



Effectiveness of planned teaching programme on the safe handling of cancer chemotherapeutic drugs for nursing officer's in selected index medical hospital, Indore year 2023

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Abstract

Background of the study: Through these years chemotherapy nurses have mastered clinical expertise in areas which contribute to patient care.

Research Methodology: An evaluatory research approach was used to find out the effectiveness of PTP on safe handling of cancer chemotherapeutic drugs for nursing officers is pre experimental one group pre-test post-test design.

Dependent Variables: Knowledge level of nursing officers cancer chemotherapeutic drugs.

Independent Variables: Planned teaching programme.

Data Collection: Demographic variables and structured knowledge questionnaire was developed.

Results: Descriptive and inferential statistics. The effectiveness of PTP was identified using frequency and percentage. Paired 't' test was used to find out the significant difference between the pre-test and post-test knowledge scores and the mean post-test knowledge scores (56.5) was higher than the mean pre-test knowledge scores (21.57). The computed 't' value is 54.058 is higher than the tabled value t_{99} at $p < 0.001$ level of significance the association between pre-test knowledge scores and selected variables were calculated using Chi square test.

Conclusion: The nurse carries personnel responsibility for nursing practice and for maintaining competence by continuous learning. Planned teaching programme enhance the knowledge of nursing officers.

Keywords: Effectiveness, safe handling, cancer chemotherapeutic drugs, nursing officers, PTP

Introduction

The modern era of chemotherapy was first initiated by discovery of oestrogen to treat prostate and breast cancer. Through these years chemotherapy nurses have mastered clinical expertise in areas which contribute to patient care. Recent studies show an increase in the potential risk due to occupational exposure to cytotoxic drugs.

Need of the Study

The investigator herself during her clinical experience, observed nursing students complaining about skin rashes, itching, dyspnoea etc, after the administration of the cancer chemotherapeutic drugs. The unsafe handling of the drugs is the major cause for these complaints. The above studies suggest that if appropriate safety measures are employed potential health hazards will be minimized. Keeping in view the above fact, the investigator planned to conduct the gallery walk intervention on nursing students after assessing their knowledge on the safe handling of cancer chemotherapeutic drugs and its side effects.

Objectives

1. To determine the level of pre-test knowledge of nursing officers regarding the safe handling of cancer chemotherapeutic drugs before and after the planned teaching programme.
2. To evaluate the effectiveness of planned teaching programme.in terms of gain in knowledge.
3. To find out association with selected demographic variables.

Assumptions

1. The b.sc and G.N.M. nursing students has some knowledge regarding safe handling of cancer chemotherapeutic drugs.
2. Planned teaching programme enhances the knowledge of nursing officers

Hypothesis

H₁: The mean post-test knowledge scores of nursing officers attending planned teaching programme on safe handling of cancer chemotherapeutic drugs will be significantly higher than their mean pre-test knowledge scores.

H₂: There is a significant association between pre-test knowledge scores and their selected demographic variables.

Conceptual Framework

The conceptual framework of the present study was developed by the investigator based on Imogine King's Goal Attainment model.

The research design used in this study is pre experimental one group pretest post test design which is represented in the figure given below.

Table 1

Group	Pretest	Intervention	Post test
I	O ₁	X ₁	O ₂

Group: Nursing officers having one year of clinical experiences and having no oncology nursing experience.

O₁: Pretest before administering the PTP

X: Administration of PTP.

O₂: Post testing of the group after administration of the PTP.

Dependent variable: In the present study it refers to the knowledge level of nursing officers regarding cancer chemotherapeutic drugs.

Independent variable: In this study it refers to the planned teaching programme on safe handling of cancer chemotherapeutic drugs.

Description of the final tool: The final tool consisted of structured knowledge questionnaire. The tool consists of two parts-A, Baseline proforma-B. Structured knowledge questionnaire.

A. aseline proforma: It consists of items for obtaining baseline information about the nursing officers.

B. Structured Knowledge Questionnaire: The tool consists of 40 items and the items were developed so as to cover three different areas: cancer and cell division (1-16 questions), chemotherapy and side effects (17-21) and safe handling of cancer chemotherapeutic drugs (22-40).

Data Analysis and Interpretation

Range, Mean, Median, Mean Percentage Score of Pretest and Post Test of Knowledge Scores

Table 2

Area	Range	Mean ± SD	Median	Mean % Score
Pretest	14-35	27.51±5.172	27.0	40.46%
Post test	52-65	56.5±3.08	58.0	85.37%

N=100

Maximum possible score: 68

It is evident from table 2 that the subjects post test knowledge scores range from 52-65 was higher than their pretest knowledge score range (14-35). The data in table

also depicted that mean post test knowledge score (X₂=61.11) is higher than the mean pretest knowledge scores (X₁ = 32.68).

