A STUDY TO ASSESS THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING SIDE EFFECTS OF CHEMOTHERAPY AMONG STAFF NURSES IN SELECTED HOSPITALS AT BHOPAL

Priyanka Patel[1]

[1]*Medical Surgical Nursing (Cardiology)*
[1]*Nursing Tutor, Government Nursing College G.M.H Rewa, MP*

ABSTRACT

Cancer is a global health challenge characterized by abnormal cell growth and potential metastasis. In India, it claims over 1300 lives daily, making it a significant public health issue. This article provides an overview of cancer statistics and an update on incidence, mortality, and survival rates, projecting data for the year 2009. Various treatment modalities for cancer are explored, emphasizing the need for comprehensive understanding and management.

This study evaluates the effectiveness of a self-instructional module on chemotherapy side effects' knowledge among staff nurses in Bhopal hospitals. The objectives are to assess current knowledge, measure the module's impact, and explore associations with demographic variables. Hypotheses suggest differences in pre-test and post-test knowledge scores and significant associations with demographic variables.

This research employs an evaluative approach with a one-group pretest-posttest design. Data collection utilized a structured questionnaire. Findings will inform nursing practice and enhance chemotherapy knowledge among nurses, contributing to better patient care.

KEYWORD: *Cancer, Chemotherapy, Staff Nurses, Knowledge, Self-instructional Module, Effectiveness, Demographic Variables*

INTRODUCTION

Cancer, a collective term encompassing a spectrum of diseases characterized by abnormal cell growth and the potential to infiltrate and spread to other regions of the body, presents a global health challenge. Notably, not all tumors are cancerous; certain tumors do not possess the capacity to metastasize. The impact of cancer is particularly pronounced in India. According to the National Cancer Registry Program established by the India Council of Medical Research (ICMR), more than 1300 lives are lost to cancer daily. Alarmingly, between 2012 and 2014, there was an approximate 6% surge in cancer-related mortality. In 2012 alone, India reported 478,180 cancer-related deaths out of 2,934,314 diagnosed cases.

Background of the Study

Cancer stands as a pervasive and pressing public health concern not only in India but also in the United States and numerous other parts of the world. Within the United States, the impact of cancer is striking, with one in four deaths attributed to this disease. The significance of understanding the intricacies of cancer, from incidence and mortality rates to survival statistics, is paramount. This article delves into a comprehensive overview of cancer statistics, providing updated data on incidence, mortality, and survival rates, as well as projections for the number of new cancer cases and deaths in the year 2009.

In addressing cancer, various treatment modalities come into play. The primary methods encompass surgery, radiation therapy, chemotherapy, immunotherapy, targeted therapy, hormone therapy, stem cell transplantation, and precision medicine. Recognizing the multifaceted nature of this formidable adversary, the study at hand seeks to shed light on the evolving landscape of cancer, its impacts, and the treatment options that are instrumental in the ongoing battle against this complex disease.

STATEMENT OF THE PROBLEM

 "A study to assess the effectiveness of self instructional module on knowledge regarding side effects of chemotherapy among staff nurses in selected hospitals at Bhopal"

OBJECTIVES OF THE STUDY

1. To assess the current knowledge of chemotherapy drug side effects among staff nurses in selected Bhopal hospitals.

2. To determine the impact of a self-instructional module on the knowledge of chemotherapy drug side effects among staff nurses.
3. To explore any associations between pre-test knowledge scores on chemotherapy drug side effects and demographic variables among staff nurses.

PROJECT OUTCOME (HYPOTHESIS)
At a significance level of 0.05: H1: There is a significant difference between pre-test and post-test knowledge scores regarding chemotherapy drugs among staff nurses. H2: There is a significant association between pre-test knowledge scores and demographic variables.

DELIMITATIONS
- The study is limited to nursing staff.
- The research focuses on staff nurses in selected hospitals in Bhopal, Madhya Pradesh.
- The sample size is limited to 50 participants.

REVIEW OF LITERATURE
The literature review is a comprehensive and critical analysis of scholarly publications and materials related to the knowledge of chemotherapy and its side effects among staff nurses. The review is organized into three main categories:
1. Studies on staff nurses' knowledge regarding chemotherapy.
2. Studies on the effectiveness of information booklets on chemotherapy.
3. Studies on the effectiveness of various teaching programs on chemotherapy.

