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# A study to assess the effectiveness of informational booklet on knowledge regarding management of side effect of chemotherapy among cancer patient at Cancer Hospital, Sector -1, J.L.N. & R.C in Bhilai (C.G.)

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**Abstract**
The investigator felt that due to lack of knowledge regarding management of side effect of chemotherapy. This influenced to take up this study. A study to assess the effectiveness of informational booklet on knowledge regarding management of side effect of chemotherapy among cancer patient at cancer hospital sector 1 J.L.N. & R.C. in Bhilai (C.G.). Objectives of the study were - To assess pre test and post test knowledge regarding management of side effect of chemotherapy, to assess the effectiveness of informational booklet regarding management of side effect of chemotherapy, to associate between pre test and socio demographic variables. The study attempted to examine the following hypothesis - there will be no significant difference in knowledge score between pre test and post test levels, there will be significant difference in knowledge score between pre test and post test levels, there will be significant effect of information booklet, there will be significant association between pre test knowledge and selected socio demographic variables. An extensive review related to literature was undertaken. The conceptual framework of this study was based on Kurt levin's theory. A one group pre test and post test design was used to accomplish the objectives of the study. The pilot study was conducted on 6 persons of Mittal Hospital, Raipur to refine the methodology and find the feasibility of the study. The reliability was computed by Karl Pearson's formula and was found to be 0.93. The main study was conducted in cancer Hospital sector -1 J.L.N. & R.C. in Bhilai, (C.G.). In this study non-probability convenient sampling was done to selected 60 samples in the study. The data collected was analyzed using descriptive and inferential statistics. Major findings of the study were:

- In pre test knowledge level of cancer patients the total mean score was 859 i.e. mean 14.31 with standard deviation of 3.91 and mean percentage was 47.7%.
- In post test knowledge level of cancer patients the total mean score 1476 i.e. mean 24.6 with standard deviation of 5.31 and mean percentage was 82% in post test. There was significant increased knowledge level in pre test and post test. Hence it is quite evident that by giving education through informational booklet is effective.
- Evaluation of data related to effectiveness of informational booklet regarding management of side effects of chemotherapy using 'Z-test'. The mean score regarding the knowledge in pre test was 14.31 and post test score was 24.6 and the mean difference was 10.29 standard deviation 4.50 and standard error difference was 0.82. The Z- value of knowledge score was 12.54 which is highly significant at >0.05 which proves the effectiveness of informational booklet.

Analysis for association between the selected socio-demographic variables with pre-test level of regarding management of side effect of chemotherapy using chi-square test and frequency and found significant association between the pre test knowledge among cancer patients and age, education, area of residence, type of family, occupation, source of information. Nurses working in hospitals and community have to realize the responsibility in giving health education to cancer patients and their relatives about management of side effect of chemotherapy to manage or prevent the side effects. Nurse administrator should motivate the nursing personnel to develop educational materials such as posters, pamphlets, planned teaching programme, on management of side effect of chemotherapy. More research needs to be conducted with large samples size in different settings to increase awareness of management of side effect of chemotherapy. CONCLUSION:-The study concluded that the use infomational booklet of management of side effect of chemotherapy was effective in managing the side effects and improved the knowledge among cancer patients regarding side effect of chemotherapy.

**Keywords:** Chemotherapy, side effects

## Introduction

Cancer is the most feared of all the disease even more than heart disease. Cancer is a disease characterized uncontrolled and unregulated growth of cells. It is a major health problem that seems in people of all ethinicities. Though cancer is considered as a disease of aging it occurs in all ages. Globally cancer is the major public health problem. Today it is the second largest killer disease in the world. The world wide estimation showed that 24.6 million peoples received the diagnosis of cancer in the last five years. The mortality rate is 13% due to cancer (international agency for research on cancer IARC 2007). The incidence of cancer in Indian males is about 72.1 per 1,00,000 population and females 82 per 100,000 population. The Indian cancer atlas indicates that the incidence of cancer for some major organs in India is highest in the world. (National cancer register data 2007).

