

“A Study to Assess the Side Effects of Chemotherapy and Coping Strategies Adopted by Cancer Patients Admitted in SMVNC At Pondicherry”.

Ms.Sweetha.N¹ Kaviya. V², Keerthika, A³, Manisha. K⁴, Mohammed Shameer. M⁵ Mohanapriya.K⁶, & Dr. G.Muthamilselvi⁷

¹ Ms.Sweetha. N¹, Nursing Tutor, Sri Manakula Vinayagar Nursing College, Puducherry.

²⁻⁶ B.Sc Nursing, Sri Manakula Vinayagar Nursing College, Puducherry.

⁷ Principal, Sri Manakula Vinayagar Nursing College, Puducherry.

Corresponding Author: Ms.Sweetha

ABSTRACT:

INTRODUCTION: Cancer is a major global health problem marked by uncontrolled cell growth. Chemotherapy is a widely used treatment that helps control disease progression but often causes physical and psychological side effects that affect patients' quality of life. Effective coping with these side effects is essential for emotional well-being, treatment adherence, and recovery.

STATEMENT OF THE PROBLEM: A study to assess the side effects of chemotherapy and coping strategies adopted by cancer patients admitted in SMVMCH at Puducherry.

OBJECTIVES: To assess the side effects of chemotherapy and coping strategies adopted by the cancer patients. To associate the side effects of chemotherapy and coping strategies adopted by the cancer patients with their demographical variables.

METHODOLOGY: A quantitative, non-experimental descriptive research design was adopted. Using purposive sampling, 50 cancer patients undergoing chemotherapy at Sri Manakula Vinayagar Medical College and Hospital, Puducherry were selected. Data were collected using a structured demographic and clinical proforma, an observational checklist for chemotherapy side effects, and a standardized coping strategies scale. Data analysis was carried out using descriptive and inferential statistics.

RESULTS: Among the patients, 36 (72%) experienced severe chemotherapy side effects and 14 (28%) had moderate side effects. Coping strategies were used sometimes by 18 patients (36%), quite often by 15 (30%), rarely by 5 (10%), while 12 patients (24%) never used coping strategies. Significant associations were observed between chemotherapy side effects and gender, occupation status, and dietary habits, while coping strategies showed significant associations with gender, religion, occupation status, number of chemotherapy cycles, and stage of cancer.

CONCLUSION: Most cancer patients undergoing chemotherapy experienced severe side effects and demonstrated inconsistent use of coping strategies. The findings underscore the need for structured patient education, psychosocial support, and targeted nursing interventions to promote effective coping and improve quality of life in hospital settings.

I. INTRODUCTION

“You can be a victim of cancer, or a survivor of cancer. It's a mindset”

- DAVE PELZER.

Cancer is a major global health problem characterized by uncontrolled cell growth and the potential to invade or spread to other parts of the body. Chemotherapy remains one of the most commonly used systemic treatments for cancer and is administered as primary, adjuvant, neoadjuvant, or palliative therapy. While chemotherapy is effective in controlling disease progression, it is associated with a wide range of physical and psychological side effects that significantly affect patients' quality of life. The experience of side effects such as nausea, fatigue, pain, hair loss, and emotional distress often necessitates the adoption of effective coping strategies. Coping strategies play a crucial role in helping cancer patients manage treatment-related stress, enhance emotional well-being, and improve treatment adherence and outcomes.

STATEMENT OF PROBLEM:

“A Study to Assess the Side Effects of Chemotherapy and Coping Strategies Adopted by Cancer Patients Admitted in SMVNC at Puducherry.”

OBJECTIVES:

1. To assess the side effects of chemotherapy and coping strategies adopted by the cancer patients.
2. To associate the side effects of chemotherapy and coping strategies adopted by the cancer patients with their demographic variables.

NEED FOR THE STUDY:

Cancer is a major global health problem characterized by uncontrolled cell growth and spread to other organs. Worldwide cancer incidence and mortality continue to rise, with millions of new cases reported annually across countries such as the USA, UK, Japan, and India. In India alone, over 14 lakh new cancer cases are diagnosed each year, with a steady projected increase. Chemotherapy remains a primary treatment modality for cancer management. However, it is associated with significant physical and psychological side effects that adversely affect patients’ quality of life. The burden of cancer is particularly high among adults and the elderly, with increasing trends also observed in children. These treatment-related side effects often lead to emotional distress, poor treatment adherence, and reduced functional ability. Effective coping strategies are essential to help patients manage these challenges. Nurses play a vital role in identifying side effects and supporting coping mechanisms. Hence, this study was undertaken to assess the side effects of chemotherapy and coping strategies adopted by cancer patients undergoing chemotherapy.

II. MATERIALS AND METHODS:

This chapter describes the research methodology followed to assess the side effects of chemotherapy and coping strategies adopted by cancer patients admitted in Sri Manakula Vinayagar Medical College and Hospital (SMVMCH), Puducherry.

Section A:

This section consists of demographic variables such as age, gender, religion, area of living, occupation status, nature of work, monthly income, type of family, dietary habits, history of bad habits, and socio-economic status.

Section B:

This section consists of clinical variables such as duration of chemotherapy, family history of cancer, body weight changes, relaxation therapy, frequency of chemotherapy drugs per day, number of chemotherapy cycles, and stage of cancer.

Section C:

This section consists of an assessment tool to assess the side effects of chemotherapy and coping strategies adopted by cancer patients.

- Side effects of chemotherapy were assessed using an observational checklist with scores ranging from nil, mild, moderate to severe.
- Coping strategies were assessed using a standardized coping strategies scale with responses ranging from never to almost always.

SCORING INTERPRETATION

Observation Checklist for Side Effects of Chemotherapy

SCORE	INTERPRETATION
None	0
Mild	1-15
Moderate	16-30
Severe	31-45

Coping Strategies Scale

SCORE	INTERPRETATION
Never	0
Rarely	1-30
Sometimes	31-60
Quite Often	61-90
Almost Always	91-120

RESEARCH APPROACH:

A quantitative research approach was adopted for the study.

RESEARCH DESIGN:

A non-experimental descriptive research design was adopted for the study.

