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Coping Strategies Used by Cancer Patients to Deal with Physical and Psychological Problems of Chemotherapy

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Abstract:

This paper aims to find the coping strategies used by cancer patients to deal with physical and psychological problems of chemotherapy. 30 participants above the age of 25, who were undergoing chemotherapy were chosen by purposive sampling method for the study. The instruments administered included socio-demographic and clinical schedule, Becks Depression Inventory-II, Becks Anxiety Inventory, a self-developed tool to assess physical problems and a semi structured interview schedule to assess the physical problems. The mean age of the participants were 55.33 years. Majority of the participants 63.33%(19) were females, 76.7%(23) were married. The most common cancer, which 33.33% of the participants had was breast cancer and 33.33% of the participants suffered from stage II cancer. Only 30% of the participants had prevalence of depression, while 26.67% of the participants had prevalence of anxiety. There was no significant difference in the level of anxiety and depression between the two genders. The most common physical problems faced by the participants were hair loss, fatigue, nausea and vomiting. The main themes of coping strategies used for physical problems were medication, rest and relaxation and distraction. Distraction, social support and religious coping was used for dealing with depression, while for anxiety social support, religious coping and distraction were used. Good Medical Care backed up by good coping strategies to help patients with their physical problems, depression and anxiety, will ultimately help patients in dealing with this dreaded disease.

Keywords: Cancer, chemotherapy, physical problems, depression, anxiety, coping strategies

1. Introduction

Cancer is among one of the main non communicable diseases that is the cause of mortality around the world with new cases in excess of 14 million and deaths due to cancer in 2012 numbering almost 8.2 million. This number over the next two decades is expected to rise to about 70 million. According to the World Health Organization – Non-communicable Diseases (NCD) Country Profiles of 2014, in India cancer contributes to 7% of deaths that are caused by non-communicable diseases. The total number of deaths caused by non-communicable diseases being 9,816000. (World Health Organization, 2014).

Chemotherapy has a lot of physical side effects such as but not limited to pain, nausea and vomiting, fatigue, hair loss, diarrhea, constipation, weakness and numbness in the hands and/or feet, tingling in parts of the body, hot flushes and night sweats, mouth sores and ulcers and skin changes. (National Cancer Institute) Psychological problems faced by the patients are mainly in terms of anxiety as they do not know what side effects they will have and what to expect out of their treatment. They suffer from a lot of distress which is not limited to fear of death. Depression is one of the main psychological problems faced by cancer patients which can be due to many reasons including the diagnosis. (Depression and Cancer) In many cases, patients also suffer from delirium and adjustment problems. Even members of the family, could suffer from stress and anxiety due to their loved one being diagnosed with cancer (American Cancer Society)

Pain and financial impact were considered as significant predictors for depression. To improve the physical well-being and life of patients, it is important that such patients have professional, psychological and social support which in turn improves their emotional quotient. Patient Education before treatment initiation is important for favorable outcomes (Polat, 2014)

According to Mystakidou et.al (2005) conclusions were drawn by comparing the demographic and clinical details with the distress. The results showed that more psychological distress was experienced by women compared to men, and those non married, and patients not responding to treatment complained of greater anxiety. Comparing depression levels between younger and older patients, it was found that older patients had more symptoms of depression (Tagay, 2006) The effect of age having been evaluated, it has been found that older men tend to have less anxiety and depression compared to women. (Tagay, 2006) To improve the clinical care that cancer patients receive, it is important to understand the psychological problems. Psychological concerns such as despair, depression, apprehension and worry should be taken care of as it will help in the treatment such patients receive.(Mystakido, 2005)

Keller and Henrich (1999) found that illness related behavior which included complaining about symptoms and utilizing informal and health care services was engaged more by women than by men. Doctors often interpreted symptoms by women as psychological in nature showing that women suffered more from psychological problems. Though women had higher distress, there was no difference between genders in relation to satisfaction with life. The effect of age having been evaluated, it has been found that older men tend to have less anxiety and depression compared to women. (Tagay, 2006)

There is an important need to develop coping strategies as using these strategies increases the quality of life which in turn decreases the depression levels in patients. For favorable outcomes patient education before treatment is important (Polat, 2014). Saniah et al in 2010 found that coping strategies such as religion, acceptance of the diagnosis and support of family and friends were used the most while using substances, disengagement of behavior and blaming oneself were not used too often.

Physical problems can have an impact on mental health of a person. Impact of ones quality of life depends on the link between a patient's mental health and physical well-being. Several patients face physical problems. Some of these affect the patient's quality of life which is inversely related to depression. The physical problems could be diarrhea or constipation and at time dyspnea and insomnia. Using healthy coping strategies can decrease the depression levels which increases the quality of life (Polat, 2014).