## Need For the Study

Cancer a term that elicits a shock in the nerve ending of every individual touches every country in the world. Cancer is one of the commonest diseases affecting around 10 million new cases per year worldwide. In India, cancer prevalence is estimated to be around 2.5 million with 8,00,000 new cases and 5,50,000 death per year. 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. 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. Recent times have seen an increase in the incidence of cancer. This is mainly attributed to urbanization, industrialization, lifestyle changes, population growth and increased life span (in turn leading to an increase in the elderly population). In India, the life expectancy at birth has steadily risen from 45 years in 1971 to 62 years in 1991, indicating a shift in the demographic profile.1 It is estimated that life expectancy of the Indian population will increase to 70 years by 2021–25.2 This has caused a paradigm shift in the disease pattern from communicable diseases to non-communicable diseases like cancer, diabetes and hypertension.

**Statement of problem**

A study to assess the effectiveness of informational booklet on knowledge regarding management of side effect of chemotherapy among cancer patient at cancer hospital sector -1 J.L.N. & R.C in Bhilai (C.G.).

**Objectives**

1. To assess pre test and post test knowledge regarding management of side effect of chemotherapy among cancer patient at cancer hospital sector -1 J.L.N. & R.C in Bhilai (C.G.).
2. To assess the effectiveness of informational booklet regarding management of side effect of chemotherapy among cancer patient at cancer hospital sector 1 J.L.N. & R.C in Bhilai (C.G.)
3. To associate between pre test and socio demographic variables regarding management of side effect of cancer patient of chemotherapy among cancer patient at cancer hospital sector 1 J.L.N. & R.C. in Bhilai (C.G.).

**Hypothesis**

**$H_0$:** There will be no significant difference in knowledge score between pre test and post test levels regarding management of side effects of chemotherapy among cancer patients at cancer hospital sector 1 J.L.N. & R.C. in Bhilai (C.G.).

**$H_1$:** There will be significant difference in knowledge score between pre test and post test levels regarding management of side effects of chemotherapy among cancer patients at cancer hospital sector 1 J.L.N. & R.C. in Bhilai (C.G.).

**$H_2$:** There will be significant effect of information booklet on knowledge regarding management of side effect of chemotherapy among cancer patient at cancer hospital sector 1 J.L.N. & R.C. in Bhilai (C.G.).

**$H_3$**: There will be significant association between pre test knowledge and selected socio demographic variables.

**Assumptions**

- Cancer patients have existing knowledge regarding management of side effects of chemotherapy.
- The use of informational booklet will help the cancer patient to update their knowledge and it will be helpful to prevent the side effects of chemotherapy.

**Methodology**

Evaluator survey approach was used in this study. Emphasizes that in one group pre test post design. In one group pre test design the investigator introduced a base measure before and after planned teaching method. in the pre test study the base measure was to assess the effectiveness of informational booklet on knowledge regarding management of side effect of chemotherapy among cancer patient at cancer hospital sector -1, J.L.N. & R.C. in Bhilai (C.G.). The sample consist of 60 cancer patient undergoing chemotherapy cancer hospital sector- 1 J.L.N. & R.C. in Bhilai (C.G) between the age group of 25year to <40 yrs. The reliability of the tool was found to be 0.93. So, the tool was found to be highly reliable for data collection. Non probability purposive sampling of 60 subject was done and self structured questionnaire was adopted to approach the subject consent of the sample was taken.