RESEARCH METHODOLOGY
Research methodology outlines the approach, design, data collection methods, and ethical considerations of the study. It follows an evaluative approach and employs a one-group pretest-posttest design to assess the effectiveness of the self-instructional module.

RESEARCH APPROACH: The evaluative approach is used to assess staff nurses' knowledge of chemotherapy, with the primary goal of evaluating the module's effectiveness.

RESEARCH DESIGN: The research design is structured to collect and analyze data that combines relevance to the research's purpose with an efficient procedure. A one-group pretest- posttest design is chosen to assess the impact of the self-instructional module on knowledge.

VARIABLES UNDER STUDY
- **Independent Variable:** The independent variable in this study is the "information booklet regarding chemotherapy."
- **Dependent Variable:** The dependent variable in this study is "knowledge regarding chemotherapy."

EXTRANEOUS VARIABLES: Several extraneous variables have been identified, including age, gender, educational status, years of experience, area of experience, previous information regarding chemotherapy, and the source of previous information.
Research Setting: The study was conducted at Hamidia and Jay Prakash Hospital and Research Centre in Bhopal, Madhya Pradesh.

DEVELOPMENT OF THE TOOL
- A structured knowledge questionnaire with multiple-choice questions was developed by the investigator to assess the knowledge of staff nurses regarding chemotherapy.
- The questionnaire was reviewed with inputs from experts to ensure content validity.
- The final draft of the questionnaire was used in the study.

Description of Tool: The questionnaire had two sections:
- Section A: Demographic data
- Section B: Knowledge questionnaire regarding chemotherapy among staff nurses, consisting of 25 items.

RELIABILITY OF THE TOOL
- The reliability of the questionnaire was assessed using the Spearman-Brown split-half method and found to be r = 0.84 for the knowledge questionnaire.

PREPARATION OF INFORMATION BOOKLET
- An information booklet on chemotherapy was developed by the investigator, incorporating suggestions from experts.

PILOT STUDY
- A pilot study was conducted at J.P. Hospital with 10 staff nurses to assess feasibility.
- The pilot study involved a pre-test with the knowledge questionnaire, followed by administering the information booklet on the same day.
- On the 3rd day, a post-test using the same questionnaire evaluated the effectiveness of the information booklet.

DATA COLLECTION PROCEDURE
- Permission was obtained from the directors, and data collection was planned according to the convenience of the nurses.
- Data collection occurred from 15/03/2017 to 21/03/2017.
- A pre-test with the knowledge questionnaire was administered, followed by the information booklet.
- The post-test with the same questionnaire was conducted on the following day to evaluate the booklet's effectiveness.

ETHICAL CONSIDERATIONS
- Research objectives were approved by the research ethical committee.
- Permission for the study was obtained from the nursing superintendent of Metro Hospital.
- Informed consent was obtained from the respondents, ensuring confidentiality and the right to withdraw from the study at any point.

In summary, this chapter detailed the research approach, design, population, sample, tools, information booklet development, and data collection procedure. The study employed a pre-experimental design, using pre-tests and post-tests, and data analysis involved statistical tests like the t-test to assess the effectiveness of the information booklet on chemotherapy knowledge among staff nurses.

DATA ANALYSIS AND INTERPRETATION
This chapter focuses on the process of data analysis and the interpretation of findings from the study. Analysis is the systematic organization of data, facilitating the answering of research questions and testing of hypotheses. It is essential for drawing meaningful conclusions from collected data. Interpreting the findings represents the creative and challenging step in research that translates data into valuable insights.

ORGANIZATION OF THE FINDINGS
The findings are structured in a way that aligns with the objectives of the study. The data is categorized into several sections for a systematic presentation:

DATA ON BACKGROUND FACTORS OF STAFF NURSES
- The majority (58%) of staff nurses in the study are in the age group of 20-24 years.
- 20% of staff nurses fall into the age group of 25-29 years.
- 18% of staff nurses are in the age group of 30-34 years.
- 4% of staff nurses are in the age group of >34 years.