The cancer mortality profile in India shows that there have been 357,500 deaths due to cancer in men and 326,300 deaths due to cancer in women. This is only the number of people who die annually, not those who are diagnosed. With an increasing number of people from little children to the elderly being diagnosed with cancer, it is therefore important that they have good coping strategies to deal with the physical and psychological problems of chemotherapy as chemotherapy is one of the primary means of treating cancer. Good coping strategies will help the individuals deal with these problems and assist them in having a positive outlook on life along with the treatment that they are receiving. (World Health Organization, 2014)

It is important to note that treating the psychological aspects of the effects of cancer treatment, especially chemotherapy is almost as important as the administering the drug itself. A patient who is depressed and anxious may well not respond well to the treatment. It would be pertinent to mention that counselling of family members of the patient is very important as they also need to cope with the fears and anxiety they may face. Ultimately, unlike many other diseases, cancer coping strategies involve not just the patient but close members of the family as well. In the final analysis it is good medical care backed up by excellent supportive care of family members which ultimately help the patient in dealing with this dreaded disease.

2. Methods

The aim of this study was to understand the coping strategies that is used by cancer patients to deal with physical and psychological problems of chemotherapy and the objectives of the study were to study the socio-demographic and clinical details of the participants, to find the physical problems faced by the participants undergoing chemotherapy, to find if the participants undergoing chemotherapy suffer from anxiety or/and depression, to understand the coping strategies used by the participants undergoing chemotherapy to deal with physical problems and to deal with anxiety or/and depression and to compare anxiety levels as well as depression between men and women undergoing chemotherapy.

Purposive Sampling was used to collect data from 30 participants diagnosed with any kind of cancer undergoing chemotherapy above the age of 25 residing in Bangalore. Participants were found mainly through friends and family. Some participants helped in getting other people to participate in the study. People below the age of 25 years and those undergoing radiation therapy or surgery or any other forms of treatment other than chemotherapy were excluded.

The measures used for data collection were a self-constructed Socio-Demographic and clinical schedule, The Becks Depression Inventory-II (BDI-II) Edition, The Becks Anxiety Inventory , A self-developed Questionnaire, 'Tool to Assess Physical Problems' and a semi-structured interview method that assessed the coping strategies that are used to deal with three dimension namely physical problems, depression and anxiety.

SPSS version 21 was used for statistical analysis. Independent T-Test, Mann Whitney Test and frequency analysis was used for analysis. Content and Theme Analysis was used for the interpretation of the qualitative data.

Informed consent was taken, and the participants had free will to withdraw from the study whenever they wanted. Confidentiality of the participants and originality of the study was maintained. The data collected wasn't fabricated and it was used only for academic purposes within the university.

3. Results, Data Analysis and Interpretation

Item	Categories	Frequency	Percentage
Age (Mean)	55.33		-
Gender	Male	11	36.67
	Female	19	63.33
Education Qualification	<12 th Standard	8	26.67
	12 th standard-Graduation	17	56.67
	Masters and Above	5	16.67
Occupation	Service	8	26.67
	Self Employed	7	23.33
	Home Maker	15	50
Marital Status	Married	23	76.7
	Single	1	3.3
	Divorced	2	6.7
	Widow	3	10.0
	Widower	1	3.3
Number of Children	0	2	6.7
	1	6	20.0
	2	15	50.0
	3	5	16.7
	4	2	6.7
Monthly Income	1000-50,000	6	20
	50,000-1,00,000	8	26.66
	1,00,000 and above	3	10
	Not Answered	2	6.67
	Not Applicable	11	36.67

Table 1: Socio Demographic Details

The table one, shows that the mean age of the participants was 55.33. The sample consisted of 36.67% of males and 63.33% of females. In terms of education qualification, 26.67% had an education below 12th standard, 56.67% had an education between 12th standard and graduation, while only 16.67% either had a masters or a higher degree. Half of the participants (50%) of the participants were home-makers, 23.33% were self-employed and 26.67% came under the category of service. Majority of the participants, 76.7% were married, followed by 10% who were widows, 6.7% who were divorced and 3.3% single and 3.3% being a widower. Having 2 children seemed to be common trend among the participants, as 50% had 2 children, followed by 20% who had only 1 child, 16.7% having 3 children and 6.7% having 4 children, while 6.7% of the population having no children. The monthly income of 20% of the participants was between one thousand and fifty thousand, for 26.66% it was between fifty thousand and one lakh and for 10% it was more than one lakh. 6.67% of the participants did not disclose their salary and for 36.67% the question was not applicable as either they were home makers or they had retired.

