



E-ISSN: 2663-2268

P-ISSN: 2663-225X

www.surgicalnursingjournal.com

IJARMSN 2024; 6(2): 01-05

Received: 02-05-2024

Accepted: 05-06-2024

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International Journal of Advance Research in Medical Surgical Nursing

To evaluate the effectiveness of video assisted teaching program on awareness and attitude regarding safe handling of chemotherapeutic drugs among staff nurses at selected hospital Kalaburagi

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DOI: <https://doi.org/10.33545/surgicalnursing.2024.v6.i2a.187>

Abstract

Background: Chemotherapy in its broadest sense, refers to the administration of medications, such as aspirin or penicillin, with the purpose of treating any condition. However, in common usage, chemotherapy specifically pertains to the use of drugs for the treatment of cancer. It is commonly abbreviated as "chemo."

Methodology: An evaluative approach with one group pretest posttest design was adopted for the study. The samples from the selected hospitals were selected using convenient sampling technique. The sample consisted of 60 staff nurses. The tools used for data collection was structured knowledge and attitude scale and teaching program was prepared for intervention.

Results: With regard to pretest level of awareness it shows that, maximum 41(68.3%) respondents were having average awareness, 11 (18.3%) respondents were having good awareness and remaining 8(13.3%) of respondents were having poor awareness. During post-test maximum 39 (65%) of respondents were having average awareness and 21(35%) of respondents were had good awareness. With regard to pretest level of attitude it shows that, majority 26(43.3%) respondents were having favorable attitude, 19(31.7%) of respondents were having non favorable attitude and remaining 15(25%) were having positive attitude. During post-test maximum 38 (63.3%) of respondents were having positive attitude, 20(33.3%) of respondents were had favorable attitude and 2(3.3%) of respondents were had non favorable attitude. The statistical paired 't' implies that the difference in the pretest and post-test knowledge and attitude value was found statistically significant at 5% level ($p < 0.05$) with a paired 't' value of 18.12 and 8.59 respectively. There exists a statistical significance in the difference of awareness and attitude score indicating the positive impact of video assisted teaching program.

Conclusion: Video assisted teaching program was effective to enhance knowledge of staff nurses women regarding safe handling of chemotherapeutic drugs. Since a very few studies have been conducted regarding this topic in India, so the nurse researcher can take further studies on the same topic.

Keywords: Chemotherapeutic drugs, staff nurses, knowledge, attitude, video assisted teaching

Introduction

Cancer is a pathological condition characterized by the proliferation of cells in an organism without proper regulation, affecting individuals of all races, ages, and ethnicities indiscriminately. It is the second leading cause of death, following cardiovascular diseases. In 2018, there were around 18 million recorded cases, with 9.5 million being male and 8.5 million being female ^[1].

Cancer is responsible for approximately 1 in 6 fatalities, resulting in an additional 9.6 million instances in mortality rates. Approximately two-thirds of all cancer occurrences are expected to occur in developing countries, with a current death rate of 70%.

In order to mitigate the severity of this potentially fatal disease, there are various treatment options available, including radiation therapy, surgery, immunotherapy, monoclonal antibody therapy, and chemotherapy. The specific treatment method chosen depends on factors such as the location, grade, and stage of the tumour. Currently, systemic treatment is increasingly being favoured as a primary method of treatment. It is important to note that chemotherapy has significantly transformed the treatment of cancer and effectively

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controlled this life-threatening illness.

The progress of technology brings forth additional protections to protect individuals who frequently interact with these agents, as they can have harmful effects.

Chemotherapy, in its broadest sense, refers to the administration of medications, such as aspirin or penicillin, with the purpose of treating any condition. However, in common usage, chemotherapy specifically pertains to the use of drugs for the treatment of cancer. It is commonly abbreviated as "chemo." Two alternative medical words for cancer chemotherapy are anti-neoplastic therapy, which means therapy that fights against cancer, and cytotoxic therapy, which refers to therapy that kills cells. Local therapies encompass procedures such as radiation therapy and surgery. They exhibit specificity for a particular region of the body, such as the breast, lung, or prostate, and typically aim to directly target the cancerous cells.

During the clinical experience, researchers discovered that a significant number of nurses were negligently managing the chemotherapeutic medications. Investigators have noted that nurses lack sufficient information about chemotherapy medications and their impact on malignant and normal cells. The majority of nurses are unaware of the detrimental impact it has on the careers. Therefore, they deemed this study to be pertinent.

