

A Study to Assess the Effectiveness of Informational Booklets on Knowledge and Attitude Regarding Chemotherapy among Cancer Patients in Selected Hospitals, Bangalore

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Abstract: ***Background:** Cancer is a major global health concern and chemotherapy remains one of the primary treatment modalities for many types of cancer. Despite its widespread use, many patients undergoing chemotherapy have inadequate knowledge and misconceptions regarding the treatment and its side effects. Lack of proper information may lead to fear, anxiety, and poor adherence to therapy. Patient education through structured informational materials can improve awareness and attitudes toward chemotherapy. **Objectives:** To assess the effectiveness of an informational booklet on knowledge and attitude regarding chemotherapy among cancer patients. **Methods:** A quantitative evaluative research approach using a pre-experimental one-group pre-test and post-test design was adopted. The study was conducted among 60 cancer patients in selected hospitals in Bangalore. Participants were selected using a sampling technique based on predefined inclusion criteria. Data were collected using a structured knowledge questionnaire and an attitude rating scale. A pre-test was conducted to assess baseline knowledge and attitude. Following the pre-test, an informational booklet explaining chemotherapy and its management was provided. A post-test was conducted after seven days. Descriptive and inferential statistics were used for data analysis. **Results:** The study findings revealed a significant improvement in knowledge and attitude after the intervention. The mean knowledge score increased from 12.55 in the pre-test to 22.33 in the post-test. The paired t-test value ($t = 20.60$) showed a statistically significant difference at the 0.05 level of significance. **Conclusion:** The informational booklet was effective in improving knowledge and developing a positive attitude toward chemotherapy among cancer patients.*

Keywords: Chemotherapy, Cancer patients, Knowledge, Attitude, Informational booklet, Patient education

1. Introduction

Cancer is a leading cause of morbidity and mortality worldwide and represents a significant burden on healthcare systems. Advances in medical science have improved cancer diagnosis and treatment, allowing many patients to receive effective therapies and achieve longer survival rates. Among the available treatment modalities, chemotherapy remains one of the most widely used approaches in cancer management.

Chemotherapy involves the use of cytotoxic drugs to destroy cancer cells or inhibit their growth and multiplication. It may be administered through different routes such as intravenous injection, oral medication, or infusion depending on the type and stage of cancer. Although chemotherapy is beneficial in controlling the progression of cancer, it is often associated with various physical and psychological side effects such as nausea, fatigue, hair loss, infection risk, and emotional distress.

Many patients undergoing chemotherapy have limited knowledge about the treatment process and its expected outcomes. Misconceptions and fear about chemotherapy can negatively influence patients' attitudes and may reduce treatment compliance. Therefore, providing accurate information and educational support is essential for helping patients understand the treatment process and cope with its effects.

Patient education is considered an important component of nursing care in oncology settings. Educational interventions such as informational booklets can improve patients' understanding of chemotherapy and enable them to manage treatment-related challenges more effectively. Informational booklets provide structured and accessible information that patients can read and review at their own convenience.

Considering the importance of patient education in cancer care, this study was conducted to evaluate the effectiveness of an informational booklet on knowledge and attitude regarding chemotherapy among cancer patients in selected hospitals in Bangalore.

Objectives of the Study:

- To assess the pre-test knowledge and attitude regarding chemotherapy among cancer patients in selected hospitals, Bangalore
- To assess the post-test knowledge and attitude regarding chemotherapy among cancer patients in selected hospitals, Bangalore
- To evaluate the effectiveness of informational booklets on knowledge and attitude regarding chemotherapy among cancer patients in selected hospitals, Bangalore.
- To determine the association between the post test scores on knowledge and attitude regarding chemotherapy with selected demographic variables among the cancer patients in selected hospitals, Bangalore.

Hypothesis:

H₁ -There will be significant difference between pre-test and post-test knowledge score regarding the chemotherapy among cancer patients.

H₂ - There will be significant differences between pre-test and post- test attitude scores regarding chemotherapy among cancer patients.

H₃ - There will be significant association between levels of knowledge regarding chemotherapy with selected demographic variables.

H₄ -There is significant association between the attitude towards chemotherapy with selected demographic variable

H₅ . There will be significant correlation between knowledge and attitude regarding chemotherapy among cancer patients.

