EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE AND PRACTICE REGARDING ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL TO CANCER PATIENTS AMONG NURSING OFFICERS

By

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In partial fulfillment of the requirement for the degree of

Masters of Science in Nursing

In

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Under the guidance of

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DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled **"Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers"** is a bonafide and genuine of **Dr. G. Vijayalakshmi,** Professor and Principal, Sri Devaraj Urs College of Nursing, Tamaka, Kolar.

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Date: **Signature of the candidate**

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Thank you

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LIST OF ABBREVIATIONS

Sl.no	ABBREVIATIONS
1	χ^2 : Chi square
2	df : Degree of freedom
3	f: Frequency
4	NS : Not Significant
5	% : Percentage
6	SS : Statistically significant
7	SD : Standard Deviation

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ABSTRACT

Tittle:-Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers.

Background : Chemotherapy administration requires strict adherence to protocols to ensure patient safety and minimize occupational hazards. Nursing officers play a vital role in ensuring correct practices. The present study aimed to evaluate the effectiveness of a structured teaching Programme on knowledge and practice regarding adherence to chemotherapy administration protocol among nursing officers.

Methods: A pre-experimental one-group pre-test and post-test design was adopted. Hundred nursing officers meeting the inclusion criteria were selected through purposive sampling. Data were collected using a structured knowledge questionnaire and a practice checklist. Ethical clearance and institutional permission were obtained. A structured teaching Programme was administered, and post-test assessment was conducted after 15 days.

Results: The mean pre-test knowledge score was 16.26(SD=3.10), which increased to 22.20(SD=2.57) post-test ($t=14.58, p<0.05$). The mean pre-test practice score was 19.48 (SD=3.49), which increased to 24.50(SD=1.70) post-test($t=13.48, p<0.05$). No socio-demographic variables were significantly associated with post-test knowledge scores, whereas area of posting showed a significant association with post-test practice scores($p<0.05$).

Conclusion: The structured teaching Programme was effective in significantly improving both knowledge and practice among nursing officers regarding adherence

to chemotherapy administration protocol. Regular structured teaching Programme and training are recommended to sustain and enhance protocol adherence.

Keywords: Chemotherapy, Adherence, Nursing Officers, Structured teaching Programme, Knowledge, Practice.

CHAPTER - I

INTRODUCTION

CHAPTER -I

INTRODUCTION

Non-Communicable Diseases (NCD) are major threat in India for the development of economic growth and human health. These sicknesses are cardiovascular sicknesses, cancer, continual breathing sicknesses and diabetes mellitus.[1]

Cancer is the second leading cause of fatality among adults worldwide. In the developed countries cancer accounts 21% of deaths and In the developing countries it accounts for 9.5% of all deaths[2]. Cancer occurrence in India is expected to be around 2.5million, with over 800,000 new instances located due to populace growth.[3]

Cancer is the term used to define the disease with which abnormal cells divide uncontrollably and invade to other tissues in the body or cancers are a group of diseases characterized by uncontrolled growth and spread of abnormal cells. It is caused by many external factors such as tobacco use, exposure to chemicals, radiation and infectious organisms, as well as some internal factors (inherited mutations, hormones, immune conditions and random mutations). The causes of cancer are diverse, complex and only partially understood. Many things are known to increase the risk of cancer, including dietary factors, certain infections, lack of physical activity, obesity and environmental pollutants.[5] These factors may act together to initiate or promote carcinogenics in human body.

Cancer can begin nearly anywhere in the human body. Normally, human cells grow and multiply (through a process call cell division) to form new cells as the body needs them. When cells grow old or become damaged, they die, and new cells take their place. Sometimes this orderly this orderly process breaks down, and abnormal or damaged cells grow and multiply, when they shouldn't. These cells may form tumors, and these tumors can be cancerous or not cancerous (benign). Cancerous tumors

spread into, or invade nearby tissues and can travel to distant places in the body to form new tumors called as metastasis and these tumors may also be called as malignant tumors.[5]

Even today, despite of considerable advances in treatment, cancer remains a fatal disease for number of patients and it is however considered as a chronic disease. The aim of cancer treatment is prolongation of life and relief of suffering and it is largely achieved through chemotherapy or radiation therapy or surgery or a combination of any two.[5]

Chemotherapeutic drugs are chemically designed to target cells that are dividing and growing rapidly. Once they reach the cancer cells. They act to retard their growth eventually resulting in their destruction. Since chemotherapy also affects normal actively diving cells as those in the bone morrow, the gastrointestinal tract, the reproductive system and in the hair follicles, most patients may experience some degree of side effects, which may include pain, nausea and vomiting, fatigue, hair loss, anxiety, susceptibility to infections, decrease in blood cell count, mouth sores and ulcers.[5]

The other side effects are fluid retention, rashes, irritated bladder, swelling and numbness and aching of the joints, hands and feet and may be associated with significant cognitive impairment.[12] May cancer patients will delay or refuse chemotherapy treatment because they fear of experiencing side effects and it may last months after treatment has been completed. Chemotherapy administration is primarily the responsibility of a registered nurse who supposed to have specific knowledge about the pharmacology and dosing of the drug as well as competence in preparation, administration and management of toxicity.[6]

Chemotherapy is a treatment that uses powerful chemicals to kill fast-growing cells in the human body. Chemotherapy most often used to treat cancer cells grow and multiply much more quickly than most cells in the body. Chemotherapy drugs can be used alone or in combination to treat a wide variety of cancers because it helps to achieve control over the disease by preventing or slowing down of a malignant tumor and this prolonging survival.

Accurate administration of chemotherapy agents are essential for the treatment of cancer patients and it is a challenging issue because inaccurate administration can threaten patient safety and result in sub-optimal treatment. Hence nurses need to adopt standardized guidelines of the hospital for safe chemotherapy administration.[7]

NEED FOR THE STUDY

Globally, cancer is the primary cause of death and disability. The World Heath Organization (WHO) estimated that, cancer killed around 10 million people in 2020. Around 70% to 80% of global cancer deaths occur in low- and middle-income countries[19]. Thus, the disproportionate burden cancer in low- and middle- income countries is expected to worsen over the next decade. Although various cancer treatments like radiation therapy, targeted therapies, chemotherapy and immunotherapy are available, their utilization or use may be delayed due to a lack of public awareness and late detection.[4]

Chemotherapy is a type of cancer treatment that is administered to eliminate cancer cells. Chemotherapy medication errors can cause significant patient morbidity and mortality, as it is toxic to human tissues, hence both patients and health care professionals are at risk of adverse health outcomes if chemotherapy is not administered safely.[8] Exposure to chemotherapy during exposure to low doses of

chemotherapy in the workplace has shown to increase the risk of adverse health outcomes among health care professionals.[8]

Adherence to guidelines and effective communication between health professionals can prevent most medication errors and it will occur at several key points during the administration of chemotherapy, from the time of prescription to preparation and administration to the patient.[8] Health professionals need to be aware of their responsibility in the process to ensure safe administration of medication.

Research has explored the practices of nurses and their reported exposure highlighting the inherent risk in the delivery of chemotherapy. A study conducted at America on Injuries to health care workers providing home care: Data from the Safe Home Care Survey revealed that, out of 402 nurses working in ambulant cancer settings, 16.9% of nurses reported of skin or eye exposure to cytotoxic drugs in the past year (Friese et al., 2012)[9]. Another American study on Nurse's use of hazardous drug safe handling precautions revealed that out of 2069 nurses, 12% reported a cytotoxic spill due to technical problems in attaching or detaching the IV administration set to the chemotherapy bag or chemotherapy preparation and 10% reported that, the cytotoxic spill was not cleaned up.[10] Hence the study suggested that, nurses working in cancer unit require education on cytotoxic safety and use of appropriate personal protective equipment to ensure safety during chemotherapy administration in the workplace.

Hence the researcher felt to conduct a study on Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers at her clinical setting that is RL Jalappa Hospital and Research Centre (RLJH&RC) which is located at Kolar and also has 40 bedded oncology unit. Here the oncology department provides comprehensive cancer care services which includes Surgical Oncology,

Medical Oncology and Radiation Oncology. It offers multi-disciplinary treatment for various types of cancer. The hospital emphasizes affordable, quality care, even offering free treatment for eligible patients under the Ayushman Bharat scheme. The Institution adopted standardized guidelines for the safe administration of chemotherapy but its effective implementation is not evaluated.

CHAPTER - II

OBJECTIVES

CHAPTER -II

OBJECTIVES OF THE STUDY

This chapter deals with the statement of the problem, objectives of the study, hypothesis, assumption, delimitations of the study, operational definitions and conceptual framework, which provides a frame of reference. The statement of problem selected for the study and its objectives are as follows.

STATEMENT OF THE PROBLEM

"Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers".

OBJECTIVES OF THE STUDY

1. To assess the knowledge among nursing officers on adherence to chemotherapy administration protocol by using structured knowledge questionnaire.
2. To assess the practice among nursing officers on adherence to chemotherapy administration protocol by using checklist scale.
3. To evaluate the effectiveness Structured Teaching Programme on adherence to chemotherapy administration protocol among nursing officers by comparing pre and post-test knowledge and practice scores.
4. To determine the association between knowledge and practice score on adherence to chemotherapy protocol with selected socio-demographic variables.
5. To compare the relationship between knowledge and practice on adherence to chemotherapy protocol among nursing officers.

Null Hypothesis:

H01: There will be no significant difference between knowledge and practice among nursing officers on adherence to chemotherapy protocol.

H02: There will be no significant difference between knowledge and practice with selected socio-demographic variables.

H03: There was no correlation between knowledge and practice score among nursing officers.

DELIMITATIONS:

The study will be limited to nursing officers working at RL Jalappa Hospital & Research Center.

OPERATIONAL DEFINITION:

Effectiveness: In this study, it refers to the extent to which the Structured Teaching Programme will achieve the desired results, and it will be measured by gain in knowledge and practice scores.

Adherence: In this study, it refers to the degree to which the nursing officers will follow the chemotherapy administration protocol prepared by RL Jalappa Hospital & Research Center.

Chemotherapy: It refers to a combination medication used to treat cancer patient.

Protocol: In this study, it refers a policy prepared by the institution to follow by nursing officers to administer injectable medications to cancer patients at the time of treatment.

Cancer patients: In this study, it refers to the individuals who will be diagnosed with cancer and admitted to oncology unit of R L Jalappa Hospital& Research Center, Kolar for injectable chemotherapy treatment.

Nursing officers: In this study, it refers to registered nurses working at RL Jalappa Hospital & research center.

CONCEPTUAL FRAMEWORK

A conceptual framework may incorporate formal theories is one or more in whole or in part to reflect the anticipated relationships between the study variables. The current study aims to evaluate the knowledge and practice on adherence to chemotherapy protocol among nursing officers working in RL Jalappa Hospital & Research Center, Kolar.

Using “Daniel Stufflebeam’s CIPP (Context, Input, Process and Product) paradigm, a conceptual framework was developed. The CIPP model, which was created by Daniel L. Stufflebeam’s in 1960,is special evaluation model that essentially offers a very methodical approach of looking at many various components of the programme and its process.it was revised in 2003” focusing on four aspects of a program-the overarching goals or mission (Context Evaluation), the plans and resources (Input Evaluation), the activities or components (Process Evaluation), and the results of objectives-allows for continual development (Product Evaluation).[11]

CONTEXT:

In CIPP, the term "context" refers a number of elements that are taken into consideration needs analysis, resources that are available, issues that need to be resolved, and the program's general environment. This stage of the cycle is the planning stage. The desired goals of a Programme are the main emphasis of the context phase. This officer explains what must be done and any requirements that must be met. A Programme is genuinely surrounded by its context because it specifies the conditions under which it will operate.

In this study, context refers to the aim of the project to evaluate the “Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding revised

Adherence to Chemotherapy Administration Protocol on level of to Cancer Patients among Nursing Officers Working at RL Jalappa Hospital & Research Center.

INPUT:

Inputs are the materials that must be incorporated into the Programme in order to satisfy the needs that were identified during the context phase. This stage of the cycle satisfies the needs that were identified during the context phase. This stage of the cycle is known as structuring. The inputs cover the tactics to be used as well as the specific tools or resources needed to accomplish programming objectives.

Input in the current study refers to the study's plans, which include,

- The creation of a suitable research tool or questionnaire (a Structured Knowledge Questionnaire with Observational Checklist) on revised Adherence to Chemotherapy Administration Protocol.
- Development of knowledge and practice on revised Adherence to Chemotherapy Administration Protocol among Nursing Officers.
- Structured Knowledge Questionnaire and Observational Checklist on revised Adherence to Chemotherapy Administration Protocol were validated by five experts.
- Selection of the Nursing Officers employed in Rural Tertiary Care Medical Teaching Hospital, Kolar.

PRODUCT:

Products are the outputs and results connected to the effectiveness and objectives of a Programme. This degree of the cycle is the assessment phase. This evaluation phase focused on determining whether the planned gals been achieved. Examining the programs sustainability in terms of context, inputs and procedures is the main concern. How effectively the Programme needs to undergo any systemic changes.

In this study product refers to

- Comparing pre-test and post-test knowledge and practice scores and analyzing effectiveness of structuring teaching Programme on adherence to chemotherapy administration protocol.
- The product measures the enhanced knowledge and practice among nursing officers on revised adherence to chemotherapy administration protocol and implementing policy of care during chemotherapy administration.
- The feedback stage, which is not a part of the study preview, related to how to enhance and changes one's present and subsequent behavior in order to reinforce an intended result. Thus, in this study a post test revealed the change in knowledge and practice among nursing officers on revised adherence to chemotherapy administration protocol.

SUMMARY

This chapter focused on the statement of the problem, objectives, Null Hypothesis, Operational definitions and conceptual framework adopted for the study.

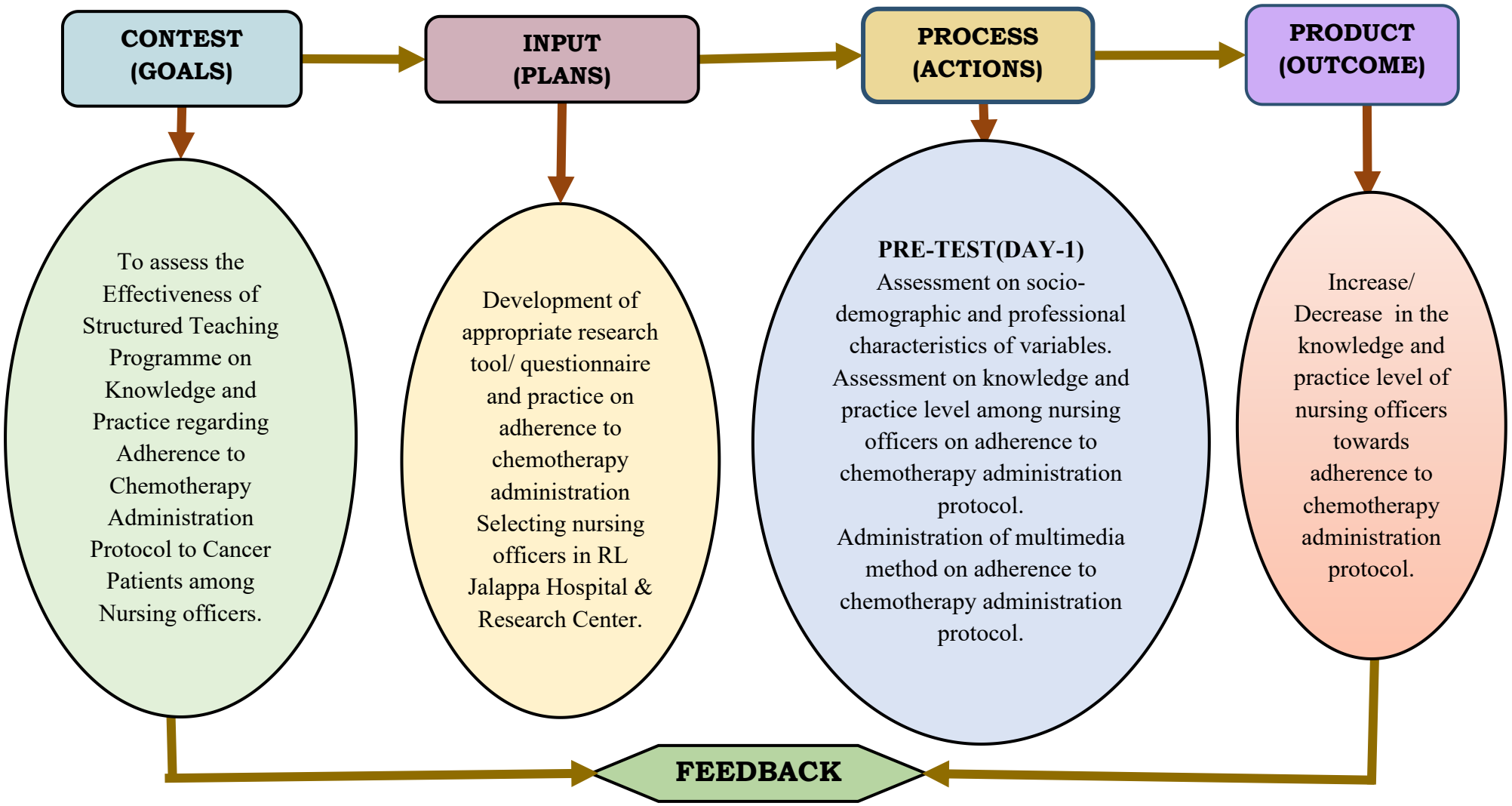
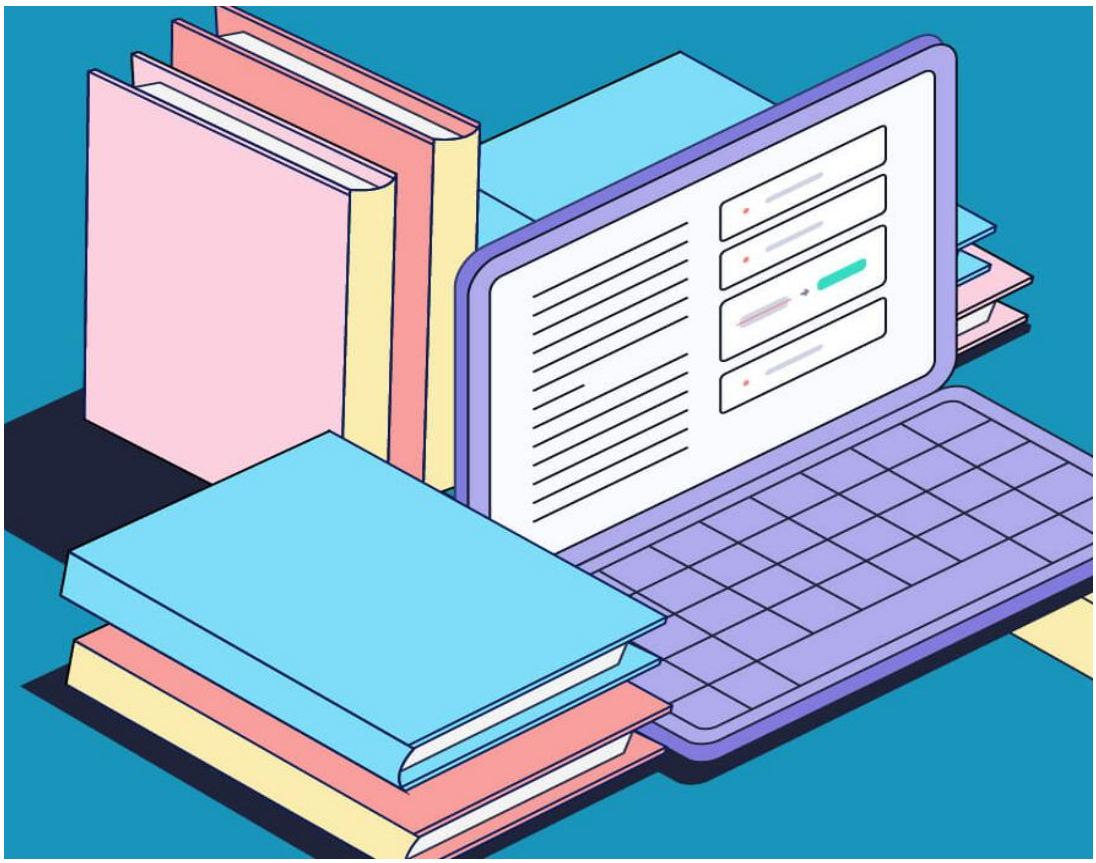


Fig. No.1: CONCEPTUAL FRAMEWORK BASED ON DANIEL.L. STUFFLEBEAM-CIPP

CHAPTER - III



REVIEW OF LITERATURE

CHAPTER III

REVIEW OF LITERATURE

Review of literature makes the researcher familiar with the existing studies and provides information which helps to focus on a particular problem and lays a foundation upon which to base a new knowledge.

