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ACTIONS ADOPTED IN MANAGING THE COMMON SIDE EFFECTS OF CHEMOTHERAPY AMONG PATIENTS WITH BREAST CANCER

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ABSTRACT

Aim: The aim of the study was to assess the actions adopted in managing the common side effects of chemotherapy among patients with breast cancer. Method: A descriptive study design was adopted. Sixty participants were selected by the Non- Probability Convenience sampling method. The data collection was done by using a semi-structured questionnaire to elicit the demographic variables of the patients with breast cancer who received chemotherapy and actions adopted in managing the common side effects of chemotherapy. Results: Frequency and percentage distribution of the patients with breast cancer by their demographic variables showing 50% of the samples were in the age group of 56-65 years, 88.3% of the samples belong to the Hindu religion and 28.3% were graduates. 50% of the samples were unemployed and 40% of them had a monthly income of Rs. 5001- Rs. 10,000, the majority (83.3%) of the samples were married, 63.3% were non-vegetarians, 16.3% had a family history of cancer. 8.3% of the samples came for the 6th cycle of chemotherapy and 46.7% of samples received information on the management of side effects of chemotherapy, among them 92.86% of the samples received information through the health care personnel. In patients with breast cancer and receiving chemotherapy with respect to the actions adopted in managing the common side effects of chemotherapy how the majority (91.7%) of the samples experienced a loss of appetite, 81.7% of the samples experienced nausea, and 65% had vomiting. (70%) of the samples experienced mouth ulcers and throat sores, only 46.67% of the samples experienced heartburn all of the samples (100%) experienced fatigue. 80% of the samples had hair loss, 71.7% samples experienced constipation, 33.3% of the samples experienced diarrhea, 63.3% of the samples experienced numbness in hands and feet, 71.7% samples experienced dry skin, 38.3% of the samples experienced memory loss, 43.3% of the samples experienced other side effects of chemotherapy, and among them 57.69% experienced hiccoughs and 34.6% experienced sleeplessness. So various actions were taken by the samples to manage the

side effects of chemotherapy, for an example, 66.6% were sucked on ice chips for mouth and throat ulcers, 75% were stayed away from fried foods for heart burn, 81.6% samples were took more fruits and vegetables for fatigue. Conclusion: As a result of the study findings, the investigator was able to gain an understanding of the actions she was taking to manage common side effects of chemotherapy among patients with breast cancer, which is hel for the planning nursing interventions for those who are receiving chemotherapy and have breast cancer.

INTRODUCTION

Worldwide, Breast Cancer (BC) is the most commonly diagnosed cancer in women with more than 2 million new cases in 2020 [1]. Its incidence is often related to heredity, age between 40 to 60 years, parity, and overweight of women, before and after menopause is higher [2,3]. It is one of the most common malignant tumors that usually occur in the glandular epithelium of the breast, seriously affecting women's physical and mental health and even life-threatening [4]. Chemotherapy refers to the use of drugs to treat a disease. Surgery and radiation kill cancer cells in specific areas, while chemotherapy works throughout the body.

Chemotherapy can destroy cancer cells that have spread to various parts of the body. With the emergence of new drugs and the strengthening of the status of chemotherapy in recent years, the cure rate of breast cancer has been significantly improved [5]. However, chemotherapy has its own shortcomings, mainly because the side effects are too large, which is difficult for patients to accept. Patients with breast cancer usually have corresponding psychological and physiological symptoms following chemotherapy [6]. Psychological symptoms manifested as anxiety, intensive concentration, depression, and other emotions, while physiological symptoms often showed vomiting, fatigue, weight reduction, cachexia, alopecia, and so on, and a few cases showed decreased libido and neurological signs. In most women's minds, there is no scarier diagnosis other than that of breast cancer [7]. It can affect almost any part of the body. The growths of cells often invade surrounding tissue and can metastasize to distant sites.

