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ASSESSMENT OF STRESS AND COPING STYLES AMONG CANCER PATIENTS UNDERGOING RADIATION THERAPY

Health Psychology

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ABSTRACT

An attempt was made in the present investigation to assess stress and coping styles among cancer patients undergoing radiation therapy. The present study was conducted on 50 cancer patients who are under Radiation therapy in Radiation oncology ward, SVIMS, Tirupati of Andhra Pradesh, India. Perceived stress scale developed by Cohen et al.,(1983) and coping styles questionnaire developed by Sudha and Hemalatha (2010) were used to assess stress and coping styles among cancer patients. The statistical analysis of the collected data revealed that there was significant relationship between the level of stress and coping styles among cancer patients and no significant association between demographic variables with the level of stress. Another significant finding of the study was significant association between financial support and presence of side effects with the level of coping.

KEYWORDS

INTRODUCTION

Cancer is a group of more than 200 diseases characterized by uncontrolled and unregulated growth of cells. It is a major health problem that occurs in people of the different ethnicities. Once diagnosed, cancer is usually treated with a combination of surgery, chemotherapy and Radiation therapy. As research develops, treatments are becoming more specific for different varieties of cancer. Radiation therapy is a local treatment modality for cancer. Radiotherapy may be used for curative or adjuvant treatment.

Although most cancer survivors do not experience major psychopathology, they often face stressors and experience psychological symptoms and distress (Anderson and Lutgendorf, 1997). Some researchers have concluded that the diagnosis of cancer produces a greater amount of distress than other diagnoses (Shapiro et al., 2001). A stress-coping model could be helpful in understanding issues for survivors at the end of their treatments for primary cancer.

Stress and Coping Mechanisms

The Transaction Model is built on the assumption that stress is a person-situation interaction, one that is dependent on the subjective cognitive judgment that arises from the interplay between the person and the environment (Lazarus and Folkman, 1984). Any individual faced with either physical or psychological situation or event performs what is known as primary appraisal. Primary appraisal is an evaluation of an event for its personal meaning. If primary appraisal results in the person identifying the event or circumstance as a harm, loss, threat or a challenge, then the person experiences stress, if not then the event is benign. If stress is present, a person performs a secondary appraisal which focuses on possible coping strategies.

According to Livneh (2000) there are two forms of coping styles: Problem- focused and emotion-focused coping. Problem-focused coping attempts to find solutions to resolve the problem causing the stress. Problem-focused coping styles functions to alter the stressor by direct action, used when conditions are appraised as amenable. Strategies include learning new skills or developing new standards of behavior.

Emotion-focused coping involves managing the emotions that an individual feels when a stressful event occurs. Emotional focused coping mostly occurs when an appraisal has been made that nothing can be done to modify the stressor. Emotion-focused styles include wishful thinking, minimization, or avoidance. The key to successful coping is the use of coping flexibility. Coping flexibility involves ability to change, and adapt coping styles over time and across different stressful conditions as different strategies work effectively than others depending on circumstances (Manuel and Burwell, 2007).

OBJECTIVES OF THE STUDY

- To assess the level of stress experienced by cancer patients undergoing radiation therapy
- To assess the level of coping styles adopted by the cancer patients undergoing radiation therapy.
- To correlate the level of stress and coping styles adopted by cancer patients undergoing radiation therapy.
- To associate the level of stress and coping styles adopted by cancer patients undergoing radiation therapy with demographic variables.

SAMPLE

The sample consisted of fifty cancer patients undergoing radiation therapy. The participants of the study involved 35 female and 15 male cancer patients. Subjects have been personally contacted and data collected using structured schedule. The time required for each testing session is approximately 100 minutes. About three to four subjects were tested each day.

TOOLS

1) Perceived stress scale developed by Cohen et al., (1983). It consists of 10 items. Each item is rated on 5- point scale ranging from never (0) to very often (4).
2) Coping styles questionnaire prepared and validated by Sudha and Hemalatha (2010). It consists of 20 statements rated on 4 point scale ranging from does not apply (0) used to a great deal (3).

DATAANALYSIS

Descriptive statistics

Frequency, percentage, mean, SD, were used for assessing the level of stress and coping.

Inferential statistics

Chi-square and F-test were used for analyzing the association between the demographic variables with stress and coping of the radiation therapy patients of selected cancers.

RESULTS AND DISCUSSION

Table –I: Frequency and percentage distribution of cancer patients undergoing Radiation therapy according to their level of stress

(n = 50)

Level of Stress	Number	Percentage
Mild	24	48%
Moderate	23	46%
Severe	3	6%

A close observation of table 1 shows that 24 (48%) Radiation therapy patients have mild stress, 23 (46%) Radiation therapy patients have moderate stress and remaining 3 (6%) radiation therapy patients have severe stress.