SETTING OF THE STUDY:

The study was conducted at Sri Manakula Vinayagar Medical College and Hospital, Puducherry.

POPULATION:

The target population for the study consisted of all cancer patients undergoing chemotherapy at SMVMCH.

SAMPLE:

The sample comprised of cancer patients undergoing chemotherapy at SMVMCH.

SAMPLE SIZE:

The sample size consisted of 50 cancer patients undergoing chemotherapy.

SAMPLING TECHNIQUE:

Purposive sampling technique was adopted for the study.

CRITERIA FOR SAMPLE SELECTION

INCLUSION CRITERIA:

- ✓ Cancer patients undergoing chemotherapy
- ✓ Both male and female patients
- ✓ Patients available at the time of data collection
- ✓ Patients willing to participate in the study

EXCLUSION CRITERIA:

- ✓ Cancer patients not available during data collection
- ✓ Patients receiving chemotherapy as outpatients
- ✓ Patients undergoing additional therapies such as yoga or other stress-relieving therapies
- ✓ Patients not willing to participate in the study

DATA COLLECTION PROCEDURE:

Permission to conduct the study was obtained from the concerned authorities of SMVMCH. The purpose of the study was explained to the participants, and informed consent was obtained. Data were collected from 50 cancer patients using purposive sampling technique based on inclusion and exclusion criteria. The tool consisted of demographic variables, clinical variables, and assessment scales for side effects of chemotherapy and coping strategies.

III. RESULTS:

- ✓ Among the cancer patients, 36 (72%) experienced severe side effects of chemotherapy, while 14 (28%) experienced moderate side effects.
- ✓ With regard to coping strategies, 18 (36%) sometimes used coping strategies, 15 (30%) used them quite often, 12 (24%) never used coping strategies, and 5 (10%) used them rarely.
- ✓ Significant associations were observed between chemotherapy side effects and selected variables such as gender, occupation status, and dietary habits.
- ✓ Coping strategies showed significant association with gender, religion, occupation status, number of chemotherapy cycles, and stage of cancer.

S.No	Demographic Variables	Number of Frequency	Percentage (%)
1.	Age in years		
	a) 21-30 years	20	40
	b) 31-40 years	20	40
	c) 41-50 years	10	20
	d) 60 years	0	0
2.	Gender		
	a) Male	25	50
	b) Female	25	50
	c) Transgender	0	0
3.	Religion		
	a) Hindu	22	44
	b) Muslim	18	36
	c) Christian	10	20
	d) Others	0	0

Table 1: Distribution of the demographic variables of cancer patients. According to their frequency and percentage. N=50

The above table shows the distribution of respondents according to age, gender, and religion. With regard to age, the majority of the respondents 20 (40%) were in the age group of 21–30 years and 31–40 years respectively. About 10 (20%) respondents belonged to the age group of 41–50 years, and none of the respondents were above 60 years of age.

Regarding gender, equal numbers of respondents were male and female. Out of 50 respondents, 25 (50%) were male and 25 (50%) were female, and none of the respondents belonged to the transgender category. In relation to religion, the majority of respondents 22 (44%) were Hindus, followed by 18 (36%) Muslims, and 10 (20%) Christians. None of the respondents belonged to other religions.

Overall, the table indicates that most respondents were between 21–40 years of age, with equal gender distribution, and the majority belonged to the Hindu religion

Table 2: Distribution of the demographic variables of cancer patients. According to their frequency and percentage. N=50

S.No	Demographic Variables	Number of Frequency	Percentage (%)
	Occupation status		
	a) Employed	9	18
	b) Unemployed	13	26
	c) Self-employed	14	28
	d) Daily wages	14	28
1.	Nature of work		
	a) Sedentary	24	48
	b) Moderate	19	38
	c) Heavy	7	14
2.	Monthly income per month		
	a) Above 50,000/-	4	8
	b) 30,000-50,000/-	19	38
	c) 10001-30,000/-	25	50

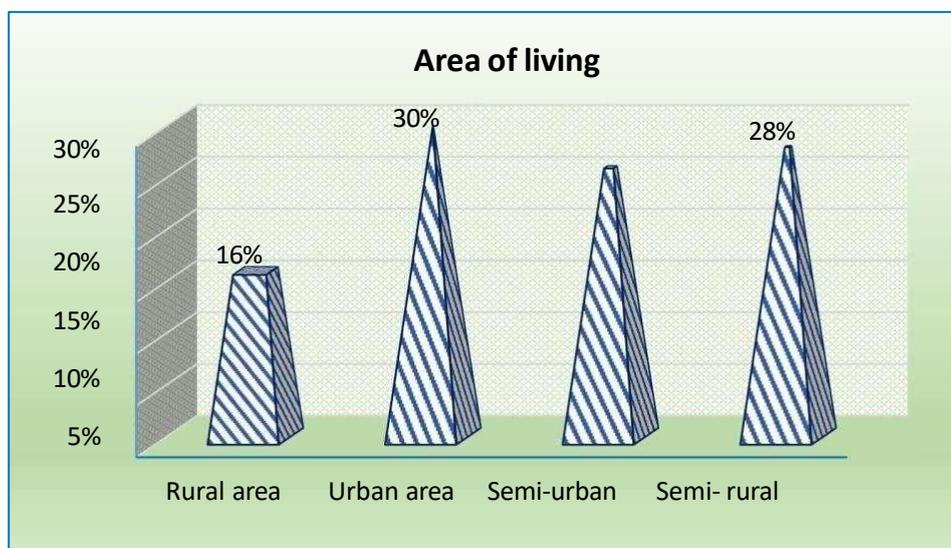
The above table shows the distribution of respondents according to occupation status, nature of work, and monthly income.