Global Scenario:

Worldwide, with over 2.3 million new cases and 685,000 deaths in 2020, breast cancer is the most commonly diagnosed cancer most cases occur in transitioned countries yet have a disproportionate share of breast cancer deaths. The future burden of breast cancer is predicted to increase to over 3 million new cases and 1 million deaths in 2040 [8]. The incidence of breast cancer is increasing in the developing world due to increased life expectancy, increased urbanization, and the adoption of western lifestyles. Although some risk reduction might be achieved with prevention, these strategies cannot eliminate the majority of breast cancers that develop in low- and middle-income countries where breast cancer is diagnosed in very late stages [9]. Therefore, early detection and prompt management are essential in order to improve breast cancer outcomes and survival and at the same time, patients have to manage the side effects of treatment is very challenging. The multi-disciplinary approach to breast cancer treatment includes radiation therapy, chemotherapy, surgery, hormonal therapy, and gene therapy [10]. Among these, chemotherapy remains the mainstay of treatment. In chemotherapy, anti-neoplastic agents are used in an attempt to kill tumor cells by interfering with cellular functions and reproduction. Chemotherapy utilizes a powerful combination of drugs that are either taken by mouth or injected directly into the bloodstream [11]. Unfortunately, cancer cells are not the only cells in the body that divide and replicate quickly. In addition to cancerous cells, chemotherapy drugs also kill some regular healthy cells causing side effects.

The side effects are inconvenient and uncomfortable and may prevent doctors from delivering the prescribed dose of therapy according to the schedule of the treatment plan [12]. So, the investigator finds it imperative to assess the actions adopted in managing the common side effects of chemotherapy among patients with breast cancer.

Need and Significance of the study

Side effects of chemotherapy not only cause discomfort and unpleasantness but may also compromise the chance of a cure by preventing the delivery of therapy at its optimal dose and time. Because the replacement of healthy tissues will limit the length and severity of side effects, it is particularly important for patients with cancer to maintain good nutrition even when they don't feel well. Many of the side effects of chemotherapy can be managed by medications, but some will require adjusting both their way of thinking about themselves and their illness and the way they go about their daily activities. The main reason was the patients were unable to bear the effects of chemotherapy.

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- From personal experience, the investigator has seen patients receiving chemotherapy discontinuing the treatment due to side effects. On the other hand, few patients take certain actions such as symptomatic management and alternative therapies to manage side effects. Since each individual is unique, the actions adopted may also vary from individual to individual. So, the investigator is interested to identify the actions adopted in managing the common side effects of chemotherapy among patients with breast cancer.
- The patients receiving chemotherapy due to side effects need to take certain actions to manage the side effects. Only when they manage the side effects they can proceed to the next cycle or continue the treatment. On the patient's side, managing side effects helps to improve the quality of life and on the nurse's side, managing side effects improve the quality of care rendered. Only when the actions adopted in managing the side effects of chemotherapy are assessed, the quality of care can be rendered. So, the investigator is interested to assess the actions adopted in managing the common side effects of chemotherapy among patients with breast cancer.

Statement of Problem

"A study to assess the actions adopted in managing the common side effects of chemotherapy among patients with breast cancer attending Oncology Department in Tamil Nadu Govt. Multi Super Speciality hospital, Chennai."

Study's objective

1. To assess the actions adopted in managing the common side effects of chemotherapy among patients with breast cancer.
2. To associate the actions adopted in managing the common side effects of chemotherapy with selected demographic variables among patients with breast cancer.

METHODOLOGY

Research Approach: The research approach used in this study was exploratory.

Research design: The research design used in this study was descriptive in nature.

Sampling Technique: The sampling technique used in this study was Non- Probability Convenience sampling method.

Study setting:

The setting of the study: Day care Medical Oncology centre, Tamil Nadu Govt Multi Super Speciality Hospital, Chennai. The population for the study consisted of patients with breast cancer and receiving chemotherapy.

Sample selection criteria:

Inclusion Criteria

- All patients with breast cancer and receiving chemotherapy from second cycle onwards.
- Patients receiving chemotherapy before and after surgery.
- Patients who were willing to participate in the study.