This section provides an overview of the age distribution among the staff nurses, which is an important demographic factor.
The remaining sections of the data analysis and interpretation chapter would likely follow a similar structure, presenting and analyzing the data in relation to the study's objectives, knowledge regarding chemotherapy, the effectiveness of the information booklet, and the association between knowledge and demographic variables.
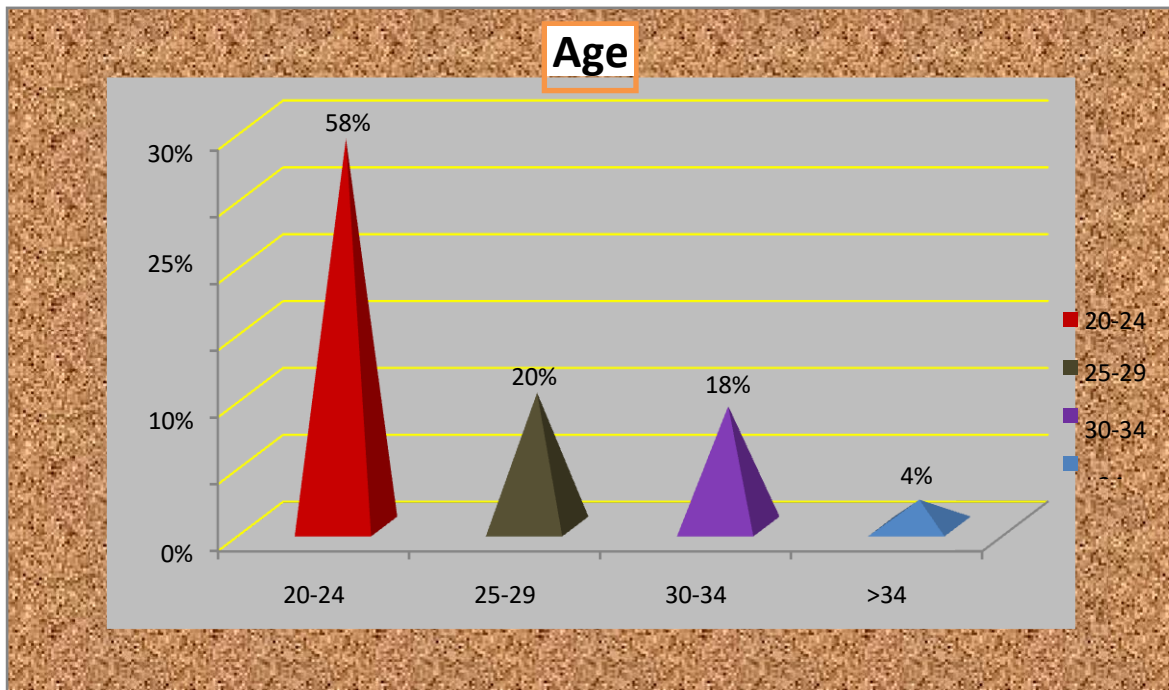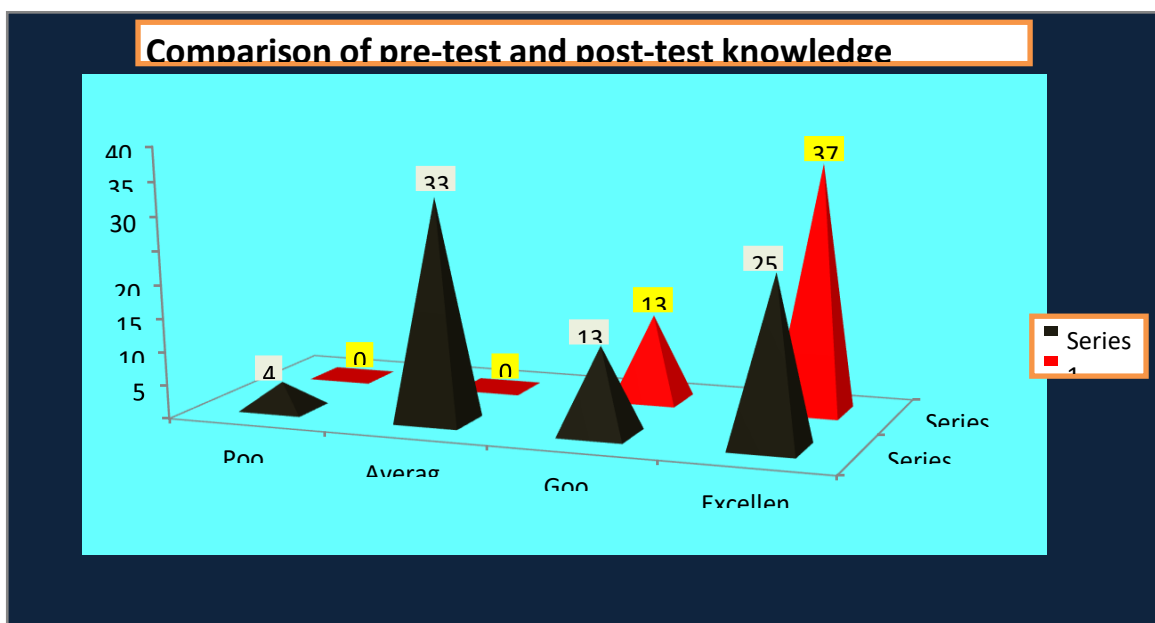
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Figure:-1 Pyramid diagram reveals percentage distribution of staff nurses age.