This chapter deals with a review of published and unpublished research studies and related materials for the present study.

The review of literature for the present study is categorized under the following heading.

1. Studies related to Knowledge on chemotherapy administration.
2. Studies related to Practice on chemotherapy administration.
3. Studies related to Knowledge and practice on chemotherapy administration.

1. Studies related to Knowledge on chemotherapy administration.

A study to assess effectiveness of structured teaching program on knowledge of intravenous chemotherapy among nurses selected hospitals was conducted at Pune. For the study, using purposive sampling technique, 100 nurses working were selected. The study results that, in post-test 100% of nurses had good knowledge score (16-22). This indicates that the structured teaching program was effective. There was no association of selected demographic variables with knowledge level.[12]

A study to assess the effectiveness of structured teaching Programme on knowledge regarding management of extravasation of chemotherapeutic drugs was conducted at Ramaiah medical college hospital, India. For the study, using convenience sampling technique, 30 staff nurses were selected. The study results that, the mean knowledge score was 15.33 ± 4.003 and 24.67 ± 5.384 in pre-test and post-test. The structured teaching program was significantly effective in staff nurses.[13]

A study to assess the effectiveness of structured teaching Programme on knowledge regarding chemotherapy and chemotherapy administration protocol among final year general nursing and midwifery students was conducted at Bengaluru. For the study, using non-probability convenient sampling technique, 50 general nursing and midwifery students were selected. The study results that, structured teaching programs are effective in increasing the knowledge of final year general nursing and midwifery students regarding chemotherapy and chemotherapy administration protocol.[14]

A study to assess the effectiveness of structured teaching Programme on knowledge regarding chemotherapy administration among students' nurses was conducted at Jodhpur. For the study, using convenient sampling technique, 60 student nurses were selected. The study results that, the pre-test mean knowledge score was 16.52 (51.60%), which increased to 29.45 (92.03%) post-intervention. The mean difference of 12.93 was statistically significant, indicating that the structured teaching program effectively enhanced the students' knowledge regarding chemotherapy administration.[15]

A study to assess the effectiveness of structured teaching Programme on knowledge regarding safe handling of chemotherapeutic drugs among B.Sc. Nursing 4th year students at Bhalwal Jammu. For the study, using purposive sampling technique, 40 students were selected. The study results that, the pre-test mean knowledge score was 11.8 ± 3.4, which increased to 22.4 ± 2.1 post-intervention. The structured teaching program significantly enhanced the students' knowledge regarding the safe handling of chemotherapeutic drugs.[16]

A study to assess the educational intervention program regarding safe administration of chemotherapy among nursing personnel was conducted at New Delhi. For the study, using purposive sampling technique, 38 nursing personnel were selected. The study results that, mean knowledge score of post-tests 23.03 ± 3.23. The significant positive effect on enhancing the knowledge of nursing personnel regarding chemotherapy preparation, administration, monitoring and management of complications, safe handling techniques, and chemotherapy exposure.[17]

A study to evaluate the Effectiveness of Structured Teaching Program on Chemotherapy Administration in Terms of Knowledge among Student Nurses was conducted at Hubballi. For the study, using purposive sampling technique, 50 student nurses were selected. The study results that, all participants achieved good knowledge scores, indicating the structured teaching program's effectiveness in enhancing knowledge about chemotherapy administration.[18]

A Study to assess the effectiveness of structured teaching Programme on knowledge about safety measures regarding handling of chemotherapeutic drugs among staff nurses was conducted at Nashik city. For this study, using non-probability sampling technique, 30 nursing were selected. The study results that, Post-test results showed 93.3% had adequate knowledge, 6.7% moderately adequate, and none had inadequate knowledge. Religion was significantly associated with post-test knowledge, while other demographic variables showed no association.[19]

The study to assess the effectiveness of educational program on knowledge regarding safe handling of cancer drugs among staff nurses was conducted at Puducherry, Tamil Nadu. For this study, convenient sampling technique, 60 staff nurses were selected. The study results that, the effectiveness of educational program on knowledge regarding safe handling of cancer drugs between the pre-test and post-test, the *p* value was highly significant at $p < 0.001$ level.[20]

A study to assess effectiveness of planned teaching on the safe handling of cancer chemotherapeutic drugs for nursing officers was conducted at selected index medical hospital, Indore. For this study, convenient sampling technique, 100 nursing officers were selected. The study results that, a significant increase in knowledge scores: the mean pre-test score was 27.51 (±5.17) compared to a mean post-test score of 56.5 (±3.08)**,** with a paired *t*-value of 54.058 ($p < 0.001$), indicating the teaching Programme was highly effective.[21]

A study to assess the effectiveness of structured teaching Programme on knowledge regarding safe handling and administration of chemotherapeutic drugs among staff nurses was conducted at Chennai. For this study, purposive sampling technique, 30 nurses were selected. The study results that, staff nurses had poor pre-test knowledge (mean = 11.58, SD = 1.22), which significantly improved after a structured teaching Programme (mean = 21.2, SD=1.68). The difference in mean percentage of knowledge was 39%, indicating the effectiveness of the intervention.[22]

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Chemotherapy Administration among Student Nurses was conducted at Jodhpur. For this study, convenient sampling technique, 60 nursing were selected. The study results that, mean post-test knowledge score was 29.45 (92.03%), significantly higher than the pre-test score of 16.52 (51.60%). the intervention was effective in enhancing student nurses' knowledge on chemotherapy administration.[23]

A study to assess the Knowledge of safe handling, administration, and waste management of chemotherapeutic drugs among oncology nurses working was conducted at Khartoum Oncology Hospital, Sudan. For this study, non-probability sampling technique, 78 oncology nurses were selected. The study results that, the mean knowledge score of nurses was 12.7 ± 3.9 out of 26, with poor knowledge in safe handling (2.0 ± 1.5) and waste disposal (4.4 ± 1.5), but better in administration (6.2 ± 1.7). Education level ($\beta = 3.715$, $p = .008$) and training ($\beta = 0.969$, $p = .004$) significantly predicted knowledge.[24]

2. Studies related to Practice on chemotherapy administration.

A study to assess the current nursing practice for patients on oral chemotherapy: a multi-center survey was conducted at Japan. For the study, using random sampling technique, 62 hospitals 62 nurses were selected. The study results that, the nurse-based variations were found on the prescription and the patients-based survey found that questions on side effects, treatment and daily activities.[25]

A study to assess the effect of chemotherapy nursing protocol application on patients care competency, safety and satisfaction was conducted at Egypt. For the study, using convenience sample technique, 44 oncology nurses and 36 patients were selected. The study results that, the total knowledge score of studied nurses was improved from 7.75 pre-protocol application to 21.45 immediately post protocol application with high statistically significant difference. The total nurses' competency score was improved from 48.79 to 88.50 then 87.57 respectively with high statistically significant difference.[26]

A study to assess the Effectiveness of Planned Teaching Program on Knowledge regarding side effects of Chemotherapy and its coping strategies was conducted at Rohtak. For the study, using purposive sampling technique, 60 participants were selected. The study results that, the pre and post test score of knowledge level among cancer patients which is not significant. The structured teaching program was effective and help in improving knowledge level of cancer patients receiving chemotherapy.[27]

A study to assess the effectiveness of structured teaching programme on knowledge regarding chemotherapy and chemotherapy administration protocol among final year general nursing and midwifery students was conducted at Bengaluru. For the study, using non-probability convenient sampling technique, 50 general nursing and midwifery students were selected. The study results that, structured teaching programs are effective in increasing the knowledge of final year general nursing and midwifery students regarding chemotherapy and chemotherapy administration protocol.[28]

A study to assess the Influence of Anti neoplastic Safe Handling Guidelines in Enhancing Nurses' Performance was conducted at Egypt. For the study, using a convenience sampling technique, 40 nurses were used. The study results show that, the nurses' performance enhanced, which forced us to continue training and monitoring. Furthermore, medical surveillance for nurses should be implemented to assess the prevalence of complications of anti-neoplastic drugs.[29]

3. Studies related to Knowledge and practice on chemotherapy administration.

A study to effectiveness of structured teaching program on knowledge and practices regarding preparation and administration of chemotherapeutic drugs among staff nurses was conducted at Sassoon General Hospital, Pune. For this study, using purposive sampling technique, 30 nurses were selected. The study results that, structured teaching programs were helpful in improving knowledge and skill among nurses preparing and administering intravenous chemotherapy.[30]

A study to assessment of Knowledge, Attitude and Practice among Nurses Regarding Safe Administration of Chemotherapy was conducted at Peshawar. For the study, using a structured questionnaire and the Universal sampling technique, 250 nurses were selected. The study results that, 70% of nurses had poor knowledge and 75% demonstrated unsatisfactory practices regarding the safe administration of chemotherapy, highlighting after a thorough analysis of a review of nurses' administration of chemotherapy to patients. The majority of samples had poor practice for giving chemotherapy drugs .[31]

A study to assess the Improving nurses' performance in the safe handling of anti-neoplastic agents among oncology nurses was conducted at Ardabil, Iran. For the study, using purposive sampling technique, 32 nurses were used. The study results that, Post-intervention, knowledge scores increased from 59.56 ± 6.41 to 66 ± 4.82, and performance scores rose from 18.96 ± 2.54 to 32.03 ± 2.45 (P = 0.001) education based on standard guidelines effectively enhanced nurses' knowledge and performance in safely handling anti neoplastic drugs.[32]

A study to assess the Impact of Educational Intervention on Compliance of Health Care Workers towards Chemotherapy Handling Guidelines in the oncology center was conducted at Saudi Arabia. For the study, using purposive sampling technique, 52 healthcare workers were used. The study results that, post-intervention, the mean compliance score increased from 17.62 ± 0.78 to 18.17 ± 0.80 out of 19 nurses exposed to HFS and VS gained remarkable knowledge and skills. Moreover, nurses exposed to both modalities showed high self-efficacy, confidence, and satisfaction following the simulation experience.[33]

A study to assess the Improvements in practicing nurses' knowledge, skills, self-efficacy, confidence, and satisfaction after a simulated clinical experience of caring for a patient undergoing chemotherapy in Clinical Skills and Simulation Centre (CSSC) was conducted at Saudi Arabia. For the study, using purposive sampling technique, 350 nurses employed were selected. The study results that, the significant improvements in nurses' knowledge; skills, self-efficacy, confidence, and satisfaction post-simulation simulated clinical experiences are effective in enhancing nurses' competencies in chemotherapy care.[34]

A study to assess the effectiveness of structured teaching program on knowledge and practice regarding handling of chemotherapeutic drugs among the staff nurses was conducted at Punjab, India. For the study, using systematic random sampling technique, 60 staff nurses were selected. The study results that, structured teaching program significantly improved knowledge scores in the experimental group compared to the control group and there was no significant improvement in practice scores post-intervention, indicating a gap between knowledge acquisition and practical application.[35]

A study to Assess the Effectiveness of a Planned Teaching Programme on Knowledge and Practice Regarding Safe Handling of Chemotherapeutic Drugs among Staff Nurses was conducted at New Delhi, India. For the study, using purposive sampling technique, 30 staff nurses were selected. The study results that, the planned teaching program significantly improved both knowledge and practice scores related to the safe handling of chemotherapeutic drugs among staff nurses.[36]

CHAPTER - IV

METHODOLOGY

CHAPTER – IV

METHODOLOGY

Research methodology organizes all the components of the study in a way that is likely to lead a valid answer to the sub problems that have been posed.

This chapter deals with the methodology of the present study. It includes research approach, research design, setting, sample and sampling technique, development and description of the instrument, data collection and plan for data analysis.

The present study was aimed to evaluate the effectiveness of structured teaching Programme on knowledge and practice regarding adherence to chemotherapy administration protocol of cancer patients among nursing officers.

RESEARCH APPROACH

The research approach helps the researcher to determine what data to collect and how to analyze it. It also suggests possible conclusions to be drawn from the data[1]. For the present study the researcher used Evaluative research approach.

RESEARCH DESIGN

A research design is an investigators overall plan for obtaining answers to the research questions[2].

For the present study is pre- experimental one group pre and post-test research design was used.

Table-1: Distribution of Research Design

Group	Pre-test	Intervention	Post test
G	O_1	X	O_2

SG- Study / single group

O1- Pre - test: Assessment Knowledge and Practice Questionnaire.

X- Intervention: Structured teaching programme on Knowledge & Practice.

O2- Post- test: Assessment Knowledge and Practice Questionnaire.

SETTING OF THE STUDY

Setting refers to an area where study was conducted[3] (Burns and Groove2002). The present study was conducted among nursing officers of R L Jalappa Hospital and Research Centre, Tamaka, Kolar. This setting was selected based on the availability of subjects and feasibility of conducting the study.

POPULATION:

The population refers as the target population which represents the entire group or all elements (individuals or objects) that meet certain criteria for inclusion in the study. In the present study, population refers to all nursing officers in different wards of RL Jalappa Hospital & Research Center.

SAMPLE AND SAMPLE SIZE

Sample refers to a portion of population which represents the entire population. (Burns and Groove 2002).

In this study sample consists of nursing officers working at different wards of RL Jalappa Hospital & Research Center, Tamaka, Kolar. The sample size is 100 nursing officers.

Sample-size calculation (normal-approximation for mean change / paired t-test approximation):

$$n = \frac{(Z_{1-\alpha/2} + Z_{1-\beta})^2 \sigma^2}{\Delta 2}$$

Whereas,

- $Z_{1-\alpha/2} = 1.96 \rightarrow$ for 95% confidence level
- $Z_{1-\beta}$=1.28Z_{1-\beta} = 1.28$Z1-\beta = 1.28 \rightarrow$ for 90% power
- σ = Standard deviation
- Δ = Minimum detectable difference (20% improvement, ≈ 1.09 points)
- n= Required sample size before adjustment
- $n_{adjusted}$= Final sample size after adding 10% attrition

$$(Z_{1-\alpha/2} + Z_{1-\beta})2 = (1.96+1.28)^2 = (3.24)^2 = 10.508$$

$$\sigma^2 = 3.2^2 = 10.24$$

$$n = \frac{10.508 \times 10.24}{1.09^2} = \frac{107.60}{1.1881} = 91$$

Hence, the required sample size is 91, and after adjusting for a 10% attrition rate, the final sample size for the present study will be 100 nursing officers.

SAMPLING TECHNIQUE

Sampling defines the process of selecting a group of people or other elements to conduct a study (Burns and grove 2002). For the present study simple random sampling technique was adopted.

CRITERIA FOR SELECTING THE SAMPLE

INCLUSION CRITERIA:

- Nursing staffs who were:
    1. Registered under Karnataka Nursing council
    2. With GNM/ B.Sc.(N)/ P.B.B.Sc.(N)/ M.Sc.(N) Qualification.
    3. Willing to participate in the study.

EXCLUSION CRITERIA:

- Nursing staff who were:

    1. Undergone similar training Programme.

SELECTION AND DEVELOPMENT OF TOOL AND LESSON PLAN

The following steps were used to develop tool and planned structured teaching program.

DESCRIPTION OF THE TOOL:

Based on the research problem, objectives of the study stated, the researcher referred text books, journals, internet and discussed with subject and research experts and prepared the tool (Annexure XII) under the following sections:

Section – A: **Socio-Demographic Variables**

This section consists of 6 items, which includes age, gender, educational qualification, area of posting, year of experience in the hospital, undergone any training in chemotherapy administration.

Section – B: Structured Knowledge Questionnaire on Administration of Chemotherapy Protocol.

This section consists of 32 items under the following headings:

Table-2: Distribution of Structured Knowledge Questionnaire.

SL.NO	AREA	QUESTIONS NO.
1	General aspect of cancer	1,2,3,4
2	Chemotherapy	5,6,7,8
3	Scope of chemotherapy	9,10,11,12
4	Pre- chemotherapy	13,14,15,16,17,18,19,20,21,22
5	Administration of chemotherapy	23,24,25,26,27,28,29,30,31,32

Scoring system: For the structured knowledge questionnaire, the scoring made for the correct answer one mark and the wrong answer zero mark. So, the total allotted score was 32. Then the scoring interpretation was given as follows:

- Less than 50% = Inadequate Knowledge
- 50-75% = moderately adequate Knowledge
- More than 75% = Adequate Knowledge

Section - C : Practice Checklist on Administration of Chemotherapy Protocol.