Exclusion Criteria

- Patients who receive chemotherapy along with radiation therapy for the treatment of cancer.
- Patients above 65 years of age.
- Patients who were suffering from other systemic illnesses.
- Patients who were critically ill.

Data Collection Tool:

The data collection tool used in this study was a semi-structured questionnaire.

Description of the Tool:

It consisted of two parts.

Part-A: Semi-structured questionnaire to elicit the demographic variables of the patients with breast cancer and receiving chemotherapy.

Part-B: Semi-structured questionnaire to collect the data on the actions adopted in managing the common side effects of chemotherapy.

RESULTS

Data Analysis and Interpretation

Section I: Frequency and percentage distribution of the patients with breast cancer by their demographic variables.

Section II: Frequency and percentage distribution of the responses of patients with breast cancer and receiving chemotherapy with respect to the actions adopted in managing the common side effects of chemotherapy.

Section I

Table 1: Frequency and percentage distribution of demographic variables of patients with breast cancer. (N=60)

S.No	Demographic variables	Frequency	Percentage %
1.	**Age (Years)**		
	a) 26-35	7	11.7
	b) 36-45	11	18.3
	c)46-55	12	20
	d)56-65	30	50
2.	**Religion**		
	a) Hindu	53	88.3
	b) Christian	2	3.3
	c) Muslim	5	8.3
3.	**Educational Qualification**		
	a) Illiterate	6	10
	b) Primary	14	23.3
	c)High school	19	31.7
	d)Higher Secondary	4	6.7
	e) Graduate and above	17	28.3
4.	**Occupation**		
	a) Unemployed	30	50
	b) Daily wages	6	10
	c)Business	10	16.7
	d)Professional	6	10
	e) Others	8	13.3
5.	**Monthly Income in rupees**		
	a) < 5000/-	14	23.3
	b)5001-10,000/-	24	40.1
	c)10,001-15,000/-	11	18.3
	d)> 15,000/-	11	18.3
6.	**Marital status**		
	a) Single	3	5.0
	b) Married	50	83.3
	c) Widow/Widower	7	11.7
7.	**Dietary pattern**		
	a) Vegetarian	22	36.7
	b) Non-vegetarian	38	63.3
8a	**Family history of cancer**		
	a) Yes	10	16.7
	b) No	50	83.3
8b	**If yes, the relationship of family members affected with cancer: -**		
	a) Mother/Father	8	80
	b) Grandmother/ Grandfather	--	---
	c)Elder/Younger brother	2	20
	d)Elder/ Younger sister	2	20
	e) Others	3	30

Table 2: Frequency and percentage distribution of clinical variables of patients with breast cancer. (N=60)

S. No	Clinical variables	Frequency	Percentage (%)
1.	**Duration of illness**		
	a) Within 1 year	49	81.7
	b) 1-2 years	7	11.7
	c) 2-3 years	2	3.3

	d) 3-4 years	2	3.3
2.	**The treatment advised for breast cancer**		
	a) Only chemotherapy	31	51.7
	b) Surgery and chemotherapy	29	48.3
3.	**Initiation of chemotherapy after diagnosis of breast cancer**		
	a) 1-6 months	43	71.7
	b) 7 months -1 year	17	28.3
	c) 1- 1 ½ years	---	--
	d) 1 ½ - 2 years	----	--
	e) More than 2 years	----	--
4.	**Number of cycles of chemotherapy**		
	a) Second	18	30
	b) Third	14	23.3
	c) Fourth	10	16.7
	d) Fifth	8	13.3
	e) Sixth	5	8.3
	f) More than six- eighth	5	8.3
5a.	**Received information on management of side effects of chemotherapy: -**		
	a) Yes	28	46.7
	b) No	32	53.3
5b.	**If yes, the source of information: -**		
	a) Books/Magazine	1	3.57
	b) Relatives	5	17.86
	c) Neighbours	1	3.57
	d) Friends	--	---
	e) Health care personnel	26	92.86
	f) Mass media	2	7.14
	g) If any other, specify	5	17.86