DATA ON PRE-TEST AND POST-TEST KNOWLEDGE

Group	Level of knowledge	Pre -test	Poet -test
Staff nurses of JAY PRAKASH hospital Bhopal	Poor (0-6)	4	0
	Average (7-12)	33	0
	Good (13-18)	13	13
	Excellent (19-25)	0	37

Table shows in pre-test 4(8%) staff nurses had poor knowledge, 33(66%) staff nurses had average knowledge and 13(26%) staff nurses had good knowledge. In post-test 13(26%) staff nurses had good knowledge and 37(74%) staff nurses had good knowledge.

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DATA ON EFFECTIVENESS OF INFORMATION BOOKLET ON STAFF NURSES.

For the purpose of the study the following null hypothesis was stated.

H01: There is no significant difference between pre-test and post-test knowledge score.

Table : Mean, standard deviation, mean difference, t value regarding pre -test and post-test knowledge among staff nurses.
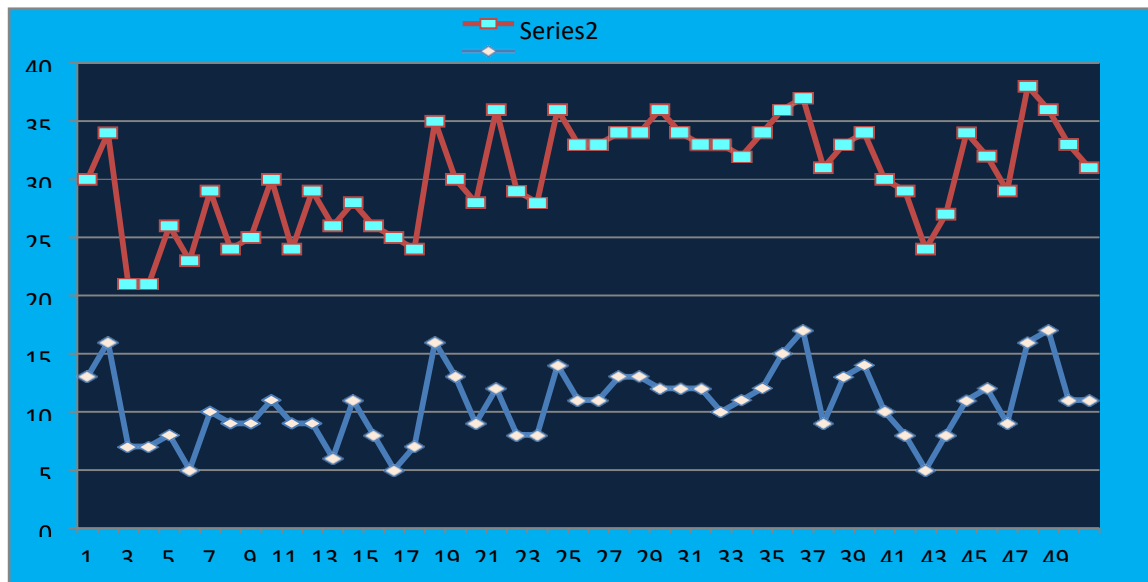
n = 50