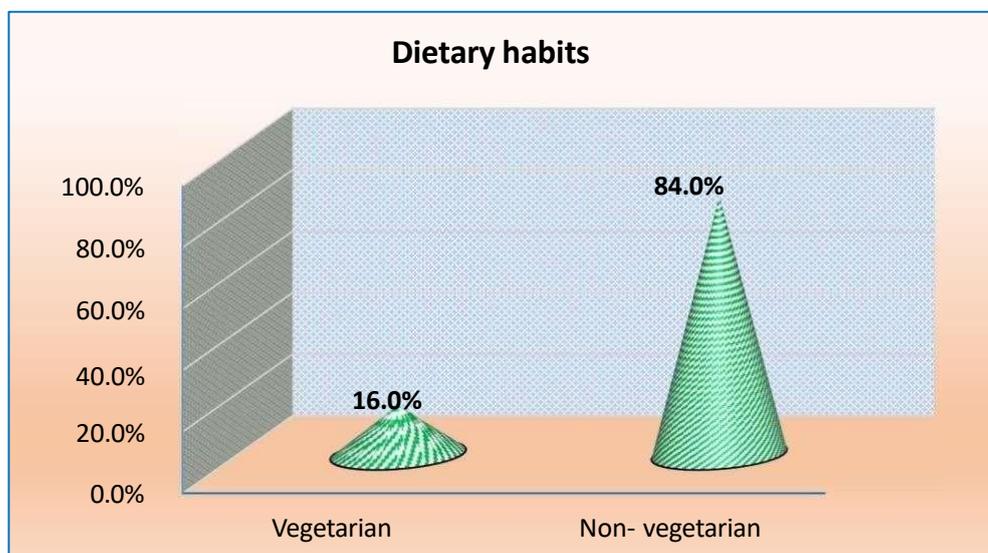
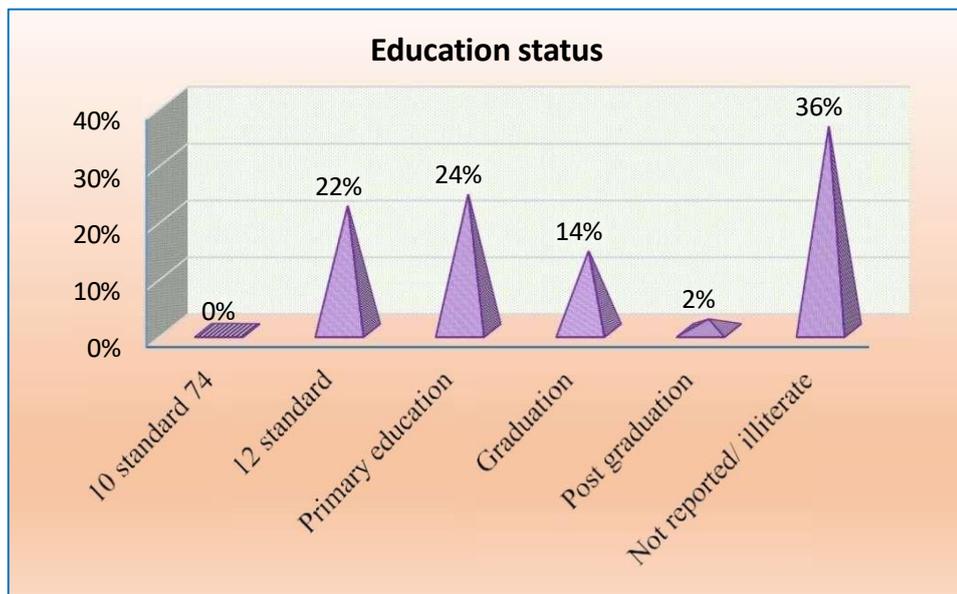
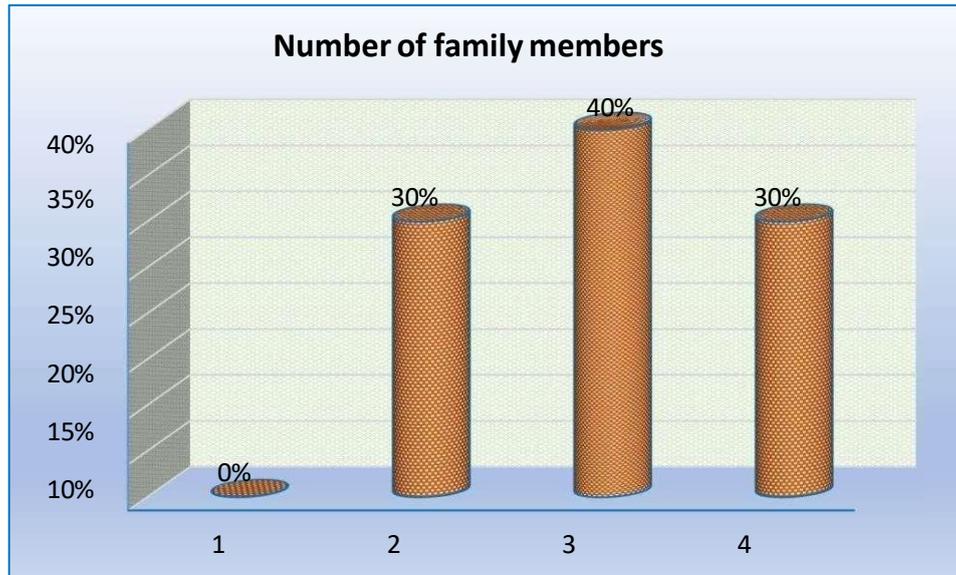
With regard to occupation status, the majority of the respondents were self-employed and daily wage workers, each constituting 14 (28%) of the total sample. About 13 (26%) respondents were unemployed, and 9 (18%) respondents were employed.

Regarding the nature of work, nearly half of the respondents 24 (48%) were involved in sedentary work. About 19 (38%) respondents were doing moderate work, and only 7 (14%) respondents were involved in heavy work.

In relation to monthly income, half of the respondents 25 (50%) had a monthly income between Rs. 10,001–30,000. About 19 (38%) respondents had a monthly income between Rs. 30,000–50,000, and only 4 (8%) respondents had a monthly income above Rs. 50,000 per month.

Overall, the table indicates that most of the respondents were self-employed or daily wage workers, engaged mainly in sedentary or moderate work, and the majority had a monthly income between Rs. 10,001–30,000.