This section consists of 38 items under the following headings:

Table-3 : Distribution of Practice Checklist.

Sl.no	AREA	QUESTIONS NO.
1	Pre- chemotherapy preparation	1,2,3,4,5,6,7
2	Personal protective equipment (PPE)	8,9,10,11,12
3	IV-Line preparation & administration	13,14,15,16,17,18,19
4	Patient monitoring during and after chemotherapy	20,21,22,23,24,25,26,27
5	Safe handling & water disposal	28,29,30,31,32,33
6	Post- chemotherapy care	34,35,36,37,38

Scoring system:

For the practice checklist, the scoring given as, the correct answer gets one mark, and the wrong answer gets zero mark. So, that allotted score was 28. Then the scoring interpretation was given as follows:

- Less than 50% = Poor
- 50% and above = Good

DEVELOPMENT OF LESSON PLAN

The content on planned structured teaching program on adherence to chemotherapy administration protocol was prepared (Annexure - XIII) after referring text books, journals, Internet and Discussing with subject experts and prepared under the following headings.

- Introduction on chemotherapy
- Scope of chemotherapy
- Concept of hazardous drugs
- Doctors authorized to order chemotherapy administration
- Pre-chemotherapy workup
- Counselling for chemotherapy
- Staff authorized to administer chemotherapy
- Routes of administration of chemotherapy
- Designated areas to administration chemotherapy
- Role of nurse in administration of chemotherapy

Content validity of the tool and lesson plan:

The prepared tool and lesson plan along with the objectives of the study was submitted to seven experts for establishing content validity.

ITEM ANALYSIS WITH FORMULA:

Item analysis is a process which examines participants' responses to individual test items (questions) in order to assess the quality of those items and of the test as a whole. According to Gilbert (1991), a question with difficulty index lying between <0.20 is considered as difficult item, 0.20 to 0.80 is considered as average to moderately difficult item, and >0.80 is considered as easy item.

For the present study, the` tool was analyzed for the difficulty index and discriminating index and found that the questions were between 0.20 to 0.80. hence the same questions were used for the data collection.

Table-4: Distribution of Item analysis index's

DIFFICULTY INDEX	DISCEIMINATION INDEX
DI = H+L/N Where, H= Number of correct answers the high group. L= number of correct answers in low group. N=total number of students in both groups.	**DI= 2× H-L/ N** Where, H= Number of correct answers the high group. L= number of correct answers in low group. N=total number of students in both groups

Reliability of the tool:

To establish reliability, the tool was administered to 10 nursing. In order to establish reliability of the tool, Split –half method was used and the reliability was found to be 0.99. Hence the tool was found to be reliable to proceed for the data collection.

Karl Pearson's correlation coefficient formula used for reliability

$$r = \frac{\sum(x_i-\bar{x})(y_i-\bar{y})}{\sqrt{\sum(x_i-\bar{x})^2(y_i-\bar{y})^2}}$$

Where, r= co relation coefficient

n= number of scores

∑XY=sum of the paired scores

∑X= Sum of the X scores

∑Y= sum of Y scores

r=0.99 there is very strong positive correlation**.**

ETHICAL CLEARANCE

Before conducting the study, an ethical clearance (Annexure-I)was obtained from the institutional ethical committee of Sri Devaraj Urs College of Nursing, Tamaka, Kolar.

PILOT STUDY

A pilot study is a small-scale version of trail run of the major study (Pilot and Hungler 1999). the purpose of the pilot study was to find out the feasibility of conducting the final study in terms of time, sample availability and co-operation from the study participants and also in terms of statistical analysis.

The pilot study was conducted at SNR District Hospital, Kolar from 27-4-2025 to 13-5-2025 among 10 nursing officers at different wards. The result showed that, there was a significant increase in the paired t test knowledge score(14.69) with p valve 0.001 and remaining to practice score (39.00) with p valve 0.001 of nursing officers. The pilot study concluded that, the study was found to be feasible to conduct the main study.

DATA COLLECTION PROCEDURE: -

The data was collected from 27 -05-2025 to 11 -06-2025 under the following phases:

1. Preparatory phase:

Ethical clearance was obtained (Annexure-I) from the institutional ethical committee of Sri Devaraj Urs College of Nursing. A written permission was obtained from the Medical Superintendent, (Annexure-VIII) and HOD of oncology department of RL Jalappa Hospital & Research Center. Then a formal permission was obtained from chief nursing officer and requested to permit nursing officers to involve in the study.

Based on the shift duty, nursing officers were requesting to gather in nursing college recreation hall between 12:30 to 2pm then these nursing officers, were explained about the study and its purposes followed by a written consent (enclosed in Annexure XI) was obtained. The data was collected through self-administered structured knowledge questionnaire and practice checklist on adherence to chemotherapy administration protocol and each person has taken 15-20 minutes.

2. Intervention phase:

On the same day of the pre-test, a planned structured teaching programme on adherence to the chemotherapy administration protocol was delivered to all participants. During teaching, the researcher utilized PowerPoint presentations, charts, flip cards, and pamphlets. Followed by a practice demonstration on chemotherapy administration protocol was conducted using relevant articles, such as a tray containing normal saline, 10ml syringes, a vacutainer, PPE kit, four pairs of gloves, injection equipment, an IV stand with infusion hand mannequin, waste disposal bins, and a patient file. The theory session lasted 45 minutes, followed by 20 minutes of practice demonstration (Annexure-XVI). A discussion session was then held to clarify any doubts raised by the participants.

3. Closing Phase:

On 15th day after the planned structured teaching programme and practice demonstration, a post-test was conducted using the same Knowledge & Practice questionnaire. Additionally, participants performed a re-demonstration of the chemotherapy administration protocol to assess practical adherence. At the conclusion of the session, the researcher expressed gratitude to all nursing officers for their active participation and co-operation in the study.

Plan of statistical analysis of data:

The data obtained from nursing officers was analyzed using descriptive and inferential statistics as follows:

- Socio-demographic variable was analyzed by using frequency and percentage.
- Knowledge and Practice score was analyzed using Frequency, percentage, mean and standard deviation.
- Effectiveness of structured teaching programme was assessed using Paired 't' test.
- knowledge and Practice score with selected socio-demographic variables was analyzed using Chi-square test.
- Comparison between knowledge and practice scores was assessed by Co-relation test.

SUMMARY

This chapter deals with the methodology, research approach, research design, setting, population, sample and sample technique, development and description of the tool and lesson plan on adherence to chemotherapy administration protocol as well as plan for data analysis. The sixth coming chapter deals with analysis of data using above statistical methods.

CHAPTER - V

SAMPLE SIZE ESTIMATION

CHAPTER -V

SAMPLE SIZE ESTIMATION

STATEMENT OF THE PROBLEM

"Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers Working at RLJH&RC"

Research approach: Evaluative Research Approach

Research design: Pre-experiential one group and post-test research design.

Sampling technique: Simple random sampling technique with lottery method.

Sample size: The sample size consisted of a total 100 Nursing Officers f nursing at different wards of RL Jalappa hospital and Research Centre, Tamaka, Kolar.

Sample Size Estimation: estimated sample size is based on recent similar study in year 2024, titled as " A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Chemotherapy Administration among Student Nurses of Government College of Nursing, Jodhpur" reported that average Standard Deviation (SD) 3.2, considering a power of 90% and a Confidence level of 95% to detect an increase of 20% in the knowledge scores (post-test). Thus, the required sample size estimated is 91. By considering 10% of attrition, the sample for the present study will be rounded up to 100 nursing officers.

Date: 26/8/25

Place: Tamaka, Kolar.

26/8/25

Name & Designation

Mr. S Ravishankar

Professor

Dept. Of Community Health

SDUAHER, Medicine

Mr. S. Ravishankar
Professor, Statistics
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CHAPTER - VI

DATA ANALYSIS INTERPRETATION

CHAPTER -VI

DATA ANALYSIS AND INTERPRETATION

Data analysis is defined as the systematic organization and synthesis of research data and the testing of research hypothesis using those data.[36]

This chapter deals with analysis and interpretation of data collected from 100 nursing officers through structured knowledge questionnaire and practice checklist. The collected data was analyzed by using descriptive and inferential statistics based on the below mentioned objectives of the study.

OBJECTIVES

1. To assess the knowledge among nursing officers on adherence to chemotherapy administration protocol by using Structured Knowledge Questionnaire.
2. To assess the practice among nursing officers on adherence to chemotherapy administration protocol by using checklist scale.
3. To evaluate the effectiveness of structured teaching programme on adherence to chemotherapy administration protocol among nursing officers by comparing pre and post-test knowledge and practice scores.
4. To determine the association between knowledge and practice score on adherence to chemotherapy protocol with selected socio-demographic variables.
5. To compare the relationship between knowledge and practice on adherence to chemotherapy protocol among nursing officers.

Null Hypothesis:

H01: There was no significant difference between knowledge and practice among nursing officers on adherence to chemotherapy protocol.

H02: There was no significant difference between knowledge and practice with selected socio-demographic variables.

H03: There was no correlation between knowledge and practice score among nursing officers.

Based on the objectives of the study the data collected were tabulated, organized and presented under the following sections:

SECTION I: Socio-demographic data of Nursing officers.

SECTION II: Knowledge among Nursing Officers on adherence to chemotherapy administration protocol.

SECTION III: Practice among Nursing Officers on adherence to chemotherapy administration protocol.

SECTION IV: Effectiveness of Structured Teaching Programme on adherence to chemotherapy administration protocol.

SECTION V: Association between Knowledge and Practice score on adherence to chemotherapy protocol.

SECTION VI: Compare relationship between Knowledge and Practice on adherence to chemotherapy protocol.

SECTION - I

DISTRIBUTION OF NURSING OFFICERS ACCORDING TO THEIR SELECTED SOCIO-DEMOGRAPHIC VARIABLES.

This section deals with the socio-demographic variables of nursing officers. Before assessing Nursing officers Knowledge regarding Adherence to Chemotherapy Administration Protocol, they were assessed for their socio-demographic variables and it is presented from table-5 to table-8.

Table-5:Distribution of Nursing officers according to their age group.

n=100

S.no	AGE	f	%
1.	**21- 30 years**	**72**	**72**
2.	31 – 40 years	28	28
Total		**100**	**100**

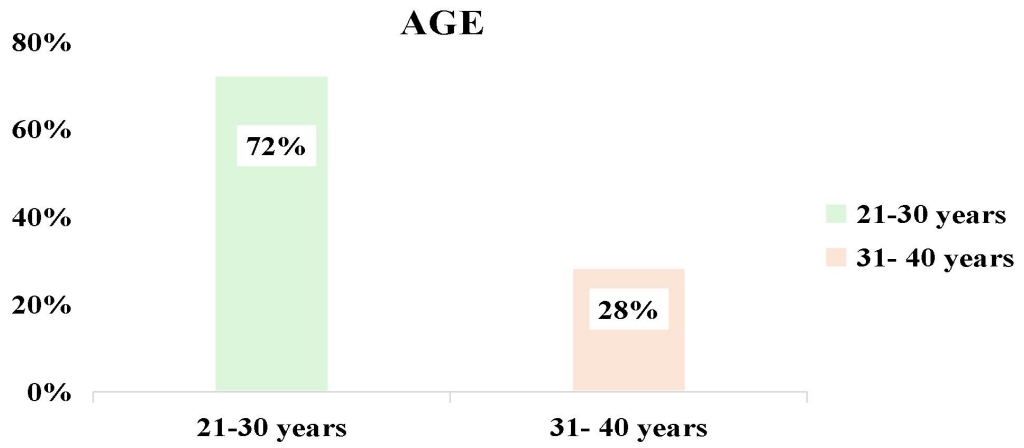

Fig-2 : Bar diagram showing distribution of nursing officers based on age

The above table and bar diagram shows that, majority (72%) of the nursing officers were between the age group 21-30 years and 28% of them were between 31-40 years of age group and none of them were with above 40 years of the age group.

Table-6: Distribution of Nursing officers according to their gender.

n=100

S.no	GENDER	f	%
1.	**Female**	**89**	**89**
2.	Male	11	11
Total		**100**	**100**

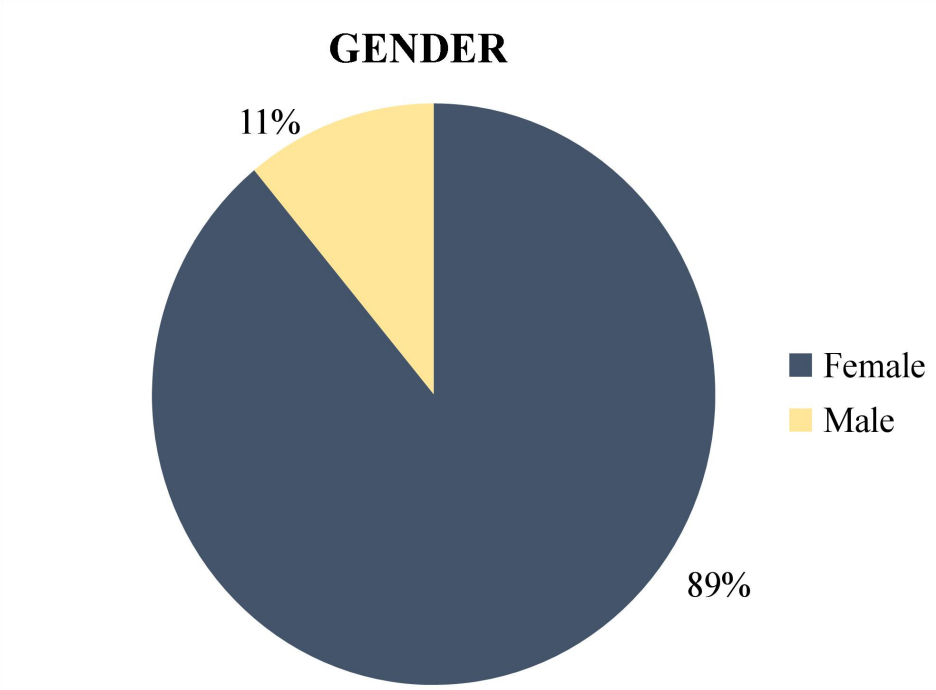

Fig -6 Pie diagram showing distribution of nursing officers bassed on gender

The above table and pie diagram shows that, majority (89%) of the Nursing officers were females and 11% of them were males.

Table -7 : Distribution of Nursing officers based on their educational qualification. n=100

S.no	EDUCATION	f	%
1.	Diploma	**68**	**68**
2.	Graduate	32	32
	Total	**100**	**100**

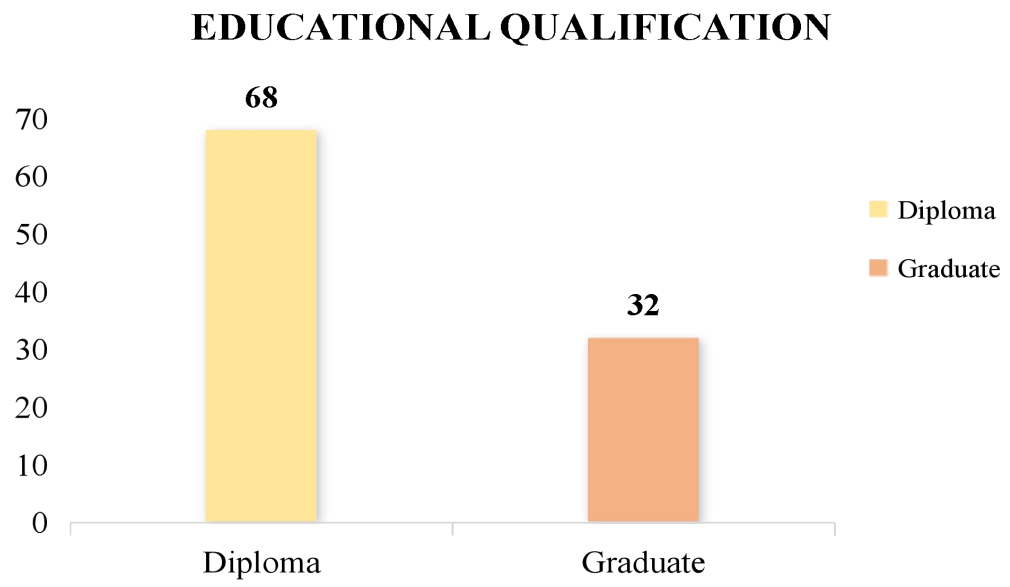

Fig-4: Bar diagram showing distribution of nursing officers based on educational qualification.

The above table and bar diagram shows that, majority (68%) of nursing officers were diploma and 32% were with graduate qualification.

Table-8: Distribution of Nursing officers based on their area of posting.

n=100

S.NO	AREA OF POSTING	f	%
1	General /Oncology wards	**51**	**51**
2	ICU	5	5
3	Emergency department	11	11
4	SICU	13	13
5	Any Other wards	20	20
TOTAL		**100**	**100**

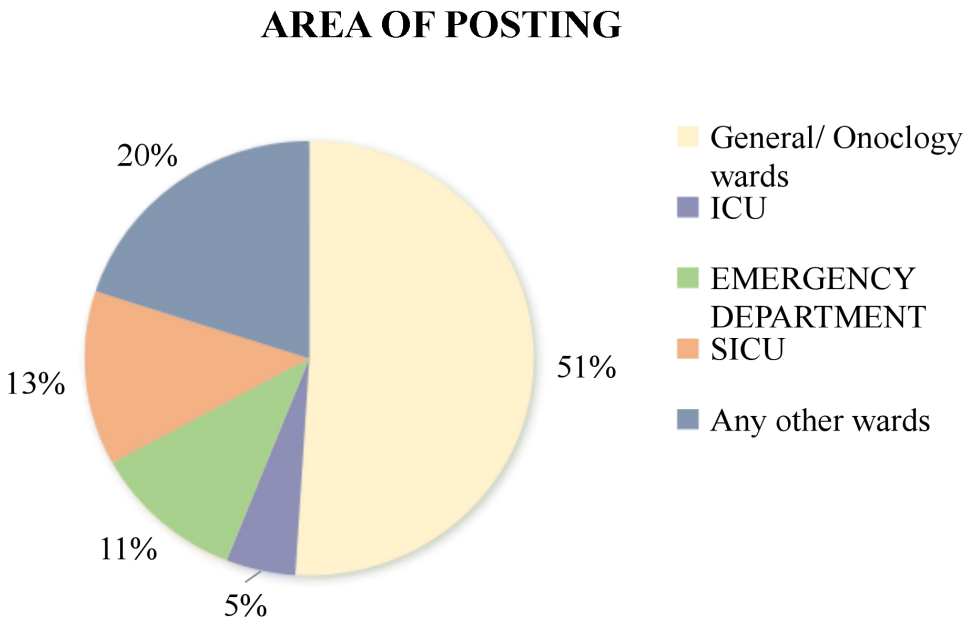

Fig-5: Bar diagram showing distribution of nursing officers based on their area of posting

The above table and bar diagram shows that, majority 51% of nursing officers were from General/ oncology wards, & remaining 5% them were in ICU,11% in emergency , 13% in SICU & 20% in other wards like OBG, Pediatrics, psychiatry and others .