Section II

Table 3: Frequency and percentage distribution of Responses and Actions adopted for patients with breast cancer. (N=60)

S. No	Responses and actions adopted for breast cancer patients	Frequency	Percentage (%)
1a.	**Do you have loss of appetite?**		
	a. Yes.	55	91.7
	b. No	5	8.3
1b.	**If yes, what actions do you adopt to manage appetite?**		
	a. Perform oral hygiene	21	38.18
	b. Try new foods and recipes	47	85.45
	c. Consume soup	29	52.73
	d. Take appetite stimulating drugs as prescribed	20	36.36
	e. If any other, specify	6	10.91
2a.	**Do you experience nausea?**		
	a. Yes.	49	81.7
	b. No	11	18.3
2b.	**If yes, what actions do you adopt to manage nausea?**		

	a. Suck on peppermint / candy	21	42.86
	b. Stay away from fried foods	29	59.18
	c. Rest in a chair after eating, for at least 2 hrs	22	44.90
	d. Take antiemetics as prescribed.	47	95.92
	e. If any other, specify	11	22.45
3a.	**Do you have vomiting?**		
	a. Yes.	39	65.0
	b. No	21	35.0
3b.	**If yes, what actions do you adopt to manage to vomit?**		
	a. Suck on peppermint/candy	13	33.33
	b. Stay away from fried foods	25	64.10
	c. Rest in a chair after eating, for at least 2 hrs.	22	56.41
	d. Take antiemetics as prescribed.	39	100.0
	e. If any other, specify	10	25.64
4a.	**Do you have mouth ulcers and throat sores?**		
	a. Yes.	42	70
	b. No	18	30
4b.	**If yes, what actions do you adopt to manage mouth and throat sores?**		
	a. Use a soft-bristled toothbrush	11	26.19
	b Use mild mouth wash or saline water	27	64.29
	c. Suck on ice chips.	18	42.86
	d. Apply prescribed mouth paint	28	66.67
	e. If any other, specify	1	2.38
5a.	**Do you experience heart burn?**		
	a. Yes.	28	46.7
	b. No	32	53.3
5b.	**If yes, what actions do you adopt to reduce heart burn?**		
	a. Stay away from fried foods.	21	75.00
	b. Lie down at 30-degree head elevation	16	57.14
	c. Take small and frequent meals	18	64.29
	d. Take antacids as prescribed	19	67.86
	e. If any other, specify	4	14.29
6a.	**Do you feel fatigued?**		
	a. Yes.	60	100
	b. No	-	-
6b.	**If yes, what actions do you adopt to manage fatigue?**		
	a. Take rest in between activities.	58	96.67
	b. Eat a well-balanced diet and drink plenty of fluids	47	78.33
	c. Take more fruits and vegetables.	49	81.67
	d. Consume supplements like vitamin, iron tablets as prescribed	27	45
	e. If any other, specify	6	10
7a.	**Do you have hair loss?**		
	a. Yes.	48	80
	b. No	12	20

7b.	**If yes, what actions do you adopt to manage hair loss?**		
	a. Use fine toothed combs.	7	14.58
	b. Use mild shampoo	12	25.00
	c. Cut/Shave hair	46	95.83
	d. Use a hat, scarf, or wig to protect the scalp from the sun.	32	66.67
	e. If any other, specify	7	14.58
8a.	**Do you have constipation?**		
	a. Yes.	43	71.7
	b. No	17	28.3
8b.	**If yes, what actions do you adopt to relieve constipation?**		
	a. Eat high-fiber diet.	31	72.09
	b. Increase water intake	29	67.44
	c. Do mild exercises	7	16.28
	d. Use laxatives as prescribed	37	86.05
	e. If any other, specify	2	4.65
9a.	**Do you have diarrhea?**		
	a. Yes.	20	33.3
	b. No	40	66.7
9b.	**If yes, what actions do you adopt to manage diarrhoea?**		
	a. Drink plenty of fluids	17	85
	b. Limit milk and milk products	13	65
	c. Take a soft and bland diet.	10	50
	d. Take anti-diarrheal drugs as prescribed	15	75
	e. If any other, specify	-	-
10a.	**Do you have numbness in your hands and feet?**		
	a. Yes.	38	63.3
	b. No	22	36.7
10b.	**If yes, what actions do you adopt to manage numbness in your hands and feet?**		
	a. Stretch hands and feet.	36	94.74
	b. Massage hands and feet	34	89.47
	c. Change position	13	34.21
	d. Take rest for some time.	6	15.79
	e. If any other, specify	2	5.26
11a.	**Do you have dry skin?**		
	a. Yes.	43	71.7
	b. No	17	28.3
11b.	**If yes, what actions do you adopt to protect your skin?**		
	a. Pat skin instead of rubbing after taking bath	19	44.19
	b. Apply creams/ lotions/oil after taking bath.	30	69.77
	c. Use mild soap	10	23.26
	d. Stay out of sun.	30	69.77
	e. If any other, specify.	-	-