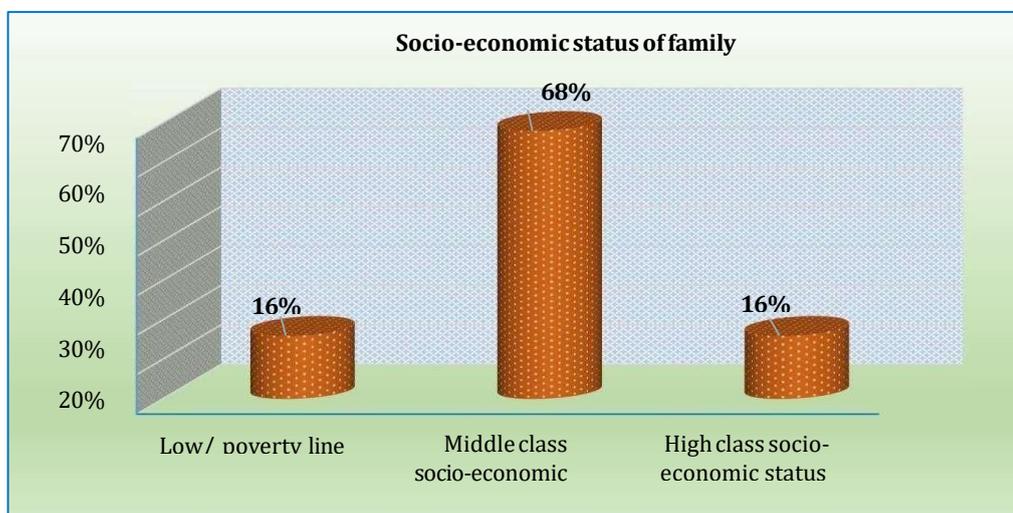
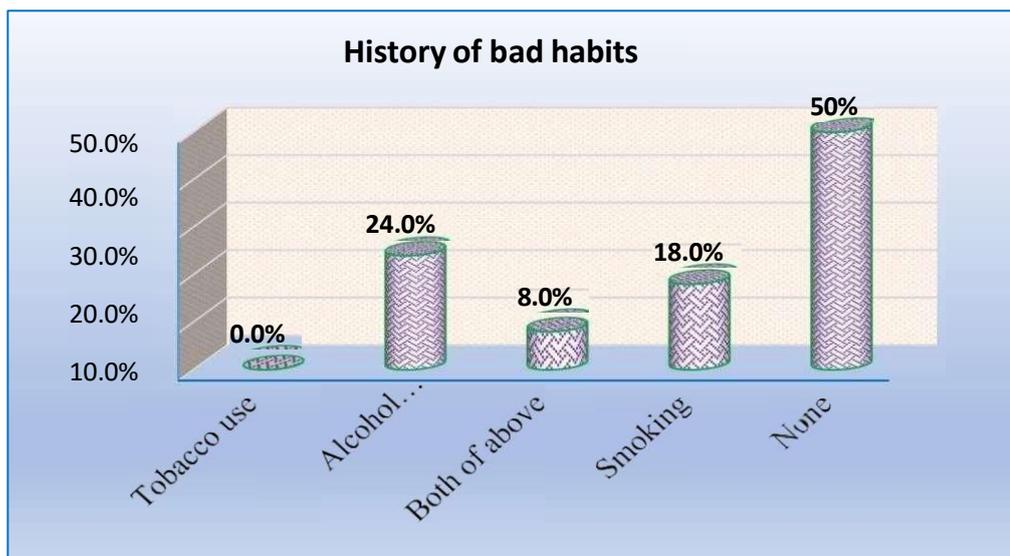
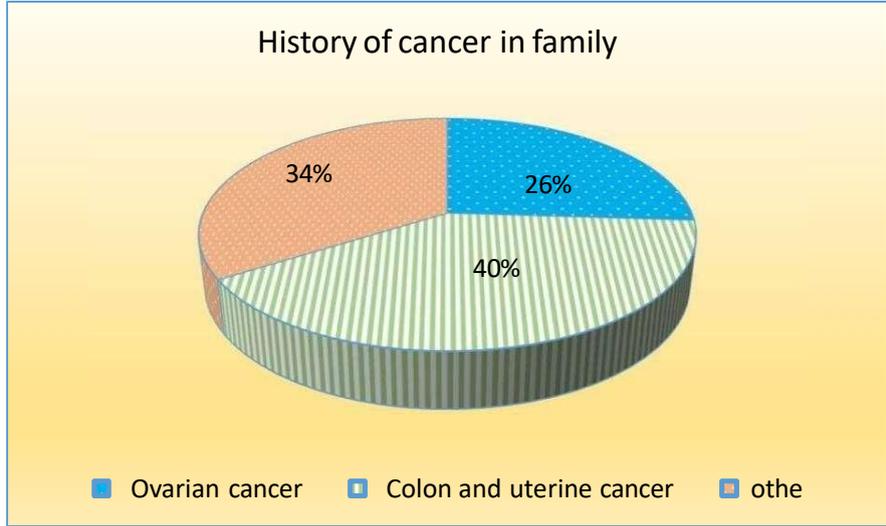
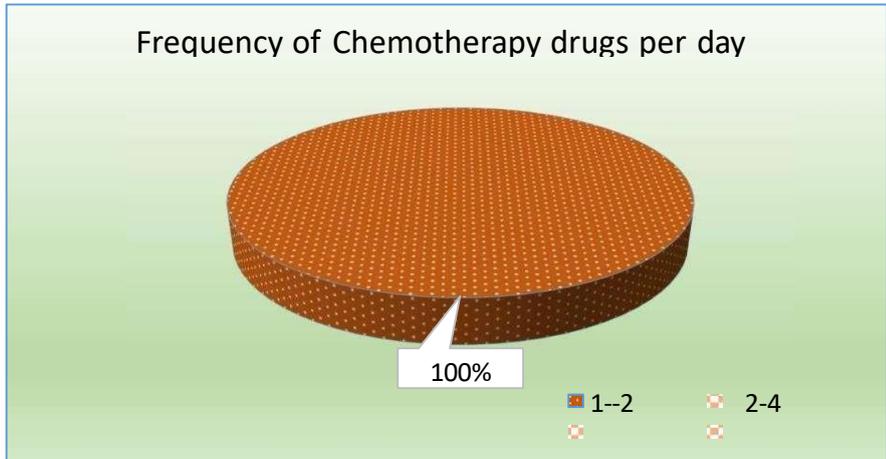
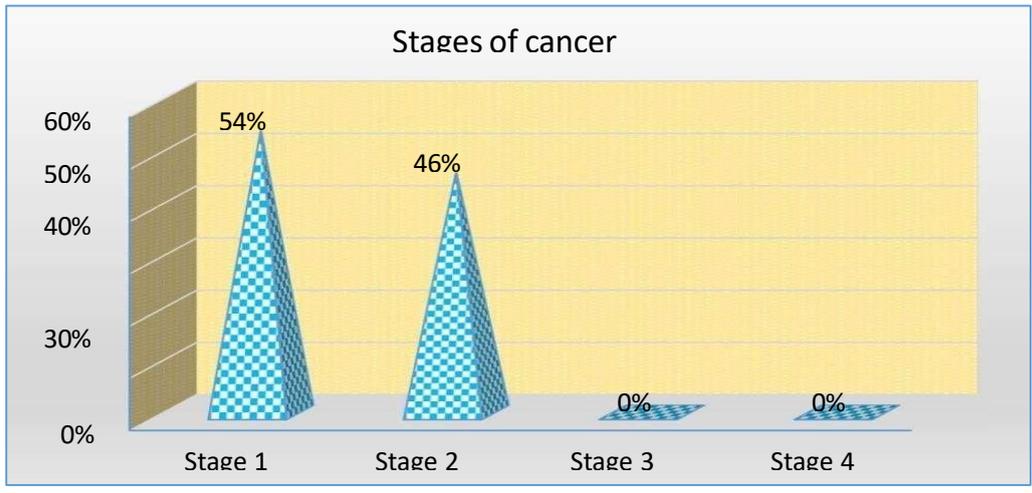