Assumption:

The study assumes that,

- Cancer patients may have some knowledge regarding chemotherapy.
- The knowledge of the patients may vary according to demographic variables.
- The informational booklet will help in improving the knowledge of cancer patients regarding chemotherapy.

2. Conceptual Framework

The conceptual framework for this study was based on the **Health Belief Model**, which explains how individual beliefs and perceptions influence health behaviours. According to this model, a person's understanding of a disease and its treatment plays an important role in shaping their health-related actions. In the present study, the informational booklet served as an educational intervention aimed at improving patients' knowledge regarding chemotherapy. Increased knowledge is expected to influence patients' perceptions, reduce misconceptions, and promote a positive attitude toward treatment. Improved knowledge and attitude may ultimately contribute to better coping and participation in the treatment process.

3. Methodology

The study adopted a **pre-experimental one group pre-test post-test research design** to assess the effectiveness of an informational booklet on knowledge and attitude regarding chemotherapy among cancer patients. The study was conducted in selected hospitals in Bangalore. The target population consisted of cancer patients receiving treatment in the hospital setting. A total of **60 cancer patients** who met the eligibility criteria were selected using a **simple random sampling technique**. Ethical clearance was obtained from the institutional dissertation committee, and formal permission was taken from the directors of the selected hospitals. Informed consent was obtained from each participant before data collection. Confidentiality and anonymity of the participants were maintained throughout the study.

4. Materials and Methods

Data were collected using a self-administered structured knowledge questionnaire and Likert attitude scale. The tool consisted of two sections: socio-demographic variables and assessment of knowledge and attitude regarding chemotherapy. Initially, a pre-test was conducted to assess the baseline knowledge and attitude of cancer patients, which took approximately 45 minutes to complete. On the same day, an informational booklet on chemotherapy was distributed and explained to the participants. The booklet included information regarding definition, indications, routes, side effects, management, and complications of chemotherapy. After seven days, a post-test was conducted using the same tool to evaluate the effectiveness of the informational booklet.

Description of the tool:

The obtained data were organised and presented for analysis under the following sections.

Section I: Description of demographic characteristics of cancer patients

Section II: knowledge and attitude level of cancer patients regarding chemotherapy.

Section III: Comparison of Pretest and Post test knowledge and attitude level on chemotherapy among cancer patients.

Section IV: Association between Demographic variables and Post-test knowledge and attitude level on Chemotherapy among cancer patients.

Section V: Correlation coefficient between knowledge and attitude.

Section - I: Demographic Characteristics of Respondent

Table 1: Classification of Respondents by Demographic Characteristics

Characteristics	Category	Respondents, N=60	
		Number	Percent
Age (years)	20-29yrs	4	6.7
	30-39yrs	17	28.3
	40-49yrs	30	50
	Above 50yrs	9	15.0
Gender	Male	35	58.3
	Female	25	41.7
Qualification	Primary Education	15	25.0
	Secondary Education	21	35.0
	Graduation	24	40
Occupation	Private employee	10	16.67
	Government employee	9	15
	Housewife	33	55
	Self employed	8	13.33
Family income per annum	Below50,000 per annum	7	11.67
	50,000-1,00,000 per annum	11	18.33
	1,00,000-1,50,000 per annum	17	28.33
	Above 1,50,000 per annum	25	41.67
Types of family	Nuclear	18	30
	Joint	31	51.67
	Extended	9	15
	Single	2	3.33
Place of	Rural	13	21.7

Residence	Urban	15	25.0
	Semi Urban	32	53.3
Personal habits	Chewing tobacco	45	75
	Smoking	10	16.6
	Drinking	5	8.3
Do you have	Print media	13	21.7

previous experience of	Electronic media	13	21.7
	Health Professionalism	30	50
	Family members/ Relatives	4	7.0
Total		60	100.0

Table 2: Classification of Pret est and Post test Knowledge level on chemotherapy among Cancer patients.

