Assessment of the Knowledge and Attitudes of Staff Nurses on Nursing Care of Cancer Patients Undergoing Chemotherapy at Selected Cancer Hospitals of Punjab

Abstract

Many antineoplastic drugs used to treat cancer are known to be teratogenic and mutagenic to patient as well as to staff who administer, handle it. So care by nurses is an important perspective for cancer patients. A non experimental descriptive research design was used. Structured self-administered questionnaire schedule to assess the knowledge and developed 4 point likert scale was used on 50 staff nurses of selected with convenience sampling technique from cancer hospitals of Punjab. The results of the study shown that mean score of staff nurses regarding knowledge was average (14.94) and mean score of their attitude comes out to be positive(59.70). The association between knowledge and attitude with their selected socio-demographic variables was calculated by chi square test and revealed statistically non significant relationship (p>0.05 ).The intention of this study was to assess the knowledge and attitude of nurses’ on nursing care of cancer patients undergoing chemotherapy. Overall, nurses appear to have average knowledge and a positive attitude towards nursing care of cancer patients undergoing chemotherapy. So enhancement in knowledge aspects is required and CNE program me or knowledge updating program me should be held time to time.

Keywords: CNE; Knowledge; Chemotherapy; Cancer

Introduction

Health is an ideal state of physical and mental well being: something to strive for but never to attain. Being healthy is very important to live happily and to run a family in good way. Severe illness or injuries can have a very detrimental effect on the family.

The word “CANCER” in Greek language means a crab, which Hippocrates thought a tumor resembled, medically known as a malignant neoplasm, term for group of different disease. Cancer is commonly referred to abnormal unlimited growth or multiplication of immature cells.

“World Cancer Day” is celebrated on 4 February for preventing cancer and raising quality of life of cancer patients.

In 2008 approximately 12.7 million cancers were diagnosed and 7.6 million people died due to worldwide cancer [1,2].

In Punjab, cancer registry programme in 2004-2005 found that whole Malwa region of a population of about 1.5 core, there ought to be about 12,000 cancer patients [3].

Need of the Study

Based on the GLOBOCAN, about 12.7 million cancer cases and 7.6 million cancer deaths occurred in2008; of these, 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 year [3]. Cancer prevalence in India is estimated to be around 2.5 million, with over 8,00,000 new cases and 5,50,000 deaths occurring each year due to this disease [4]. More than 70% of the cases report for diagnostic and treatment services in the advanced stages of the disease, which has lead to a poor survival and high mortality rate [5]. The survey conducted in Punjab, from October to December 2012, has covered 2,64,84,434 people in 50,53,447 households in 12,603 villages and 217 cities and towns. This is 97.78 per cent of the population of the Census data. While 23,874 cases of people suffering from cancer have been detected, the numbers of persons complaining of cancer symptoms were 84,453.

Research Problem

“Assessment of the knowledge and attitudes of staff nurses on nursing care of cancer patients undergoing chemotherapy selected Cancer Hospitals of Punjab.”

Objective of the Study

The main objective of the study to explore the knowledge and attitude of staff nurses regarding care of patient undergoing chemotherapy treatment.

Hypothesis

I. H_A: There will be good knowledge on nursing care of cancer patients undergoing chemotherapy among staff nurses in selected cancer hospitals of Punjab.

II. H_B: There will be positive attitude on nursing care of cancer...
There will be significant association between the knowledge and attitude among staff nurses with their selected socio-demographic variables.

**Conceptual Framework**

The conceptual framework chosen for this study is based on health belief model. This model was developed in early 1950 by Becker and Rosens stock.

**Review of Literature**

1. Knowledge of Nurses related to nursing care of cancer patients undergoing chemotherapy
2. Attitudes of nurses towards nursing care of cancer patient and chemotherapy

**Research Methodology**

In the present study
1. Research Approach-Quantitative descriptive
2. Research Design -Non Experimental
3. Research Setting-Selected cancer hospitals of Punjab.

Target population-Target population included staff nurses of selected cancer hospitals of Punjab.

1. Sample- Sample was staff nurses of selected cancer hospitals of Punjab
2. Sample size-The sample size of present study comprised of 50 staff nurses of selected cancer hospitals of Punjab.
3. Sampling technique-Non-probability convenience sampling technique

**Selection and Development of Tools**

The tool consisted of 3 parts:

Part-1: consisted of socio-demographic data.
Part-2: consisted of structured knowledge questionnaire.
Part-3: Developed Attitude assessment scale.