Table - II: Frequency and percentage distribution of cancer patients undergoing Radiation therapyaccording to their level of coping styles

(n = 50)

Level of Coping	Number	Percentage
Poor	18	36%
Moderate	30	60%
Adequate	2	4%

An observation of table II shows that 18 (36%) Radiation therapy patients have poor coping, 30 (60%) Radiation therapy patients have moderate coping and 2 (4%) radiation therapy patients have adequate coping.

Table III: Relationship between the level of stress and coping styles among cancer patients undergoing radiation therapy

S.No.	Variable	Mean S.D	Correlation Coefficient	t-value
1.	Stress	20.48 4.281	-0.329*	S, P = 0.05
2.	Coping	31.560 7.917		

It is evident from the table III that there was significant relationship between the level of stress and coping styles at 0.05 level.

Table IV : Association between demographic variables and the level of stress and coping styles among cancer patients undergoing radiation therapy

(n = 50)

Demographic variables	Level of stress						Level of coping						Chi square			
	Mild		Moderate		Severe		Poor		Moderate		Adequate		Stress		Coping	
	n	%	n	%	n	%	n	%	n	%	n	%	Value	Sig	Value	Sig
Age													0.580	*	6.444	*
Below 20	0	0%	1	2%	0	0%	0	0%	1	2%	0	0%				
20-40	3	6%	7	14%	0	0%	3	6%	6	12%	1	2%				
40-60	11	22%	12	24%	1	2%	12	245	11	22%	1	2%				
Above 60 years	10	20%	3	6%	2	4%	3	6%	12	24%	0	0%				
Sex																
Female	17	34%	16	32%	2	4%	12	24%	21	42%	2	4%	0.026	*	0.952	*
Male	7	14%	7	14%	1	2%	6	12%	9	18%	0	0%				
Marital Status													2.401	*	3.043	*
Married	15	30%	19	38%	2	4%	15	38%	19	38%	2	4%				
Unmarried	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%				
Widow / widower	9	18%	4	8%	1	2%	3	22%	11	22%	0	0%				
Education													11.904	*	5.905	*
Professional	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%				
Graduate, postgraduate	1	2%	1	2%	0	0%	1	2%	1	2%	0	0%				
Intermediate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%				
High school	4	8%	1	2%	0	0%	1	2%	3	6%	1	2%				
Upper primary	0	0%	6	12%	0	0%	3	6%	3	6%	0	0%				
Primary	2	4%	0	0%	0	0%	0	0%	2	4%	0	0%				
Illiterate	17	34%	15	35%	3	6%	13	26%	21	42%	1	2%				
Occupation																
Professional	1	2%	0	0%	0	0%	1	23%	0	0%	0	0%	6.518	*	6.494	*
Semi-professional	1	2%	0	0%	0	0%	0	0%	1	2%	0	0%				
Clerk / shop owner / farmer	5	10%	3	6%	0	0%	1	2%	6	12%	1	2%				
Skilled worker	1	2%	1	2%	0	0%	1	2%	1	2%	0	0%				
Semi skilled worker	2	4%	4	8%	0	0%	2	4%	4	8%	0	0%				
Unskilled worker	10	20%	13	26%	2	4%	10	20%	14	28%	1	2%				
Unemployed	4	8%	2	4%	1	2%	3	6%	4	8%	0	0%				
Family Income in rupees													10.914	*	9.198	*
Above 19575	2	4%	0	0%	0	0%	1	2%	1	2%	0	0%				
9788 – 19574	4	8%	6	12%	0	0%	1	2%	8	16%	1	2%				
7323 – 9587	8	16%	6	12%	0	0%	5	10%	8	16%	1	2%				
4894 – 7322	2	4%	1	2%	1	2%	1	2%	3	6%	0	0%				
2936 – 4893	1	2%	1	2%	0	0%	1	2%	1	2%	0	0%				
980 – 2935	7	14%	7	14%	2	4%	9	18%	7	14%	0	0%				
Below 979	0	0%	2	4%	0	0%	0	0%	2	4%	0	0%				
Socio Economic Status													6.729	*	7.213	*
Upper class	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%				
Upper middle class	6	12%	2	4%	0	0%	2	4%	5	10%	1	2%				
Lower middle class	3	6%	7	14%	0	0%	3	6%	6	12%	1	2%				
Upper lower class	9	18%	8	16%	1	2%	5	10%	13	26%	0	0%				
Lower class	6	12%	6	12%	2	4%	8	16%	6	12%	0	0%				
Religion													4.097	*	1.766	*
Hindu	22	44%	18	36%	3	6%	15	30%	26	52%	2	4%				
Muslim	2	4%	2	4%	0	0%	1	2%	3	6%	0	0%				