Objectives

1. To assess the awareness and attitude of staff nurses regarding Safe handling of chemotherapeutic drugs in terms of pre-test and posttest awareness and attitude scores.
2. To evaluate the effectiveness of video assisted teaching program on awareness and attitude of staff nurses regarding safe handling of chemotherapeutic drugs by comparing pre-test and post-test awareness scores.
3. To find the association between the pre-test awareness scores of staff nurses regarding safe handling of chemotherapeutic drugs and selected demographic variables.
4. To find the association between the pre-test attitudes scores of staff nurses regarding safe handling of chemotherapeutic drugs and selected demographic variables.

Hypotheses

- **H₁:** The mean posttest awareness scores of staff nurses regarding safe handling of chemotherapeutic drugs, who have undergone the video assisted teaching program will be significantly higher than their mean pre-test awareness scores.
- **H₂:** The mean posttest attitude scores of staff nurses regarding safe handling of chemotherapeutic drugs who have undergone the video assisted teaching program will be significantly higher than their mean pre-test attitude scores.
- **H₃:** The levels of awareness of staff nurses regarding safe handling of chemotherapeutic drugs will be significantly associated with their selected personal variables.
- **H₄:** The levels of attitude of staff nurses regarding safe handling of chemotherapeutic drugs will be significantly associated with their selected personal variables.

Methodology

- **Research Approach:** Evaluative research approach.
- **Research Design:** Pre-Experimental one group pre-test post- test design.
- **Sampling technique:** Non-Probability Convenient Sampling Technique.
- **Sample size:** 60.
- **Setting of study:** Selected Hospital, Kalaburagi.
- **Population:** Staff Nurses.

Tool used for data collection: Following tools used for the data collection

Section I: Demographic data: It consists of 7 items related to demographic data of participants

Section II: Structured awareness questionnaire: This section consists of 30 structured multiple choice items with the multiple options for each item to assess the awareness of staff nurses regarding safe handling of chemotherapeutic drugs.

Section III: Structured attitude scale: A structured attitude scale consisted of 13 statements regarding safe handling of chemotherapeutic drugs.

Results

Section I: Demographic Profile

Table 1: Frequency & Percentage Distribution of Respondents by their socio demographic variables, n=60

Sl. No.	Demographic variables	Frequency (f)	Percentage (%)
1.	Age in years		
	20 - 30	22	36.7
	31 - 40	20	33.3
	41 -60	18	30
2.	Gender		
	Female	43	71.7
	Male	17	28.3
3.	Educational Qualification		
	Diploma Nursing	25	41.7
	Basic Bsc Nursing	22	36.7
	Post Basic Bsc Nursing	13	21.7
4.	Area of working		
	Oncology ward	26	43.3
	Medical ward	17	28.3
	ICU	13	21.7
	Other	4	6.7
5.	Years of Experience		
	0 - 1 year	17	28.3
	1 - 5 years	21	35
	5 - 10 years	16	26.7
	>10 years	6	10
6.	Previous awareness		
	Yes	35	58.3
	No	25	41.7
7.	Source of information		
	News papers	15	25
	Family & friends	20	33.3
	Social Media	16	26.7
	Other	9	15

Section II: Awareness and attitude scores

Area wise and total distribution of pretest and posttest awareness and attitude scores of respondents

Table 2: Mean, median, mode, standard deviation and range of pretest and posttest awareness scores of respondents, n = 60

Area of Awareness	Number of Items	Mean	Median	Mode	Standard deviation	Range
Pre test	30	15.36	15	12	4.35	8-25
Post test	30	19.33	19	19	3.58	13-27

Table 2 reveals the pretest awareness scores respondents mean was 15.36, median was 15, mode was 12 with standard deviation 4.35 and score range was 8-25. The

posttest awareness scores respondents mean was 19.33, median was 19, mode was 19 with standard deviation 3.58 and score range was 13-27.

Table 3: Mean, median, mode, standard deviation and range of pretest and posttest attitude scores of Respondents, n = 60

Area of attitude	Number of Items	Mean	Median	Mode	Standard deviation	Range
Pretest	13	39.21	38	34	11.01	16-61
Post test	13	50.33	50	49	7.79	29-63

Table 3 reveals, in pretest, respondents mean was 39.21, median was 38, mode was 34 with standard deviation 11.01 and score range was 16-61. In posttest, respondents mean was 50.33, median was 50, mode was 49 with standard deviation 7.79 and score range was 29-63.