**Reliability**

Reliability of the instrument was established by using split half technique.

**Reliability of knowledge questionnaire**

Knowledge questionnaires were 30. They were split in half of original number and then co-relation between both the halves was found. By applying split half method correlation coefficient was calculated i.e. \( r_s = 0.6 \), \( r_h \) i.e. estimated reliability of entire test was also calculated: \( r_s = 0.70 \).

**Reliability of attitude scale**

Total items of the attitude scale was 22 by applying split half method correlation coefficient was calculated i.e. \( r_s = 0.5 \), \( r_h \). estimated reliability of entire test was also calculated. \( r_s = 0.68 \) both tools were found to be reliable.

**Data Collection Procedure**

The researcher collected the data from 03 February 2016 to 19 April 2016 in selected cancer hospitals of Punjab.

1. The investigator sought a prior permission from the concern authority of selected cancer hospitals of Punjab.
2. The investigator personally talks telephonically and through mail to every staff nurse and explained about the purpose and nature of study. Their written informed consent was obtained before enrolling them in a present study.
3. The tool was self administered and mail to all the participants through the email to assess the knowledge and developed 4 point likert attitude scale to assess the attitude.

**Ethical Consideration**

As study was descriptive in nature so does not need any special ethical clearance from any ethical review board. Data collection permission was obtained from concern authority. Written inform consent obtained from subject and their anonymity and confidentiality of data obtained will be maintained.

**Data Analysis**

The Descriptive and inferential Statistical measures was used to analyze the data. For example, percentage, Mean, SD was used to assess the knowledge and attitude of staff nurses and Chi square, item analysis was used to check the association of knowledge and attitude with its socio-demographic variables Table 1-7.

**Discussion**

Wiseman T has shown in her study oncology nurses have good knowledge [6]. In contrast to the study of results shown poor knowledge of staff nurses on chemotherapy [7]. This finding is important for nursing care to cancer patients because if oncology nurses did not have adequate knowledge and not competent in their skills will be considered as unsafe for providing chemotherapy administration to cancer patients and chances for medication errors can be high as various studies in past already highlighted these points.

Statistical analysis has shown that staff nurses have mild positive attitude i.e., mean scores were 59.7. Many previous researches have shown nurses have positive attitude towards nursing care of cancer patients undergoing chemotherapy. As in study by Verity and Damrosch also shown positive attitude towards chemotherapy among staff nurses.

In this study, experiences, professional education about chemotherapy appear to have had no effect. These finding contradicted by Verity’s study on staff nurses on chemotherapy. Results showed that factors influencing patient care included; staff education and experience other than that nurses receiving regular knowledge updates affect the nursing practice and attitude of staff nurses towards chemotherapy.
Table 1: Describing Socio demographic distribution of study subjects.

| S.No | Socio-Demographic Variables       | Frequency | Percentage |
|------|----------------------------------|-----------|------------|
| 1    | Age (in years)                   |           |            |
|      | a. 21-25                         | 31        | 62%        |
|      | b. 26-30                         | 15        | 30%        |
|      | c. 31-35                         | 2         | 4%         |
|      | d. 36-40                         | 1         | 2%         |
|      | e. >40                           | 1         | 2%         |
| 2    | Gender                           |           |            |
|      | a. Male                          | 2         | 4%         |
|      | b. Female                        | 48        | 96%        |
| 3    | Marital status                   |           |            |
|      | a. Married                       | 15        | 30%        |
|      | b. Unmarried                     | 35        | 70%        |
|      | c. Divorced                      | 0         | 0%         |
|      | d. Widower                       | 0         | 0%         |
| 4    | Habitat                          |           |            |
|      | a. Rural                         | 29        | 58%        |
|      | b. Urban                         | 21        | 42%        |
| 5    | Religion                         |           |            |
|      | a. Hindu                         | 4         | 8%         |
|      | b. Sikh                          | 45        | 90%        |
|      | c. Christian                     | 1         | 2%         |
|      | d. Muslim                        | 0         | 0%         |
|      | e. Any other                     | 0         | 0%         |
| 6    | Professional qualification       |           |            |
|      | a. GNM                           | 38        | 76%        |
|      | b. Post basic nursing            | 9         | 18%        |
|      | c. Basic nursing                 | 3         | 6%         |
|      | d. M. Sc. Nursing                | 0         | 0%         |
| 7    | Years of experience in cancer unit|         |            |
|      | a. <1                            | 21        | 42%        |
|      | b. 1-5                           | 24        | 48%        |
|      | c. 6-10                          | 5         | 10%        |
|      | d. 11-15                         | 0         | 0%         |
| 8    | Have you ever attended CNE programme related to chemotherapy | | |
|      | a. Yes                           | 7         | 14%        |
|      | b. No                            | 43        | 86%        |

