



A study to assess the Effectiveness of Structured Instructional Module on Knowledge on Safe handling and administration of chemotherapeutic agent among the Nursing students at Rani Meyyammai College of Nursing, Chidambaram

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*“Once cancer happens it changes
The way you live for the rest of your life”.*

- Hayley Mills

Introduction: Cancer is the second leading causes of fatality among adults worldwide. Nurses have a predominant role in oncology unit in safe handling and administration of chemotherapeutic drugs. Administration of chemotherapy poses greater risk of exposure to harmful factors. Hence it is an impotent to update their knowledge and skill regarding safe handling and administration of chemotherapeutic drugs. **Materials and methods:** pre experimental one group pretest and post test design was adopted to accomplish the objectives. **Results:** On analysis, the study revealed that the pretest mean score on knowledge on chemotherapy drugs was 4.614 and the post test mean score was increased to 5.604. Regarding knowledge on skill on safe handling and administration of chemotherapy drugs, the pretest mean value was 11.291 which was increased to 14.270 in post test. The knowledge on nursing care for patient undergoing chemotherapy, the

pretest mean value was 1.708 and it was increased to 2.687. Paired Z test was applied to compare mean and standard deviation of pretest and posttest. The result showed that knowledge on safe handling and administration was statistically significant at $P < 0.001$ level and the structure instructional module was found to be more effective, hence the hypothesis was supported.

Keywords: Structured Instructional Module, chemotherapy

STATEMENT OF THE PROBLEM

A study to assess the Effectiveness of Structured instructional module on Knowledge on Safe handling and administration of chemotherapeutic drugs among the Nursing students at Rani Meyyammai College of Nursing, Chidambaram.

OBJECTIVES

1. To assess the knowledge regarding Safe handling and administration of chemotherapeutic drugs.
2. To assess the knowledge on skills of the safe handling and administration of chemotherapeutic drugs
3. To evaluate the effectiveness of the structured instructional module on safe handling and administration of chemotherapeutic drugs
4. To associate the Knowledge with selected demographic and academic variables such as age, gender, education, occupation etc.

REVIEW OF LITERATURE:

Review of literature organized in the present study were organized in the following sections

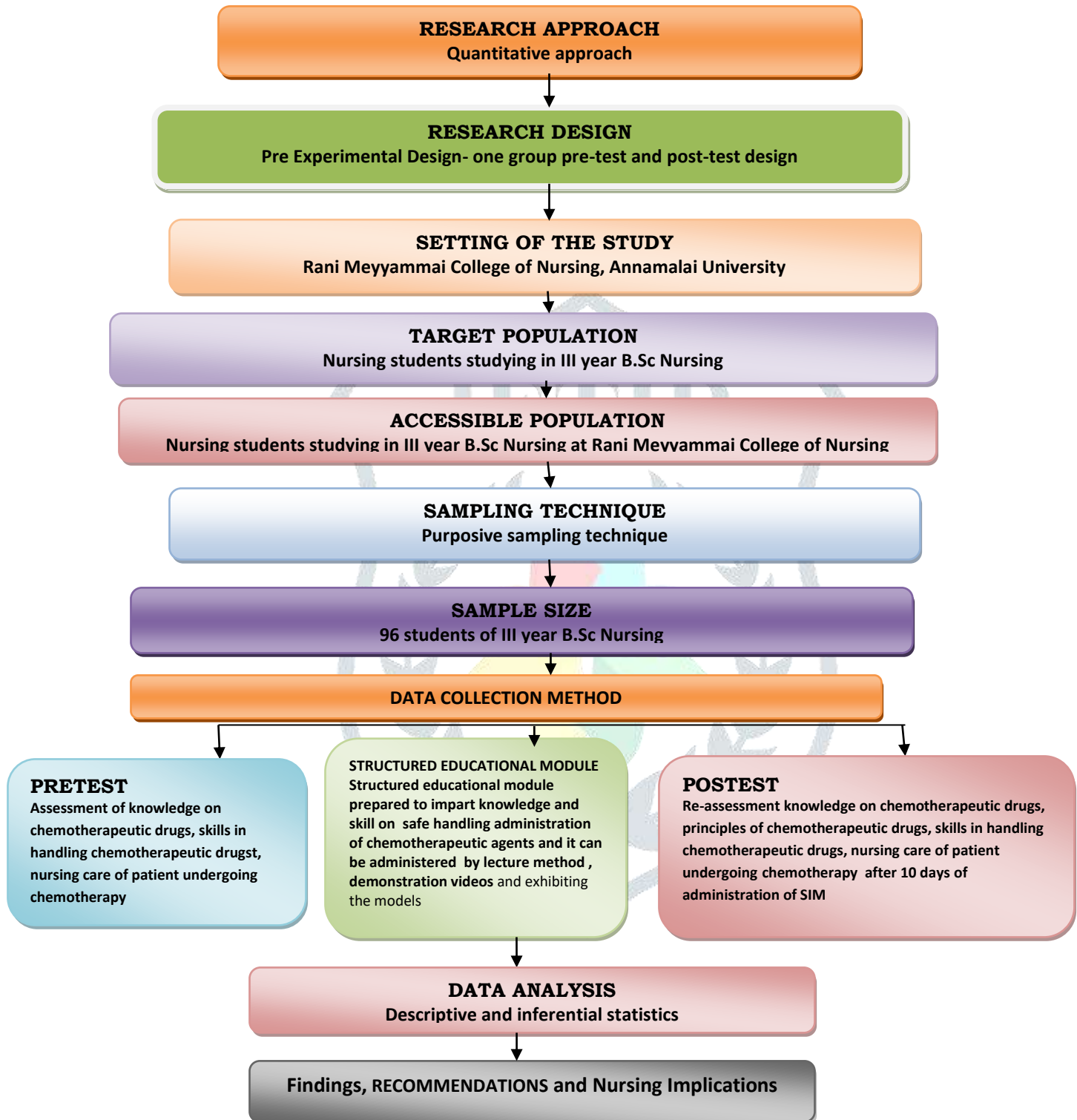
SECTION A: Literature related to nurses knowledge on chemotherapeutic drugs.