Table 2: Distribution of the clinical variables of cancer patients. According to their frequency and percentage

S.No	Clinical Variables	Number of Frequency	Percentage (%)
1	Body weight changes		
	a) 1-3 kg	22	44
	b) 4-6 kg	28	56
	c) 7-9 kg	0	0
	d) >10 kg	0	0
2	Relaxation therapy		
	a) yoga	26	52
	b) reflexology	0	0
	c) swimming	0	0
	d) aerobic exercise	24	48
3.	Cycles of chemotherapy		
	a) 1	13	26
	b) 2	25	50
	c) 3	12	24
	d) 4	0	0



Tabel 4.3: Frequency and distribution of the level of side effects of chemotherapy among cancer patients.
N=50

S.No	Level of side effects	Frequency (n)	Percentage %
1.	Severe	36	72
2.	Moderate	14	28
3.	Mild	0	0

Tabel 4.4: Frequency and distribution of level of coping strategies among cancer patients.
N=50

S.No	Level of Coping strategies	Frequency (n)	Percentage %
1.	Never	12	24
2.	Rarely	05	10
3.	Sometimes	18	36
4.	Quite often	15	30
5.	Almost always	0	0

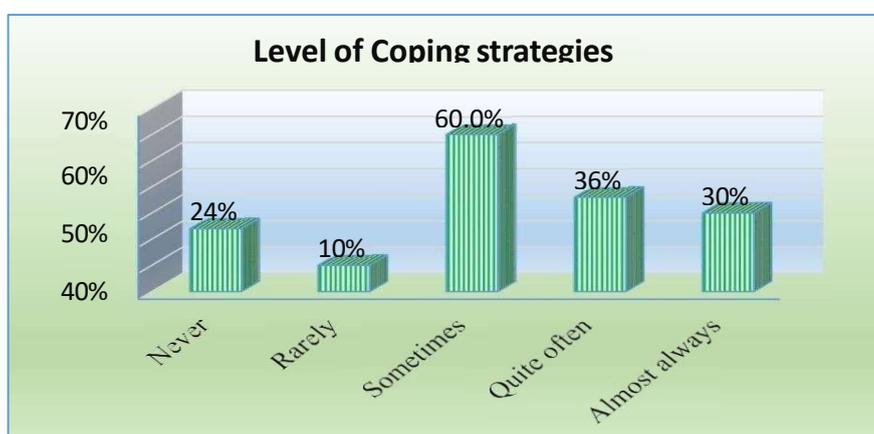


Table 4.5: Association of the level of side effects of chemotherapy among cancer patients with selected demographic variables

S.NO	Demographic Variables	Level of side effects of chemotherapy						X ² Value
		Mild		Moderate		Severe		
		N	%	N	%	N	%	
1.	Age in years							X ² = 3.125 Df =2 P= 0.210 (NS)
	a) 21-30 years	0	0	0	0	0	0	
	b) 31-40 years	12	24	8	16	0	0	
	c) 41-50 years	17	34	3	6	0	0	
2.	Gender							X ² = 4.235 Df =1 P= 0.032 (S)*
	a) Female	19	38	6	12	0	0	
	b) Male	17	34	8	16	0	0	
	c) Transgender	0	0	0	0	0	0	
3.	Religion							X ² = 0.577 Df = 2 P= 0.749 (NS)
	a) Hindu	16	32	6	12	0	0	
	b) Muslim	12	24	6	12	0	0	
	c) Christian	8	16	2	4	0	0	
4.	Area of living							X ² = 0.975 Df =3 P= 0.807 (NS)
	a) Rural area	6	12	2	4	0	0	
	b) Urban area	12	24	3	6	0	0	
	c) Semi-urban area	9	18	4	8	0	0	

	d) Semi- rural area	9	18	5	10	0	0	
5.	Number of family members							X ² = 1.058 Df =2 P= 0.589 (NS)
	a) 1	0	0	0	0	0	0	
	b) 2	10	20	5	10	0	0	
	c) 3	16	32	4	8	0	0	
	d) 4	10	20	5	10	0	0	
6.	Educational status							X ² = 3.097 Df =5 P= 0.685 (NS)
	a) 10 standard	0	0	0	0	0	0	
	b) 12 standard	9	18	2	4	0	0	
	c) Primary education	7	14	5	10	0	0	
	d) Graduation	6	12	1	2	0	0	
	e) Post graduation	1	2	0	0	0	0	
	f) Not reported/ illiterate	13	26	6	12	0	0	

The above table shows that there is a significant association between gender and level of side effects of chemotherapy, and there is no significant association between age, religion, area of living, number of family members, and educational status with the level of side effects of chemotherapy among cancer patients.

