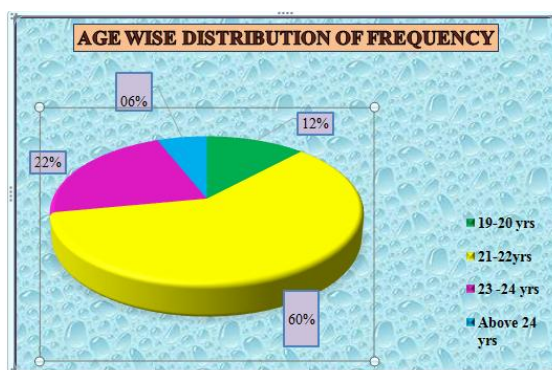
- 1) To assess the pre existing knowledge on standard protocol regarding care of patient with central pressure line among B.Sc. nursing student.
- 2) To determine the effectiveness of structural teaching programme on knowledge of standard protocol regarding care of the patient with central venous pressure line by comparing pre test and post test knowledge score.
- 3) To find out the association between pre test score on care of patient with central venous pressure line with selected demographic variable.

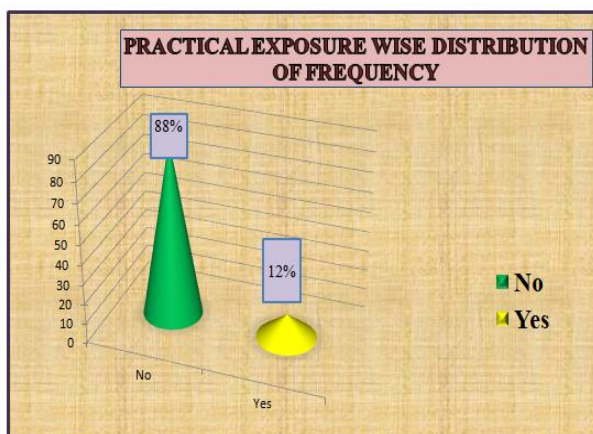
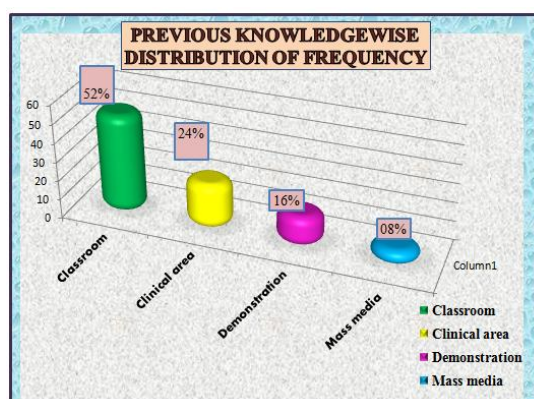
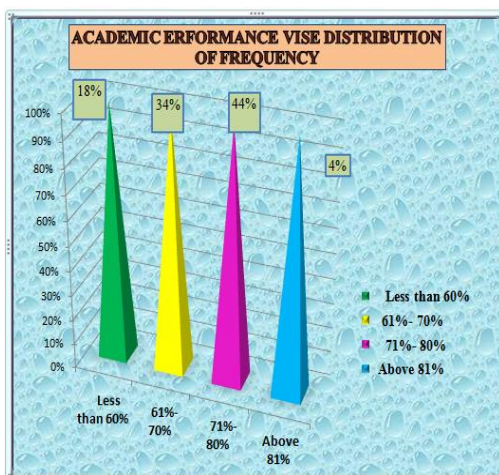
## III. Research Methodology

In this study a quantitative evaluative approach were one group pre –test post test research design was adopted. A total of 50 B.Sc nursing III<sup>rd</sup> year students were selected through non-probability convenient sampling technique.

## IV. Results

### Section I:- Frequency and percentage distribution of selected sample characteristics.





**SECTION II :- Comparison Of The Pre-Test Score And Post – Test Knowledge Score Among Samples.**

S. No.	Knowledge Score	Pre knowledge Score		Post knowledge Score	
		No.	%	No.	%
1.	Poor (0-7)	20	40%	00	00 %
2.	Average (08-15)	24	48%	05	10%
3.	Good (16-23)	05	10 %	20	40%
4.	Excellent(24-30)	01	2%	25	50%

It was seen that 20 (40%)out of 60 had poor knowledge, 24 (48%) had average knowledge, 05(10%) had good knowledge and 1(2%) had excellent knowledge. But after the intervention 20 (40%)out of 60 had good knowledge, 25 (50%) had excellent knowledge, 05(10%) had average knowledge.

**Section III :- Effectiveness of Structured Teaching Programme**

Knowledge score	Mean ( $\bar{X}$ )	S. D. ( $\sigma$ )	Std. Error of Mean	D. F.	t-value	Significance
Pre-test	10.40	4.54	0.499	98	-15.5307	P<0.0001*
Post-test	23.85	4.11				

**Section –IV Association of Pre test Score with selected demographic variables .**

It has been highlighted that the demographic variables which includes age , gender , academic performance ,previous knowledge , practical exposure found to be significant .

**V. CONCLUSION**

Thus after the analysis and interpretation of the data ,we can conclude that the hypothesis, **H1** that, “There will be significant difference between the mean post-test knowledge scores of the students regarding care of patient with catheter will be significantly higher than mean pre -test knowledge scores at the level of P < 0.05.” is **being accepted** .

Also, the hypothesis, **H2**, “It was found out that age, gender, academic performance, previous knowledge and marital status all socio demographic variables found to be significant at the level of p = 0.05.” is being **accepted** .

**NURSING IMPLICATION**

**Nursing Practice**

Nursing practice plays not only curative but preventive, promotive and rehabilitative. In health care centres and management, he/she is responsible to assist doctors with examinations and medical procedures, cleaning and dressing wounds. Many factors are using for nursing practice in today's time. For nurses who are working in the medical hospitals or intensive care setting both inpatient and outpatient department, it is vital concern that she/he should have competent skill and critical knowledge about the particular phenomenon.

**Nursing Education**

With changing health care trends nursing must emphasize on prevention and then cure and thus, empowering the prospective nurse to be well assist client for soon recovery. The present study helps to raise the awareness among health care providers to improve the quality of life of the patients. As with changing lifestyle and rehabilitative activities it's a need of health care professionals to educate the middle age person regarding various techniques and caring of patient with central venous pressure line through which the students can understand the importance of central venous pressure line and know how to inject the drug through central venous pressure line.

**Nursing Administration**

Generally in the critical care units, it is the nurse practitioners who take interest in providing knowledge to patients and their relatives, all about multiple disorder, its effects and outcomes and also the possible complications of central venous pressure line related disorders. The nurse administrator must take up the challenges to organize continuous nursing education programmes for the nursing personnel and motivate them to prepare instructional materials like structured teaching programme and to conduct programmes which are beneficial for patients. The administrator can motivate the nurses for giving clinical teaching to the patients coming for treatment regarding how they can cope with the problems which they are facing during health related issues

**Nursing Research**

Nursing researchers in the field of medical surgical nursing is still in the upcoming stage in India, an increased number of studies related to other complementary therapy should be taken up as an education method at Masters and post masters level in various Indian settings. Since nursing studies in this area are few the tool and technique of the study can be used for the research studies. It increased the body of knowledge and can be used for further references material. Teaching programme on caring of patient with central venous pressure line and complication arises after administering the drugs.

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