N=50
### Table 2: Frequency and percentage distribution of knowledge on nursing care of cancer patients undergoing chemotherapy among staff nurses.

| Level of Knowledge Score | Range | N  | Percentage |
|--------------------------|-------|----|------------|
| Very poor                | 0-6   | 1  | 2%         |
| Poor                     | 12-18 | 7  | 14%        |
| Average                  | 13-18 | 21 | 42%        |
| Good                     | 19-24 | 20 | 40%        |
| Very good                | 25-30 | 1  | 2%         |

N=50

### Table 3: Knowledge Mean scores of staff nurses on nursing care of cancer patients undergoing chemotherapy.

| Knowledge | Total samples | Range statistics | Minimum statistics | Maximum statistics | Mean   | Std error | Std deviation |
|-----------|---------------|------------------|--------------------|--------------------|--------|-----------|---------------|
|           | 50            | 19               | 6                  | 25                 | 14.94  | 0.613     | 4.335         |

### Table 4: Frequency and percentage distribution of the attitude on nursing care of cancer patients undergoing chemotherapy among staff nurses.

| S. No. | Levels of Attitude | Range | No. of Respondent | Percentage |
|--------|--------------------|-------|-------------------|------------|
| 1      | Negative           | 22-38 | 0                 | 0%         |
| 2      | Mild negative      | 39-54 | 11                | 22%        |
| 3      | Mild positive      | 55-71 | 37                | 74%        |
| 4      | Positive           | 72-88 | 2                 | 4%         |

### Table 5: Attitudes Mean scores of staff nurses on nursing care of cancer patients undergoing chemotherapy.

| Attitude Scales | Total Samples | Range Statistics | Minimum Statistics | Maximum Statistics | Mean   | Std Error | Std Deviation |
|-----------------|---------------|------------------|--------------------|--------------------|--------|-----------|---------------|
|                 | 50            | 34               | 46                 | 80                 | 59.7   | 0.904     | 6.393         |

### Table 6: Item analysis of the attitude regarding nursing care of cancer patients undergoing chemotherapy.

| S/N | Attitude Statement                                                                 | Strongly Agree | Agree | Disagree | Strongly Disagree |
|-----|----------------------------------------------------------------------------------|----------------|-------|----------|------------------|
| 1   | I don’t have a problem to give chemotherapy to patient with taking risks with my health if the benefits are great enough. | 5              | 10%   | 15       | 30%              | 22    | 44%    | 8     | 16% |
| 2   | I follow the orders as doctor has given regarding the care of patient undergoing chemotherapy, other than that I do not want to take risk on the behalf of myself even in emergency condition also. | 1              | 2%    | 20       | 40%              | 23    | 46%    | 6     | 12% |
| 3   | It is easy to inform patients about their chemotherapy treatment but harder to help them emotionally. | 0              | 0%    | 4        | 8%               | 37    | 74%    | 9     | 18% |
| 4   | Administering/handling chemotherapy is no different than administering/handling intravenous antibiotics. | 8              | 16%   | 22       | 44%              | 18    | 36%    | 2     | 4%  |