Table-9: Distribution of Nursing officers based on their year of experience.

n=100

S.NO	YEAR OF EXPERIENCE	f	%
1	Below or equal to 2 years	32	32
2	**Above 2 years**	**69**	**69**
TOTAL		**100**	**100**

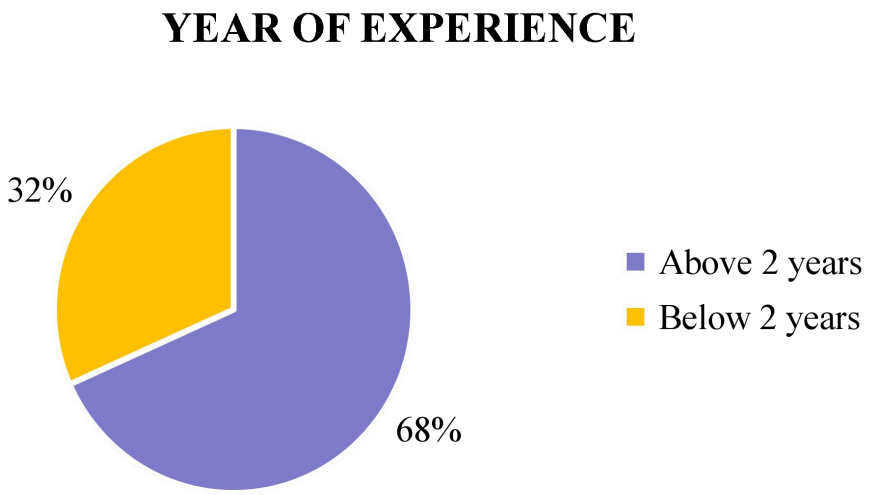

Fig-6 : pie diagram showing distribution of nursing officers based on year of experience

The above table and pie diagram shows that, majority (69%) of Nursing officers were with above 2 years of experience & 32% of them were with below or equal to 2 years of experience.

Distribution of Nursing officers based on chemotherapy administration

With regard to training on chemotherapy administration training, it was observed that all 100% nursing officers were not undergone any chemotherapy administration training Programme.

SECTION – II

KNOWLEDGE ON ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL

This section deals with the first objective of the study that was **To Assess the knowledge of nursing officers on adherence to chemotherapy administration protocol by using Structured Knowledge Questionnaire.** The collected data were analyzed & presented from table-10 to 11.

Based on the level of knowledge obtained from Nursing officers, they were grouped as inadequate knowledge (who scored less than 50%), moderately adequate knowledge (who scored between 50-75 %) and adequate knowledge (who scored above 75%) and presented in table-10.

TABLE 10: Distribution of Nursing officers based on overall pre-test knowledge Score. **n=100**

S.No	KNOWLEDGE	f	%
1.	Inadequate knowledge	3	3
2.	Moderately adequate knowledge	89	89
3.	Adequate knowledge	8	8

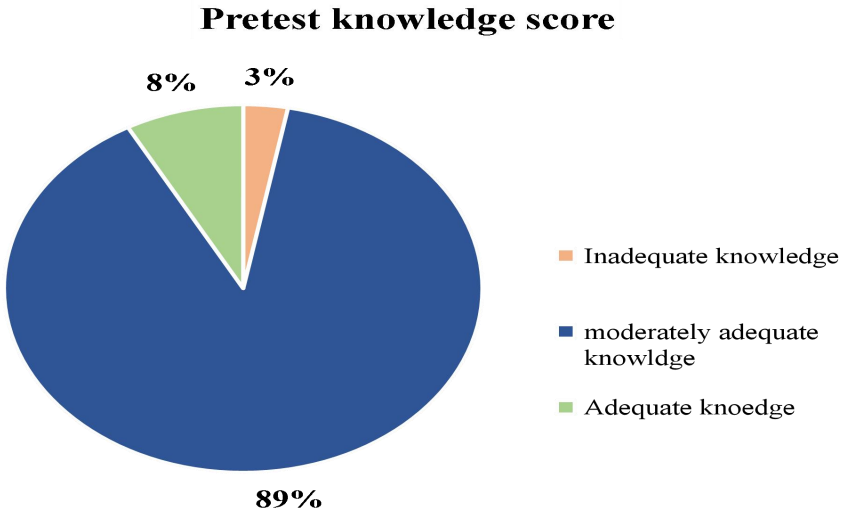

FIG -7 : Pie

diagram showing distribution overall pre-test knowledge score

The above table and bar diagram shows that, overall pre-test knowledge score of nursing officers on adherence to chemotherapy administration protocol. Majority (89%) of the nursing officers had moderately adequate knowledge, 8% of them had adequate knowledge and 3% of them had inadequate knowledge.

TABLE 11: Distribution of Nursing officers based on area wise pre-test knowledge score. n=100

S. No	Area wise knowledge	Maximum Scores	Range	Mean	SD
1.	General aspect of cancer	4	0-4	2.21	1.00
2.	Chemotherapy	4	0-4	2.14	0.91
3.	Scope of chemotherapy	4	0-4	**1.96**	0.99
4.	Pre-chemotherapy	10	1-8	**4.99**	1.60
5.	Administration of chemotherapy	10	1-7	4.96	1.55

The above table depicts distribution of Nursing officers based on area wise pre-test knowledge score. In the knowledge questionnaire there were five areas. The highest mean value of 4.99 with the SD of 1.60 was seen in area of pre-chemotherapy administration and the lowest mean valve of 1.96 with SD of 0.99 was seen in the area of scope of chemotherapy administration. Remaining areas such as general aspect of cancer, the mean valve was 2.21 with SD of 1.00, in chemotherapy, the mean valve was 2.14 with SD of 0.91 & administration of chemotherapy, the mean valve was 4.96 with SD of 1.55 was seen.

SECTION -III

PRACTICE ON ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL

This section deals with the second objective of the study that was **To assess the practice on adherence to chemotherapy administration protocol by using rating scale** and presented from table-12 To 13.

Based on the level of practice obtained by Nursing officers, they were grouped as poor (who scored less than 50%) and good (who scored above 50%) presented in table-12.

TABLE- 12 : Distribution of Nursing officers based on overall pre-test practice score. **n=100**

S.No	PRACTICE	f	%
1.	Good	49	49%
2.	Poor	51	51%

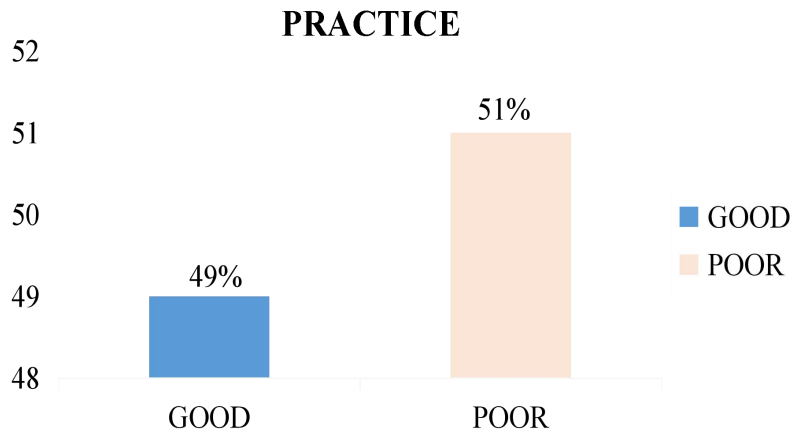

FIG-7 : Bar diagram showing distribution overall pre-test practice score

The above table and bar diagram shows that, overall pre-test practice score on nursing officers on adherence to chemotherapy administration protocol. Majority (51%) of the nursing officers had poor practice and 49% of them had good practice.

TABLE-13: Distribution of nursing officers based on area wise pre-test practice Score **n=100**

S. No	AREA WISE PRACTICE	Maximum scores	Range	Mean	SD
1.	Pre-chemotherapy preparation	7	1-7	3.80	1.30
2.	Personal Protective Equipment (PPT)	5	0-5	**2.51**	1.05
3.	IV-Line preparation & administration	7	1-6	3.46	1.23
4.	Patient monitoring during and after chemotherapy	8	1-8	**3.97**	1.49
5.	Administration of chemotherapy	6	1-6	3.08	1.19
6.	Post-chemotherapy care	5	1-5	2.66	1.10

The above table depicts distribution of nursing officers based on area wise pre-test practice score. In the observation checklist there were six areas. The highest mean value of 3.97 with the SD of 1.49 was seen in area of patient monitoring during and after chemotherapy and the lowest mean valve of 2.51 with SD of 1.05 was seen in the area of Personal Protective Equipment (PPT). Remaining areas such as pre-chemotherapy preparation, the mean valve was 3.80 with SD of 1.30, IV-line preparation & administration, the mean valve was 3.46 with SD of 1.23, administration of chemotherapy, the mean valve was 3.08 with SD of 1.19 & Post-chemotherapy care, the mean valve was 2.66 with SD of 1.10 was seen.

SECTION-IV

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL.

This section deals with third objective that was **To Evaluate the Effectiveness of Structured Teaching Programme on Adherence to Chemotherapy Administration Protocol among Nursing Officers by comparing pre and post-test knowledge and practice scores** and it is presented in table- 14.

TABLE-14: Effectiveness of knowledge and practice on adherence to chemotherapy administration protocol among nursing officers. n=100

Variable		Mean	SD	df	Paired 't' value	P-value
Knowledge	Pre-test	16.26	3.10	99	14.58	0.000
	Post-test	22.22	2.57			
Practice	Pre-test	19.48	3.49		13.48	0.000
	Post-test	24.50	1.70			

The above table shows that, comparison of pretest and post-test mean knowledge and practice score of nursing officers on adherence to chemotherapy protocol.

With regard to knowledge, the mean pretest knowledge score was 16.26 with SD of 3.10, whereas the mean post-test knowledge score was 22.22 with SD of 2.57. The obtained paired 't' value was 14.58 which was greater than the table value (1.98) at 0.05 level of significance, indicating a statistically significant.

Similarly, the mean pre-test practice score was 19.48 with SD of 3.49, whereas the mean post-test practice score was 24.50 with SD of 1.70. The obtained paired 't' value was 13.48 which was greater than the table valve (1.98) at 0.05 level of significance, indicating it was a statistically significant. This indicates that the structured teaching program was highly effective in improving both the knowledge and practice scores of nursing officers on adherence to chemotherapy administration protocol. Hence the first null hypothesis stated in the study was rejected.

SECTION- V

ASSOCIATION BETWEEN POST TEST KNOWLEDGE AND PRACTICE SCORE WITH SELECTED SOCIO DEMOGRAPHIC VARIABLES.

This section deals with fourth objective that was to find out the **association between knowledge and practice score on adherence to chemotherapy protocol with selected socio-demographic variables** and it is presented from table-15 to16.

Table-15: Association between post-test knowledge score with socio-demographic variables. n=100

S.no	Socio-demographic variables	Knowledge		χ^2	df	p-value	Inference
		Below median (<16)	Above median (>16)				
1	**Age**						
	21 – 30 years	46	26	0.001	1	0.97	NS
	>31 years	18	10				
2.	**Gender**						
	Female	56	30	0.33	1	0.07	NS
	Male	8	6				
3.	**Education**						
	Diploma	44	24	0.16	1	0.91	NS
	Graduate	21	11				
4.	**Area of posting**						
	General ward/ oncology wards	33	18	0.16	1	0.92	NS
	ICU & SICU	12	6				
	Emergency department & any other	19	12				
5.	**Year of experience**						
	Below & equal to 2 years	23	8	1.43	1	0.23	NS
	Above 2 years	41	28				

The above table shows 15 that association of post-test knowledge score among nursing officers with selected socio-demographic variables.

- With regard to age, there were 2 age groups, 21-30 years and above 31 year . The obtained χ^2 value was 0.001 and p value was 0.97 indicating there was no statistically significant association between knowledge score of nursing officers with age at 0.05 level.
- With regard to gender, there were 2 groups, Female and Male. The obtained χ^2 value was 0.33 and p value was 0.07 indicating there was no statistically significant association between knowledge score of nursing officers with gender at 0.05 level.
- With regard to education, there were 2 groups, Diploma and Graduate qualification. The obtained χ^2 value was 0.16 and p value was 0.91 indicating there was no statistically significant association between knowledge score of nursing officers with education at 0.05 level.
- With regard to area of posting , there were 3 groups, General / Oncology wards, ICU & SICU and Emergency department & any other. The obtained χ^2 value was 0.16 and p value was 0.92 indicating there was no statistically significant association between knowledge score of nursing officers with area of posting at 0.05 level.
- With regard to year of experience, there were 2 groups, below 2 years and above 2 years. The obtained χ^2 value was 1.43 and p value was 0.23, indicating there was no statistically significant association between knowledge score of nursing officers with year of experience at 0.05 level.

Table-16: Association between post-test practice score with socio-demographic variables. n=100

S.no	Socio-demographic variables	Practice		χ^2	df	p-value	Inference
		Below median (<19)	Above median (>19)				
1	**Age**						
	21 – 30 years	37	35	0.038	1	0.84	NS
	>31years	15	13				
2.	**Gender**						
	Female	45	40	0.20	1	0.65	NS
	Male	7	8				
3.	**Education**						
	Dipolma	43	40	0.007	1	0.93	NS
	Graduate	9	8				
4.	**Area of posting**						
	General ward/ oncology wards	35	16	12.0	2	5.99	SS*
	ICU & SICU	5	13				
	Emergency department & any other	12	19				
5.	**Year of experience**						
	Below 2 years	16	15	0.002	1	0.95	NS
	Above 2 years	36	33				

The above table 16 shows that association of posttest practice score among nursing officers with selected socio-demographic variables.

- With regard to age, there were 2 age groups, 21-30 years and above 31 year. The obtained χ^2 value was 0.038 and p value was 0.84, indicating there was no statistically significant association between practice score of nursing officers with age at 0.05 level.
- With regard to gender, there were 2 groups, female and male. The obtained χ^2 value was 0.20 and p value was 0.65 indicating there was no statistically significant association between practice score of nursing officers with gender at 0.05 level.
- With regard to education, there were 2 groups, Diploma and Graduate qualification . The obtained χ^2 value was 0.007 and p value was 0.93 indicating there was no statistically significant association between practice score of nursing officers with education at 0.05 level.
- With regard to area of posting , there were 3 groups, General ward/ oncology wards, ICU & SICU and Emergency department & any other. The obtained χ^2 value was 12.0 and p value was 5.99 indicating there was statistically significant association between practice score of nursing officers with area of posting at 0.05 level.
- With regard to year of experience, there were 2 groups, below 2 years and above or equal to 2 years. The obtained χ^2 value was 0.002 and p value was 0.95 indicating there was statistically significant association between practice score of nursing officers with year of experience at 0.05 level. Hence the 2nd null hypothesis stated for the study is accepted.

SECTION – VI

COMPARE THE RELATIONSHIP BETWEEN KNOWLEDGE AND PRACTICE ON ADHERENCE TO CHEMOTHERAPY PROTOCOL

This section deals with fifth objective that was **to compare the relationship between Knowledge and Practice on Adherence to Chemotherapy Protocol among Nursing officers** and it is presented in table 17.

Table-17 : Comparison of knowledge and practice on adherence to chemotherapy protocol. n =100

Variables	Mean	SD	r	P-value	Interpretation
Knowledge score	22.22	3.95	0.018	0.85	NS(p<0.01)
Practice score	26.10	2.57			

The above table shows that, comparison of knowledge and practice score on adherence to chemotherapy protocol among nursing officer after the intervention. The obtained mean knowledge score was 22.22 with SD of 3.95, whereas the practice score was 26.10 with SD of 2.57. The calculated correlation coefficient (r) was 0.018, and the p-value was 0.85, which is not statistically significant at the 0.01 level. This indicates that there was no significant correlation between knowledge and practice scores. This indicates that Knowledge score not seem to be associated with higher practice score. Hence the 3rd null hypothesis stated for the study was accepted.

SUMMARY

This chapter deals with the data analysis and interpretation had dealt with description of socio-demographic variables of nursing officers knowledge and practice regarding adherence to chemotherapy administration protocol in pretest and post-test and comparison and association between the knowledge and practice scores with selected socio-demographic variables.

CHAPTER - VII

DISCUSSION

CHAPTER- VII

DISCUSSION

Nurses form an essential pillar of the healthcare system and play a critical role in ensuring patient safety and quality of care. Hence the present study was intended to evaluate the Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers. The data collected from 100 nursing officers was analyzed and presented in chapter-V. The findings obtained were discussed as follows:

I. SOCIO-DEMOGRAPHIC VARIABLES

Age

With regard to age, majority (72%) of the nursing officers were between the age group of 21-30 years and 28% of them were between 31-40 years of age group. This finding is supported by the study on chemotherapy safe handling through educating nurses.[43]

Gender

With regard to gender, majority (89%) of the Nursing officers were females and 11% of them were males. Similar findings were seen by the study on chemotherapy safe handling through educating nurses.[43]

Educational qualification

With regard to educational qualification, majority (68%) of nursing officers were with diploma, & 32% of them were graduates. This finding was seen by the study on chemotherapy safe handling through educating nurses.[43]

Area of posting

With regard to area of posting, majority 51% of nursing officers were from General/ oncology wards & to support this finding there were no studies.

Year of experience

With regard to year of experience, majority (69%) of Nursing officers were with above 2 years of experience & this finding is supported by the study on effectiveness of Structured teaching program for nurses regarding intravenous administration of chemotherapy.[44]

Training in chemotherapy administration

With regard to training in chemotherapy administration by nursing officers, majority (100%) of nursing officers were not trained by the hospital & to support these findings there were no studies.