Distribution Respondent’s Pretest and Post Test Scores according To Their Level of Awareness and Attitude

Awareness Scores

Table 4: Frequency and Percentage distribution of respondents according to level of Awareness regarding safe handling of chemotherapeutic drugs, n=60

Level of Awareness					
Pre test			Post test		
Poor f(%)	Average f(%)	Good f (%)	Poor f(%)	Average f(%)	Good f (%)
8(13.3%)	41 (68.3%)	11(18.3%)	00	39 (65%)	21 (35%)

Table 4 depicts that, with regard to pretest level of awareness it shows that, maximum 41(68.3%) respondents were having average awareness, 11 (18.3%) respondents were having good awareness and remaining 8(13.3%) of

respondents were having poor awareness. During post-test maximum 39 (65%) of respondents were having average awareness and 21(35%) of respondents were had good awareness.

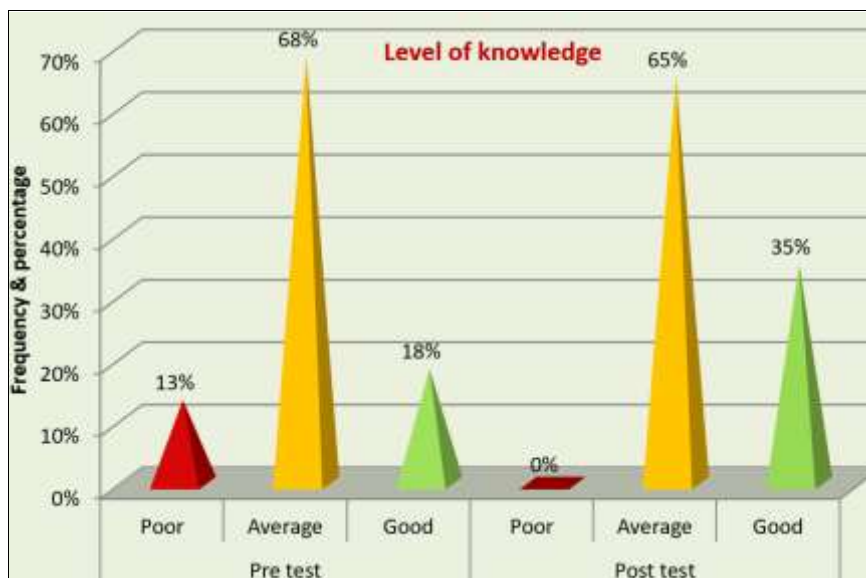


Fig 1: Pretest and posttest level of awareness

Attitude Scores

Table 5: Frequency and Percentage distribution of respondents according to level of Attitude regarding safe handling of chemotherapeutic drugs, n=60

Level of Attitude					
Pre test			Post test		
Non favorable f (%)	Favorable f (%)	Positive f (%)	Non favorable f (%)	Favorable f (%)	Positive f (%)
19 (31.7%)	26 (43.3%)	15(25%)	2 (3.3%)	20 (33.3%)	38 (63.3%)

Table 5 depicts that, with regard to pretest level of attitude it shows that, majority 26(43.3%) respondents were having favorable attitude, 19(31.7%) of respondents were having non favorable attitude and remaining 15(25%) were having

positive attitude. During post-test maximum 38 (63.3%) of respondents were having positive attitude, 20(33.3%) of respondents were had favorable attitude and 2(3.3%) of respondents were had non favorable attitude.

