

Effectiveness of Sensitizing Programme on Chemotherapy for Cancer Patients Upon the Knowledge and Practice of Nursing Students

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"Knowledge without Practice is Useless. Practice without Knowledge is Dangerous"

- Confucius

Abstract: Introduction: Health is an ideal state of physical and mental wellbeing: something to strive for but never to attain. The incidence of cancer in India is 70 – 90 per 100, 000 population and the cancer prevalence is established to be about 2.5 million with over 800, 000 new cases and 5, 50, 000 deaths occurring each year. (National Cancer Statistics, 2018) ¹. Nurses are involved in caring for patients who are dying or have a terminal illness and are faced with the process of dying. A study conducted by Sadala and da Silva (2009) in Brazil with fourteen undergraduate nursing students, aimed to understand how they perceive themselves while caring for terminal cancer patients and exposed the meaning of the experience they had. Findings showed that informants perceived it as a painful experience that made them confront their weaknesses and insecurities. They were feeling insecure and weak due to lack of preparation and inexperience as well as lack of support from professionals during their practical placement. The main objective being to help nursing students understand and interpret their experience. The researcher aimed to explore the experiences of the undergraduate students when they come face - to - face with cancer care during their clinical placements. A number of studies recommend that nurses should be properly trained on cancer patient care and treatment, including communication, psychosocial support, and caring for terminal illnesses. Based on our observations in hospital settings and experiences as clinical instructors, we believe that student nurses indeed do have difficulty working with cancer patients. Examining student experiences with cancer patients and identifying the problems, and sensitizing them will help to improve their preclinical training and provide better care for cancer patients. Methodology: The research design used in this study was a pre experimental one - group pre - test - post - test research design. Purposive sampling technique was used and 97 Nursing Students studying in III year B. Sc. Nursing at College of Nursing, Chennai were selected as study samples. Structured knowledge questionnaire was used to assess the knowledge regarding chemotherapy for cancer patients. Observation practice checklist was developed to assess the practice of nursing student on chemotherapy that includes preparation, administration, monitoring, disposal of chemo waste and nursing responsibility. Rating scale was designed to assess the level of acceptance among nurses regarding sensitizing program on chemotherapy for cancer patients upon the knowledge of nursing students. Data was collected for a total period of 4 weeks from selected samples. The pre - test was conducted followed by the sensitizing programme as lecture and demonstration and Post - test was conducted after 1 week. Result: This study revealed that majority of the nursing students aged between 18 - 20 years (69.1%) and all of them were females (100%), half of them were having above ten thousand rupees of the family income per month (50.1%), most of them belonged to nuclear family (83.5%), more than half of them were from urban area (53.6%) and majority of them scored more than seventy five percentage and studied in English medium (74.2%). On Comparing the mean and standard deviation Pretest and Posttest Knowledge Scores of Nursing Students on Chemotherapy for Cancer Patients posttest knowledge score (18.10 and 1.84) was high compared to the pretest knowledge score (14.3 and 2.78) with t value of 10.54 at p<0.001 level. With regard to practice, The students had very high total practice scores (Mean = 75.77, SD = 3.84) after the sensitizing program on Chemotherapy. The nursing students reported high acceptability with regard to the approach of the researcher (95%), Sensitizing programme administration (90%) and the effectiveness of Sensitizing programme regarding chemotherapy for cancer patients. (95%) and there was no correlation between the posttest level of knowledge and practice of nursing students on chemotherapy for cancer patients. Conclusion: The sensitizing programme was effective in improving the knowledge and practice of nursing students regarding chemotherapy for cancer patients.

Keywords: Sensitizing program, chemotherapy, knowledge, practice, nursing students

1. Introduction

The cancer is the leading cause of death worldwide. Based on the GLOBOCAN, (2012), about 12.7 million cancer cases and 7.6 million cancer deaths occurred in 2008.56% of the cases and 64% of the deaths occurred in the economically developing world. It is estimated that about 9 million cancer cases are diagnosed every year².

The landscape of cancer treatment has dramatically changed over last two decades. The treatment plan will depend on the cancer type, the chemotherapy drugs used, the treatment goal, and how your body responds. Hence Nursing students and nurses need to have knowledge to handle the

chemotherapy. Despite positive developments and innovations in cancer treatment in recent years, symptom control and quality of care for cancer patients remain challenging, and complications are frequent.