Item	Categories	Frequency	Percentage
Duration of Diagnosis(years)	1-2	8	26.67
	2-4	9	30
	4-6	4	13.33
	6-8	1	3.33
	8 and above	8	26.67
Type of Cancer	Breast	10	33.33
	Leukemia	5	16.7
	Stomach	3	10.0
	Seminoma	3	10.0
	Pancreatic	2	6.7
	Others	7	23.27
Stage of Cancer	Stage 1	8	26.7
	Stage 2	10	33.3
	Stage 3	6	20.0
	Stage 4	6	20.0

Table 2: Clinical Details

The table two shows that 8 (26.67%) participants have been diagnosed less than two year back, 9 (30%) have been diagnosed less than 4 years back, 4 (13.33%) had been diagnosed less than 6 years back, 8 (26.67%) had been diagnosed more than 8 years back while only 1 (3.33%) participant had been diagnosed less than 8 years back. The most common kind of cancer was Breast cancer, as 10 (33.33%) were diagnosed with It. Five (16.7%) had leukemia, three (10%) had stomach cancer, while another three (10%) had seminoma, followed by two (6.7%) who had pancreatic cancer. Out of the 30 participants, 10 (33.3%) were diagnosed with Stage II cancer, eight (26.7%) were diagnosed with stage III cancer and six (20%) were diagnosed with Stage III, while another six (20%) were diagnosed with Stage IV Cancer.

Symptom	Yes (%)	No (%)
Pain	66.7	33.3
*Nausea and Vomiting	73.3	26.7
*Fatigue	76.7	23.3
Diarrhea	46.7	53.3
Constipation	36.7	63.3
Sores in mouth and throat	46.7	53.3
*Hair Loss	80	20
Weakness or numbness in the hands and/or feet	66.7	33.3
Tingling in parts of the body	50	50
Fever	26.7	73.3
Hot flushes and Night Sweats	50	50
Skin Changes	66.7	33.3
Others	20	80

Table 3: Percentage of Participants having each Physical Problem

The table three shows that the main physical problems faced by the participants were (80%), (76.7%) and (73.35), followed by 66.7% which were common for pain, weakness or numbness in hands/or feet and skin changes. 50% suffered from hot flushes or night sweats and 46.7% had diarrhea and sores in the mouth or throat. The least physical problems faced by the participants were constipation (36.7%) and fever (26.7%).

In the category of others, six (20%) participants faced physical problems other than what were mentioned in the list and these were dizziness, hallucinations, swollen feet, collapsed veins, boils, peripheral neuropathy, neutropenia and mild loss of hearing.

Sl. No	Depression	No	Percent	Cumulative Frequency
1	Ups & Downs- Normal	12	40.0	12
2	Mild Mood Disturbance	9	30.0	21
3	Borderline Clinical Depression	4	13.33	25
4	Moderate Depression	4	13.33	29
5	Severe Depression	1	3.34	30
Total		30	100.0	30

Table 4: Depression Levels

The table four shows that 40% of the participants had regular ups and downs which were considered normal, followed by 30% who had mild mood disturbances, 13.33% had borderline clinical depression, another 13.33% had moderate depression while only 3.34% had severe depression. No participant had extreme depression. In the present study, depression was prevalent in 30% of the participants.

Sl. No	Anxiety Levels	Frequency	Percentage	Cumulative Frequency
1	Low Anxiety	22	73.33	22
2	Moderate Anxiety	3	10	25
3	Potential Cause for Concern	5	16.67	30
Total		30	100	30

Table 5: Anxiety Levels

The table five shows that majority of the participants (73.33%) had low anxiety, 10% had moderate anxiety, and while 16.67% had anxiety which was a potential cause for concern. 26.67% of participants had anxiety in the present study.

Sl. No	Coping Strategies	Frequency
1	Medications	13
2	Rest and Relaxation	9
3	Distraction	8
4	Social Support	7
5	Religious Coping	5
6	Yoga	5
7	Regular Exercise	4
8	Denial (Ignore)	4

Table 6: Coping Strategies used to deal with Physical Problems

The table six shows the main coping strategies that are used by the participants of the study to deal with the physical problems of chemotherapy. The main strategies were use of prescription medication by 13 participants, rest and relaxation by nine which includes family members massaging the hands and feet of the participant, distraction by eight which is mainly social media usage and reading books. Social Support was used by only seven of the participants. Social support was given by family members (spouse and children) and near and dear friends. Religious coping used by five of the participants, included praying every day, listening to gospel music, reading the Holy Book and going to church/temple. Yoga used by five helped in dealing with the physical problems. Regular exercise helped four of the participants to cope with their physical problems, while another four of the participants of the study preferred to ignore many of their physical problems.