12a.	**Do you have memory loss?** a. Yes. b. No	 23 37	 38.3 61.7
12b.	**If yes, what actions do you adopt to manage memory loss?** a. Give exercise to brain by working out cross word puzzles, reading etc. b. Keep a note pad nearby to jot down things c. Use a calendar to keep track of upcoming events d. Build a routine and stick to it. e. If any other, specify	 - 9 15 4 3	 - 39.13 65.22 17.39 13.04
13a.	**Do you have any other side effects other than above mentioned?** a. Yes b. No	 26 34	 43.3 56.7
13b	**If yes, specify** 1. Sleeplessness 2. Stomach irritation 3. Hiccoughs 4. Weight loss 5. Body ache 6. Hearing loss 7. Diminished vision 8. Brittle nails 9. Salty taste in teeth 10. Watery eyes on speaking 11. Skin discoloration 12. Bad odour in sweat 13. Numbness in head 14. Lack of stiffness in finger tips 15. Hole in urinary bladder	 9 4 15 7 6 2 2 8 2 1 7 2 5 3 1	 34.6 15.38 57.69 26.92 23.07 7.69 7.69 30.76 7.69 3.84 26.92 7.69 19.23 11.53 3.84

Table 4: Frequency and percentage distribution of the responses of patients with breast cancer with respect to actions adopted in managing the other side effects of chemotherapy (N=60)

S.No	Actions adopted in managing the other side effects of chemotherapy.	Frequency	Percentage (%)
1.	**Sleeplessness**	9	34.62
	Listening to music	4	44.44
	Reading books	5	55.55
	Writing Poems	2	22.22
	Watching television	6	66.66
	Consume milk	5	55.55
2.	**Stomach irritation**	4	15.38
	Drink cold milk	3	75.1
	Apply coconut oil to.0 the stomach.	2	50.0
3.	**Hiccoughs**	15	57.69
	Drink thick Horlicks	10	66.66
	Drink cool juice.	3	20.00
	Consume cold milk	4	26.66
4.	**Weight loss**	7	26.92

	Eat fruits Consume soup Take ayurvedic medicine	2 5 3	28.57 71.42 42.85
5.	**Body ache** Massage therapy	6 6	23.08 23.08
6.	**Hearing loss** To take treatment after chemotherapy	2 2	7.69 7.69
7.	**Diminished vision** Wear spectacles	2 2	7.69 7.69
8.	**Brittle nails** Cut short nails	8 8	30.77 30.77
9.	**Salty taste in teeth** Often brush with sweetie tooth paste	2 2	7.69 7.69
10.	**Watery eyes on speaking** Avoid speaking	1 1	3.84 3.84
11.	**Skin discoloration** Cold water application	7 7	26.92 26.92
12.	**Bad odour in sweat** Bath twice a day	2 2	7.69 7.69
13.	**Numbness in head** Perform exercises	5 5	19.23 19.23
14.	**Lack of stiffness in finger tips** Perform exercises	3 3	11.54 11.54
15.	**Hole in urinary bladder** Do dressing daily	1 1	3.84 3.84

DISCUSSION

The aim of the study was to assess the actions adopted in managing the common side effects of chemotherapy among patients with breast cancer. A total of 60 samples were selected and the actions adopted in managing the common side effects of chemotherapy were assessed using a semi-structured questionnaire. The collected data were tabulated and analyzed using descriptive and inferential statistics, and the results were interpreted. The discussion is based on the objectives specified in the study.

