" A Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge Regarding Chemotherapy Administration Among Student Nurses Of Government College Of Nursing , Jodhpur"

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Abstract: *A pre experimental study to assess the effectiveness of structured teaching programme on knowledge regarding chemotherapy administration among student nurses. The sample consisting of 60 student nurses. Student nurses were selected by using convenient sampling. The tool comprised of self administered structured knowledge questionnaire. The post test was conducted after one week. The data obtained were analyzed by using descriptive and inferential statistics. The mean score of post test knowledge 29.45 (92.03%) was apparently higher than the mean score of pre test knowledge score 16.52 (51.60%), suggesting that the structured teaching programme was effective in increasing the knowledge of the student nurses regarding chemotherapy administration. The mean difference 12.93 between pre test and post test knowledge score of the student nurses was found to be significant.*
Key words: *Chemotherapy, student nurses, pre experimental study.*

I.   Introduction

Non Communicable Diseases (NCD) are a major threat to development, economic growth and human health. India faces the human and economic threat posed by NCDs such as cardiovascular diseases, cancers, chronic respiratory diseases, diabetes.[1] Cancer is the term used to define the diseases with which abnormal cells divide uncontrollably [2] and Chemotherapy is now a mainstay of cancer therapy used in the treatment of most of solid tumors and hematologic malignancies like leukaemia's, lymphomas, myeloma and myelo-dysplastic syndromes. In India, cancers account for about 3.3% of the disease burden and about 9% of all deaths. Cancers in all forms are causing about 12 per cent of deaths throughout the world. In the developed countries cancer accounts for 21% deaths and in the developing countries cancer accounts for 9.5% of all deaths.[3]

Chemotherapy is the specific treatment of diseases by the administration of chemotherapeutic agents administered by the oral, intramuscular and intravenous routes occasionally directly into a body cavity, used to arrest the progress of or eradicate a specific pathological condition in the body without causing irreversible harm to healthy tissue.[4] Without taking proper precautions, nurses and other health industry workers can be exposed to the drugs. Nurses need to update their clinical and theoretical knowledge regarding chemotherapy administration including drug calculations, appropriate dilutions, identification of antidotes of cytotoxic drugs and management of side effects**.** This study was done to determine the knowledge regarding chemotherapy administration among student nurses regarding chemotherapy administration.

II. Research Elaborations

Statement of the problem
" A study to assess the effectiveness of structured teaching programme on knowledge regarding chemotherapy administration among student nurses of government college of nursing , Jodhpur"

III. Objectives

1   To assess the pre-test knowledge score regarding chemotherapy administration among student nurses.
2   To assess the post-test knowledge score regarding chemotherapy administration among student nurses.
3   To evaluate the effectiveness of structured teaching programme on knowledge regarding chemotherapy administration among student nurses.

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4   To find out association between pretest knowledge scores regarding chemotherapy administration and selected socio-demographic variables.

IV. Hypothesis

Ho: There is no difference between pre-test and post-test knowledge score student nurses regarding chemotherapy administration.

H$_1$: There is significant difference between pre-test and post-test knowledge scores of student nurse regarding chemotherapy administration.

H$_2$: There is significant association between the pre-test knowledge scores of student nurse regarding chemotherapy administration and selected socio demographic variables

V.   Material And Methods

Population - Student nurses

Sample – Student nurses studying at Colleges of nursing, Jodhpur.

Sample size- 60 Student nurses.

Setting- Government College of nursing, Jodhpur.

The conceptual framework for the study was developed on the bases of General systems theory by Von Lund wing Bertalanffy.

VI. Research Design

The research design selected for the present study was a pre experimental one group pre-test post-test research design.

Table 1: Pre experimental one group pre-test post-test research design.

Group	Pre test	Intervention	Post test
Student nurses	O$_1$	X	O$_2$
	Knowledge of Student nurses	Structured teaching programme on knowledge regarding chemotherapy	Knowledge of student nurses

The interpretations of the symbol are as below:

O$_1$- Administration of pre-test knowledge questionnaire

O$_2$- Administration of post-test knowledge questionnaire

X- Intervention, (Independent variable) i.e. Structured teaching programme.

Ethical consideration

Ethical clearance certificate was obtained from Institutional Ethical Clearance Committee of Government College of Nursing Jodhpur Rajasthan. (Raj.) India. Consent was taken from each participant who had participated in the study.

Description of the tool

The structured knowledge questionnaire consisted of two parts i.e. Part – I & II.

Part - I: consisted of 7 items on socio- demographic data such as Age, Studying class, Religion, Father and mother occupation, and source of information.

Part - II: consisted of 32 knowledge items. Each item was multiple choices in nature with 4 choices.

Scoring

The knowledge of student nurses regarding the outcomes of chemotherapy administration was scored as follow,

one mark for each correct answer and zero marks for incorrect answer. The maximum score was 32, to interpret level of knowledge the score was distributed as follows;

Interpretation of knowledge:

Level	Range of score
Inadequate knowledge	0-10
Moderate knowledge	11-20
Adequate knowledge	21-32

An answer key was prepared for scoring answer to the structured knowledge questionnaire.

Data collection and data analysis

The data was presented under the following sections

Section-I: Description of socio-demographic characteristics of sample..

Section-II: Assessment of Pretest knowledge of the students nurses regarding chemotherapy administration.

Section-III: Assessment of Posttest knowledge of the students nurses regarding chemotherapy administration.

Section-III: Evaluation of the effectiveness of the STP on knowledge of the students nurses regarding chemotherapy administration

Section-IV: Association between pre-test knowledge scores of student nurses regarding chemotherapy administration and selected socio-demographic variables.