The International Council of Nurses stresses that the nurses' role is important when dealing with terminally ill patients in reducing suffering and improving the quality of life for patients and their families in the management of physical, social, psychological, spiritual and cultural needs.

Huang et al (2010) in a descriptive qualitative study with 12 students in Taiwan explored the experiences of nursing students' encountering death during their clinical practice.

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Nursing students expressed the need for teaching and receiving support at the moment of a patient's death and at the bereavement period that follows. Informants felt satisfied in relation to the knowledge and support gained from clinical mentors and nurses prior to patient's death².

Sanford et al. have shown that difficulties faced in communicating with cancer patients and their families were significant among student nurses practicing end of life care, and recommend that students be better trained to overcome such challenges.

The investigator felt while working with the cancer patients the nursing students posted, expressed fear about the hazards due to chemo drugs and hesitation to handle the patients who were on chemotherapy. Hence the investigator had insight to sensitize them with the knowledge and practice input on cancer and chemotherapy in order to prepare the nursing students for the future nursing role and selected the study of effectiveness of sensitizing programme on chemotherapy for cancer patients for nursing students during their training, they being the future nurses to take care of the patients.

2. Literature Survey

As cancer has become more chronic in nature, nursing faculty and clinical educators must rethink how the education and clinical experiences of students must occur throughout the trajectory of a cancer illness. The literature also suggests that nurses working with cancer patients often feel inadequate and put under stress. Such feelings may be brought about by communication difficulties with patients and their relatives, conflict with team members, or psychological difficulties due to coping with a patient's worsened state of health or death, all of which are common sources of stress and burnout.

Based on our observations in hospital settings and experiences as clinical instructors, we believe that student nurses indeed do have difficulty working with cancer patients. Examining student experiences with cancer patients and identifying the problems, the sensitizing programme will help improve their preclinical training and provide better care for cancer patients.

3. Methods

The research design used in this study was a pre experimental one - group pre - test - post - test research design. Purposive sampling technique was used to select samples, 97 Nursing Students studying in III year B. Sc. Nursing at College of Nursing, Chennai were selected as study samples. Background variable (age, religion, income, type of family, and medium of instruction at XII Standard). Structured knowledge questionnaire was developed by the investigator to assess the knowledge regarding chemotherapy for cancer patients. It consists of 30 MCQ items. Each correct option scores 1 and wrong option carries 0 was given. Total obtained score for 30 items was converted to percentage and the converted percentage. Observation practice checklist developed by the investigator to assess the practice of nursing student on chemotherapy that includes preparation, administration, monitoring,

disposal of chemo waste and nursing responsibility. It consists of 40 items. If the nursing student performs all the respective items (✓) scores will be given as 2 for Performed, 1 for Partially performed, 0 for Not performed. Total marks scored for 40 items and converted to percentage. Rating scale was designed to assess the level of acceptance among nurses regarding sensitizing program on chemotherapy for cancer patients upon the knowledge of nursing students. It is 10 items scale and rated on 3 - point rating scale as rated as 3 - Highly acceptable, 2 - Acceptable, 1 - Unacceptable. Total scores for 30 items are converted to percentage.

After initial introduction the investigator obtained consent from the students to participate in the study. Data was collected for a total period of 4 weeks from selected samples. The pre - test knowledge on effectiveness of sensitizing program on knowledge and practice upon chemotherapy for cancer patients among the nursing students were measured for all the samples by using the tools developed by the investigator such as demographic variable tool proforma, structured knowledge questionnaire and observation checklist for assessing practice. Investigator had assessed the level of pre - test knowledge on 1st day by administering pre - test questionnaire. Then the sensitizing programme was administered for four days as lecture and demonstration. Post - test was conducted after 1 week by the investigator to assess the level of knowledge and practice regarding effectiveness of training program on knowledge and practice on chemotherapy for cancer patients among the nursing students along with level of acceptability. The data collection was done from 21st Dec 2017 to 21st January 2018.