The significant findings of the study were as follows: -

The majority 50% of the samples were in the age group of 56-65 years. 88.3% of the samples belong to the Hindu religion, 31.7% underwent high school education, and 50% of the samples were unemployed. 40%of samples earn Rs. 5001-10,000/- per month, 83.3% were married, 63.3% belong to Non-vegetarian, 81.7% of the sample duration of illness is within 1 year, 51.7% of the samples are treated with only chemotherapy. 8.3% of samples came for the 5^{th} cycle of chemotherapy, and 16.7% of samples have a family history of cancer. 71.7% of samples-initiated chemotherapy within 1-6 months after diagnosis of cancer, and only 46.7% of samples received information on the management of side effects of chemotherapy. The investigator initially assessed the presence of common side effects. The significant findings are as follows: 91.7% of the samples experienced a loss of appetite, 81.7% of the samples experienced nausea, 65% of the samples experienced vomiting, and 70% of the samples experienced mouth ulcers and throat sores. 46.7% experienced heartburn, 100% of the samples experienced fatigue, 80% of the samples experienced hair loss, 71.7% experienced constipation, 33.3% experienced diarrhea, 63.3% experienced numbness in hands and feet, 71.7% experienced dry skin, 38.3% experienced memory loss.

After assessing the presence of common side effects of chemotherapy, the investigator felt the need of importance of adopting actions to manage the side effects then the investigator assessed the actions adopted by the patients with cancer in managing the common side effects. Table 2.0 shows that the majority (91.7%) of the samples experienced a loss of appetite. Regarding adopting actions for managing the loss of appetite is concerned, the study findings showed that 85.45% of the samples adopted the actions of trying new foods and recipes, 52.73% consumed soup and around 10.91% (6) mentioned other actions such as drinking tender coconut water, salt porridge, and powdered rice porridge to manage the loss of appetite. When nausea as a side effect is concerned, 81.7% of the samples experienced nausea, out of which 95.95% of the samples adopted the actions

of taking anti-emetics as prescribed and 59.18% stayed away from fried foods. When vomiting is concerned, 65% of the samples experienced vomiting and among them, all 100% of the samples managed it by taking anti-emetics as prescribed.

A study was done among 48 patients with varying diagnoses who were receiving chemotherapy to assess the self-care behavior for side effects of chemotherapy and concluded that the self-care behavior for nausea and vomiting was taking prescribed medicines [13]. This is consistent with my study findings as most of the samples suffering from nausea and vomiting was managed by taking antiemetics as prescribed. 22.45% (12) of the samples suffering from nausea and 25.64% (11) of the samples experiencing vomiting specified certain other actions to manage the side effects of nausea and vomiting. Among them, 6 of them specified performing relaxation exercises as an action to manage nausea and vomiting.

A study was conducted to assess the effectiveness of the progressive muscle relaxation technique in the clinical management of chemotherapy-related nausea and vomiting and proved that it was effective in the significant reduction of nausea and vomiting of patients receiving adjuvant chemotherapy [14]. This is consistent with my study findings as few samples stated relaxation exercises to manage nausea and vomiting. The other actions specified by the samples were sucking jaggery, consuming food when hot, consuming ginger chocolate, and alpakkoda, and intake dry grapes to manage nausea and vomiting.

Table 3 shows that 70% of the samples experienced mouth ulcers and throat sores, out of which 66.67% of the samples adopted the actions of applying prescribed mouth paint to manage it, 64.29% of the samples used mild mouthwash or saline water and 42.86% of the samples sucked on ice chips. This action of sucking ice chips to manage mouth ulcers and throat sores is supported by the study who proved that the application of plain ice is effective in preventing mouth ulcers and throat sores after chemotherapy [13]. The other action specified by 2.38% (1) of the sample to manage mouth ulcers and throat sores is applying butter in the mouth and throat.