Citation: Choudhary VS (2016) Assessment of the Knowledge and Attitudes of Staff Nurses on Nursing Care of Cancer Patients Undergoing Chemotherapy at Selected Cancer Hospitals of Punjab. Nurse Care Open Access J 1(2): 00009. DOI: 10.15406/ncoaj.2016.01.00009
|   | Statement                                                                 | No. | %       | No. | %       | No. | %       | No. | %       |
|---|---------------------------------------------------------------------------|-----|---------|-----|---------|-----|---------|-----|---------|
| 5 | Communicating with patients about their treatments and its side-effects is irritating because of their over questioning. | 5   | 10%     | 23  | 46%     | 17  | 34%     | 5   | 10%     |
| 6 | I do not find administering/handling chemotherapy a challenging part of my role. | 3   | 6%      | 11  | 22%     | 33  | 66%     | 3   | 6%      |
| 7 | I have poor interest in acquiring education regarding chemotherapy through seminar held in hospitals. | 14  | 28%     | 24  | 48%     | 10  | 20%     | 2   | 4%      |
| 8 | I feel burn out syndrome is more common among staff in chemotherapy units as compared to other units. | 6   | 12%     | 24  | 48%     | 17  | 34%     | 3   | 6%      |
| 9 | It is more interested to care of patient undergone radiotherapy/surgery than chemotherapy. | 5   | 10%     | 12  | 24%     | 31  | 62%     | 2   | 4%      |
| 10| I think other units are safer than chemotherapy units.                      | 2   | 4%      | 15  | 30%     | 24  | 48%     | 9   | 18%     |
| 11| I think administering chemotherapy is not as protective as other treatment because it has more serious side-effect than other treatment. | 2   | 4%      | 17  | 34%     | 24  | 48%     | 4   | 36%     |
| 12| I feel that policies made for administering chemotherapy in hospital are not always correct as there is wastage of time and material than its benefit. | 10  | 20%     | 24  | 48%     | 8   | 16%     | 8   | 16%     |
| 13| I feel staff need not to check CBC report before starting chemotherapy because doctor’s already check this. | 12  | 24%     | 19  | 38%     | 14  | 28%     | 5   | 10%     |
| 14| It does not affect when again patient come with worst condition due to effect of chemotherapy because I feel confident in my competency to deal with that condition. | 1   | 2%      | 9   | 18%     | 29  | 58%     | 11  | 22%     |
| 15| I lost my interest in work due to poor outcome of chemotherapy.            | 6   | 12%     | 33  | 66%     | 11  | 22%     | 0   | 0%      |
| 16| I do not like long discussions with attendants of chemotherapy patients because it is wastage of time. | 6   | 12%     | 31  | 62%     | 11  | 22%     | 2   | 4%      |
| 17| If I asked to change the ward I will prefer it.                           | 6   | 12%     | 27  | 54%     | 15  | 30%     | 2   | 4%      |
| 18| I avoid to work in cancer department because side effects of chemotherapy are not easy to manage. | 5   | 10%     | 31  | 62%     | 13  | 26%     | 1   | 2%      |
| 19| To work with chemotherapy patients and their family members is difficult as comparative to other patients | 3   | 6%      | 24  | 48%     | 19  | 58%     | 5   | 10%     |
| 20| I think patient who are undergone chemotherapy are just like other patients they need not any different type of nursing care. | 7   | 14%     | 28  | 56%     | 15  | 30%     | 0   | 0%      |

Citation: Choudhary VS (2016) Assessment of the Knowledge and Attitudes of Staff Nurses on Nursing Care of Cancer Patients Undergoing Chemotherapy at Selected Cancer Hospitals of Punjab. Nurse Care Open Acces J 1(2): 00009. DOI: 10.15406/ncoaj.2016.01.00009
I avoid to give chemotherapy to patients with cancer as it can be risky for me.

Knowledge given to patients regarding chemotherapy supports them emotionally.

Table 7: Association of Knowledge and Attitude score with selected demographic variables.