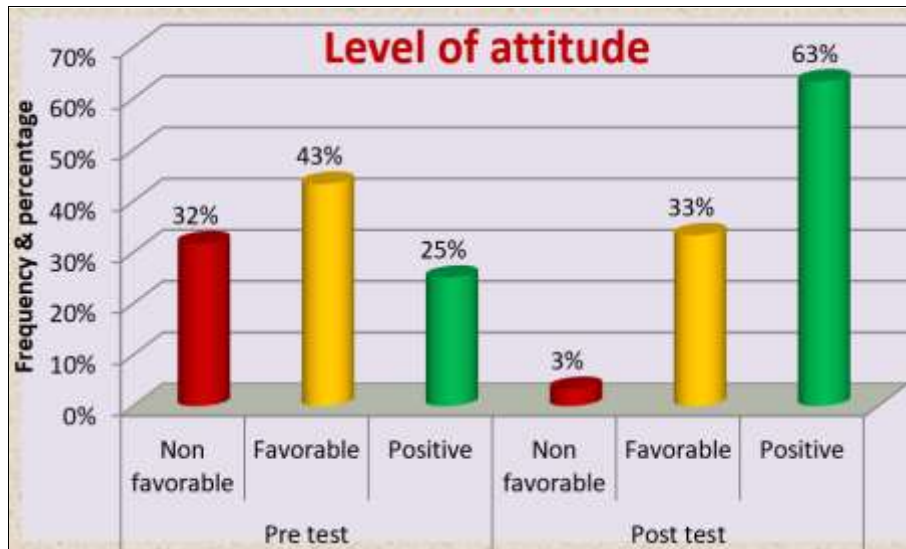


Fig 2: Pretest and posttest level of attitude

Effectiveness of Video Assisted Teaching Program

Table 6: Mean, standard deviation, standard error of difference and ‘t’ value of pre-test and post-test awareness and attitude scores, N=60

Area	Aspects	Mean	Sd	SEMD	Paired t Test
Awareness	Pre-test	15.35	4.35	0.21	18.12*
	Post-test	19.33	3.58		
Attitude	Pre-test	39.21	11.01	1.29	8.59*
	Post-test	50.33	7.79		

* Significant at 5% level

Table 6 indicates the overall mean awareness and attitude scores of pre-test and post-test scores -

Awareness

With respect to awareness scores of participants, the findings reveal that the post-test mean awareness scores was found higher [mean=19.33, SD of 3.58] when compared with pre-test mean awareness score value which was 15.35 with SD of 4.35.

With respect to attitude scores of participants, the findings reveal that the post-test mean attitude scores was found higher [mean=50.33, SD of 7.79] when compared with pre-test mean attitude score value which was 39.21 with SD of 11.01.

The statistical paired ‘t’ implies that the difference in the pretest and post-test awareness and attitude values was found statistically significant at 5% level ($p < 0.05$) with a paired ‘t’ value of 18.12 and 8.59 respectively. There exists a statistical significance in the difference of awareness score indicating the positive impact of video assisted teaching program.

Hence, the research hypothesis H₁ and H₂ is supported. This indicates that the enhancement in awareness and attitude scores is not by chance and the staff nurses who exposed to video assisted teaching program on safe handling of chemotherapeutic drugs, significantly improved in their awareness and attitude.

Association between Level of Awareness, Attitude and Selected Socio Demographic Variables

The computed Chi-square value for association between level of awareness of staff nurses regarding safe handling of chemotherapeutic drugs and their selected demographic variables is found to be statistically significant at 0.05 levels

for gender of participants and is not found statistically significant for other socio demographic variables. Therefore, the findings partially support the hypothesis H₃, inferring that staff nurses level of awareness regarding safe handling of chemotherapeutic drugs is significantly associated only with their gender.

The computed Chi-square value for association between level of attitude of staff nurses regarding safe handling of chemotherapeutic drugs and their selected demographic variables is not found to be statistically significant at 0.05 levels for any of the selected socio demographic variables. Therefore, the findings do not support the hypothesis H₄, inferring that staff nurses level of attitude regarding safe handling of chemotherapeutic drugs is not significantly associated with their selected socio demographic variables.

Conclusion

- The overall pretest knowledge and attitude of staff nurses regarding chemotherapeutic drugs was average and favorable.
- There was a need for teaching program regarding chemotherapeutic drugs among staff nurses.
- Post test results showed significant improvement in the level of knowledge and attitude regarding chemotherapeutic drugs. Thus, it can be concluded that video assisted teaching program was effective to increase and update their knowledge and attitude on chemotherapeutic drugs.
- The results revealed that there was no significant association found between pre-test knowledge scores and selected socio demographic variables.

Conflict of Interest

Not available.

Financial Support

Not available.

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How to Cite This Article

Awati N, Honnakamble VA. To evaluate the effectiveness of video assisted teaching program on awareness and attitude regarding safe handling of chemotherapeutic drugs among staff nurses at selected hospital Kalaburagi. *International Journal of Advance Research in Medical Surgical Nursing*. 2024;6(2):01-05.

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