SECTION B: Literature related to prevalence of improper handling of chemotherapeutic agents.

SECTION C: Literature related to safe handling of chemotherapeutic agents.

SECTION D: Literature related to management of side effects of chemotherapy administration.

SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



ASSESSMENT OF KNOWLEDGE ON CHEMOTHERAPEUTIC DRUGS**N=96**

VARIABLE	PRE-TEST		POST-TEST	
	MEAN	SD	MEAN	SD
Knowledge on chemotherapeutic agent	4.614	1.558	5.604	1.565

Table 1 infers that the mean pre test value was 4.614 with the standard deviation of 1.558 and the post test mean score was 5.604 with the standard deviations of 1.565 regarding knowledge on chemotherapeutic agents

TABLE 2

ASSESSMENT OF KNOWLEDGE ON PRINCIPLES OF CHEMOTHERAPEUTIC DRUG ADMINISTRATION

N=96

VARIABLE	PRE-TEST		POST-TEST	
	MEAN	SD	MEAN	SD
Knowledge on principles of chemotherapeutic drug administration	1.458	0.869	2.187	1.008

Table 2 shows the knowledge on principles of chemotherapeutic drug administration between pretest and post test. The Pretest mean score was 1.458 with the standard deviations of 0.869 and the mean score was increased to 2.187 with the standard deviations of 1.008 in post test

TABLE 3

**ASSESSMENT OF KNOWLEDGE ON SKILL IN SAFE HANDLING AND
ADMINISTRATION OF CHEMOTHERAPEUTIC DRUGS**

N=96

VARIABLE	PRE-TEST		POST-TEST	
	MEAN	SD	MEAN	SD
Knowledge on skill in handling chemotherapeutic drugs	11.291	3.321	14.270	2.892

Table 3 depicts the knowledge on skill in handling chemotherapeutic drugs between pretest and post test. The Pretest mean score was 11.291 with the standard deviations of 3,321 and the mean score was increased to 14.270 with the standard deviations of 2.892 in post test

TABLE 4

**ASSESSMENT OF KNOWLEDGE ON NURSING CARE FOR PATIENT UNDERGOING
CHEMOTHERAPY**

N=96

VARIABLE	PRE-TEST		POST-TEST	
	MEAN	SD	MEAN	SD
Knowledge on nursing care of patient undergoing chemotherapeutic agent administration	1.708	1.065	2.687	1.136

Table 4 infers that the pretest mean value was 1.708 with the standard deviations of 1.065 and the post test mean score was 2.687 with the standard deviations of 1.136 with regard to the knowledge on nursing care of patient undergoing chemotherapeutic drugs administration