4. Result

Table 1: Frequency and Percentage Distribution of Background Variables of Nursing students, (N=97)

Background Variable	F	%
Age		
≤17yrs	-	-
18 – 20 yrs	67	69.1
≥21yrs	30	30.9
Family Income		
<Rs.5000	14	14.4
Rs.5000 - 10000	34	35.1
>Rs.10000	49	50.1
Religion		
Hindu	47	48.5
Muslim	4	4.1
Christian	46	47.4
Type of family		
Nuclear	81	83.5
Joint	15	15.5
Extended	1	1
Area of residence		
Urban	52	53.6
Rural	26	26.8
Semi - urban	19	19.6
Medium of Instruction in XII std		
Tamil	25	25.8
English	72	74.2
Others	-	-

This study revealed that majority of the nursing students aged between 18 - 20 years (69.1%) and all of them were females (100%), half of them were having above ten thousand rupees of the family income per month (50.1%), most of them belonged to nuclear family (83.5%), more than half of them were from urban area (53.6%) and majority of them scored more than seventy five percentage and studied in English medium (74.2%).

Table 2: Comparison of Pretest and Posttest Knowledge Scores of Nursing Students on Chemotherapy for Cancer Patients, (N=97)

Assessment	Pretest		Paired t Value	P Value
	Mean	SD		
Pretest	14.30	2.78	10.54***	0.001
Posttest	18.10	1.84		

The mean and standard deviation of the posttest knowledge score regarding chemotherapy for cancer patients (18.10 and 1.84) was high compared to the pretest knowledge score among nursing students (14.3 and 2.78) with t value of 10.54 which was statistically significant at $p < 0.001$ level. Hence the null hypotheses H01 stating that "There will be no significant difference between the pretest and posttest knowledge scores regarding chemotherapy for cancer patients among the nursing students" was rejected.

Table 4: Frequency and Percentage Distribution of Level of acceptability Scores regarding the Effectiveness of Sensitizing Program on Chemotherapy for Cancer Patients upon the Knowledge of Nursing Students, (N=97)

Domain	Highly Acceptable		Acceptable		Unacceptable		Highly Unacceptable	
	f	%	F	%	f	%	f	%
Approach of the Researcher	57	95	3	5	-	-	-	-
Sensitizing programme Administration	54	90	6	10	-	-	-	-
Effectiveness of Sensitizing programme	57	95	3	5	-	-	-	-

The nursing students reported high acceptability with regard to the approach of the researcher (95%), Sensitizing program

Majority of nursing students had very high practice scores with regard to all aspects such as preparation (Mean = 44.08, SD = 2.45), administration (Mean = 9.57, SD = 0.73), monitoring (Mean = 9.33, SD = 1.11), disposal of waste (Mean = 9.43, SD = 0.80) and nursing responsibility in handling chemotherapy (Mean = 3.35, SD = 0.89). The students had very high total practice scores (Mean = 75.77, SD = 3.84) after the sensitizing program on Chemotherapy.

administration (90%) and the effectiveness of Sensitizing program regarding chemotherapy for cancer patients. (95%).

Table 5: Association between the Selected Background Variables of Nursing Students and their level of Knowledge Regarding Chemotherapy for Cancer Patients, (N=97)

Background Variables		Pretest knowledge			Results	Posttest knowledge			
		≤ Mean	>Mean	Total		≤ Mean	>Mean	Total	Results
Age	≤17yrs	-	-	-	$\chi^2=0.12$ df=1 p=0.91	-	-	-	$\chi^2=0.89$ df=1 P=0.58
	18 – 20 yrs	41	26	67		47	20	67	
	≥21yrs	18	12	30		19	11	30	
Academic Performance in 12 th	≥75%	41	31	72	$\chi^2=2.20$ df=2 p=0.33	51	21	72	$\chi^2=1.10$ df=2 p=0.87
	60 – 74%	17	06	23		14	09	23	
	≤59%	01	01	02		01	01	02	
Medium of Instruction in XII standard	Tamil	13	12	25	$\chi^2=1.10$ df=1 p=0.29	18	07	25	$\chi^2=0.24$ df=1 p=0.62
	English	46	26	72		48	24	72	
	Others	-	-	-		-	-	-	

There were no significant association between selected demographic variables such as age and medium of education in XII Standard and level of knowledge regarding chemotherapy for cancer patients ($p > 0.05$). Hence the null hypotheses H02 stating that "There will be no significant association between demographic variables and level of knowledge regarding chemotherapy for cancer patients among the nursing students" was retained.