**Discussion**

**Finding related to socio – demographic data**

- Distribution of subject according to age in year. Table 4.1 Depicts that 0% (0) subjects were under 25-30yrs, 0% (0) subjects were under 31-35 yrs, 15% (9) subjects were under 36-40yrs and 85% (51) maximum subjects were under >40 yrs
- Distribution of subject according to gender. Table 4.2 depicts that 46.66% (28) subjects were male, 53.33% (32) are female and maximum subjects 53.33% (32) were female.
- Distribution of subject according to education. Table 4.3 depicts that 23.33% (14) subjects were done primary education, 46.66% (28) subjects were having middle/higher, 30% (18) subjects were graduate/post graduation and maximum subjects were having 46.66% (28) subjects were having middle/higher education.
- Distribution of subject according to monthly income. Table 4.4 depicts that 23.33% (14) subjects were having 1000-5000 income, 31.67% (19) subjects were having 5000-10000 income, 33.33% (20) subjects were having 10000-15000 income, 11.67% (7) subjects were having >15000 income and maximum 33.33% (20) subjects were having 10000-15000 income.
- Distribution of subject according to area of residence. Table 4.5 depicts that 18.33% (11) subjects were living in rural area, 81.66% (49) subjects were living in urban area and maximum subjects were living in urban area 81.66% (49).
- Distribution of subject according to type of family. Table 4.6 depicts that 55% (33) subjects were belongs to joint family, 45% (27) subjects were belongs to nuclear family and maximum subjects were belongs to joint family 55% (33).
- Distribution of subject according to occupation. Table 4.7 depicts that 47% (28) subjects were employed, 53% (32) subjects were unemployed and maximum subjects were unemployed 53% (32).
- Distribution of subject according to previous experience of chemotherapy. Table 4.8 depicts that 100% (60) subjects were having previous experience of chemotherapy.
- Distribution of subject according to time period of taking chemotherapy. Table 4.9 depicts that 43.35% (26) subjects were having cancer disease <6 month, 38.35% (23) subjects were having cancer disease since 1 year, 10% (6) subjects were having cancer disease since 2 year, 8.3% subjects were having cancer disease since >2 year and maximum subjects were having cancer disease < 6 month 43.35% (26).

- Distribution of subject according to source of information. Table 4.10 depicts that 87% (52) subjects were having information from hospital, 3% (2) subjects were having information from internet, 10% (6) subjects were having information from health workers and maximum subjects were having information from hospital 87% (52).

**Question wise analysis of knowledge score of subjects.**
Question wise analysis of pre test & post test knowledge score using mean, mean percentage, standard deviation was done. In introduction part pre test knowledge score mean was 2.55, mean percentage was 63.75%, standard deviation was 0.79, and the side effects part pre test knowledge score mean was 1.11, mean percentage was 55.5%, standard deviation was 0.80, and the management of side effects & its prevention part pre test knowledge score mean was 6.9, mean percentage was 49.28%, standard deviation was 2.35, and the oral hygiene & prevention part pre test knowledge score mean was 3.03, mean percentage was 37.87%, standard deviation was, and the emotional cause & management part pre test knowledge score mean was 0.63, mean percentage was 31.5%, standard deviation was 0.75. In introduction part post test knowledge score mean was 3.68, mean percentage 92%, standard deviation was 0.70, and the side effects part post test knowledge score mean was 1.75, mean percentage was 87.5%, standard deviation was 0.47, and the management of side effects & its prevention part post test knowledge score mean was 11.56, mean percentage was 82.57%, standard deviation was 2.45, and the oral hygiene & prevention part post test knowledge score mean was 5.75, mean percentage was 71.87%, standard deviation was 1.68, and the emotional cause & management part post test knowledge score mean was 1.66, mean percentage was 83%, standard deviation was 0.52.

**Comparison of knowledge scores between pretest and post test by frequency, percentage and total score.**
Comparison of knowledge scores between pretest and post test in which 51.33% (31) have good knowledge regarding management of side effects of chemotherapy in the pre test. In the post test knowledge level, majority of cancer patients 68.33 (41) has excellent knowledge regarding management of side effects of chemotherapy.

**Analysis of pre test and post test knowledge score using frequency, percentage and total score.**
Total mean score was 859 i.e. mean 14.31 with standard deviation of 3.91 and mean percentage was 47.7% in pre test and total mean score 1476 i.e. mean 24.6 with standard deviation of 5.31 and coefficient of mean percentage was 82% in post test. The above result signifies that there has been a consistent increase in knowledge score in post test when compared to pre test. Hence, $H_0$ is rejected and $H_1$ is accepted.

**Evaluation of data related to effectiveness of informational booklet regarding knowledge regarding management of side effect of chemotherapy using z- test**
Mean score regarding the knowledge in pre test was 14.31 and post test score was 24.6 and the mean difference was 10.29 standard deviation 4.50 and standard error difference was 0.82. The Z- value of knowledge score was 12.54 which is highly significant at >0.05 which proves the effectiveness of informational booklet. Hence $H_2$ is accepted.