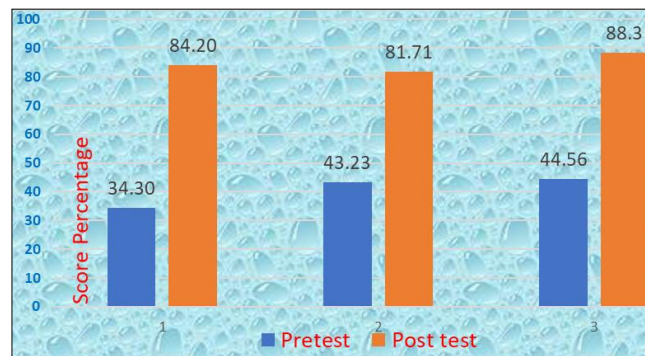


Fig 1: Bar-Diagram Showing Mean % Knowledge Score of Pretest and Post Test

Table 3: Area Wise Paired ‘t’ Test Showing Significant Difference Between the Pretest and Post Test Knowledge Scores on Safe Handling of Cancer Chemotherapeutic Drugs

Areas	Max. score	Mean		Mean difference	SD of difference	SD Error SD/√n	‘t’ Value	Degree of freedom
		Pretest	Posttest					
Cancer and cell division	29	9.96	24.42	14.46	3.467	.3467	41.45	99
Chemotherapy & side effects	7	3.02	5.72	2.697	1.134	.1134	23.71	99
Safe handling of cancer chemo-therapeutic drugs	32	14.26	28.2	13.94	4.036	.4036	33.32	99

N=100

(t₉₉ = 3.390 P< 0.001)

Table 4: Association Between Level of Pretest Knowledge Scores and Selected Variables

n=100

Variables	Pretest Knowledge scores		df	χ ²	Inference
	≤ mean	> mean			
Total years of experience					
≤2yrs	41	32	1	0.1481	NS
≥2yrs	14	13			
Qualification					
GNM	18	23	1	0.2670	NS
B Sc.	29	30			

(χ²₁=3.84) NS: Not Significant

Nursing Implications

The finding of the present study has implications in the field of nursing education, nursing practice, nursing administration and nursing research.

Nursing Education

Study also gives priority for the continuing education programme as it upholds and maintains the knowledge, and thus making them more competent. Continuing education programmes should be conducted for the need awareness of the nursing officers. Every student should be encouraged to do the safe handling techniques of cancer drugs and thus

will get acquainted to this method. The skill will also be developed by practicing it. The topic can also be included in the curriculum.

Nursing practice

Information's about safe handling of hazardous drugs is always not available in drug resource books commonly used by the nurses. Nurses working in the hospital as well as in the community should be equipped with skill and knowledge in handling the chemotherapeutic or antineoplastic drugs. The gap between the existing knowledge and expected levels indicates the need for continuing educations programme on safe handling of cancer chemotherapeutic drugs.

Nursing Administration

They should plan for manpower, money, material, methods and time to conduct successful educational programmes. Health administration should make the education department aware about the prevailing health problems and assign the staff for conducting the planned teaching programme in hospital and also in the community.

Nursing research

Nurse researchers should be aware about the health care system and status of nursing profession. If the nurses are serious about their impact of cancer care, they should ensure research based practice in the future. The ability to identify the complementary roles, and the areas of role overlap with the nurses will empowered them to acknowledge, define, accept, and practice their role with less ambiguity and frustration.

Limitations

1. Sample was from only one institution. This restricts the generality of the results.
2. Study did not assess the practice of nursing officers.
3. Study was delimited to nursing officers who are having minimum one year of experience.
4. Randomization could not be obtained.

Recommendations

On the basis of study findings, following recommendations have made for further study.

1. The study could be conducted on a larger sample thereby findings can be generalized for a larger population.
2. An exploratory study could be conducted to identify the knowledge and practices of staff nurses regarding safe handling of cancer chemotherapeutic drugs.
3. An experimental study could be undertaken with a control group.

Conclusion

The researcher a new experience, a chance to widen the knowledge and a venue to interact with nursing officers, the directions from the guide, various experts and co-operation of staff nurses played a major role in successful completion of the study.

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