VII.   Result

Table 2: Frequency and Percentage distribution of respondents to their level of knowledge score.
N=60

Level of knowledge	Score	Respodents			
		Pre-test		Post-test	
		frequency	Percent (%)	frequency	Percent (%)
Inadequate knowledge	**0-10**	**0**	**0**	**0**	**0**
Moderately knowledge	**11-20**	**57**	**95**	**0**	**0**
Adequate knowledge	**21-.32**	**3**	**5**	**60**	**100**
total		**60**	**100**	**60**	**100**

Table 2: The result showed that, in pre-test 95% of the respondents had Moderately adequate knowledge, 5% of therespondents had adequate knowledge and none of the respondents had inadequate knowledge and in post-test 100% of the respondents had adequate knowledge and none of the respondents had inadequate and moderately adequate knowledge regarding chemotherapy administration.
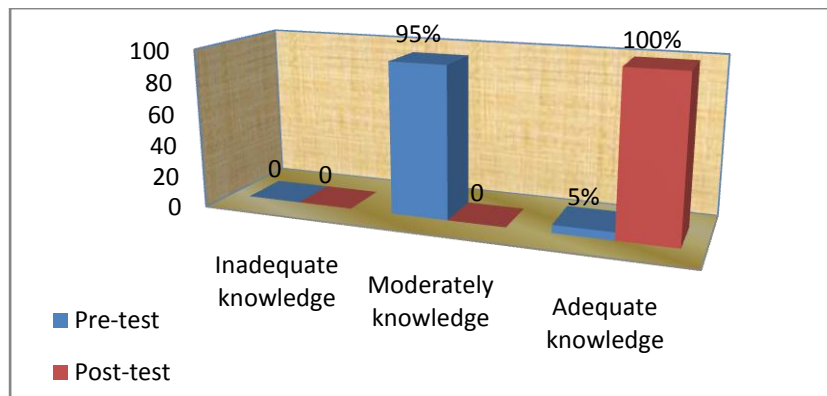

Figure 1: Frequency and Percentage distribution of respondents to their level of knowledge score.

SECTION: III
Evaluation of the effectiveness of the STP on knowledge of the students nurses regarding chemotherapy administration

The Paired "t" value was computed to determine the effectiveness of STP on knowledge of the students nurses regarding chemotherapy administration

The following research hypothesis was stated

Ho: There is no difference between pre-test and post-test knowledge score student nurses regarding chemotherapy administration.

H₁: There is significant difference between pre-test and post-test knowledge scores of student nurse regarding chemotherapy administration.

H₂: There is significant association between the pre-test knowledge scores of student nurse regarding chemotherapy administration and selected socio demographic variables

Table 3: Significance of the difference between the pre-test and post-test knowledge scores of the student nurses   **N=60**

Knowledge area	Test	Mean	SD	Mean Diff.	SD Diff.	Paired t-value	P value
Knowledge on Chemotherapy Administration	**Pre test**	**16.52**	**2.67**	**12.9**	**2.8**	**35.97**	**0.000*****
	Post test	**29.45**	**1.7**				

***p<0.001

Table 3: The result showed that the overall mean difference was 12.9 with paired 't' value 35.97. Thus it was revealed that the post test mean score was significantly higher than the pre test mean score. The table value of paired t' test at 39 degree of freedom and at 0.01 level of significance is 1.96 since the calculated value was

higher than the table value, the research hypothesis H_1 was accepted. Hence there was a significant difference found between the pre test and post test scores on chemotherapy administration.

Table 4: Association between the pre-test knowledge scores of student nurses regarding chemotherapy administration and selected socio-demographic variables

N=60

Sl. No	Socio-demographic variables	Df	Chi-square value	P Value	Inference
1.	Age	1	0.033	1.00	NS
2.	Studying Class	1	0.599	0.583	NS
3.	Occupation of Father	3	6.8	0.051	NS
4.	Occupation of Mother	3	3.011	0.428	Ns
5.	Religion	2	7.7	0.028*	S
6.	Family Monthly Income	2	39.35	0.002**	S
7.	Family Type	1	1.25	0.551	NS
8.	Family History of Cancer	1	0.83	0.39	NS

*p<0.05

**p<0.01

Df – Degree of freedom

Table 4: There is is no significant association was found between the knowledge of student nurses regarding chemotherapy administration and their socio–demographic variable: such as age (χ2 cal= 0.033 and P< 0.00), Studying class (χ2 cal= 0.599 and P< 0.010), Father occupation (χ2 cal= 6.8and P< 0.005), occupation of mother (χ2 cal= 3.011 and P< 0.004) , family type (χ2 cal= 1.25 and P< 0.012) and family history of cancer(χ2 cal= 0.83 and P< 0.010. No significant association was found between the knowledge of student nurses and their socio demographic factors; Age, studying class, father occupation, mother occupation, family type and family history of cancer.

A significant association was found between the knowledge scores of student nurses and socio demographic factors such as Religion (χ2 cal= 7.7 and P< 0.05) and monthly family income(χ2 cal= 39.35 and P< 0.01)   the research hypothesis suggesting H_2:There is a significant association between knowledge of student nurses regarding chemotherapy administration and their selected socio-demographic variables is accepted.

VIII.   CONCLUSION

The study aimed at testing the effectiveness of structured teaching programme on knowledge of student nurses regarding chemotherapy administration. The study concludes that the structured teaching programme is an effective measure in improving the knowledge level of student nurses regarding chemotherapy administration.

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