S.NO	Demographic Variables	Level of side effects of chemotherapy						X ² Value
		Mild		Moderate		Severe		
		N	%	N	%	N	%	
7	Occupation status							X ² = 10.232 Df =3 P= 0.025 (S)*
	a) Employed	5	10	4	8	0	0	
	b) Unemployed	12	24	1	2	0	0	
	c) Self-employed	8	16	6	12	0	0	
	d) Daily wages	11	22	3	6	0	0	
8	Nature of work							X ² = 0.795 Df =2 P= 0.672 (NS)
	a) Sedentary	16	32	8	16	0	0	
	b) Moderate	15	30	4	8	0	0	
	c) Heavy	5	10	2	4	0	0	
9	Monthly income per month							X ² = 2.044 Df =3 P= 0.563 (NS)
	a) Above 50,000/-	3	6	1	2	0	0	
	b) 30,000-50,000/-.	15	30	4	8	0	0	
	c) 10001-30,000/-	16	32	9	18	0	0	
	d) Less than 10,000/-	2	4	0	0	0	0	
10	Type of family							X ² = 0.905 Df =2 P= 0.636 (NS)
	a) Nuclear	11	22	4	8	0	0	
	b) Joint	21	42	7	14	0	0	
	c) Extended family	4	8	3	6	0	0	
11	Dietary habits							X ² = 5.024 Df = 1 P= 0.012 (S)*
	a) Vegetarian	4	8	4	8	0	0	
	b) Non- vegetarian	32	64	10	20	0	0	
12	History of bad habits							X ² = 0.198 Df =3 P= 0.978 (NS)
	a) Tobacco use	0	0	0	0	0	0	
	b) Alcohol consumption	9	18	3	6	0	0	
	c) Both of above	3	6	1	2	0	0	
	d) Smoking	6	12	3	6	0	0	
	e) None	18	36	7	14	0	0	
13	Socio-economic status of family							X ² = 3.205 Df = 2 P= 0.201 (NS)
	a) Low/ poverty line	5	10	3	6	0	0	
	b) Middle class socio-economic status	27	54	7	14	0	0	
	c) High class socio- economic status	4	8	4	8	0	0	

The above table shows that there is a significant association between occupation status and dietary habits with the level of side effects of chemotherapy, whereas there is no significant association between nature of work, monthly income, type of family, history of bad habits, and socio-economic status with the level of side effects of chemotherapy among cancer patients.

Table 4.6: Association between the level of coping strategies among cancer patients with selected demographic variables.

S.No	Demographic Variables	Coping strategies								X ² Value
		Never		Rarely		Some Times		Quite often		
		N	%	N	%	N	%	N	%	
1	Age in years									X ² = 7.958 Df =6 P= 0.241 (NS)
	a) 21-30 years	0	0	0	0	0	0	0	0	
	b) 31-40 years	6	12	4	8	6	12	4	8	
	c) 41-50 years	3	6	0	0	8	16	9	18	
	d) 60 years	3	6	1	2	4	8	2	4	
2	Gender									X ² = 7.915 Df =3 P= 0.052 (S)*
	a) Female	9	18	1	2	7	14	8	16	
	b) Male	3	6	4	8	11	22	7	14	
	c) Transgender	0	0	0	0	0	0	0	0	
3	Religion									X ² = 13.221 Df = 6 P= 0.041 (S)*
	a) Hindu	4	8	1	2	10	20	7	14	
	b) Muslim	4	8	3	6	7	14	4	8	
	c) Christian	4	8	1	2	1	2	4	8	
	d) Others	0	0	0	0	0	0	0	0	
4	Area of living									X ² = 8.879 Df =9 P= 0.449 (NS)
	a) Rural area	1	2	1	2	3	6	1	2	
	b) Urban area	3	6	1	2	8	16	3	6	
	c) Semi-urban area	6	12	2	4	2	4	6	12	
	d) Semi-rural area	2	4	1	2	5	10	2	4	

The above table shows that there is a significant association between gender and religion with coping strategies, whereas there is no significant association between age and area of living with coping strategies among cancer patients.

S.No	Demographic Variables	Coping strategies								X ² Value
		Never		Rarely		Some Times		Quite often		
		N	%	N	%	N	%	N	%	
5	Number of family members									X ² = 8.879 Df =9 P= 0.449 (NS)
	a) 1	0	0	0	0	0	0	0	0	
	b) 2	5	10	2	4	5	10	3	6	
	c) 3	4	8	1	2	9	18	6	12	
	d) 4	3	6	2	4	4	8	6	12	
6	Marital status									X ² = 6.863 Df =15 P= 0.961 (NS)
	a) 10 standards	0	0	0	0	0	0	0	0	
	b) 12 standards	3	6	1	2	5	10	2	4	
	c) Primary education	2	4	1	2	4	8	5	10	
	d) Graduation	1	2	1	2	3	6	2	4	
	e) Post graduation	0	0	0	0	1	2	0	0	
	f) Not reported/ illiterate	6	12	2	4	5	10	6	12	
7	Occupation status									X ² = 17.535 Df =9 P= 0.042 (S)*
	a) Employed	2	4	2	4	2	4	3	6	
	b) Unemployed	2	4	0	0	7	14	4	8	
	c) Self-employed	4	8	2	4	4	8	4	8	
	d) Daily wages	4	8	1	2	5	10	4	8	
8	Nature of work									X ² = 5.754 Df =6 P= 0.451 (NS)
	a) Sedentary	4	8	4	8	9	18	7	14	
	b) Moderate	6	12	0	0	8	16	5	10	
	c) Heavy	2	4	1	2	1	2	3	6	
9	Monthly income per month									X ² = 5.874 Df = 9 P= 0.752 (NS)
	a) Above 50,000/-	2	4	0	0	0	0	2	4	
	b) 30,000-50,000/-	3	6	2	4	8	16	6	12	
	c) 10001-30,000/-	7	14	3	6	9	18	6	12	
	d) Less than 10,000/-	0	0	0	0	1	2	1	2	
10	Type of family									X ² = 3.038 Df = 6 P= 0.804 (NS)
	a) Nuclear	3	6	1	2	5	10	6	12	
	b) Joint	8	16	3	6	9	18	8	16	
	c) Extended family	1	2	1	2	4	8	1	2	

The above table shows that there is a significant association between occupation status with coping strategies, whereas there is no significant association between number of family members, marital status, nature of work, monthly income, and type of family with coping strategies among cancer patients.

