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## Knowledge regarding care of patients with chemotherapy among staff nurses and nursing students in NMCH, Nellore

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### Abstract

**Background:** Cancer is treated by many therapies such as radiation therapy, chemotherapy, surgery and hormonal therapy, each may be used along or in combination with other modalities. Chemotherapy is a major treatment modality for cancer, currently chemotherapy was responsible for increasing the survival time of many patients with cancer.

**Objectives:** 1. To assess the level of knowledge regarding care of patients with chemotherapy among staff nurses and nursing students.

2. To compare the level of knowledge between staff nurses and nursing students.

3. To find out the association between level of knowledge regarding care of patients with chemotherapy among staff nurses and nursing students with their selected socio- demographic variables.

**Methods:** A quantitative approach A quantitative approach with descriptive design, Sample size was 30; out of which, 15 staff nurses and 15 nursing students were selected by using Non-probability convenience sampling technique.

**Results:** Study revealed that the level of knowledge among staff nurses, 9(60%) had inadequate knowledge, 4 (27%) had moderate knowledge and 2(13%) had adequate knowledge. Among nursing students, 13(87%) had inadequate knowledge, 2(13%) had moderate knowledge and none of them had adequate knowledge regarding chemotherapy.

**Conclusion:** The study concluded that staff nurses had better knowledge than nursing students on Care of Patients with Chemotherapy.

**Keywords:** knowledge, patients, chemotherapy, staff nurses, nursing students

### Introduction

Chemotherapy means the treatment of cancer by with one or more cytotoxic anti-neoplastic drugs, it acts by killing cells that divide rapidly, one of the main properties of most cancer cells, it results in most common side effects. When body cells are damaged or die the body produces new ones to replace them. This is an orderly way. The reproduction is out of control. More and more of them are produced and they start to occupy more and more space until eventually they push out space occupied by useful cells. Chemotherapy drugs interfere with a cancer cells ability to divide and reproduce chemotherapy drugs may be applied into the blood stream to attack cancer cells throughout the body or they can be delivered directly to specific cancer sites<sup>[1]</sup>.

The main objective in treating the patients with chemotherapy is to maximizes the death of malignant tumor cells while sparing those normal cells with a high mitotic index, e.g. bone marrow cells, oral mucosal cells, hair follicles. It is for cure, control the cancer and to extend the life spare and improve the qualities of life of clients with cancer. Theoretical approach to management of patients with chemotherapy is striking similar. Some chemotherapy drugs can damage cells in heart, kidney, bladder, lung and nervous system in some cases medicines can be given with the chemo to help protect the body's normal cells<sup>[2]</sup>.

### Need for the Study

Globocan (2012) estimates that 14.1 million cancer cases are there around of these 7.4 million were in men and 6.7 million in women. This number is expected to increase 24 million by 2035<sup>[3]</sup>.

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**United Nation Organisation (2013):** Reports that the total cancer cases are likely to go up from 28,166 cases in the year of 2013. The tobacco related cancers for men are estimated to go up from 190 to 244 in the year 2020, similarly the female cases will go up from 93 to 563 cases in the year 2020<sup>[4]</sup>.

**WHO (World Health Organization, 2011):** reports that in India 7.28 million cases are reported, the number of people that have been reached by preventive chemotherapy for at least one disease in 2011. 8.2 million death in 2012, with the increasing prevalence of alcohol and tobacco consumption in the country, it is estimated that 10 lakh new cases will be diagnosed in 2016, up from about 8 lakhs in 2001. Nearly 6, 70, 000 people are expected to die due to cancer in India in 2016. Based on cancer registry there are about 8, 00, 000 new cancer cases reported every year<sup>[5]</sup>.

**Gerald Berenson (2011):** conducted a mixed method research study to explore the knowledge and attitude of Saudi nurses towards chemotherapy, the samples of chemotherapy side effects among 100 nurses in Jeddah hospital in oncology/ hematology units. The results show that knowledge is weakest component of 50% and the attitude is strongest component of 66%. Saudi nurses about chemotherapy and concluded that nurses have to improve their knowledge regarding chemotherapy<sup>[6]</sup>.

**Najmakhan (2014):** conducted an interventional study to measure the level of nurses knowledge and attitude after the education session regarding chemotherapy administration and management. The study was conducted at two oncology units of tertiary hospitals, Rawalpandi. Pre-posttest design was used 35 nurses were selected for the study. The mean score of knowledge were calculated by Cochran’s test. Showed that knowledge scores have significantly increased with “educational training (p value <0.001), the difference in the attitude of the nurses was not found to be statistically, significant in repeated measures of ANOVA. The result shows that knowledge is the weakest component and attitude is the strongest component of oncology nurses competences in chemotherapy administration<sup>[7]</sup>.

**Problem Statement**

A study to assess the Knowledge Regarding Care of Patients with Chemotherapy among Staff Nurses and Nursing Students in NMCH, Nellore.

**Objectives**

1. To assess the level of knowledge regarding care of patients with chemotherapy among staff nurses and nursing students.
2. To compare the level of knowledge between staff nurses and nursing students.
3. To find out the association between level of knowledge regarding care of patients with chemotherapy among staff nurses and nursing students with their selected socio- demographic variables.

**Delimitations**

- The study is delimited to
1. Staff nurses and student nurses at NMCH only.
  2. A sample of 15 staff nurses and 15 student nurses.
  3. 2 weeks of data collection period only.