Knowledge Level	Category	Classification of Respondents				χ ² Value
		Pretest		Post test		
		Number	Percent	Number	Percent	
Inadequate	≤ 50 % Score	42	70.0	0	0.0	78.14 *
Moderate	51-75 % Score	18	30.0	25	41.7	
Adequate	> 75% Score	0	0.0	35	58.3	
Total		60	100.0	60	100.0	

* Significant at 5% level, χ² (0.05, 2df) = 5.991

The above table indicates that pretest 70.0% (42) had inadequate knowledge, 30.0% (18) had moderate knowledge and none of them had adequate knowledge in the pretest. In

the post test majority 58.3 (35) had adequate knowledge, and 41.7(25) had moderate knowledge and none of them had inadequate knowledge.

Table 3: Classification of respondents on Pretest and Post attitude level on chemotherapy.

Attitude Level	Category	Classification of Respondents				χ ² Value
		Pre test		Post test		
		Number	Percent	Number	Percent	
Unfavorable	≤ 50 % Score	21	35	0	0	68.9
Moderate	51-75 % Score	39	65	19	31.7	
Favourable	> 75 % Score	0	0	41	68	
Total		60	100	60	100	

* Significant at 5% level, χ² (0.05, 2df) = 5.991

The above table indicates that 35.0% of the respondents had unfavorable attitude, 65.0% had moderate attitude and none of them had favorable attitude in the pretest. In the post test

majority 68.0% had favorable attitude, 31.7 % had moderate attitude and none of them had unfavorable attitude.

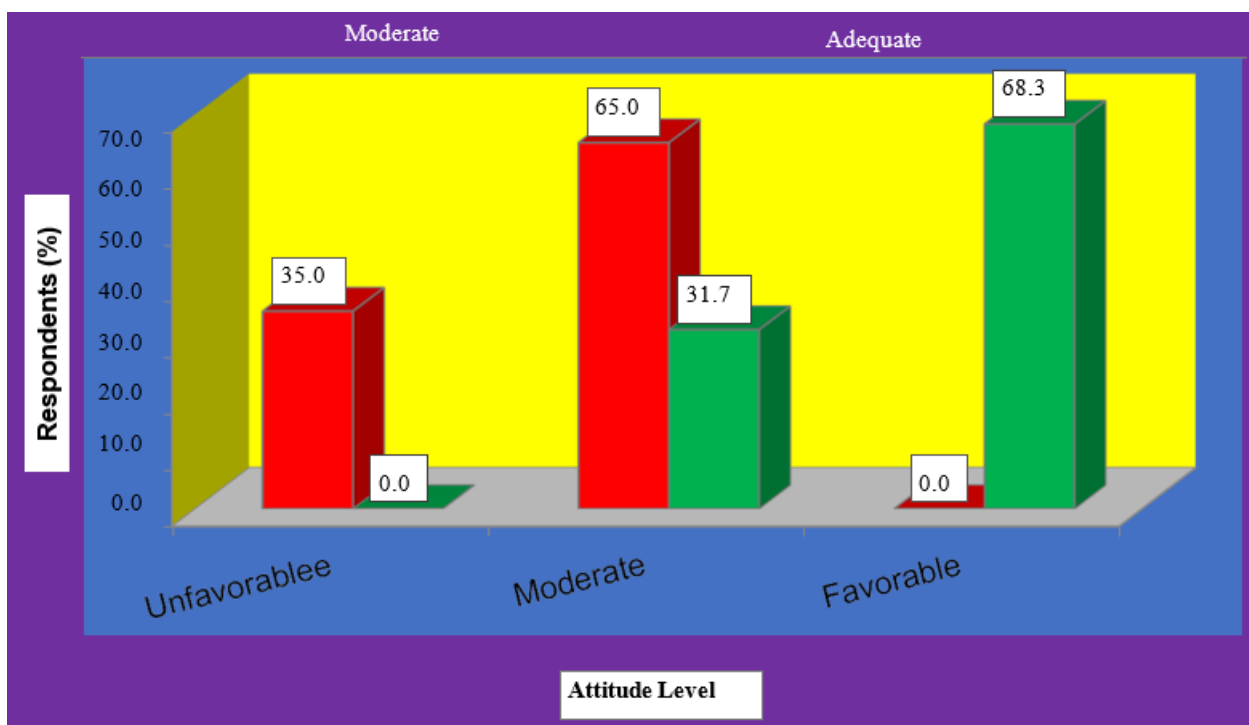


Figure 2: Classification of Pretest and Post test Attitude level on chemotherapy among Cancer patients.