**To find association between pre test levels of knowledge score with selected socio demographic variables**.

- There was significant association between the pre test level of knowledge among cancer patients and age as the calculated value i.e 14.49 is greater than the table value of chi-square (12.59) at level of 5% significant.
- There was no association between the pre test knowledge level of knowledge among cancer patients and gender as the calculated value i.e. 0.24 was less than the table value of chi-square (5.99) at level of 5% not significant.
- There was highly significant association between the pre test level of knowledge among cancer patients and education as the calculated value i.e 22.32 was greater than the table value of chi-square (9.49) at level of 5% significant.
- There was no association between the pre test knowledge level of knowledge among cancer patients and income as the calculated value i.e. 10.32 was less than the table value of chi-square (11.07) at level of 5% not significant.
- There was highly significant association between the pre test level of knowledge among cancer patients and area of residence as the calculated value i.e 16.41 was greater than the table value of chi-square (5.99) at level of 5% significant.
- There was highly significant association between the pre test level of knowledge among cancer patients and type of family as the calculated value i.e 13.96 was greater than the table value of chi-square (5.99) at level of 5% significant.
- There was significant association between the pre test level of knowledge among cancer patients and occupation as the calculated value i.e 8.63 was greater than the table value of chi-square (5.99) at level of 5% significant.
- There was no association between the pre test level of knowledge among cancer patients and previous experience of chemotherapy as the calculated value i.e 0 was less than the table value of chi-square (5.99) at level of 5% not significant.
- There was no association between the pre test level of knowledge among cancer patients and year of using chemotherapy as the calculated value i.e 1.82 was less than the table value of chi-square (12.59) at level of 5% not significant.
- There was highly significant association between the pre test level of knowledge among cancer patients and source of information as the calculated value i.e 33.61 was greater than the table value of chi-square (9.49) at level of 5% significant.

Data presented in table indicates that there was significant association between the knowledge scores with selected demographic variables. Hence $H_3$ is accepted.

**Conclusion**
On the basis of the findings of the study, the following conclusions were drawn:
The first objective was to assess the pre test and post test knowledge regarding management of side effect of chemotherapy among cancer patient at Cancer hospital, sector-1, J.L.N. & R.C. in Bhilai (C.G.).
According to self structured questionnaire Table 4.12: depicts that total mean score was 859 i.e. mean 14.31 with

standard deviation of 3.91 and mean percentage was 47.7% in pre test and total mean score 1476 i.e. mean 24.6 with standard deviation of 5.31 and coefficient of mean percentage was 82% in post test. The above result signifies that there has been a consistent increase in knowledge score in post test when compared to pre test. Hence, $H_0$ is rejected and $H_1$ is accepted.

The Second objective to assess the effectiveness of informational booklet regarding management of side effect of chemotherapy among cancer patient at cancer hospital sector-1, J.L.N. & R.C. in Bhilai (C.G.).

Evaluation of data related to effectiveness of informational booklet using 'Z-test'. According to objective type questionnaire. Table 4.13: depicts that mean score regarding the knowledge in pre test was 14.31 and post test score was 24.6 and the mean difference was 10.29 standard deviation 4.50 and standard error difference was 0.82. The Z- value of knowledge score was 12.54 which is highly significant at >0.05 which proves the effectiveness of informational booklet. Hence, $H_2$ is accepted.

The third objective was to associate between pre test and selected socio demographic variables regarding management of side effect of cancer patient of chemotherapy among cancer patient at cancer hospital sector 1 J.L.N. & R.C. in Bhilai (C.G.).

Chi square analysis for association between the selected socio demographic variables with pre test knowledge score of cancer patients. Table 4.15: depicts that that there is significant association between the knowledge scores with selected demographic variables. Hence $H_3$ is accepted.

There was significant association between age, education, area of residence, type of family, job, source of information and knowledge scores.

There was no significant association between gender, income, previous experience of chemotherapy, time duration of taking chemotherapy and knowledge scores.

**Limitations**

1. Generalization of the result could have been possible if the investigator had included more samples.
2. The sample for the study was limited to 60 only.
3. The time of span of the study was short.
4. The study was restricted to the cancer hospital sector-1 J.L.N. & R.C. in Bhilai (C.G.).

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