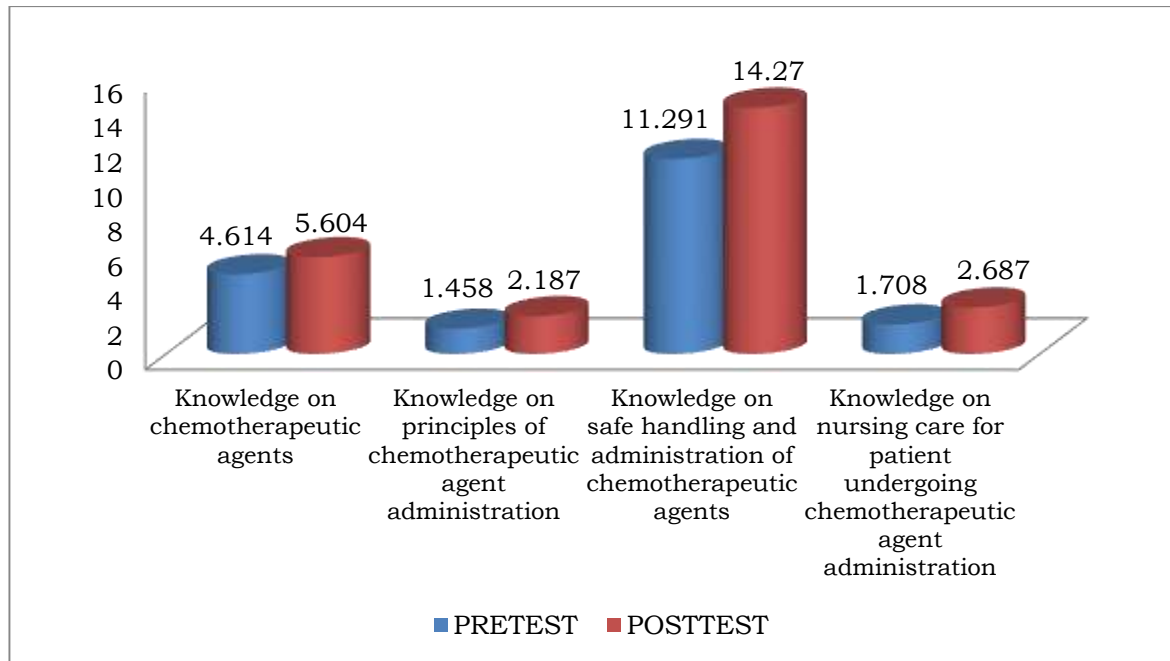
FIGURE1**COMPARISON OF MEAN OF KNOWLEDGE ON SAFE HANDLING AND ADMINISTRATION OF CHEMOTHERAPEUTIC AGENTS BETWEEN PRETEST AND POSTTEST AMONG NURSING STUDENTS****N=96**

Fig 1 explains the comparison of pretest and post test mean values of knowledge on various aspects such as knowledge on chemotherapeutic drugs, principles of chemotherapeutic drugs administration, handling and administration of chemotherapeutic drugs and nursing care of patient undergoing chemotherapy. The calculated paired z test score showed that there is a improvements in knowledge score in various aspects of chemotherapy drug administration which was found to be significant at $p > 0.001$ level. Hence the hypothesis was supported. Further it implies that the structured educational module was found to be effective in imparting knowledge among student on safe handling and administration of chemotherapeutic drugs.

TABLE 5

**ASSOCIATION OF KNOWLEDGE ON SAFE HANDLING OF CHEMOTHERAPEUTIC
DRUGS WITH SELECTED VARIABLES**

N=96

VARIABLES	SUB-VARIABLES	n	MEAN	SD	WILCOXON SIGNED RANK TEST	P VALUE
Choice of selecting nursing	Interested	40	18.875	5.159	46.64	0.001*
	Not interested	30	19.000	5.166	47.34	
	By compulsion	26	20.000	4.223	52.69	
Medium of education	Tamil	22	19.081	4.756	47.47	0.441
	English	74	19.682	5.445	51.95	
SSLC score	Above 350	40	19.625	4.617	50.23	0.272
	Above 450	56	18.929	5.112	47.25	
HSC score	Above 600	17	18.588	4.569	44.41	0.598
	Above 900	67	19.284	4.889	48.82	
	Above 1100	12	19.750	5.2706	52.25	
Pre year score obtained	Distinction	5	19.400	5.224	48.70	1.223
	First class	63	18.857	4.944	46.34	
	Second class	28	20.000	4.8305	53.32	
Interest towards the speciality	OG	20	19.900	5.535	53.03	0.001*
	MSN	46	19.655	3.939	50.34	
	Pediatric	10	17.773	5.163	40.41	
	CHN	10	19.133	4.867	47.73	
Area of interest	Practical	44	20.523	4.648	55.63	0.001*

	Theory	27	17.889	4.9173	41.04	
	Both	25	18.360	4.923	44.02	
Interest towards patient care	Yes	80	19.450	4.738	49.8	0.001*
	No	16	18.063	5.662	41.91	
Interest towards newer procedure	Yes	82	19.390	4.674	49.10	0.001*
	No	14	18.214	6.616	44.96	

Table 5 shows the association of knowledge on safe handling and administration of chemotherapeutic drugs with selected variables. Calculated Wilcoxon Signed Rank Test score revealed that there is a strong association exists between choice of selecting nursing, interest towards the nursing speciality, area of interest, interest towards patient care and interest towards newer procedures.

Ethical aspects:

Ethical clearance to undertake this study was obtained from the human ethical committee of RMMCH at Annamalai University. Also permission was obtained from principle of Rani meyyammai college of nursing and parents of each sample. All adolescents who participated in the study were fully informed via written information sheets and verbal correspondence about the nature and purpose of the research. Samples were reassured that refusal to provide information or withdraw from the study at any time during the study

CONCLUSION

This study implies that Structured Instructional Module had improved the knowledge on safe handling and administration of chemotherapeutic drugs among the nursing students. Hence, the multiple methods of teaching program can be carried out in the college to update the recent the knowledge of student and thereby helping them in administering the chemotherapeutic drugs to provide quality of patient care.

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