II. LEVEL OF KNOWLEDGE ON ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL

Area wise mean knowledge score

With regard to area wise mean knowledge score, the highest mean value of 4.99 with the SD of 1.60 was seen in area of pre-chemotherapy administration and the lowest mean valve of 1.96 with SD of 0.99 was seen in the area of scope of chemotherapy administration. This finding is supported by the study on chemotherapy safe handling through educating nurses.[43]

Overall knowledge score

With regard to overall knowledge score of nursing officers regarding adherence to chemotherapy administration protocol, majority (89%) of the nursing officers had moderately adequate knowledge, 8% of them had adequate knowledge and 3% of them had inadequate knowledge. Similar finding was seen by the study on chemotherapy safe handling through educating nurses.[43]

III. LEVEL OF PRACTICE ON ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL

Area wise mean practice score

With regard to area wise mean practice score, the highest mean value of 3.97 with the SD of 1.49 was seen in area of patient monitoring during and after chemotherapy and the lowest mean valve of 2.51 with SD of 1.05 was seen in the area of Personal Protective Equipment (PPT). This finding is supported by the study on chemotherapy safe handling through educating nurses.[43]

Overall practice score

With regard to overall practice score of nursing officers regarding adherence to chemotherapy administration protocol, majority (51%) of nursing officers had poor practice scores and 49% of them had good practices scores. Similar findings were seen by the study on chemotherapy safe handling through educating nurses.[43]

IV. EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL.

With regard to knowledge, the mean pre-test knowledge score was 16.26 with SD of 3.10, whereas the mean post-test knowledge score was 22.2 with SD of 2.57. Similarly, the mean pre-test practice score was 19.48 with SD of 3.49, and the mean post-test practice score was 24.50 with SD of 1.70. This finding was similar to the study on chemotherapy safe handling through educating nurses.[43]

V. ASSOCIATION BETWEEN POST TEST KNOWLEDGE AND PRACTICE SCORES WITH SELECTED SOCIO DEMOGRAPHIC VARIABLES.

With regard to association of post-test knowledge scores among nursing officers with selected socio-demographic variables, there were no variables found to be significant at 0.05 level. This finding is supported by the study on chemotherapy safe handling through educating nurses.[43]

With regard to association of post-test practice score among nursing officers with selected socio-demographic variables, it was observed that, area of posting was found to be statically significant at 0.05 level then other variables. Similar findings were seemed by the study on chemotherapy safe handling through educating nurses.[43]

VI. COMPARE THE RELATIONSHIP BETWEEN KNOWLEDGE AND PRACTICE ON ADHERENCE TO CHEMOTHERAPY PROTOCOL

With regard to comparison of knowledge and practice on adherence to chemotherapy protocol among nursing officers, the mean knowledge score was 22.22 with SD of 3.95, whereas the practice score was 26.10 with SD of 2.57 which is not statistically significant at the 0.01 level. This indicates that there was no significant correlation between knowledge and practice scores. To support this study there were no findings.

SUMMARY

This chapter deals with the discussion of major findings seen in the analysis chapter and next coming chapter is on summary of the study.

CHAPTER - VIII

CONCLUSION

CHAPTER -VIII

CONCLUSION

The present study was an attempt to evaluate the Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers. Using pre-experimental one group pre-test post-test design, through purposive sampling technique, 100 nursing officers were assessed with a structured knowledge questionnaire and practice checklist. The results showed that both knowledge and practice scores improved significantly after the intervention. Hence, the study concluded that the structured teaching Programme was effective in enhancing the knowledge and practice of nursing officers, thereby promoting adherence to chemotherapy administration protocol there is increased safety and concern among the nurses for the patients.

CHAPTER - IX

SUMMARY

CHAPTER -IX

SUMMARY

This chapter discusses on a brief summary of the study, limitations, Nursing implications and recommendations for the future study.

The present study aimed to assess the Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers.

The objectives of the study:

1. To assess the knowledge among nursing officers on adherence to chemotherapy administration protocol by using structured knowledge questionnaire.
2. To assess the practice among nursing officers on adherence to chemotherapy administration protocol by using checklist scale.
3. To evaluate the effectiveness structured teaching programme on adherence to chemotherapy administration protocol among nursing officers by comparing pre and post-test knowledge and practice scores.
4. To determine the association between knowledge and practice score on adherence to chemotherapy protocol with selected socio-demographic variables.
5. To compare the relationship between knowledge and practice on adherence to chemotherapy protocol among nursing officers.

Null Hypothesis:

H01: There was significant difference between knowledge and practice among nursing officers on adherence to chemotherapy protocol.

H02: There was significant difference between knowledge and practice with selected socio-demographic variables.

H03: There was no correlation between knowledge and practice score among nursing officers.

MAJOR FINDINGS OF THE STUDY

Socio demographic variables

With regard to socio-demographic variables majority (72%) of the nursing officers were in the age group of 21-30 years, 89% of them were females, 68% were with diploma, 51% were working in General/ oncology wards, 69% were having above 2 years of experience &100% of them have not undergone any training related to chemotherapy administration.

Overall knowledge score

With regard to overall knowledge score of nursing officers regarding adherence to chemotherapy administration protocol, it found that 89% of them had moderately adequate knowledge.

Overall practice score

With regard to overall practice score of nursing officers regarding adherence to chemotherapy administration protocol, it found that 51% of them had poor practice.

Effectiveness of structured teaching Programme

With regard to knowledge, the mean pre-test knowledge score was 16.26 with SD of 3.10, whereas the mean post-test knowledge score was 22.2 with SD of 2.57.

Similarly, the mean pre-test practice score was 19.48 with SD of 3.49, whereas the mean post-test practice score was 24.50 with SD of 1.70 which indicated that structured teaching program was effective in improving the knowledge practice score.

Association between post-test Knowledge and Practice scores with selected socio-demographic variables.

With regard to association of post-test knowledge scores among nursing officers with selected socio-demographic variables, none of the selected variables were found to be significant at 0.05 level where as with regard post practice score it was found that expect the area of posting other variables were not significant.

NURSING IMPLICATION

The findings of the present study have several implications in nursing administration, nursing practice, nursing education, and nursing research.

NURSING ADMINISTRATION

Nursing administrators should involve themselves in formulating and enforcing policies to support strict adherence to chemotherapy administration protocols in both inpatient and outpatient oncology units. With the advancement and ever-growing challenges in cancer care, administrators have the responsibility to provide need-based in-service education for nursing officers.

- The Nursing Administrator should encourage regular skill enhancement sessions, safety drills, and awareness Programme on safe handling and administration of chemotherapy drugs for all nursing officers working in oncology department.
- The Nursing Administrator should arrange periodic structured teaching Programme on chemotherapy administration for nursing officers, ensuring inclusion of safe handling, management of side effects, and adherence monitoring.

- The Nursing Administrator should plan monthly clinical audits and protocol compliance checks in oncology wards to ensure safe and effective chemotherapy administration.
- The Nursing Administrator should make an institutional policy for mandatory training and certification of all nurses handling chemotherapy drugs.

NURSING PRACTICE

- The professional nurse must be aware of all aspects of chemotherapy administration, including drug preparation, verification, administration techniques, and management of complications. Nurses should strictly follow institutional SOP's and safety guidelines while administering chemotherapy drugs to prevent errors and occupational exposure.
- Nurses should also take responsibility for educating patients and caregivers on the importance of treatment adherence, side-effect reporting, and home-care precautions during chemotherapy cycles.

NURSING EDUCATION

Nursing education is an essential tool for the development of the nursing profession. From the study findings, the nurse educator can plan as follows:

- Nursing educators should prepare nurses to impart high-quality patient education by using various teaching methods such as demonstrations, simulations, case-based discussions.
- Undergraduate and postgraduate nursing students can be given specialized knowledge and hands-on skill practice in chemotherapy administration protocols.

NURSING RESEARCH

- Nursing research is an integral part of the nursing profession. The nurse's role is not only limited to drug administration but also in generating evidence for better patient outcomes. This role can be expanded by conducting research on various aspects of chemotherapy administration and adherence.
- The findings of the present study can serve as a basis for further research in oncology nursing, particularly in evaluating the long-term impact of structured teaching Programme.
- There is a lack of studies assessing protocol adherence among nursing officers; therefore, nurse researchers should focus on conducting similar studies in various oncology care settings.
- There are few studies on the effectiveness of structured teaching Programme in improving chemotherapy administration practices. Hence, nurse researchers must involve themselves in conducting more research in this area.

LIMITATIONS

- The study was limited to nursing officers working in RL Jalappa Hospital and Research Centre.
- The sample size was limited hence cannot be generalized.

RECOMMENDATIONS

- A similar study can be replicated on a larger population of nursing officers working in various oncology care setting to improve the generalizability of findings.
- A true experimental study can be conducted using structured teaching interventions to evaluate the effectiveness of training Programme on chemotherapy administration protocol adherence.
- A research study can be conducted focusing on each component of chemotherapy administration (drug preparation, administration, side-effect management, and safety precautions) separately to assess specific skill improvement.
- Studies assessing the knowledge, and practice of nursing officers on safe handling and administration of chemotherapy drugs should be conducted in different hospital settings.

CHAPTER - X

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CHAPTER - XI

ANNEXURES

CHAPTER -XII

ANNEXURE-I

Written Informed Consent Form

Study Title: "Effectiveness structured teaching programme on knowledge and practice regarding adherence to chemotherapy administration protocol to cancer patients among nursing officers".

Code Number:

I confirm that I have read and understood the information given to me about this study and my role in it. I had opportunities to ask questions and questions have been answered to my satisfaction.

Or

I confirm that all information about this study and my role in it has been read / explained to me by a member of the investigating team in a language that I understand. I had opportunities to ask questions and questions have been answered to my satisfaction.

b) I understand that my participation in this study is voluntary and that I am free to withdraw from the study at any time, without giving any reason and legal rights being affected.

c) I understand that my identity will not be revealed in any document or publication.

d) I agree not to restrict the use/publication of any data or results that arise from this study provided such use is only for scientific purposes.

e) I am aware that by agreeing to my participation in this investigation, I will have to give time for learning and assessment by the investigating team and that these assessments will not interfere with the benefits that I am entitled to or my daily routine.

f) I give my consent, voluntarily to take part in this study.

Signature of the study participants /Legally Acceptable Representative:

Name of the study participant: _____

Date: _/_/_/_____

Place:

Study participant signature: _____

Name of the investigator: _____

Date: ___/___/_____

Place:

Study Investigator's Signature: _____

ANNEXURE-II

Ethical committee clearance certificate

SRI DEVARAJ URS COLLEGE OF NURSING
Tamaka, Kolar-563 103, Karnataka.
(Affiliated to RGUHS, Bangalore and Recognized by KNC, Bangalore & INC, New Delhi)
ISO 9001:2015 Certified& NAAC Accredited
Phone: 9480880802 E-mail: sduconson@yahoo.com, Website: sducon.ac.in

Ref.:No. SDUCON/IEC/PG-148/2023-2024 **Date: 09-05-2024**

From,
The Institutional Ethics Committee
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563103

To,

Ms. Nalli Jaya Sujana
M.Sc Nursing student
Medical Surgical Nursing
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563103

This is to certify that the Institutional Ethics Committee of Sri Devaraj Urs College of Nursing, Tamaka, Kolar has examined and unanimously approved M.Sc. (N) Topic: **Evaluate the Effectiveness of adherence to Chemotherapy administration Protocol to Cancer patients among Nursing staff working at RLJH & RC** of **Ms. Nalli Jaya Sujana**, under the guidance of **Dr G. Vijayalakshmi, Principal**, Department of Medical Surgical Nursing of Sri Devaraj Urs College of Nursing Kolar.

Member Secretary

Chairperson

ANNEXURE-III

Section – A

SOCIO-DEMOGRAPHIC VARIBALE

1. Age
    a) 21- 30 years
    b) 31 – 40 years
    c) >40 years
2. Gender
    a) Female
    b) Male
3. Education
    a) GNM
    b) BSc (N)
    c) PBBSc (N)
    d) MSc (N)
4. Area of posting
    a) General ward / oncology wards
    b) ICU
    c) Emergency department
    d) SICU
    e) Any other specify
5. Year of experience in the hospital
    a) Below 2 years
    b) Above 2 years
6. Received any specialized training in chemotherapy administration : Yes/ No

Section - B

Dear Madam/Sir,

Instruction: Please answer to the following questions which you feel appropriate. The information provided by you will be kept confidential and used only for research purpose.

1. Cancer refers to
    a. A viral infection
    b. A genetic disorder only
    c. Uncontrolled growth of abnormal cells in the body
    d. A deficiency of red blood cells
2. Following are the common symptoms of cancer, excluding
    a. Unexplained weight loss
    b. Persistent pain
    c. Charge in bowel or bladder habits
    d. Regular exercise
3. The following is a risk factor for developing cancer
    a. Family history
    b. Tobacco use
    c. UV radication exposure
    d. All of the above
4. Standard treatment for cancer include the following except
    a. Surgery
    b. Chemotherapy
    c. Skin ointment
    d. Radiation therapy

5. Chemotherapy means the administration of

   a. Antibiotic medication

   b. Cytotoxic or cytostatic medications

   c. Antihypertensive medication

   d. Anti-inflammatory medication

6. Chemotherapy drugs are harmful to the following except

   a. Healthy tissues

   b. Cancerous cells

   c. Health professionals

   d. Bone cells

7. Hazardous drugs may cause all the following except

   a. Carcinogenicity

   b. Reproductive toxicity

   c. Organ toxicity

   d. Weight gain

8. Hazardous drugs include all the following except

   a. Antiviral drug

   b. Hormones

   c. Anti-cancer chemotherapy

   d. Anti-hypertensive drugs

9. The following are the benefits of chemotherapy expect

   a. Neo-Adjuvant

   b. Curative

   c. Palliative

   d. Preventive

10. Common side effect of chemotherapy

    a. Increased appetite

    b. Hair growth

    c. Fatigue

    d. Increased red blood cell count

11. Neo-adjuvant chemotherapy aims to

    a. Improve appetite

    b. Shrink tumor before surgery/radiotherapy

    c. Cause sleep

    d. Remove infection

12. Palliative chemotherapy aims to

    a. Cure cancer

    b. Shrink the tumor & provide symptom relief

    c. Cause sedation

    d. Treat infection

13. Chemotherapy can be ordered by all the following except:

    a. Pediatric oncologist

    b. General practitioner

    c. Radiation oncologist

    d. Medical oncologist

14. Before chemotherapy patient must be assessed

    a. Neutrophil & platelet counts

    b. Renal functions & general condition

    c. HIV & HBsAg

    d. All of the above

15. Every patient planned for chemotherapy must be counseled for

    a. Diagnosis & plan of management

    b. Stage & grade of cancer tumor

    c. Benefits of chemotherapy

    d. All of the above

16. Chemotherapy shall be administered only after signature of the patient to

    a. Consent form

    b. Pre- operative form

    c. Case file

    d. Nurses note

17. Chemotherapy can be administered by

    a. Fresher nurses

    b. Nurses with 3 years' experience

    c. Trainee interns

    d. ANMs

18. Any queries on drug and it's dosage on chemotherapy should go to

    a. Head of the department

    b. Treating oncologist

    c. Nursing staff

    d. Pharmacist

19. Chemotherapy should be administered in

    a. Chemotherapy wards with bio-safety cabinet

    b. ICU

    c. OPD

    d. Causality

20. Emergency items in chemo ward should include

    a. Spillage kit

    b. Resuscitation equipment

    c. Emergency drugs

    d. All the above

21. Nurses required to wear the following during administration of chemotherapy

    a. Saree with mask and gloves

    b. PPE kit

    c. Saree with mask

    d. None of the above

22. Before administration of chemotherapy nurse should check for

    a. Weight and Height

    b. Skin and eye colour

    c. Patient identity and chemo protocol

    d. Family history

23. The following to written on chemotherapy infusion bag except

    a. Drug and dosage added

    b. Time of starting the drug

    c. Signature of the nurse

    d. Doctor's signature

24. Chemotherapy drugs are drawn or mixed by nurse in

    a. Separate room with good ventilation

    b. Nurses station with good ventilation

    c. Bedside with good ventilation

    d. OPD with good ventilation

25. Chemotherapy is administered commonly through the following route

    a. Intradermal
    b. Intravenous
    c. Intra-arterial
    d. Intrathecal

26. During administration of chemotherapy the nurse should look for

    a. IV cannula site
    b. Patient complains of pain or swelling
    c. Erythema & extravasation
    d. All of the above

27. While administrating chemotherapy through intramuscular route the nurse should follow except

    a. Select appropriate needle
    b. Use Z track technique
    c. Rotate the injection site
    d. Cover the patient with blanket

28. The hazardous chemotherapy drug spill must be cleaned

    a. Wearing PPE
    b. Wiping in hand with cloth
    c. With moping
    d. Pouring water

29. If unintended chemotherapy drug exposure occurs with needle stick injury should do except

    a. Inform to the doctor
    b. Clean exposed area 15 minutes with running water
    c. Apply Bandage
    d. Not inform to anyone

30. Chemotherapy drugs must be stored & dispensed by

    a. Pharmacist
    b. Trained & competent pharmacist
    c. Pharmacy in charge
    d. Nursing officers

31. The movement of the following persons are avoided in the chemotherapy Dept

    a. Hospital staff
    b. Patient relative
    c. Security officer
    d. Suspicious person

32. Every patient entering chemotherapy department should have the following except

    a. OPD card
    b. Daily treatment card
    c. In-patient file
    d. Surgery note

SECTION – C

PRACTICE QUESTIONNAIRE ON ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL

Chemotherapy Administration Checklist for Staff Nurses			
S.NO	**CRITERIA**	**YES**	**NO**
1.	**Pre-Chemotherapy Preparation:**		
	o Verify doctor's chemotherapy order (signed & dated)		
	o Confirm patient identity (Ensure HIV & HBsAg tests are completed)		
	o Assess patient's condition (KPS >70)		
	o Confirm signed informed consent in the patient's file		
	o Ensure all required drugs & supportive medications are available		
	o Check for contraindications before administration		
	o Ensure patient is in a designated chemotherapy area		
2.	**Personal Protective Equipment (PPE):**		
	o Wear double gloves (change outer gloves if contaminated)		
	o Wear a protective gown (plastic, non-permeable, long sleeves)		
	o Wear safety glasses or goggles		
	o Wear a face mask if splashes are possible		
	o Wear fully closed shoes		
3.	**IV Line Preparation & Administration:**		
	o Ensure IV-line patency (check for blood return & flow)		
	o Use a new IV cannula for vesicant drugs when possible		
	o Administer IV bolus drugs slowly over 5 minutes		
	o Label infusion bags with drug name, dose & administration details		
	o Monitor infusion site for redness, swelling, or extravasation		
	o Stop infusion & inform the oncologist if extravasation occurs		
	o Use infusion pumps if required		

4.	**Patient Monitoring During & After Chemotherapy:**		
	○ Continuously monitor patient during administration		
	○ Observe for immediate side effects (pain, redness, allergy)		
	○ In case of anaphylaxis:		
	▪ Stop infusion immediately		
	▪ Administer Inj. Avil & Hydrocortisone IV stat		
	▪ Start Oxygen 4 L/min & give nebulization (Duolin + Budecort)		
	▪ Monitor pulse, BP, SpO2 & inform oncologist		
	○ Document adverse reactions & inform the floor nurse & oncologist		
	○ Educate patient on delayed side effects & when to seek help		
5.	**Safe Handling & Waste Disposal:**		
	Prepare chemotherapy in a designated area (not at bedside)		
	○ Dispose of unused chemo drugs in hazardous waste containers		
	○ Report any spills, contamination, or exposure incidents		
	○ Clean spills with absorbent pads & decontaminate area		
	○ Remove gloves & wash hands after handling chemotherapy		
	○ Store chemotherapy drugs separately from other medications		
6.	**Post-Chemotherapy Care:**		
	○ Ensure patient is stable before discharge		
	○ Educate on post-chemotherapy precautions		
	○ Confirm follow-up appointment & next chemotherapy schedule		
	○ Document all chemotherapy details in the patient file		
	○ Report any concerns to the oncologist		

ANNEXURE-IV

Key answer : Section-B

1	**c**	**21**	**b**
2	**d**	**22**	**c**
3	**d**	**23**	**d**
4	**c**	**24**	**a**
5	**b**	**25**	**b**
06	**d**	**26**	**d**
7	**d**	**27**	**d**
8	**d**	**28**	**a**
9	**d**	**29**	**d**
10	**c**	**30**	**b**
11	**b**	**31**	**d**
12	**b**	**32**	**d**
13	**b**		
14	**d**		
15	**d**		
16	**a**		
17	**b**		
18	**b**		
19	**a**		
20	**d**		

ANNEXURE-V

LESSON PLAN

SRI DEVARAJ URS COLLEGE OF NURSING TAMAKA,KOLAR

TOPIC: ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL

SUBMITTED TO,

Dr. G. VIJAYALAKSHMI

PRINCIPAL

SDUCON

SUBMITTED BY,

Ms. N. JAYA SUJANA

II YEAR M.Sc. NURSING

SDUCON

LESSON PLAN ON ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL

Name of the student : Ms. N. Jaya Sujana

Topic : Adherence to Chemotherapy Administration Protocol

Batch : Nursing officers of RLJHRC.