**Materials and Methods**

**Research Approach:** Quantitative research approach

**Design:** Descriptive Design.

**Setting:** The study was conducted at Narayana Medical College Hospital at Nellore.

**Population: Target Population:** The target population was Staff nurses and Nursing students.

**Accessible Population:** Staff nurses and Nursing students who are posted in NMCH, Nellore.

**Sample:** Staff nurses and nursing students who fulfilled the inclusion criteria

**Sample Size:** Sample size was 30; out of which, 15 staff nurses and 15 nursing students.

**Sampling Technique:** Non- Probability Convenience sampling technique was adopted. Sampling Criteria:

**Inclusion Criteria**

- Staff nurses and nursing students who are;
- Working or posted in NMCH, Nellore.
  - Available at the time of data collection.
  - Willing to participate in the study.

**Exclusive Criteria**

- Staff nurses and nursing student who are;
- Not present at the time of data collection.
  - Not willing to participate in the study.

**Description of the Tool**

**The Tool consists of two parts**

**Part I:** Demographic variables of staff nurses consist of age, gender, educational qualification, professional experience, sources of information and attended any CNE programme regarding chemotherapy. Demographic variables of nursing students consist of age, course, year of course, source of information and attended any CNE programme regarding chemotherapy.

**Part II:** consists of self-structured questionnaire to assess the knowledge level regarding chemotherapy. It consists of 50 closed ended multiple choice questions.

**Score Interpretation**

S. No	Level of Knowledge	Percentage
1.	Inadequate Knowledge	<50%
2.	Moderate Knowledge	50-70%
3.	Adequate Knowledge	>70%

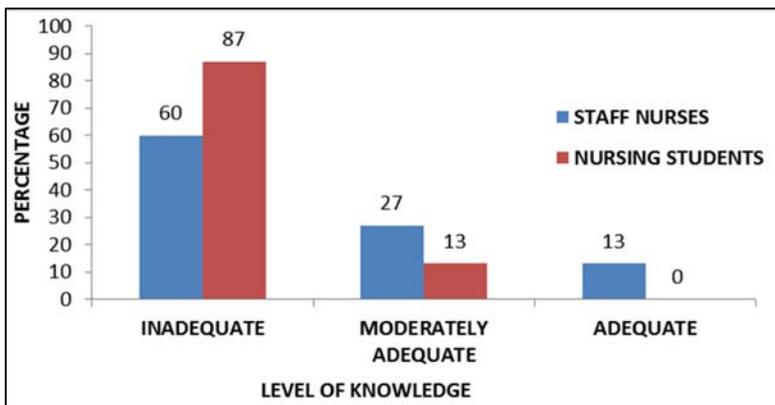
**Results and Discussion**

**Table 1:** Frequency Distribution of Level of Knowledge Regarding Chemotherapy among Staff Nurses and Nursing Students. (N=30)

S. No	Level of Knowledge	Staff Nurses		Nursing Students	
		(F)	(P)	(F)	(P)
1.	Inadequate (<50)	9	60	13	87
2.	Moderately adequate (51-70)	4	27	2	13
3.	Adequate (>70)	2	13	-	-
	Total	15	100	15	100

Table -1: Shows that with regard to level of knowledge among staff nurses, 9 (60%) had inadequate knowledge, 4 (27%) had moderate knowledge and 2(13%) had adequate knowledge. Among nursing students, 13 (87%) had

inadequate knowledge, 2(13%) had moderate knowledge and none of them had adequate knowledge regarding chemotherapy.



**Fig 1:** Percentage distribution of level of knowledge among staff nurses and nursing students.

**Table 2:** Comparison of Level of Knowledge among Staff Nurses and Nursing Students. (N=30)

Samples	Mean	Standard Deviation
Staff Nurses	22.26	8.62
Nursing Students	21.88	2.173

**Table 3:** Association between the level of knowledge among staff nurses and nursing students with selected socio demographic variables. (N=30)

S. No	Demographic Variables	Adequate		Moderate		In adequate		Chi-Square (X <sup>2</sup> )
		F	P	F	P	F	P	
1.	Source of information							C=11.118 T=9.488 df=4 P<0.05 S*
	b) Books/Journals	0	0	3	20	2	13	
	c) Internet	0	0	0	0	2	13	
	d) All the above	2	13	1	7	5	34	

Among all the demographic variables, there was a significant association found between source of information and level of knowledge at P<0.05 level.

**Major Findings of the Study**

- Regarding level of knowledge among staff nurses, 9 (60%) had inadequate knowledge, 4 (27%) had moderate knowledge and 2 (13%) had adequate knowledge. Among nursing students, 13 (87%) had inadequate knowledge, 2 (13%) had moderate knowledge and none of them had adequate knowledge regarding chemotherapy.
- Among that staff nurses mean knowledge score is 22.26 with standard deviation of 8.62 where nursing students mean knowledge score is 21.88 with standard deviation of 2.173
- Among all the demographic variables, there was a significant association found between source of information and level of knowledge at P<0.05 level.

**Conclusion**

- The study revealed that the level of knowledge among staff nurses, 9 (60%) had inadequate knowledge, 4 (27%) had moderate knowledge and 2 (13%) had adequate knowledge. Among nursing students, 13 (87%) had inadequate knowledge, 2 (13%) had moderate knowledge and none of them had adequate knowledge regarding chemotherapy. Hence, it can be concluded that staff nurses had better knowledge than nursing students on Care of Patients with Chemotherapy.

**Recommendations**

- A similar study can be replicated on large sample size, in different settings with in different population.
- A similar study can be replicated as a large sample to generalize findings.
- A similar study can be done in different settings.
- The intervention can be made as regular, reduce the cancer patients.

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