S.No	Demographic Variables	Coping strategies								X ² Value
		Never		Rarely		Some Times		Quite often		
		N	%	N	%	N	%	N	%	
11	Dietary habits									X ² = 9.358 Df = 3 P= 0.025 (S)*
	a) Vegetarian	3	6	2	4	1	2	2	4	
	b) Non- vegetarian	9	18	3	6	17	34	13	26	
12	History of bad habits									X ² = 13.711 Df = 9 P= 0.133 (NS)
	a) Tobacco use	0	0	0	0	0	0	0	0	
	b) Alcohol consumption	4	8	1	2	3	6	4	8	
	c) Both of above	0	0	0	0	1	2	3	6	
	d) Smoking	5	10	0	0	3	6	1	2	
	e) None	3	6	4	8	11	22	7	14	
13	Socio-economic status of family									X ² = 2.273 Df = 6 P= 0.893 (NS)
	a) Low/ poverty line	3	6	0	0	2	4	3	6	
	b) Middle class socio- economic status	7	14	4	8	13	26	10	20	
	c) High class socio- economic status	2	4	1	2	3	6	2	4	

Significance at p<0.05

The above table shows that there is a significant association between dietary habits and coping strategies, whereas there is no significant association between history of bad habits and socio-economic status with coping strategies among cancer patients.

Table 4.7: Association between the level of coping strategies among cancer patients with selected clinical variables.

S. No	Clinical Variables	Level of side effects of chemotherapy						X ² Value
		Mild		Moderate		Severe		
		N	%	N	%	N	%	
1	Body weight changes							X ² = 1.878 Df = 1 P= 0.171 (NS)
	a) 1-3 kg	18	36	4	8	0	0	
	b) 4-6 kg	18	36	10	20	0	0	
	c) 7-9 kg	0	0	0	0	0	0	
	d) >10 kg	0	0	0	0	0	0	
2.	Relaxation therapy							X ² = 0.031 Df = 1 P= 0.860 (NS)
	a) Yoga	19	38	7	14	0	0	
	b) reflexology	0	0	0	0	0	0	
	c) swimming	0	0	0	0	0	0	
	d) aerobic exercise	17	34	7	14	0	0	
3.	Cycle of Chemotherapy							X ² = 8.256 Df = 2 P= 0.018 (S)*
	a) 1	9	18	4	8	0	0	
	b) 2	18	36	7	14	0	0	
	c) 3	9	18	3	6	0	0	
	d) 4	0	0	0	0	0	0	

Significance at p<0.05

The above table shows that there is significance association of Cycles of chemotherapy and Stages of cancer with the level of coping strategies among cancer patients with selected clinical variables

S. No	Clinical Variables	Level of side effects of chemotherapy						X ² Value
		Mild		Moderate		Severe		
		N	%	N	%	N	%	
4.	Stages of cancer							X ² = 6.724 Df = 1 P= 0.023 (S)*
	a) Stage 1	19	38	8	16	0	0	
	b) Stage 2	17	34	6	12	0	0	
	c) Stage 3	0	0	0	0	0	0	

“A Study to Assess the Side Effects of Chemotherapy and Coping Strategies Adopted by ..

5.	d) Stage 4 Frequency of Chemotherapy drugs per day	0	0	0	0	0	0	0	0	X ² = a
	a) 1-2	36	72	14	28	0	0	0	0	
	b) 2-4	0	0	0	0	0	0	0	0	
	c) 3-4	0	0	0	0	0	0	0	0	
	d) >4	0	0	0	0	0	0	0	0	
6	History of cancer in family									X ² = 4.105 Df = 2 P= 0.128 (NS)
	a) Ovarian cancer	12	24	1	2	0	0	0	0	
	b) Colon and uterine cancer	12	24	8	16	0	0	0	0	
	c) other	12	24	5	10	0	0	0	0	

Significance at p<0.05

The above table shows that there is significance association of Cycles of chemotherapy and Stages of cancer with the level of coping strategies among cancer patients with selected clinical variables.

S.No	Clinical Variables	Level of side effects of chemotherapy								X ² Value
		Never		Rarely		Some Times		Quiet often		
		N	%	N	%	N	%	N	%	
1	Body weight changes									X ² = 0.419 Df =3 P= 0.936 (NS)
	a) 1-3 kg	5	10	2	4	9	18	6	12	
	b) 4-6 kg	7	14	3	6	9	18	9	18	
	c) 7-9 kg	0	0	0	0	0	0	0	0	
	d) >10 kg	0	0	0	0	0	0	0	0	
2.	Relaxation therapy									X ² = 11.782 Df =3 P= 0.014 (S)*
	a) Yoga	7	14	3	6	10	20	6	12	
	b) reflexology	0	0	0	0	0	0	0	0	
	c) swimming	0	0	0	0	0	0	0	0	
	d) aerobic exercise	5	10	2	4	8	16	9	18	
3.	Cycles of chemotherapy									X ² = 14.548 Df = 6 P= 0.021 (S)*
	a) 1	4	8	1	2	4	8	4	8	
	b) 2	7	14	2	4	8	16	8	16	
	c) 3	1	2	2	4	6	12	3	6	
	d) 4	0	0	0	0	0	0	0	0	

Significance at p<0.05

The above table shows that there is significance association of relaxation therapy and stages of cancer with the level of coping strategies among cancer patients with selected clinical variables.