Place : Sri Devaraj Urs College of nursing

Date : 27-05-2025

Time : 12PM

Number of students : 100

AV aids used : Power point, Leaf lets, Handouts, OHP, brochure, pamphlet, blackboard.

Method of Teaching : Lecture ,Discussion, Demonstration

Previous knowledge of the group : The Nursing Officers will have some Knowledge and Practice on adherence to chemotherapy protocol of cancer patient.

General Objectives: By the end of session , this session nursing officers able to:

- Understand the Primary Goal of Chemotherapy
- Identify the Role of Chemotherapy in Cancer Treatment Plans
- Appreciate the Importance of Protocol Standardization

Specific Objectives:

By the end of the session, the participant will be able to:

- ✧ Defines chemotherapy.
- ✧ Understands the concepts of hazardous drugs
- ✧ Explains in detail about the scope of chemotherapy
- ✧ Identity's who can order chemotherapy
- ✧ Describes the step in pre- chemotherapy workup
- ✧ Enumerates the counselling and consent steps
- ✧ Enlists nurses authorized to administer
- ✧ Describes chemotherapy routes for administration
- ✧ Describes designated area for chemotherapy administration
- ✧ Identify steps in managing chemotherapy complications
- ✧ Describes the PPE required while handling chemotherapy drugs
- ✧ Enlists steps for safe chemotherapy administration
- ✧ Describes the acute unintended exposure
- ✧ Explains the storage & dispensing guidelines

Time	Specific objectives	Content	Teacher's activity	Students activity	A.V aids	Evaluation
5mins	Explains the meaning of Adherence to Chemotherapy Administration Protocol		**Introduction:** Q: As a nurses can u list out non- communicable diseases ? A: yes. Q: let us know what is cancer? A: Yes, cancer is a uncontrolled growth of abnormal cells in the body. Q: What are the different types of treatment in cancer? A: Yes, the treatment is given in the form of surgery , chemotherapy and Radiation therapy. Q: Can anyone say what is chemotherapy? A: Yes, it is an administration of Cytotoxic or cytostatic medications. This chemotherapy is a harmful drug hence will be administrating we should the protocol So let's us discuss today's topic on "Adherence to Chemotherapy Administration Protocols" by RLJH&RC.	Staff nurses listens carefully		

Time	Specific objectives	Content	Teacher's activity	Students activity	A.V aids	Evaluation
1mins	Defines chemotherapy	**Meaning:** Chemotherapy is a type of treatment that uses strong medicines to kill cancer cells or stop them from growing. ● Chemotherapy medicines travel through the blood and reach cancer cells anywhere in the body. It is called a **systemic treatment** because it works on the whole body. ● Cancer cells grow and divide very quickly and Chemotherapy targets these fast-growing cells. But some healthy cells in the body (like those in the hair, mouth, and stomach) also grow fast, so they can be affected too. This causes side effects like hair loss, vomiting, and tiredness.	Defines chemotherapy	Listening and taking notes	OHP	What do you mean by clinical handover?
3 mins	Explains in detail about the scope of chemotherapy	**Scope of chemotherapy** Chemotherapy is used in the treatment of a wide variety of **malignancies and few non-malignant** conditions also. Chemotherapy drugs can be used as either single agents or as a combination chemotherapy based on the indication and	Enlists the scope of chemotherapy	Listening and taking notes	leaflets	What is the scope of chemotherapy

		patient's tolerability. Chemotherapy is used for both solid tumour and haematological malignancies in various settings. The benefits of chemotherapy are : • **Neo-adjuvant** – chemotherapy given before surgery/radiotherapy to shrink the cancer, allow radical treatment and reduce the risk of the cancer coming back. • **Curative:** chemotherapy to give the best possible chance of being cured. • **Concurrent:** chemotherapy given along with radiotherapy to improve the chances of cure. • **Adjuvant**: chemotherapy given afte surgery/radiotherapy to reduce th risk of cancer coming back. • **Disease control/palliative**: the aim is not to cure but to control or shrink the disease, there by improve both quality of life and survival.		Listening and taking notes		

4 mins	Understands the concepts of hazardous drugs	**Concept of hazardous drugs** Hazardous drugs include those used for cancer chemotherapy such as antiviral drugs, hormones, some bio-engineered drugs and other miscellaneous drugs. These hazardous drugs exhibit one or more of the following six characteristics in humans: • Carcinogenicity • Teratogenicity or other developmental toxicity • Reproductive toxicity • Organ toxicity at low doses • Genotoxicity	Explains the concept of hazardous drugs	Listening and taking notes	Black board & PPT	What is the concept of hazardous drugs
2mins	Identity's who can order chemotherapy	**Doctors authorized to order chemotherapy administration** Only doctors who are formally trained in administration of cancer chemotherapy, have requisite qualification and found to be competent in it are privileged to authorize or order chemotherapy administration. Doctors qualified to order administration of Chemotherapy are Medical oncologist, Radiation oncologist, Hemat-oncologist	Explains who can order chemotherapy	Listening and taking notes	Black board	Mention that who can order chemotherapy

3mins	Describes the step in pre-chemotherapy workup	and Paediatric oncologist **Pre-chemotherapy work up** Before starting a course of chemotherapy treatment by any route, the patient must be clinically assessed to ensure: 1. Haematology parameters such as neutrophil and platelet counts required sufficient for treatment to start. 2. Clinical chemistry parameters, appropriate to the treatment and as set out in the treatment protocol, are sufficient for the treatment to proceed. 3. Any other investigations e.g. renal function, audiology or cardiology, that impact on whether the treatment can be given and/or at what dose, have been performed, reported and reviewed. 4. Investigations listed in the case notes for patients following individualized treatment plans. 5. The patient should be clinically well and patient's general condition is good (KPS>70).	Explains the steps in pre-chemotherapy workup	Listening and taking notes	handouts	What are the steps in pre-chemotherapy workup

4mins	Enumerates the counselling and consent steps	6. HIV and HBsAg testing are compulsory before initiating chemotherapy. **Counselling for chemotherapy** • Every patient who is planned for chemotherapy administration is counseled by the treating oncologist regarding the diagnosis, stage & grade of the tumour, current plan of management, benefits of chemotherapy, its immediate and long term side effects as well as precautions to be taken during and after chemotherapy. • Patient need to be informed by the treating oncologist about the sexual and fertility related issues that may arise due to chemotherapy administration. Patients will be informed about the life threatening complications if they are associated with administration of chemotherapy. • Doctor shall have the responsibility to answer all the queries of patient to his satisfaction. The consent form will be	Explains the steps of counselling and consent	Listening and taking notes	PPT	What the steps of counselling and consent

		filled by the treating oncologist and signed by the patient and his/her care giver or relative. • Consent form will be signed by parent or a guardian if the patient is of pediatric age group or not in a condition to do so due to various reasons. Chemotherapy shall be administered only after the consent form is signed by the patient. • If patient is not signed the consent form and not agreed for chemotherapy is to be recognized and accepted. Patient has the right to request for an alternate regimen of chemotherapy if anything is available and that need to be recognized and accepted. However this need to be recorded in writing by the patient and doctor shall document the same in the patient's file. Patient's right to ask for a second opinion is also accepted and to be considered.		Listening and taking notes		

3mins	Enlists nurses authorized to administer	**Staff Authorized to Administer Cytotoxic Drugs** • Nursing staff with at least 3 years of experience and with prior experience of administering chemotherapy are allowed to administer chemotherapy under the supervision of floor in-charge nurses. • Senior nurse in-charge of the floor shall supervise and monitor all chemotherapy being administered in their respective wards on that floor. Senior nurse in-charge of the floor shall review the chemo protocol and check the drugs and patient's IV cannula before chemotherapy is initiated. • She shall enumerate the steps of chemotherapy administration to the ward nurse Floor in-charge nurse shall also assist in mixing the chemotherapy drugs and controlling the rate of administration of the drug as described in the chemotherapy protocol.	Lists nurses authorized to administer	Listening and taking notes	Black board	Explains the nurses authorized to administer

5mins	Describes chemotherapy routes for administration	• Any queries regarding the drugs, dose or method of administration shall be directed to the treating oncologist. **Routes of Administration of Chemotherapy** Chemotherapy can be delivered through multiple routes, and administration must strictly follow the protocol outlined in the chemotherapy treatment plan. **1. Intravenous Route: Infusion & Bolus** **a. Peripheral IV Cannula:** For every patient receiving chemotherapy via a peripheral IV cannula: 1. For every patient, irritant and vesicant chemotherapy drugs should be administered through a newly inserted peripheral IV cannula whenever possible, and the cannula site must be carefully observed during and after the drug administration. 2. If any signs of extravasation are detected, the infusion must be stopped immediately, and the attending doctor must be notified. 3. If the patient reports pain at the cannula site, the area should be assessed for erythema and extravasation. If neither is present, the infusion rate may be reduced. 4. The cannula site should be considered	Explains chemotherapy routes for administration	Listening and taking notes	Leaflets	What are the routes for chemotherapy administration

3mins		for replacement after 24 hours. However, if the infusion flows freely, there is good blood return, and no signs of erythema, swelling, or pain are observed, the same cannula may be used with diligent monitoring. 5. Intravenous bolus injections should be administered slowly, ideally over a duration of approximately 5 minutes. **b. Central venous access devices**: Accessing and de-accessing CVAD must be done by the treating oncologist or the Oncology OPD nurse. Patency of central venous access devices (CVADs) should be confirmed prior to use using blood return. If there is any problem with the CVAD, it should not be used further and the treating oncologist must be informed at the earliest. 2**. Intra muscular route**: For each patient receiving chemotherapy via the intramuscular route: a. The most appropriate needle should be selected based on the required length to adequately reach the patient's muscle. b. The **"Z" track technique** should be employed to prevent leakage of the drug into the patient's skin.		Listening and taking notes		

		c. The injection site should be checked to ensure there is no leakage; a cotton wool ball or plaster may be applied if necessary. d. Injection sites should be rotated for each patient to minimize local irritation. **3. Subcutaneous Route:** For each patient receiving chemotherapy via the subcutaneous route: a. Care must be taken to select the smallest appropriate needle and to ensure it is correctly positioned during drug administration. b. The injection should be administered using the pinch technique, inserting the needle at a **45° angle** to the patient's skin surface. c. The injection site should be checked for any leakage; if present or as a precaution, the site may be covered with a cotton wool ball or plaster. d. Injection sites should be rotated for each patient to reduce the risk of local irritation. **4. Oral Route:** The patient is counseled by the treating oncologist and nurse regarding the correct		Listening and taking notes		

2mins	Describes designated area for chemotherapy administration	dosage and timing of oral chemotherapy, in accordance with the prescribed chemotherapy protocol. Additionally, the patient is informed about the relationship between the oral chemotherapy and food intake, as well as any supportive medications that may be required. **Designated area for administration of chemotherapy** Chemotherapy is administered to patients in the wards of RL Jalappa Hospital and Research Centre, where care is provided by nursing staff with adequate experience in chemotherapy administration, under the supervision of the floor in-charge nurse. Each ward designated for chemotherapy administration must be equipped with the following to ensure patient safety and effective response to emergencies: ● Telephone ● Resuscitation equipment including Oxygen cylinder/supply ● Drugs for the management of emergencies – cardiac arrest and anaphylaxis ● Cytotoxic spillage kit	Explains the designated area for chemotherapy administration	Listening and taking notes	Pamphlet	Mention the designated area for chemotherapy Administration

3mins	Identify steps in managing chemotherapy complications	• Access to running water • Disposal equipment e.g. appropriate sharps bins • Copies of relevant policies and procedures **Role of nurse in administration of chemotherapy** **Management of complications** If a patient develops any complications during or after chemotherapy administration, the ward nurse must immediately inform the floor in-charge nurse, the ward in-charge postgraduate (PG), and the treating oncologist. In the event of an anaphylactic or anaphylactoid reaction in a patient: 1. Immediately stop the chemotherapy infusion. 2. Administer Inj. Avil 1 amp IV stat and Inj. Hydrocortisone 100 mg IV stat. 3. Begin oxygen at 4 L/min and give Duolin + Budecort nebulization immediately.	Explains steps in managing chemotherapy complications	Listening and taking notes	brochure	What are the steps in managing chemotherapy

5mins	Describes the PPE required while handling chemotherapy drugs	**4.** Continuously monitor the patient's pulse, blood pressure, and SpO2 levels. **Personal protective equipment** While handling chemotherapy drugs, the nursing staff, doctors & others involved must compulsorily wear the below mentioned personal protective equipment. 1. Two pairs of gloves; the outer pair must be changed immediately if contaminated, and both pairs should be replaced if the outer pair is torn. 2. Wear a protective gown or equivalent that is made of plastic, non-permeable with a solid front, long sleeves, and tight-fitting elastic or knit cuffs. 3. Wear long pants/ saree and fully closed shoes. 4. Wear safety glasses with side shields or goggles. 5. Wear face protection, such as a face mask, when splash/splatter is possible.	Explains the PPE required while handling chemotherapy drugs	Listening and taking notes	Handouts	Mention the PPE required while handling chemotherapy drugs

3mins	Enlists steps for safe chemotherapy administration	**Safe administration practices:** • To ensure patient safety and maintain the highest standards of care during chemotherapy administration, the following practices must be strictly followed: • Chemotherapy drugs must never be prepared at the nursing station or bedside. All preparation should take place in a separate, well-ventilated room. Only the treating oncologist, ward nurse, and floor nurse are permitted inside the room during the preparation process. • **Work Surface Hygiene:** Always clean the work surface thoroughly before and after each chemotherapy preparation to prevent contamination. • **Use of Personal Protective Equipment (PPE):** Staff handling chemotherapy drugs must wear all required PPE, including gloves, protective gowns, and eye protection, to avoid direct exposure to hazardous substances. • **Patient Identification and Protocol Verification:** Confirm the patient's	Lists steps for safe chemotherapy administration	Listening and taking notes	Handouts	List the steps for safe chemotherapy administration

		identity by checking the hospital number on their wristband against the chemotherapy protocol. If the information does not match, do not administer chemotherapy until the discrepancy is resolved. • **Drug Availability:** Before initiating chemotherapy, ensure all prescribed drugs are available with the patient. If any drug is missing, do not start the treatment. • **Authorization and Documentation:** Chemotherapy should only be started when a printed protocol and written order from the treating oncologist—signed, dated, and sealed—is present in the patient's file. • **IV Line Patency:** Confirm that the IV line is patent (i.e., functioning properly) before starting chemotherapy. If it is not patent, a new IV line must be inserted. • **High-Risk Infusion Handling**: Treat chemotherapy drugs as high-risk medications and handle them with extra caution throughout the administration process. • **Following the Prescribed**		Listening and taking notes		

		Sequence: Administer chemotherapy drugs exactly in the sequence specified in the prescription to maintain treatment efficacy and avoid errors. • **Proper Labelling of Infusion Bags:** Each infusion bag or bottle must be clearly labelled with: Name of the chemotherapy drug, Dose added, Start time of infusion, Rate of administration, Expected end time, Signature of the administering nurse • **Patient Communication:** Inform the patient about possible local (e.g., pain at injection site) and systemic (e.g., nausea, allergic reactions) side effects. Advise the patient to report any discomfort or unusual symptoms immediately. • **Monitoring During Administration:** Continuously monitor the patient throughout chemotherapy administration. After completion, observe the patient frequently for any delayed reactions. Promptly record and report any adverse symptoms or events to the treating team.		Listening and taking notes		

1mins	Describes the spill management for chemotherapy	• **Use of Infusion Pumps:** The use of infusion pumps for chemotherapy administration is permitted and recommended for controlled delivery. • **Waste Disposal**: Any unused or excess chemotherapy drugs, as well as hazardous materials, must be disposed of in the appropriate waste containers designed for cytotoxic substances. • **Post-Procedure Hygiene:** After handling chemotherapy agents, staff must remove gloves and wash hands thoroughly with soap and water. • **Incident Reporting:** Any incidents involving spills, contamination, or errors in administration must be reported immediately following hospital protocol. **Chemotherapy Spill management** Floor in charge nurse must be informed immediately who will supervise the spill clean-up and record the incident. Chemotherapy and other hazardous drug spills must be cleaned up as soon as possible by personnel wearing personal	Explains the spill management for chemotherapy	Discussing,listening and taking notes	Flipcard	How to manage the spill of chemotherapy

		protective equipment. All other persons should leave the area. Spill response procedures: ● Liquids: Wipe up spilled liquids with absorbent pads. ● Powders: Gently cover the powder spill with wetted paper towels or absorbent pads to avoid raising dust, then wipe up. ● Decontaminate the spill area thoroughly with a detergent solution, followed by clean water and thorough rinsing. ● The use of detergent is recommended, as there is no single accepted method of chemical deactivation for all agents. ● 70% isopropyl alcohol may be used with the cleaner if the contamination is soluble only in alcohol. ● If the spill is extensive within the containment, clean all interior surfaces after completing the spill clean-up. ● Double-bag all waste in plastic bags labeled with the contents and dispose of it in the proper waste container.		Listening and taking notes		