Table 3 shows that only 46.7% of the samples experienced heartburn, out of which, 75% of the samples adopted the actions of staying away from fried foods, 67.86% of the samples took antacids as prescribed.14.29%, of the samples specified certain other actions such as consumption of cold milk, tender coconut water, jaggery, and chilled buttermilk. All 100% of the samples experienced fatigue, and it is the highest common side effect of chemotherapy present for the patients with cancer in this study. Regarding adopting actions for managing fatigue is concerned, 96.67% of the samples adopted the action of taking a rest in between activities. This is supported by the study which proved that the adaptive behavior to promote sleep may assist in maintaining sleep, and managing fatigue during chemotherapy [15].

10% of the samples specified certain other actions such as foot reflexology, consumption of milk with fig fruit, and performing aerobic exercises to manage fatigue.

A study reported that aerobic exercises can decrease fatigue and improve psychological distress in patients with cancer and receiving chemotherapy and the result showed a decrease in fatigue in the experimental group [16]. This is consistent with my study findings as some of the samples stated that the performance of aerobic exercises greatly helps in minimizing fatigue.

Table 3 shows that 80% of the samples experienced hair loss, out of which 95.83% of the samples adopted the action of cutting or shaving hair, and 66.67% use a hat, scarf, or toupee. This is supported by the study [12] which stated that the self-care behavior for managing the loss of hair is by wearing a toupee or hat. 14.58% of samples mentioned certain other actions such as scalp massage, application of sandalwood root oil, and coconut oil during hair fall. One sample stated applying rabbit blood on the scalp is an action to manage hair loss. Also, 71.7% of the samples experienced constipation. Regarding adopting actions to manage constipation is concerned, 86.05% of the samples use laxatives as prescribed, and 72.09% eat high fiber diet, this is supported by the study [8] which stated, that the self-care behavior for constipation includes increasing the roughage in the diet. About 4.65% of samples specified certain other actions like intake of castor oil and tender coconut water to manage constipation. And 33% of the samples experienced diarrhea, out of which 85% of the samples adopted the action of taking anti-diarrheal drugs to manage diarrhea. Also, the investigator during the period of data collection, while interacting with the clients observed that few patients had diarrhea.

A study analyzed that diarrhea was the common side effect of chemotherapy and concluded that pharmacologic intervention loperamide and octreotide are recommended for practice in managing chemotherapy-induced diarrhea. This is in consistent with my study findings as most of the samples stated that the predominant action they adopted to manage diarrhea is by taking anti-diarrheal drugs.

63.3% of the samples experienced numbness in the hands and feet. Regarding adopting actions for managing numbness is concerned, 94.74% of the samples

adopted the action of stretching hands and feet, and 89.47% of the samples manage by massaging hands and feet. About 5.26% (2) specified that they go for massage therapy twice a day, and wear buckled shoes to manage numbness.

71.7% of the samples experienced dry skin. Regarding adopting actions for managing dry skin is concerned, 69.77% of the samples adopted the actions of applying creams, lotion, or oil after taking bath and by hospitals staying out of the sun.

38.3% of the samples experienced memory loss, out of which 65.22% of the samples adopted the action of using a calendar to keep track of upcoming events, and 39.13% of the samples keep a notepad nearby to jot down things. About 13.04% of samples mentioned that informing family members to remind them is an action to manage memory loss. The second objective was to associate the actions adopted in managing the common side effects of chemotherapy with selected demographic variables among patients with breast cancer.