S.No	Clinical Variables	Level of side effects of chemotherapy								X ² Value
		Never		Rarely		Some Times		Quiet often		
		N	%	N	%	N	%	N	%	
4.	Stages of cancer									X ² = 0.483 Df =3 P= 0.923 (NS)
	a) Stage 1	6	12	3	6	9	18	9	18	
	b) Stage 2	6	12	2	4	9	18	6	12	
	c) Stage 3	0	0	0	0	0	0	0	0	
	d) Stage 4	0	0	0	0	0	0	0	0	
5.	Frequency of Chemotherapy drugs per day									X ² = a
	a) 1-2	12	24	5	10	18	36	15	30	
	b) 2-4	0	0	0	0	0	0	0	0	
	c) 3-4	0	0	0	0	0	0	0	0	
	d) 4	0	0	0	0	0	0	0	0	
6	History of cancer in family									X ² = 6.212 Df =6 P= 0.400 (NS)
	a) Ovarian cancer	1	2	1	2	7	14	4	8	
	b) Colon and uterine cancer	5	10	1	2	7	14	7	14	
	c) other	6	12	3	6	4	8	4	8	

Significance at p<0.05

The above table shows that there is significance association of relaxation therapy and stages of cancer with the level of coping strategies among cancer patients with selected clinical variables.

IV. CONCLUSION:

The major findings of the study reveal that the majority of cancer patients 36 (72%) experienced severe side effects of chemotherapy, while 14 (28%) experienced moderate side effects. With regard to coping strategies, most of the cancer patients sometimes used coping strategies. Significant associations were found between gender, occupation status, and dietary habits with the level of side effects of chemotherapy. There was also a significant association between cycles of chemotherapy and stage of cancer with the level of coping strategies among cancer patients.

NURSING IMPLICATIONS:

The findings of the present study have implications related to nursing administration, nursing services, nursing education, and nursing research.

NURSING ADMINISTRATION:

Nurse administrators can formulate and implement policies and guidelines to improve the management of chemotherapy side effects and promote effective coping strategies among cancer patients undergoing chemotherapy.

NURSING SERVICES:

Nurses, as caregivers, counsellors, and educators, should provide adequate information and emotional support to cancer patients regarding chemotherapy side effects and coping strategies. Nurses should be empathetic, supportive, and approachable while caring for patients.

NURSING EDUCATION:

- Nursing educators should strengthen teaching on chemotherapy side effects and coping strategies among undergraduate and postgraduate nursing students.
- Students should be trained to apply evidence-based nursing practices in caring for patients undergoing chemotherapy.

NURSING RESEARCH:

- The findings of this study provide baseline data for nurses and students to conduct further research in this area.
- Similar studies can be replicated with different settings and populations to validate and generalize the findings.

V. RECOMMENDATIONS:

Based on the findings of the present study, the following recommendations are made:

- A similar study can be conducted with a larger sample size for better generalization.
- Comparative studies can be conducted in different hospital settings.
- Further research may be undertaken to explore long-term effects of chemotherapy and coping strategies on quality of life among cancer patients.

BOOK REFERENCES:

- [1]. Yarbro, C. H., Wujcik, D., & Gobel, B. H. (2018). *Cancer Nursing: Principles and Practice* (8th ed.). Jones & Bartlett Learning.
- [2]. Kelly, P. (2019). *Oncology Nursing*. Wolters Kluwer.
- [3]. Cowan, K., & Briggs, P. (2018). *Coping with Cancer: A Guide to Psychological Support*. Routledge.
- [4]. McKay, J., & Schacher, T. (2018). *The Chemotherapy Survival Guide*. Demos Health.
- [5]. Geiger, C. (2018). *The Cancer Survivor's Club: A Guide to Living Your Best Life After Cancer*. Skyhorse Publishing.

JOURNAL REFERENCES:

- [6]. Aaronson N. K., Ahmedzai S., Bergman B., Bullinger M., Cull A., Duez N. J., et al. (1993). The European Organization for Research and Treatment of Cancer QLQ-C30: a Quality-Of-Life Instrument for Use in International Clinical Trials in Oncology. *JNCI J. Natl. Cancer Inst.* 85 (5), 365–376.
- [7]. Ahles T. A., Li Y., McDonald B. C., Schwartz G. N., Kaufman P. A., Tsongalis G. J., et al. (2014). Longitudinal Assessment of Cognitive Changes Associated with Adjuvant Treatment for Breast Cancer: the Impact of APOE and Smoking. *Psycho-Oncology* 23 (12), 1382–1390.
- [8]. G. Sathyavathy, Evaluate the effectiveness of STP on **knowledge and attitudes about safety measures regarding handling of chemotherapy drugs** with cancer clients among the nurses in GOVT general hospital at Anantapur, *International Journal of renewable energy exchange- JYTU*, ISSN:2321-1067/Volume 10, Issue 12, Impact Factor : 7.52, PP 110-117.
- [9]. Ahles T. A., Root J. C. (2018). Cognitive Effects of Cancer and Cancer Treatments. *Annu. Rev. ClinPsychol.* 14, 425–451. 10.1146/annurev-clinpsy-050817-084903 – DOI – PMC – PubMed
- [10]. Ahles T. A., Saykin A. J. (2007). Candidate Mechanisms for Chemotherapy- Induced Cognitive Changes. *Nat. Rev. Cancer* 7 (3), 192–201.
- [11]. Ahles T. A., Saykin A. J., McDonald B. C., Furstenberg C. T., Cole B. F., Hanscom B. S., et al. (2008). Cognitive Function in Breast Cancer Patients Prior to Adjuvant Treatment. *Breast Cancer Res. Treat.* 110 (1), 143–152.

- [12]. Dr. G. Muthamilselvi, Soyabean-“Yellow Jewel” TNNMC Journal of Obstetrics and Gynaecological Nursing 4 (2), 31-34.
- [13]. Dr. G. Muthamilselvi, Assess The Knowledge And Practice On Management Of Chronic Renal Failure And To Identify The Factors Influencing Compliance Among The Hemodialysis Patients, International Journal of Multidisciplinary Educational Research 3.
- [14]. G. Sathyavathy, **Marburg Virus Disease (MVD)**, *International Journal of Nursing and Health Science (IOSR-JNHS)* e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 12, Issue 3 Ser.3 (May. – June. 2023), impact factor: 4.59, Ser.3 (May. – June. 2023), PP 24-31.

NET REFERENCES;

- [15]. <https://www.who.int/> (World Health Organization)
- [16]. <https://www.cancer.org/> (American Cancer Society)
- [17]. <https://www.cancer.gov/> (National Cancer Institute)
- [18]. <https://www.mayoclinic.org/> (Mayo Clinic)