Sl. No	Coping Strategy	Frequency
1	Social Support	13
2	Religious Coping	11
3	Distraction	10
4	Yoga and Meditation	7
5	Positive Outlook	5
6	Counselling	3
7	Rest and Relaxation	2
8	Educating Oneself	2
9	Animal Therapy	1

Table 7: Coping Strategies used to deal with Anxiety

The table seven shows the coping Strategies that are used by the participants undergoing chemotherapy to deal with anxiety. To deal with anxiety, social support is the most important strategy used by 13 of the participants. Social Support includes the spouse and children, friends, people going through similar problems and for some of the participants their grandchildren. Religious Coping used by 11 participants included praying frequently, reading the bible, singing hymns and going to church/temple. Distraction by the means of watching TV, listening to music, getting occupied in household activities, reading, blogging (by one participant), gardening (by one participant) and surfing the internet is used by 10 participants. Seven participants use yoga and meditation to deal with their anxiety. Having a positive outlook to life is how five participants are managing while three of the participants go for counselling to deal with their anxiety. Two participants deal with their anxiety by resting, while two try and educate themselves about their illness to reduce their anxiety levels. One of the participants plays with their dog whenever they feel anxious.

Sl. No	Coping Strategy	Frequency
1	Distraction	17
2	Social Support	16
3	Religious Coping	9
4	Positive Outlook	4
5	Educating Oneself	3
6	Counselling	2
7	Yoga and Meditation	2
8	Avoidance	1

Table 8: Coping Strategies used to deal with Depression

The table eight shows the coping strategies that are by the participants of the study to cope with their sadness. The method of distraction is the most frequently used strategy. Used by 17 by watching TV, listening to music, getting occupied in household activities, reading, blogging (by one participant) and surfing the internet. 16 participants rely on Social Support (Spouse, children, grandchildren, extended family or friends) to make them feel better. Religious Coping (Praying, visiting holy places, listening to holy music and reading the holy book) is used by nine of the participants. Having a positive outlook about their life helps four of the

participants while educating oneself about their illness helps three of the participants to deal with their sadness. Two participants prefer to go for counselling, while two go for yoga and meditation and one participant prefers to avoid all social interactions. A Mann-Whitney Test was conducted to compare the levels of anxiety between males and females. The test indicated that the levels of anxiety were not significant between males ($M=15.91$) and females ($M= 5.26$), conditions; $U= 100.000$, $p= 0.846$. An independent-sample t-test was conducted to compare the levels of depression between males and females. There was no significant difference in the scores between men ($M=13.8$, $SD=8.875$) and women ($M=12.74$, $SD=9.030$) conditions; $t(28) = .131$, $p= .897$. Statistical Analysis has shown that there is no significant difference in the levels of depression and anxiety between the two genders. Both the hypotheses have been rejected.

4. Discussions and Conclusions

Considering the top three themes of coping strategies used by the maximum number of participants to deal with physical issues were medications, rest and relaxation and distraction. The top three themes of coping strategies used for anxiety were social support, religious support and distraction, while similarly the three themes of coping strategies used for depression were distraction, social support and religious coping.

Physical problems as well as anxiety and depression are prominent in cancer patients undergoing Chemotherapy. A wide variety of coping strategies are used to deal with these issues such as social support, religion coping, distraction and many others. Identifying the coping strategies that are being used by these participants, can help other patients understand the strategies that they can use to cope with their physical issues as well as the anxiety and depression they face while undergoing chemotherapy.

Treating the psychological aspects (depression and anxiety) is an important as administering the drug. A person, who does not have complete mental well-being, may not respond to the treatment well. It is important for the family members to have mental well-being as they play a huge role in supporting the patient. Good medical care backed up by excellent coping strategies will ultimately help the patient in dealing with this disease.

This study adds to the body of existing knowledge. The results of this study can be used to help cancer patients understand the coping strategies that they can use to help them cope with their anxiety and sadness. It also helps in understanding the strategies that can be used to help them deal with the physical side effects of chemotherapy. Based on the themes of the coping strategies that have been found, medical social workers can use these findings of this study to help patients.

5. Limitations

As participants were unwilling to take part in the study, the researcher was able to get only 30 samples using Purposive Sampling. Her sample size had unequal representation of males and females. Another drawback of the study is the wide range in terms of age of the participants.

6. Conclusion

Physical problems, anxiety and depression are notable side effects of patients receiving chemotherapy. Various coping strategies were used by the patients as enumerated in the study. With the help of these coping strategies, patients can deal with the side effects of chemotherapy more effectively. This will also help the patients in accepting their problems and remain in a positive frame of mind.

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