The study findings showed that there is a significant association between the presence of the common side effects of chemotherapy with selected demographic variables ($p<0.01$ and $p<0.05$) like religion, educational status, occupation, monthly income, dietary pattern, duration of illness, initiation of chemotherapy and number of cycles of chemotherapy. Also, there is a significant association of actions adopted in managing the loss of appetite with selected demographic variables of patients with breast cancer ($p<0.01$) like age, educational status, and the number of cycles of chemotherapy. The patients who came for 8^{th} cycle of chemotherapy adopted actions better than the other patients. There is a significant association of actions adopted in managing nausea with selected demographic variables like educational status, monthly income, initiation of chemotherapy, number of cycles of chemotherapy, and information on the management of side effects. There is a significant association between the actions adopted in managing to vomit with selected demographic variables like educational status, duration of illness, and information on the management of side effects of chemotherapy. There is a significant association of actions adopted in managing mouth and throat sores with selected demographic variables like age and monthly income. There is a significant association of actions adopted in managing heart burn with the initiation of chemotherapy. There is a significant association of actions adopted in managing constipation with selected demographic variables like age, religion, and treatment advice for breast cancer. There is a significant association of actions adopted in managing diarrhea with selected demographic variables like sex, educational status, family history, and initiation of chemotherapy. There is a significant association of actions adopted in managing numbness in hands and feet with selected demographic variables like age, educational status and initiation of chemotherapy. There is a significant association of actions adopted in managing dry skin with selected demographic variables like age, family history, and information on the management of side effects. There is a significant association of actions adopted in managing memory loss with selected demographic variables like sex and educational status. The above results showed that the investigator's second assumption of "there may be an association of the actions adopted in managing the common side effects of chemotherapy with selected demographic variables of patients with breast cancer" is accepted.

Apart from the above findings the investigator also found out, that out of 60 samples 43.3% (26) of them experienced other side effects apart from the common side effects mentioned above in table 4. The other side effects were hiccoughs (57.69%), sleeplessness (34.6%), brittle nails (30.76%), weight loss (26.92%), skin discoloration (26.92%), body ache (23.07%)numbness in head (19.23%) stomach irritation (15.38%)lack of stiffness in fingertips (11.53%), hearing loss(7.69%), diminished vision(7.69%), salty taste in teeth(7.69%), bad odour in sweat (7.69%), watery eyes on speaking (3.84%) and hole in the urinary bladder (3.84%) for which each sample managed it by adopting certain actions and also there is a significant association of the actions adopted in managing other side effects of chemotherapy with selected demographic variables like age, monthly income, marital status, dietary pattern, family history of cancer, duration of illness, treatment advised for cancer and information received on management of side effects of chemotherapy. This emphasized the need for further exploration of this topic. The investigator found that before starting chemotherapy the patients are informed about the various side effects of chemotherapy, but much information is not given regarding the management of these side effects of chemotherapy. By conducting this study, the investigator found various actions adopted by the patients themselves to manage the side effects of chemotherapy. Thus, the investigator felt the need for disseminating the study findings to the patients receiving chemotherapy through an information booklet during their regular cycles for chemotherapy.

CONCLUSION

The study findings concluded that in patients with breast cancer and receiving chemotherapy with respect to the common side effects, the majority (91.7%) of the samples experienced a loss of appetite, 81.7% of the samples experienced nausea, and 65% had vomiting.

(70%) of the samples experienced mouth ulcers and throat sores, only 46.67% of the samples experienced heartburn all of the samples (100%) experienced fatigue. 80% of the samples had hair loss, 71.7% samples experienced constipation, 33.3% of the samples experienced diarrhea, 63.3% of the samples experienced numbness in hands and feet, 71.7% samples experienced dry skin, 38.3% of the samples experienced memory loss, 43.3% of the samples experienced other side effects of chemotherapy, and among them 57.69% experienced hiccoughs and 34.6% experienced sleeplessness. So various actions were taken by the samples to manage the side effects of chemotherapy, for example, 66.6% were sucked on ice chips for mouth and throat ulcers, 75% stayed away from fried foods for heartburn, 81.6% samples were taken more fruits and vegetables for fatigue.

The study findings gave an insight to the investigator about the actions adopted in managing the common side effects of chemotherapy among patients with cancer and this further helps in planning the nursing interventions for patients with breast cancer and receiving chemotherapy.

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