Christian	0	0%	3	6%	0	0%	2	4%	1	2%	0	0%				
Residence																
Urban	21	42%	20	40%	3	6%	17	34%	25	50%	2	4%	0.438	*	1.599	*
Rural	3	6%	3	6%	0	0%	1	2%	5	10%	0	0%				
Financial Support																
Ashis	23	46%	21	42%	3	6%	16	32%	30	60%	1	2%	0.631	*	9.614	**
Reimbursement	1	2%	2	4%	0	0%	2	4%	0	0%	1	2%				
Family history of cancer																
Yes	2	4%	1	2%	1	2%	3	6%	1	2%	0	0%	3.036	*	2.899	*
No	22	44%	22	44%	2	4%	15	30%	29	58%	2	4%				
Using stress relieving measures																
Yes	5	10%	8	16%	0	0%	4	8%	8	16%	1	2%	2.309	*	0.739	*
No	9	38%	15	30%	3	6%	14	28%	22	44%	1	2%				
Types of cancer																
Cancer cervix	46	32%	16	32%	2	4%	12	24%	20	40%	2	4%	1.091	*	1.971	*
Oral cancer	6	12%	4	8%	1	2%	5	10%	6	12%	0	0%				
Cancer stomach	2	4%	3	6%	0	0%	1	2%	4	8%	0	0%				
Type of radiation therapy																
External	24	48%	23	46%	3	6%	18	36%	30	60%	2	4%	0.00	*	0.000	*
Internal	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%				
Frequency of Radiation therapy																
Every day	3	6%	2	4%	1	2%	1	2%	4	8%	1%	2%	1.537	*	3.494	*
Alternate day	0	0%	0	0%	0	0%	0	0%	0	0%	0%	0%				
For every two days	0	0%	0	0%	0	0%	0	0%	0	0%	0%	0%				
Above 2 days	21	42%	21	42%	2	4%	17	34%	26	52%	1%	2%				
Presence of any side effects																
Yes	13	26%	18	36%	3	6%	15	15%	19	38%	0%	0%	4.63	*	6.495	**
No	11	22%	5	10%	0	0%	3	3%	11	22%	2%	4%				
Significance	* not significant ** significant at p = 0.05															

It is evident from table IV that there was no significant association between the level of stress and selected cancer patients' demographic variables such as age, sex, marital status, education, occupation, family income, socio economic status, religion, residence, financial support, family history, stress relieving measures, type of cancer, type and frequency of radiation therapy and presence of side effects. It also revealed that there was no significant association between the coping styles adopted by the radiation therapy patients with demographic variables such as age, sex, marital status, education, occupation, family income, socioeconomic status, religion, residence, family history, stress relieving measures, type of cancer, type and frequency of radiation therapy. But there was significant association between the coping styles adopted by radiation therapy patients with selected variables such as financial support and presence of side effects.

CONCLUSIONS

- Among fifty Radiation therapy patients 24 (48%) cancer patients have mild stress, 23 (46%) cancer patients have moderate stress and 3 (6%) cancer patients have severe stress.
- Among fifty Radiation therapy patients 18 (36%) cancer patients have poor coping, 30 (60%) cancer patients have moderate, 2 (4%) cancer patients have adequate coping.
- Correlation coefficient showed that there was significant relation between the level of stress and coping styles (p = 0.05)
- Analysis revealed that there was no significant association between demographic variables with level of stress.
- It was also found that there was significant association between demographic variables such as financial support and presence of side effects with the level of coping.

IMPLICATIONS

The results of this research have several significant implications for individuals suffering from cancer. It can help in developing constructive stress management programs in which the perceived stress can be reduced by teaching the patients to use different coping techniques along with increasing the social support structure and healthy dietary habits thus at the same time improving interpersonal relations. Happy and relaxed patients have more tolerance and adaptive skills along with good immune system to deal with stress. Awareness campaigns and counseling sessions can be generated by highlighting how these stressors related to health threats can be reduced by both increased information and development of good coping skills and drawing the attention of individuals towards more positive elements in their life other than the distress related to their health issues. With this awareness, Psychologists, counselors, social workers and clinicians can work on rehabilitation plans and attempt to improve stress management programs among the growing number of cancer patients to improve their health condition.

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