Table 6: Correlation between Posttest level of Knowledge and Practice of Nursing Students on Chemotherapy for Cancer Patients, (N=97)

Post test score	Correlation	
	R	P
	0.006	0.951 NS

NS Not significant

There was no correlation between the posttest level of knowledge and practice of nursing students on chemotherapy for cancer patients. Hence the H03 stating that "There is no correlation between the posttest level of

knowledge and practice of nursing students on chemotherapy for cancer patients” was retained.

5. Discussion

A Pre - experimental Study to Assess the Effectiveness of the Sensitizing Program on Chemotherapy for Cancer Patients upon the Knowledge of Nursing Students was conducted at selected College of Nursing, Chennai.

The conceptual framework for this study is based on “Imogene King’s Goal Attainment Model (1989)”. One group pre - test and post - test design was used. The study included 97 Nursing students selected by purposive sampling technique. The data collection tools were validated and reliability was established. The feasibility and research ability was established by the pilot study conducted on 10% of the sample for two weeks. Then data collection for main study was done.

The pretest consists of collecting the background variables, the level of knowledge regarding effectiveness of sensitizing program on the knowledge regarding chemotherapy for cancer patients among nursing students, from 21st Dec 2017 to 21st January 2018 by using structured knowledge questionnaire. The Sensitizing programme regarding knowledge on chemotherapy for cancer patients among nursing students was provided to the group for 2 hours for 4 days. Then the posttest knowledge was assessed after 7 days of training Programme.

This study revealed that majority of the nursing students aged between 18 - 20 years (69.1%) and all of them were females (100%), half of them were having above ten thousand rupees of the family income per month (50.1%), most of them belonged to nuclear family (83.5%), more than half of them were from urban area (53.6%) and majority of them scored more than seventy five percentage and studied in English medium (74.2%).

On Comparing the Pretest and Posttest Knowledge Scores of Nursing Students on Chemotherapy for Cancer Patients The mean and standard deviation of the posttest knowledge score (18.10 and 1.84) was high compared to the pretest knowledge score (14.3 and 2.78) with t value of 10.54 which was statistically significant at $p < 0.001$ level. Hence the null hypotheses H01 stating that “There will be no significant difference between the pretest and posttest knowledge scores regarding chemotherapy for cancer patients among the nursing students” was rejected.

With regard to practice, majority of nursing students had very high practice scores in all aspects such as preparation (Mean = 44.08, SD = 2.45), administration (Mean = 9.57, SD = 0.73), monitoring (Mean = 9.33, SD = 1.11), disposal of waste (Mean = 9.43, SD = 0.80) and nursing responsibility in handling chemotherapy (Mean = 3.35, SD = 0.89). The students had very high total practice scores (Mean = 75.77, SD = 3.84) after the sensitizing program on Chemotherapy.

The nursing students reported high acceptability with regard to the approach of the researcher (95%), Sensitizing

programme administration (90%) and the effectiveness of Sensitizing programme regarding chemotherapy for cancer patients. (95%).

There were no significant association between selected demographic variables ($p > 0.05$). Hence the null hypotheses H02 was retained.

There was no correlation between the posttest level of knowledge and practice of nursing students on chemotherapy for cancer patients. Hence the H03 was retained.

6. Conclusion

Study findings revealed that the sensitizing programme was effective in improving the knowledge of nursing students regarding chemotherapy for cancer patients. It underscores the need for empowering the nursing knowledge by conducting such educational programme. This type of sensitizing program is widely used for evaluation of knowledge among various groups of health care workers. Therefore, in this study the investigator had conducted the sensitizing programme to assess the knowledge and practice regarding the chemotherapy for cancer patients among nursing students.

References

- [1] Warren JL, et al (2008) Current and future utilization of services from medical oncologists July 26 (19): 3242. [www/http/National cancer institute, Cancer Statistics \(2012\)](http://www.nationalcancerinstitute.gov/cancerstatistics/2012/)
- [2] Huang et al Nursing students’ experiences of their first encounter with death during clinical practice in Taiwan, First published: 14 July 2010 <https://doi.org/10.1111/j.1365-2702.2009.03090.x> <http://globocan.iarc.fr/Default.aspx> (2012)