Group	Pre -test		Post-test			Paired t testvalues
Staff nursesof Hamidiaand Jay prakash hospital	Mean	SD	Mean	SD	MD	
	10.7	3.09	19.7	2.39	9	**t = -19.4** **t table value =49p = 0. 0001** **S**

S: Significant, SD: standard deviation, MD: mean deviation, level of significance =0.05

The obtained post-test mean value (19.7) was higher than pre -test mean value(10.7). The mean difference value is (9) and the obtained ̈ test value is -19.4 which is found to be greater than the„t ̈ table value (). Since the obtained t value is not significant at p < 0.05 level therefore null hypothesis is rejected. It is inferred that there is significant difference in knowledge among staff nurses after information

booklet on chemotherapy.

Line graph shows post-test scores are higher than pre-test scores regardingchemotherapy among staff nurses.

Figure:-3 Line graph shows overall comparison of pre -test and post-testknowledge

scores among staff nurses.

Data on association between knowledge regarding chemotherapy and demographic variables. at 0.05 level of significance

H02: There is no significant association between pre- test knowledge score and theirdemographic variables.

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Table3:- Data on association between pre-test knowledge and demographicvariables. N 50

Sl.No	Demographicvariables	Categories	Total Number	<Median11	>Median	Result
1.	Age	20-24	29	17	12	**Chi square=1.940 P=0.585 Df=3 NS**
		25-29	10	5	5	
		30-34	9	6	3	
		>34	2	2	0	
2.	Gender	Male	6	4	2	**Chi square=0.126 P=0.722 Df=3 NS**
		Female	44	26	18	
3.	Education status	G.N.M.	27	15	12	**Chi Square=0.six94 P=0.707Df=2 NS**
		B.sc	21	14	7	
		Post B.sc	2	1	1	
		M.sc	0	0	0	
4.	Year of experience	< 2 year	26	16	10	**Chi square=0.401 P=0.818 Df=2 NS**
		2-4 year	16	10	6	
		>4 year	8	4	4	
5.	Area of experience	General ward	13	10	3	**Chi Square=1.82SI P=0.11Df=3 NS**
		ICU	17	10	7	
		Cancer ward	6	4	2	
		Other ward	14	7	7	
6.	Previous information regarding chemotherapy	Yes	35	18	17	**Chi square=1.72 P=0.1 Df=1NS**
		No	15	12	3	
7.	Source of previous information	In service education	11	5	6	**Chi Square=11.152 P=0.011Df=3 S***
		Mass medias	4	4	0	
		Journals & books	9	6	3	
		Others	11	2	9	

SUMMARY

This study aimed to assess the effectiveness of an information booklet on chemotherapy among staff nurses in HAMIDIA and JAY PRAKASH Hospitals in Bhopal. The research employed a one-group pre-test post-test design with an evaluative approach. Data were collected from 50 participants before and after the booklet's administration.

MAJOR FINDINGS

1. The mean pretest knowledge score was 10.7, while the mean post-test score was 19.7. This indicates a substantial increase in knowledge after the administration of the information booklet.
2. The mean difference between pretest and post-test scores was 9, further underscoring the positive impact of the booklet.
3. The t-test value, which was -19.4, was not statistically significant at the 0.05 significance level. This suggests that the intervention was effective in improving knowledge.
4. An analysis of the association between pretest knowledge and various background variables showed that, with the exception of the sources of previous information, there was no significant association. The chi-square value for sources of previous information was 11.152, with a p-value of 0.0109, which is less than 0.05. Therefore, the alternative hypothesis was accepted, indicating a significant association between this variable and knowledge.

In conclusion, the information booklet on chemotherapy was effective in enhancing the knowledge of staff nurses. The study also highlighted the importance of the source of previous information in influencing knowledge levels among caregivers

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