5mins	Describes the acute unintended exposure	**Acute unintended exposure** Follow the steps below for any exposures to chemotherapy or other hazardous drugs 1. Notify your supervisor as soon as possible for assistance. Provide first aid immediately. 2. For inhalation exposure, move out of the contaminated area immediately. 3. For sharps injury (needle stick and subcutaneous exposure), scrub the exposed area thoroughly with warm water and soap for 15 minutes. 4. For skin exposure, use the nearest safety shower for 15 minutes. Stay under the shower and remove contaminated clothing. Use clean spare clothing and do not wear the contaminated clothing again. 5. For eye exposure, use the eye wash for 15 minutes, keeping your eyelids open. 6. Get medical help by calling the treating oncologist for further assistance.	Explains the acute unintended exposure	Listening and taking notes	PPT	What is the acute unintended exposure

2mins	Explains the storage & dispensing guidelines	7. Secure the area by locking the doors and marking the spill if necessary before leaving. **Storage and Dispensing chemotherapy drugs** ● Chemotherapy drugs must be stored separately from other medications and dispensed by a pharmacist who is adequately trained and competent in the task. ● Chemotherapy drugs must not be dispensed without a prescription duly signed by an oncologist authorized to do so. ● Chemotherapy tablets or drugs must not be dispensed against outdated or past-dated prescriptions. ● Chemotherapy drugs may be dispensed to inpatients based on an indent raised by the nursing staff and duly signed by the RMO, after verifying the chemotherapy protocol issued by the treating oncologist. ● If chemotherapy tablets are exposed due to a broken blister pack or if leakage of solution or powder from vials is observed, such items must not be dispensed. ● In the event of a chemotherapy spill, follow the chemotherapy spill management guidelines mentioned	Enlists the storage & dispensing guidelines	Listening and taking notes	PPT	How to store & dispensing of chemotherapy drugs

1mins		above. ● If there is an acute exposure to staff or the public in the pharmacy, follow the acute exposure management guidelines provided. ● When in doubt, or if the order is unclear, contact the treating oncologist for clarification. **Conclusion:** Nurses play a crucial role in the safe administration of chemotherapy. Strict adherence to standard operating procedures (SOPs) helps protect both patients and healthcare staff from hazardous exposure. The consistent and correct use of personal protective equipment (PPE) is essential throughout the process. Prompt identification and reporting of any complications can be life-saving. Continuous monitoring and precise documentation are key to ensuring patient safety during treatment. Being prepared to manage spills or accidental exposures reinforces the nurse's responsibility as a healthcare professional. A strong commitment to protocol upholds high standards of care in cancer treatment.		Listening and taking notes		

ANNEXURE-VI
MASTER SHEET
SECTION-A: SOCIO-DEMOGRAPHIC VARIABLES

SL.NO	Age Group	Gender	Education	Area of Posting	Ye1rs of Experience	Received Specialized Training
1	1	1	1	5	1	2
2	1	1	1	4	1	2
3	1	1	1	4	2	2
4	1	1	1	1	2	2
5	1	1	1	1	1	2
6	1	1	1	1	2	2
7	1	2	1	5	2	2
8	2	1	3	1	1	2
9	2	1	1	3	2	2
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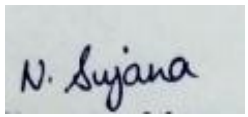

Signature of the researcher

Signature of the guide

SECTION-B : STRUCTUED KNOWDGE QUESTIONNAIRE

PRE-TEST

S.NO	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32
1	0	1	0	1	1	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0	0
2	1	1	1	0	1	0	1	1	0	0	1	0	1	1	0	1	0	0	1	1	1	1	0	1	0	0	1	0	1	1	1	0
3	1	0	0	1	0	0	1	1	0	1	0	0	1	0	0	0	0	1	0	1	1	0	1	1	1	1	0	1	0	1	1	1
4	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	1	0	0	0	1
5	0	0	1	1	0	1	0	0	1	0	1	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	1	1
6	0	1	1	1	0	0	0	0	1	1	0	0	1	0	0	1	0	1	0	1	1	0	1	1	1	1	1	0	0	0	0	0
7	0	1	1	0	0	0	0	0	1	1	1	0	0	1	1	1	1	0	0	0	0	1	0	1	0	0	1	0	1	0	1	0
8	1	0	1	0	1	0	0	1	0	0	0	0	1	0	1	0	1	0	1	0	1	1	0	1	1	0	1	1	0	1	0	1
9	1	1	1	0	0	0	1	1	0	1	1	0	1	1	1	0	0	0	1	1	1	0	0	1	1	0	1	1	0	1	1	1
10	1	0	0	1	1	1	0	0	1	0	0	0	1	1	0	0	0	1	0	1	1	1	0	0	0	0	0	1	1	1	1	0
11	1	0	0	1	0	1	0	1	1	0	0	1	0	1	0	0	0	1	0	1	1	1	1	1	1	0	1	1	1	0	1	0
12	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	0	0	1	0	0	1	0	1	0	1	1	0	1
13	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	1	0	1	1	0	0	0	0
14	0	0	0	0	0	1	0	0	1	1	1	1	1	0	0	1	0	0	1	0	0	1	1	0	1	1	1	0	0	0	1	1
15	1	1	0	0	1	1	1	0	0	0	1	1	0	1	1	0	1	0	1	0	0	1	1	1	0	1	1	1	1	0	0	0
16	1	0	0	0	0	0	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1
17	1	0	1	0	0	0	1	0	1	1	0	1	1	1	0	0	1	0	1	0	0	0	0	0	1	1	0	1	0	1	1	1
18	1	1	0	0	1	1	1	0	0	1	1	1	0	0	1	1	0	0	0	1	0	0	0	0	1	1	1	1	1	0	1	0
19	0	1	1	1	0	1	0	1	0	0	0	1	1	0	1	0	0	0	0	0	1	1	1	0	1	0	1	1	0	1	1	0
20	1	1	0	1	0	0	1	0	1	0	1	0	0	0	1	1	0	0	0	0	1	1	1	1	1	0	0	0	1	1	0	0
21	1	0	0	0	0	1	1	1	1	1	0	0	1	0	0	0	0	1	1	1	1	1	0	0	1	0	1	0	0	0	1	1
22	1	0	1	0	0	1	0	1	0	0	0	1	1	1	0	0	0	1	0	0	0	0	1	1	0	1	1	0	0	1	0	1
23	0	1	0	0	0	1	0	1	0	1	1	0	0	1	0	0	0	1	1	1	1	1	0	1	1	0	0	1	0	0	1	0
24	1	0	1	1	0	1	1	0	0	1	1	0	0	1	0	0	0	1	0	1	0	1	1	0	1	1	0	0	1	0	0	1
25	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	0	1	1	1	1	1	1	1
26	0	0	0	0	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	1	0
27	0	0	0	0	0	1	1	0	1	0	1	1	0	1	1	0	1	0	0	1	1	1	1	0	1	0	1	1	1	1	0	0
28	1	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	1	0	1	1	0	0	1	1	0	0	1	0	0	1	1	1
29	0	1	0	0	1	0	1	1	1	0	0	1	0	1	0	1	0	0	0	0	1	1	0	1	1	1	0	0	1	1	1	1
30	0	0	0	1	0	1	0	0	0	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	1
31	0	1	0	0	1	1	0	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0
32	1	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	1	0	0	1	0	0	1	0	1	0	0
33	0	1	1	0	1	0	0	1	0	0	1	0	1	1	1	0	1	1	1	0	0	1	0	0	1	1	1	0	0	1	0	0

34	1	0	0	0	1	1	0	1	0	1	1	0	1	1	1	0	0	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1
35	0	1	0	1	0	0	0	1	1	1	1	0	0	1	0	0	0	1	1	0	1	1	0	0	1	1	1	0	1	1	1	0
36	0	1	1	1	0	0	1	1	1	1	1	0	1	0	1	1	0	0	0	1	0	1	0	1	1	1	0	1	1	0	1	1
37	0	1	1	0	1	1	0	1	1	1	1	0	1	0	1	1	1	1	0	0	1	1	0	0	1	0	1	1	1	1	1	0
38	1	1	0	1	1	1	1	1	1	0	0	0	1	1	1	1	0	1	0	0	0	0	1	0	0	0	1	1	1	0	0	0
39	1	1	0	0	0	1	0	1	1	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1	1	1	0	0	1	0	0	0
40	1	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	0	0	1	0	1	1
41	1	1	1	1	0	0	0	1	1	0	0	1	1	0	0	1	1	0	1	0	1	0	0	0	1	1	1	0	1	1	1	0
42	0	0	1	0	0	1	1	0	1	0	1	1	0	0	1	0	0	1	1	1	0	1	1	1	1	0	0	1	1	0	0	1
43	0	1	0	1	0	0	0	1	0	0	1	0	0	1	1	1	1	1	0	0	1	0	0	1	0	1	1	1	0	1	1	0
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45	1	0	1	1	1	0	0	1	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	0	1	1	0	1	1	0	0	1
46	1	1	0	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	1	0	0	0
47	1	1	0	1	1	0	0	0	0	1	0	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0
48	0	1	0	0	0	0	1	0	0	1	1	0	1	1	0	0	1	0	1	1	1	0	0	1	1	1	0	1	0	0	1	0
49	1	0	1	1	0	0	1	1	1	0	0	1	1	1	0	0	0	0	1	1	1	1	0	1	0	1	0	1	1	0	0	1
50	1	1	1	0	1	1	1	1	0	1	1	0	1	0	1	0	0	0	1	0	0	1	0	1	1	0	0	1	0	0	1	0
51	1	1	1	1	1	0	0	0	1	1	1	0	1	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0
52	1	1	1	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	0	1	1	0	1	1	1	1	1
53	0	1	1	0	1	1	0	0	1	0	1	0	0	0	1	1	0	0	1	1	0	1	1	1	0	0	0	1	0	0	0	1
54	0	0	0	1	1	1	0	0	0	1	0	0	1	1	0	0	0	0	0	1	1	1	1	0	0	0	1	0	1	0	1	0
55	0	0	1	1	0	1	0	0	1	1	1	1	1	0	1	1	1	0	0	0	1	1	1	1	0	0	1	1	1	1	0	1
56	0	0	1	0	1	1	0	1	0	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0
57	1	0	1	0	1	1	1	0	1	1	1	0	0	1	1	0	0	0	1	1	1	1	0	0	1	1	0	1	1	0	0	1
58	0	1	1	0	0	1	1	1	1	0	0	1	1	0	1	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	1	0
59	1	1	1	0	0	0	1	1	1	0	0	1	0	0	1	1	0	1	1	1	0	1	0	0	1	1	1	1	0	0	1	0
60	1	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1	1	0	0	1	0	1	0
61	1	0	1	1	0	0	1	1	1	1	0	0	1	0	1	0	1	1	0	1	0	1	1	1	0	0	1	1	0	0	0	1
62	1	0	1	1	1	1	0	0	1	1	0	1	1	0	0	1	0	1	0	1	1	1	0	0	0	0	1	1	0	0	1	0
63	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0	1	0	1	1	0	0	1	0	0	0	0
64	1	0	1	1	1	1	0	1	0	1	1	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0	1	1	1	1	1	1
65	1	0	1	0	1	1	1	1	1	1	0	0	1	0	0	1	0	1	0	1	0	0	0	1	1	0	1	0	0	1	0	0
66	1	0	1	1	1	0	0	1	0	1	1	0	1	0	1	1	0	0	0	1	1	0	0	1	0	1	1	1	1	0	0	1
67	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	0	1	0	1	1	0	0	1	0	1	0	0	1	1	0	1	1

68	1	1	0	1	1	1	0	0	0	0	1	0	0	1	0	1	0	0	1	1	0	0	0	0	0	1	0	1	0	0	1	1
69	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
70	0	1	1	0	1	1	0	0	0	0	0	1	1	0	1	0	1	0	0	1	0	0	0	0	0	1	1	1	0	1	0	0
71	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	0	0	0	1	1	0	1	1	0	0	0	0	1	0	0	0	0
72	1	0	1	1	1	0	1	1	0	1	0	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
73	1	0	0	1	1	0	0	1	0	0	0	1	0	1	1	1	0	0	0	1	1	0	1	0	0	0	1	0	1	1	1	1
74	0	0	1	1	1	1	0	1	0	0	0	1	1	0	1	1	1	1	1	0	0	0	1	1	0	0	1	0	1	0	1	0
75	0	0	0	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	0	1	0	0	0	1	0	1	1	1	0	0	0	1
76	1	0	0	1	0	0	1	1	0	1	0	0	1	0	1	1	0	0	1	1	1	0	0	1	0	0	1	0	0	1	1	1
77	1	0	1	1	1	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	0	0	1	0	0	1	1	1	0
78	1	0	1	1	1	0	1	1	1	1	0	0	1	1	1	0	1	1	1	0	0	1	0	1	0	0	1	0	1	0	0	1
79	0	1	0	0	1	1	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	1	1	1	0	0	1	0	1	0	0
80	1	1	1	0	0	0	1	0	0	1	0	1	1	1	0	0	0	0	0	1	0	0	1	1	1	1	0	0	1	1	0	0
81	1	0	0	1	1	1	1	0	1	0	0	1	0	0	1	1	0	1	1	1	1	0	0	0	1	1	1	0	0	1	0	0	1
82	0	1	1	1	1	1	0	1	0	0	1	1	0	1	0	1	1	0	0	0	0	1	0	1	0	0	0	1	0	1	1	1
83	1	0	0	1	0	0	1	0	0	1	1	1	1	1	0	1	1	0	1	1	0	1	1	0	0	0	1	0	0	1	0	0
84	0	1	0	0	1	1	0	0	1	0	1	0	1	0	1	1	0	1	1	1	1	1	0	0	1	0	0	1	1	1	1	1
85	1	1	1	0	1	1	1	0	1	1	0	0	0	0	1	1	1	0	0	1	0	0	0	1	1	1	1	1	1	0	0	0
86	1	0	0	1	1	1	0	1	0	0	1	0	0	1	0	1	0	1	1	1	1	0	1	0	1	1	1	0	1	1	0	0
87	0	1	1	1	1	1	1	0	0	1	1	1	1	0	0	0	1	1	0	0	1	1	1	1	0	0	1	1	0	1	0	0
88	1	0	0	0	1	1	0	0	1	1	0	1	1	1	0	1	1	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0
89	0	1	0	1	0	0	0	1	1	0	1	0	1	0	0	0	0	1	1	0	0	1	1	0	0	0	1	0	1	1	0	1
90	0	0	1	1	0	0	1	0	0	1	0	0	1	1	1	1	1	0	1	1	1	1	0	0	0	1	1	1	0	1	0	1
91	0	1	0	1	1	1	0	1	1	1	0	1	0	1	1	1	1	1	0	1	1	1	0	0	0	1	0	1	1	1	1	0
92	1	0	0	0	0	1	1	0	0	0	0	0	1	1	0	1	0	0	1	1	0	0	1	0	0	1	0	0	1	1	1	1
93	0	0	0	0	0	1	1	1	0	1	0	0	0	0	1	0	0	1	1	0	1	1	1	0	1	1	1	0	0	1	1	1
94	1	1	1	1	0	0	1	1	1	0	0	0	1	1	1	1	0	0	0	0	1	1	0	0	1	1	1	1	0	0	1	1
95	1	1	0	1	1	1	0	1	1	1	0	0	1	1	1	1	1	1	0	0	1	1	0	1	0	1	1	0	0	1	0	1
96	0	0	1	1	1	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	1
97	0	0	1	1	1	1	1	0	1	0	1	0	0	1	1	0	1	1	0	0	1	0	0	0	1	0	0	0	0	1	0	0
98	1	1	1	1	0	1	0	0	1	1	1	0	1	1	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	1	1
99	1	0	1	0	0	0	1	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	1	0	0	0
100	1	1	1	1	0	0	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1

SECTION-C: PRACTICE QUESTIONNAIRE
PRE-TEST

S.NO	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38
1	0	1	0	1	1	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0	1	0	1	0	1	1
2	1	1	1	0	1	0	1	1	0	0	1	0	1	1	0	1	0	0	1	1	1	1	0	1	0	0	1	0	1	1	1	0	0	0	1	1	1	0
3	1	0	0	1	0	0	1	1	0	1	0	0	1	0	0	0	0	1	0	1	1	0	1	1	1	1	0	1	0	1	1	1	0	1	1	0	0	1
4	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	1	0	0	0	1	1	1	0	1	0	0
5	0	0	1	1	0	1	0	0	1	0	1	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	1	1	1	1	0	0	0	1
6	0	1	1	1	0	0	0	0	1	1	0	0	1	0	0	1	0	1	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	1	1	0	1	0
7	0	1	1	0	0	0	0	0	1	1	1	0	0	1	1	1	1	0	0	0	0	1	0	1	0	0	1	0	1	0	1	0	0	0	1	1	1	1
8	1	0	1	0	1	0	0	1	0	0	0	0	1	0	1	0	1	0	1	0	1	1	0	1	1	0	1	1	0	1	0	1	1	1	0	0	0	1
9	1	1	1	0	0	0	1	1	0	1	1	0	1	1	1	0	0	0	1	1	1	0	0	1	1	0	1	1	0	1	1	1	0	1	0	1	0	0
10	1	0	0	1	1	1	0	0	1	0	0	0	1	1	0	0	0	1	0	1	1	1	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0	0
11	1	0	0	1	0	1	0	1	1	0	0	1	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	1	0	1	0	1	0	0	1	0	0
12	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	0	0	1	0	0	1	0	1	0	1	1	0	1	1	0	1	0	1	0
13	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1
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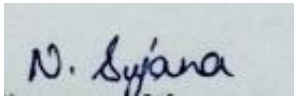
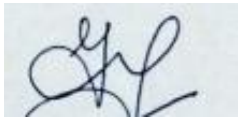