| S.N | Socio-Demographic Variables | Level of Knowledge Score | Chi-Square | Df | Level of Attitude | Chi-Square | Df |
|-----|-----------------------------|--------------------------|------------|----|------------------|------------|----|
|     |                             | Very Poor | Poor | Average | Good | Very good | -Ve | Mild | Mild | +Ve |       | -Ve | Mild | Mild | +Ve |       |
| 1.  | Age in years                |           |     |         |     |          |     |      |      |      |       |     |      |      |      |       |
| a   | 21-25                       | 01         | 08  | 16      | 06  | 00       | 00  | 08   | 22   | 01   | 9.25* | 9    |      |      |      |      |       |
| b   | 26-30                       | 00         | 04  | 08      | 02  | 01       | 00  | 00   | 01   | 01   | 7.54* | 12   |      |      |      |      |       |
| c   | 31-35                       | 00         | 01  | 00      | 01  | 00       | 00  | 00   | 01   | 00   | 00    |      |      |      |      |      |       |
| d   | 36-40                       | 00         | 00  | 01      | 00  | 00       | 00  | 00   | 01   | 00   | 00    |      |      |      |      |      |       |
| e   | >40                         | 00         | 00  | 00      | 00  | 00       | 00  | 00   | 01   | 00   | 00    |      |      |      |      |      |       |
| 2.  | Professional qualification  |           |     |         |     |          |     |      |      |      |       |     |      |      |      |       |
| a   | G.N.M                       | 01         | 13  | 17      | 07  | 00       | 00  | 00   | 27   | 02   | 19.77* | 12   |      |      |      |      |       |
| b   | Basic Nursing               | 00         | 01  | 06      | 02  | 00       | 00  | 00   | 02   | 07   | 9.89*  | 6    |      |      |      |      |       |
| c   | Post-Basic Nursing          | 00         | 02  | 02      | 00  | 01       | 00  | 00   | 03   | 00   | 00    |      |      |      |      |      |       |
| d   | M.Sc. Nursing               | 00         | 00  | 00      | 00  | 00       | 00  | 00   | 00   | 00   | 00    |      |      |      |      |      |       |
| 3.  | Years of experience in cancer unit in years |           |     |         |     |          |     |      |      |      |       |     |      |      |      |       |
| a   | <1                          | 01         | 05  | 12      | 03  | 00       | 00  | 00   | 15   | 00   | 6.61*  | 8    |      |      |      |      |       |
| b   | 1-5                         | 00         | 06  | 11      | 06  | 01       | 00  | 00   | 18   | 02   | 4.65*  | 6    |      |      |      |      |       |
| c   | 6-10                        | 00         | 03  | 02      | 00  | 00       | 00  | 00   | 04   | 00   | 00    |      |      |      |      |      |       |
| d   | 10-15                       | 00         | 00  | 00      | 00  | 00       | 00  | 00   | 00   | 00   | 00    |      |      |      |      |      |       |
| e   | >15                         | 00         | 00  | 00      | 00  | 00       | 00  | 00   | 00   | 00   | 00    |      |      |      |      |      |       |
| 4.  | Have you attended CNE programme related to Chemotherapy |           |     |         |     |          |     |      |      |      |       |     |      |      |      |       |
| a   | Yes                         | 00         | 02  | 02      | 03  | 01       | 00  | 01   | 05   | 01   | 3.868* | 4    |      |      |      |      |       |
| b   | No                          | 01         | 12  | 23      | 06  | 00       | 00  | 10   | 32   | 01   | 6.896* | 3    |      |      |      |      |       |

* Non-significant

**Conclusion**

The intention of this study was to assess the knowledge and attitude of nurses’ on nursing care of cancer patient undergoing chemotherapy. Overall, nurses appear to have average knowledge and a positive attitude towards nursing care of cancer patient undergoing chemotherapy. So to improve their knowledge CNE program me or knowledge updating program me should be regularly conducted for the Nursing fertility.

**Conflict of Interest**

There is no conflict of interest as researcher was not received any financial support from institute or individual. Project was self financed.

**Acknowledgement**

I acknowledge my sincere thanks to my loving parents Mr. & Mrs. J.R Choudhary, my loving wife Mrs. Geeta Choudhary, Associate Professor Dept. of OBG Nsg. for her valuable guidance and support at every movement of this work and Two little star of my family Pari & Geetesh for understanding my busy schedule and adjusted themselves with that. At the end I thanks to Dr. Gursevak Singh Director DCON, for his unconditional support for me on each stage of my carrier.
References

1. Cancer (2011) Cancer.
2. Cancer incidence worldwide.
3. Eisenhouer la, Hurley ac, Dolan N (2007) Nurses’ reported Thinking during Medication Administration. Journal Nursing Scholarship 39(1): 82-87.
4. Ahmedin Jemal, Freddie Bray, Melissa M, Jacques Ferlay, Elizabeth ward, et al. (2011) Global worldwide cancer statistics 2008, CA: A Cancer Journal for Clinicians 61(2): 69-90.
5. Kearney, N, Richardson A Di Giulio P (200) Nursing Education in Cancer Care. Cancer Nursing Practice:A Textbook for the Specialist Nurse 4(6): 45-55.
6. Kav S, Johnson J, Ritlenberg C, Fernadez ortega P, Suominen T, et al. (2008) The Nurse Inpatient Education and Follow up of People Receiving Oral Chemotherapy Treatment. Support Care Cancer Sep 16(9): 1075-1083.
7. Cancer in India.