Table 4: Correlation coefficient between knowledge and attitude, N= 60

	Aspect	Max. Score	Response				Correlation coefficient (r)
			Mean	SD	Mean (%)	SD (%)	
Pre test	Knowledge	30	10.23	3.3	40.9	13.3	+ 0.7681*
	Attitude	50	27.60	3.4	55.2	6.8	
Post test	Knowledge	30	19.15	2.4	76.6	9.6	+0.8493*
	Attitude	50	40.25	2.9	80.5	5.7	

* Significant at 5% level

The above table shows that there exists a positive significant relationship between knowledge and attitude scores in both pre test ($r=+0.7681$) and Posttest($r=+0.8493$). So,

the hypothesis H_5 is accepted. The finding implies that, an increase in knowledge brings about positive changes in attitude.

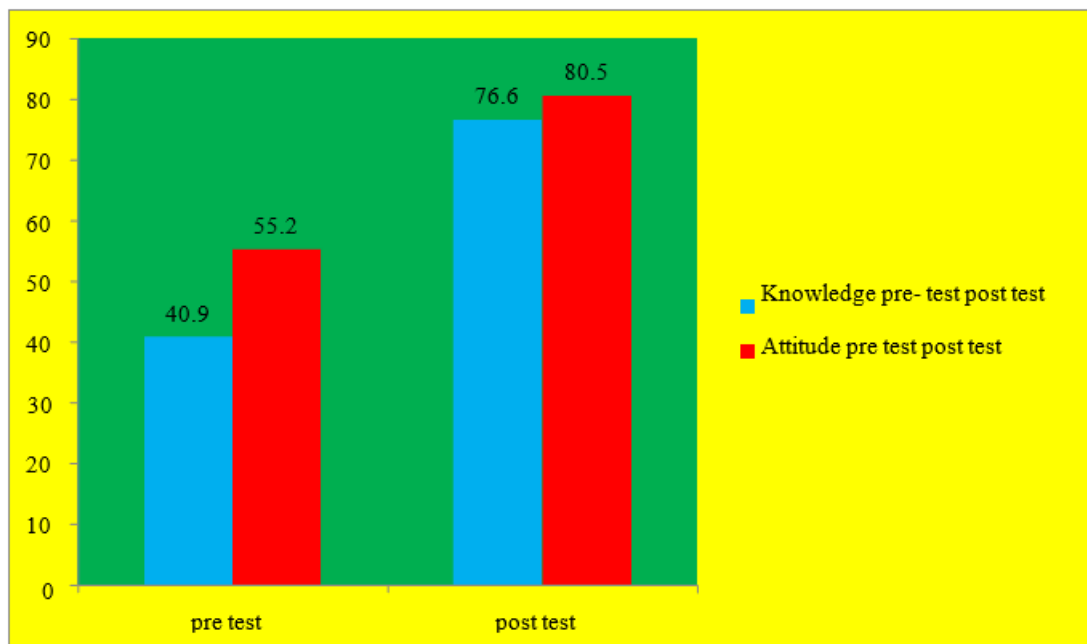


Figure 3: Correlation coefficient between Knowledge and Attitude on chemotherapy among Cancer patients.

The above table shows that there exists a positive significant relationship between knowledge and attitude scores in both pretest ($r=+0.7681$) and Posttest ($r=+0.8493$). The correlation coefficient between knowledge and attitude at pretest was 40.9% and 55.2% respectively and posttest knowledge was 76.6% and 80.5% for attitude. H_5 . There will be significant correlation between knowledge and attitude regarding chemotherapy among cancer patients.

5. Conclusion

The study demonstrated that providing an informational booklet significantly improved the knowledge and attitude of cancer patients regarding chemotherapy. Educational interventions are therefore important in enhancing patient understanding and promoting positive perceptions about cancer treatment. Nurses play a key role in delivering patient education and supporting individuals undergoing chemotherapy. Incorporating educational materials into routine oncology care can improve patient preparedness and treatment adherence.

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