Signature of the researcher



Signature of the guide

SECTION-B : STRUCTUED KNOWDGE QUESTIONNAIRE
POST -TEST

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17	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1
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21	0	1	0	1	0	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1
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86	1	1	1	1	1	1	0	0	0	1	1	1	0	1	1	1	1	1	1	0	1	0	0	0	1	1	1	0	1	1	1	1
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SECTION-C: PRACTICE QUESTIONNAIRE
POST-TEST

S.no	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38
1	1	0	1	1	0	1	0	1	1	0	1	1	0	0	1	1	1	0	1	1	1	1	0	1	1	1	1	0	0	1	1	0	1	1	0	1	1	1
2	0	1	1	0	1	1	1	0	1	1	0	1	1	1	0	0	1	1	0	1	1	0	1	1	0	1	1	1	1	1	0	1	1	0	1	1	0	0
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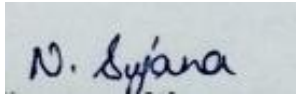
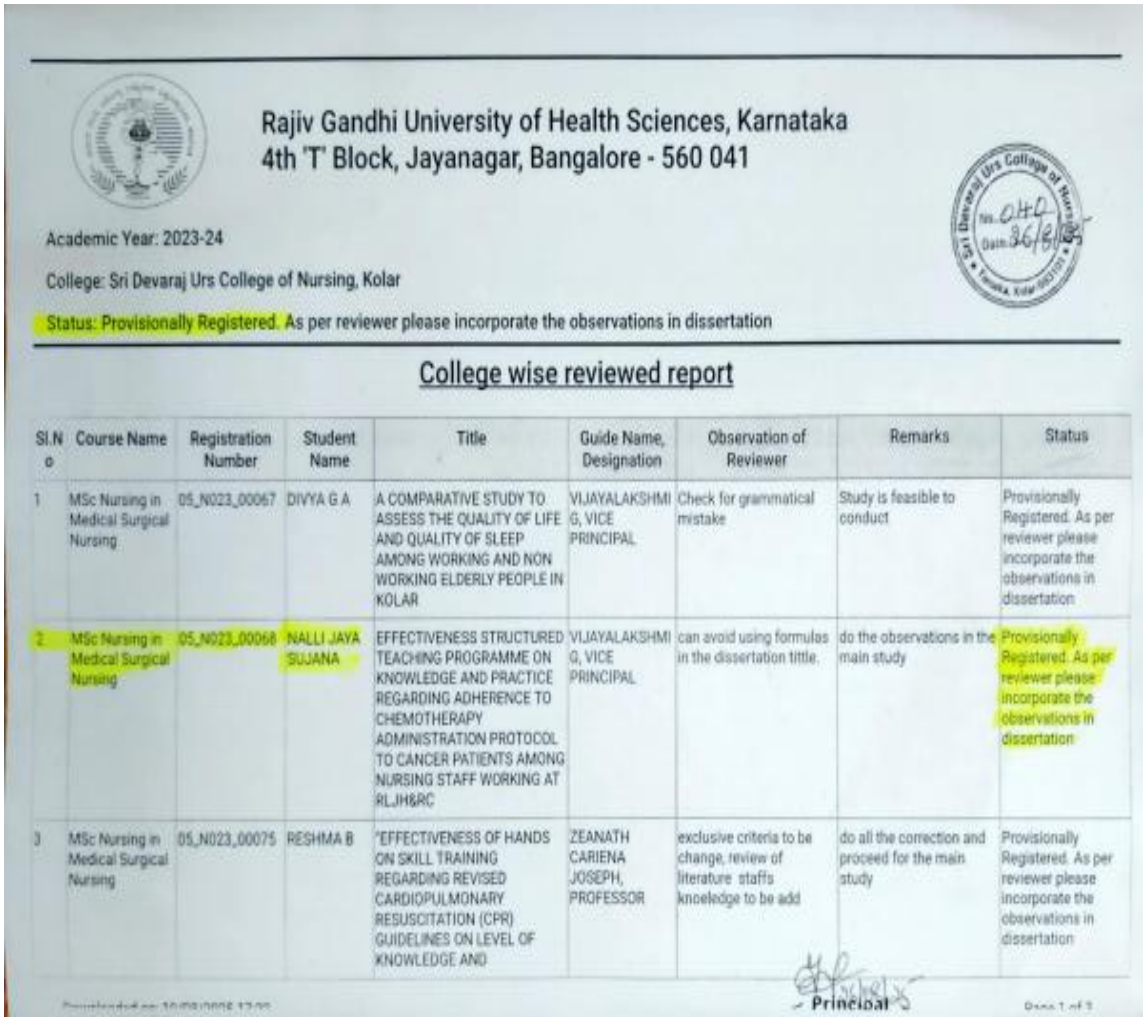


Signature of the researcher

Signature of the guide

ANNEXURE-VII

Synopsis Approval Letter



Rajiv Gandhi University of Health Sciences, Karnataka
4th 'T' Block, Jayanagar, Bangalore - 560 041

Academic Year: 2023-24

College: Sri Devaraj Urs College of Nursing, Kolar

Status: Provisionally Registered. As per reviewer please incorporate the observations in dissertation

College wise reviewed report

Sl.No	Course Name	Registration Number	Student Name	Title	Guide Name, Designation	Observation of Reviewer	Remarks	Status
1	MSc Nursing in Medical Surgical Nursing	05_N023_00067	DIVYA G A	A COMPARATIVE STUDY TO ASSESS THE QUALITY OF LIFE AND QUALITY OF SLEEP AMONG WORKING AND NON WORKING ELDERLY PEOPLE IN KOLAR	VIJAYALAKSHMI G, VICE PRINCIPAL	Check for grammatical mistake	Study is feasible to conduct	Provisionally Registered. As per reviewer please incorporate the observations in dissertation
2	MSc Nursing in Medical Surgical Nursing	05_N023_00068	NALLI JAYA SUJANA	EFFECTIVENESS STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE AND PRACTICE REGARDING ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL TO CANCER PATIENTS AMONG NURSING STAFF WORKING AT RLJH&RC	VIJAYALAKSHMI G, VICE PRINCIPAL	can avoid using formulas in the dissertation tittle.	do the observations in the main study	Provisionally Registered. As per reviewer please incorporate the observations in dissertation
3	MSc Nursing in Medical Surgical Nursing	05_N023_00075	RESHMA B	"EFFECTIVENESS OF HANDS ON SKILL TRAINING REGARDING REVISED CARDIOPULMONARY RESUSCITATION (CPR) GUIDELINES ON LEVEL OF KNOWLEDGE AND	ZEANATH CARIENA JOSEPH, PROFESSOR	exclusive criteria to be change, review of literature staffs knoeledge to be add	do all the correction and proceed for the main study	Provisionally Registered. As per reviewer please incorporate the observations in dissertation

Principal

ANNEXURE - VIII

Letter requesting permission to conduct main study

PERMISSION TO CONDUCT STUDY

From,

Ms. Nalli Jaya Sujana

I year M.Sc. (N) Student

Sri Devaraj Urs College of Nursing

Tamaka, Kolar – 563101.

Date: 26/6/25

Place: Kolar

To,

The Medical superintendent,

RL Jalappa Hospital and Research Centre,

Tamaka, Kolar- 563101.

Respected Madam / Sir,

Through the principal,

SDUCON, Kolar.

Sub: Requesting permission to collect data from nursing staff-reg

With the subject to the above, I the under signed student of II year M.Sc. Nursing under the Department of Medical-Surgical Nursing specialty would like to collect data for the mini research study on **Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol of Cancer Patients among Nursing officers working at RLJH&RC** as a partial fulfilment of my M.Sc. Nursing curricular requirement.

Hence I request you to grant permission to collect data from nursing officers of RLJH and RC and do the needful. Herewith I am enclosing my research objectives, tool and ethical clearance for your kind consideration.

Forwarded to MS, RLJH&RC with a request to permit our student to collect data

Thanking you **yours faithfully,**

Enclosure: Ms. Nalli. Jaya Sujana

N. Sujana

- **Synopsis**
- **Tool**

Principal 26/6/25
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563103

Copy to:

1. Head, Department of Oncology, RLJH & RC, Kolar.
2. Dr. Zeanath Cariena J, Chief Nursing Officer, RLJH & RC, Kolar.

permitted

Medical Superintendent
RL Jalappa Hospital & Research Centre
Tamaka, Kolar-563103.

PERMISSION TO CONDUCT STUDY

Date: 26/5/25

Place: Kolar.

From,

Ms. Nalli Jaya Sujana

I year M.Sc. (N) Student

Sri Devaraj Urs College of Nursing

Tamaka, Kolar – 563101.

To,

The Medical superintendent,

RL Jalappa Hospital and Research Centre,

Tamaka, Kolar- 563101.

Respected Madam / Sir,

Through the principal,

SDUCON, Kolar.

Sub: Requesting permission to collect data from nursing staff-reg

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Hence I request you to grant permission to collect data from nursing officers of RLJH and RC and do the needful. Herewith I am enclosing my research objectives, tool and ethical clearance for your kind consideration.

Thanking you

yours faithfully,

Ms. Nalli. Jaya Sujana

N. Sujana

forwarded to CMO, RLJH&RC with a request to permit our student to collect data

Principal
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563103

Enclosure:

- **Synopsis**
- **Tool**

Copy to:

1. Head, Department of Oncology, RLJHC& RC, Kolar.
2. Dr. Zeanath Cariena J, Chief Nursing Officer, RLJHC& RC, Kolar.

Permitted – Maintain Confidentiality & pt. Data

PERMISSION TO CONDUCT STUDY

From,

Date: 26/5/25

Place: Kolar.

Ms. Nalli Jaya Sujana

I year M.Sc. (N) Student

Sri Devaraj Urs College of Nursing

Tamaka, Kolar – 563101.

To,

The Medical superintendent,

RL Jalappa Hospital and Research Centre,

Tamaka, Kolar- 563101.

Respected Madam / Sir,

Through the principal,

SDUCON, Kolar.

Sub: Requesting permission to collect data from nursing staff-reg

With the subject to the above, I the under signed student of II year M.Sc. Nursing under the Department of Medical-Surgical Nursing specialty would like to collect data for the mini research study on **Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol of Cancer Patients among Nursing officers working at RLJH&RC** as a partial fulfilment of my M.Sc. Nursing curricular requirement.

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forwarded to HOD oncology wit RLJH&RC with a request to permit the student to collect data our

Thanking you **yours faithfully,**

Enclosure: Ms. Nalli. Jaya Sujana

- **Synopsis**
- **Tool**

Principal 26/5/25 Sujana
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563103

Copy to:

1. Head, Department of Oncology, RLJHC& RC, Kolar.
2. Dr. Zeanath Cariena J, Chief Nursing Officer, RLJHC& RC, Kolar.

permitted 14/06/25

ANNEXURE-IX

LETTER REQUESTING OPINION AND SUGGESTION OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY OF RESEARCH TOOL

From,

Miss. Nalli. Jaya sujana
II year M.Sc.(N) Student
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563101

To,

Respected madam/sir,

Sub: Request for opinion and suggestions of experts for content validity of research tool.

I, **Miss. Nalli. Jaya Sujana** post graduate student (Medical Surgical Nursing speciality) of Sri Devaraj Urs College of Nursing, Tamaka, Kolar has selected the below mentioned topic for my dissertation, as a requirement of Masters of Nursing Degree.

Title of the topic:

"EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE AND PRACTICE REGARDING ADHERENCE TO CHEMOTHERAPY ADMINISTRATION PROTOCOL TO CANCER PATIENTS AMONG NURSING OFFICERS".

With regards to above May I kindly request you to validate the tool and Health Education content at the earliest. Hence with I am enclosing the objectives of the study. I would be highly obliged and remain thankful for your great help.

Thanking you, Yours sincerely,

Nalli. Jaya Sujana

ANNEXURE-X

Criteria rating scale for validating the content on Structured Knowledge Questionnaire regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers.

Respected Sir/ Madam,

Kindly go through the content and rate the content in the appropriate columns given below:

Section-A

Sl.no	Item	Very Relevant	Relevant	Needs modification	Not Relevant
	Socio-demographic data				
1					
2					
3					
4					
5					
6					

Section-B : Structured Knowledge Questionnaire on Adherence to Chemotherapy Administration Protocol.

Sl.no	Item	Very Relevant	Relevant	Needs modification	Not Relevant
	General aspect of cancer				
1					
2					
3					
4					
	Chemotherapy				
5					

6					
7					
8					
	Scope of chemotherapy				
9					
10					
11					
12					
	Pre- chemotherapy				
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
	Administration of chemotherapy				
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

Section-C : Practice checklist on Adherence to Chemotherapy Administration Protocol.

Sl.no	Item	Very Relevant	Relevant	Needs modification	Not Relevant
	Pre-chemotherapy preparation				
1					
2					
3					
4					
5					
6					
7					
	Personnel protective equipment (PPE)				
8					
9					
10					
11					
12					
	IV-Line preparation & administration				
13					
14					
15					
16					
17					
18					
19					
	Patient monitoring during and after chemotherapy				
20					
21					
22					
23					
24					
25					
26					
27					
	Safe handling & water disposal				
28					
29					
30					
31					
32					
33					
	Post-chemotherapy care				
34					
35					
36					
37					
38					

ANNEXURE-XI

LIST OF EXPERTS

1. Dr. S M Azeem Mohiyuddin

Professor &HOD

Dept of Otorhinolaryngology,

SDUMC, Tamaka, Kolar.

2. Dr. Manjunath GN

Associate Professor

Dept of Radio oncology,

SDUMC.

3. Dr. Zeanath Cariena Joseph

HOD of MSN &

CNO at RLJHC&RC

Kolar.

4. Smt. Kamatchi K

Medical Physicist

RLJH&RC.

5. Mrs. Rashmi

Asst. Professor

SDUCON

6. Mrs. Geetha. S

Nursing tutor

SDUCON

7. Mr. Rajendra Prasad

Nursing Tutor

SDUCON.

ANNEXURE-XII

CONTENT VALIDITY CERTIFICATE

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tool of **Ms. N. Jaya Sujana** MSC (N) student in medical Surgical Nursing specialty of Sri Devaraj Urs College of Nursing, Tamaka, Kolar, who is understanding a dissertation as a fulfillment of Master of Science in Nursing degree on **Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol of Cancer Patients among Nursing Officers working at RLJHRC.**

Head of the Department
Dept. of Medical Surgical Nursing
Sri Devaraj Urs College of Nursing
Tamaka, Kolar- 563 101.
26/04/2025

Signature of Expert with Designation

Prof. Zeenath Cassina.
HOD, MSN, SDUCON

Date: 26/04/2025

Place: Kolar.

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tool of **Ms. N. Jaya Sujana** MSC (N) STUDENT IN Medical Surgical Nursing specialty of Sri Devaraj Urs College of Nursing, Tamaka, Kolar, who is understanding a dissertation as a fulfillment of Master of Science in Nursing degree on:

Effectiveness Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Staff working at RLJHRC.

9/4/2025

Signature of Expert with Designation

Medical Physicist

Date: 9/4/2025

Place: Kolar

CONTENT VALIDITYCERTIFICATE

IherebycertifythatIhavevalidatedthetoolofMs. **N. Jaya Sujana**M.Sc.(N)student in Medical Surgical Nursing Specialty of Sri Devaraj Urs College of Nursing, Tamaka, Kolar, whoisundertaking adissertation as afulfillment of Masterof Sciencein nursingdegreeon:

Effectiveness Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Staff working at RLJHRC.

7/04/2025

Signature of Expertwith Designation

Date: 7/04/2025

Place: Kolar,

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tool of **Ms. N. Jaya Sujana** MSC (N) student in medical Surgical Nursing specialty of Sri Devaraj Urs College of Nursing, Tamaka, Kolar, who is understanding a dissertation as a fulfillment of Master of Science in Nursing degree on **Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol of Cancer Patients among Nursing Officers working at RLJHRC.**

Geetha S (NSG TUTOR)

Signature of Expert with Designation

Date: 28/04/2025

Place: Kolar

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the tool of **Ms. N. Jaya Sujana** MSC (N) STUDENT IN Medical Surgical Nursing specialty of Sri Devaraj Urs College of Nursing, Tamaka, Kolar, who is understanding a dissertation as a fulfillment of Master of Science in Nursing degree on:

Effectiveness Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Staff working at RLJHRC.

Rajendra. [Nursing Tutor]

Signature of Expert with Designation

Date: 28/11/25

Place: Kolar

ANNEXURE-XIII

CERTFICATE FROM STATISTICIAN

I herely certify that provided statistical guidance in analysis of the data to Miss. Nalli. Jaya Sujana, II year M.Sc (N) student, for her study titled as **"Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers Working at RLJHRC"** at Sri Devaraj Urs College of Nursing, Tamaka, Kolar.

Date: 26/8/25

Place: Tamaka, Kolar.

Signature of Statistician

Mr. S Ravishankar
Asst. Professor, Statistics
Dept. of Community Medicine
SDUMC, Kolar-563103

Mr. S Ravishankar

Professor

Dept. Of Community Health

SDUAHER, Medicine

ANNEXURE-XIV

Data Collection Photos

PRE-TEST

INTERVENTION

POST-TEST


Tamaka, Karnataka, India
45jf+74w, Tamaka, Karnataka 563103, India
Lat 13.13042° Long 78.173097°
11/06/2025 03:58 PM GMT +05:30
Google


Tamaka, Karnataka, India
45jf+74w, Tamaka, Karnataka 563103, India
Lat 13.13042° Long 78.173097°
11/06/2025 03:58 PM GMT +05:30
Google


Tamaka, Karnataka, India
Google


Tamaka, Karnataka, India
Google

CHAPTER-XV

PLAGIARISM

SRI DEVARAJ URS COLLEGE OF NURSING
Tamaka, Kolar 563103

Certificate of Plagiarism Check

Title of the Dissertation	Effectiveness of Structured Teaching Programme on Knowledge and Practice regarding Adherence to Chemotherapy Administration Protocol to Cancer Patients among Nursing Officers Working at RLJHRC.
Name of the Student	Nalli Jaya Sujana
Registration Number	23NM548
Name of the Supervisor / Guide	Dr. G. Vijayalakshmi
Department	Medical Surgical Nursing
Acceptable Maximum Limit (%) of Similarity Dissertation	10%
Similarity	10%
Software used	Turnitin
Paper ID	2733804275
Submission Date	23-Aug-2025 15:21

N. Sujana
Signature of Student

Signature of Guide/Supervisor

Librarian

HOD Signature

Head of the Department
Dept. of Medical Surgical Nursing
Sri Devaraj Urs College of Nursing
Tamaka, Kolar - 563 103.