Explore the Relationship between Post Traumatic Growth, Ways of Coping and Anxiety among Cancer Patients at Selected Hospital Of Haryana

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Abstract: *A cancer diagnosis is hard to take and having cancer is not easy. Like all chronic illnesses, cancer involves a series of negative threat to life of individual that may be due to the diagnosis and treatment of cancer as it has the ability to shake one's worldview and significantly impact one's assumption about life. In addition to commonly recognized negative effects such as posttraumatic stress symptoms (PTSS), there may also be positive personal developmental change, including posttraumatic growth (PTG)which is affected by the anxiety level of the patient. The purpose of the study was to determine the relationship between post traumatic growth, ways of coping and anxiety among cancer patients. The study involved 100 cancer patients. There was a highly positive correlation between PTG and WAYS. State-trait anxiety was found to be highly negatively co-related to post traumatic growth and ways of coping.Thus it can be concluded that post traumatic growth and ways of coping goes in same manner which suggest that the better the coping behavior used by cancer patients more will be the post traumatic growth and there was negative relationship between post traumatic growth, ways of coping and state-trait anxiety.*
Keywords: *cancer, Post traumatic growth, Ways of coping, State-trait anxiety.*

I.   Introduction

1.1 Introduction

Cancer is the leading cause of death in economically developed countries and the second leading cause of death in developing countries [1].Cancer is the second biggest cause of death in India, growing at 11 per cent annually. There are 2.5 million cancer cases and four lakh deaths a year in India [2]. Cancer has the ability to shake one's worldview and significantly impact one's assumption about life. The diagnosis and subsequent treatment of cancer can cause negative psychological and physical sequel that can severely impact individuals' everyday life. In addition to commonly recognized negative effects such as posttraumatic stress symptoms (PTSS) [3], there may also be positive personal developmental change, including posttraumatic growth (PTG), which occurs in conjunction with or in the aftermath of the traumatic experience. PTG has been defined as "Positive psychological change experienced as a result of the struggle with highly challenging life circumstances or traumatic events"[4]. The post traumatic growth is also affected by the anxiety level and the coping behavior used by cancer patients.

A total of 1,638,910 new cancer cases and 577,190 deaths from cancer are projected to occur in the United States in 2012 [5]. As per Indian population census data, the rate of mortality due to cancer in India is alarmingly high this was 819354 in (2004) which drastically increases to 979786 in (2010). According to the Health department officials based the calculation on the basis of a report on cancer patients prepared by PtBhagwatDayal P.G.I.M.S. Rohtak, Haryana in October 2012 stated that there are 27,827 cancer patients in Haryana [6] and a survey conducted in Punjab, the Punjab Health Minister Madan Mohan Mittal said that 23,874 cases of people suffering from cancer have been detected, the number of persons complaining of cancer symptoms were 84,453. According to the survey, 33,318 cancer deaths have occurred during last five years, out of which 14,682 were in the Malwa region alone. As many as 4,000 of these happened in Ludhiana [7].

1.2 Objective of the study:

To determine the relationship between post traumatic growth, ways of coping and anxiety among cancer patients.

II.   Material And Method

2.1 Research Design and setting

The study used a cross-sectional exploratory(survey) design and it was carried out between 13th December 2012 to 12th January 2013. The study sample consisted of 100 patients diagnosed with a variety

cancer (62 male and 38 female) who were consecutively admitted in the In-patient unit, Radiotherapy department of Post graduate institute of Medical Sciences (P.G.I.M.S),Rohtak, Haryana. They entered the study based on their acceptance to the questionnaire and willingness to participate.

2.2 Data Collection
The data collection tools comprised arecord sheet on Demographic and clinical characteristics of cancer patients, Post traumatic growth inventory, Ways of coping, State-trait anxiety inventory. The data were collectedby face to-face interviews conducted by researchers in the in-patient unit of radiotherapy department. The researchers introduced the questionnaire to the participants and explained the material covered. The average time for completing the questionnaires was 90-120 minutes.

2.3 Data Collection Instrument
The tools which were used in present study comprised of 4 sections: Demographic and clinical variables, post traumatic growth inventory, ways of coping and State-Trait anxiety inventory.

Section 1: Demographic and clinical variables

Part A- It consisted of the record sheet which was constructed to collect data regarding patient's characteristics (age, gender, residence, education, occupation, annual household income, marital status, present position in the family, importance of religious activities.

Part B- consists of diagnosis of cancer, duration of diagnosis, stage of disease andongoing treatment.

Section 2: Post Traumatic Growth Inventory (PTGI)
The Posttraumatic Growth Inventory is a 21-item self-report measure, which assesses positive outcomes related to cancer. Participants will be asked to rate the degree to which they experienced a certain change in their life as a result of their experience with cancer diagnosis. Each item is rated on a six-point Likert scale ranging from 0 ("I did not experience this change") to 5 ("I experienced this change to a very great degree"). Reliability score for hindi version was .94. The 21 items wereunder five subscales including Relating to Others, New Possibilities, Personal Strength, Appreciation of Life, and Spiritual Change. The range of scale score is 0-105. The higher score of the scale mote will be the post traumatic growth[8-9].

Section 3: Ways of coping
The Ways of Coping is a 66-item self-report measure of how individuals cope with a self-selected specific recent stressful event. Each item was rated on a scale from 0 ("does not apply or not used") to 3 ("used quite a bit"). Reliability scores for the subscales of Hindi version of ways of coping was .74. The WAYS assesses eight coping factors including Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal [10-11].

Section 4: State–Trait Anxiety Inventory
The State–Trait Anxiety Inventory is a 40-item self-report measure of state and trait anxiety. The reliability of Hindi version of state anxiety was .95 and .96 for trait anxiety. The trait subscale measures a more stable tendency to experience anxiety whereas the state subscale measures a temporary experience of anxiety or tension. Each item is rated on a 4-point intensity scale [12-13].

2.4 Ethical Considerations
Regarding ethical considerations, the ethical approval was obtained from the Institutional Ethical Committee Maharishi Markendshwar University and formal approval was obtained from the H.O.D of Radiotherapy department. Written information was given to the participants and their oral consent was obtained. The patients were informed about the purpose of the research and assured of their right to refuse to participate in or to withdraw from the study at any stage. Anonymity and confidentiality of subjects' data were guaranteed.

2.5 Statistical analysis
Data was analyzed and interpreted by employing descriptive and inferential statistics. SPSS version 16.0 was used to analyze the data. P value ≤0.05 was considered as significant.

III. Results

About (51%) of the cancer patients were belonged to age group of 48-62 years,(62%) of the patients were male most of them (78%) of the were residing in rural area, (45%) of the patients were illiterate. Majority of (91%) were self employed. Most of the patients (63%) belong to income group of 50001-100000/- .The majorities (93%) of the patients were married and (67%) were adults. Most of (58%) of the patients were those who does religious activities once in a day and (51%) of the patients had a great importance of religious activities. most of the patients (29%) were diagnosed were Ca Cervix and only (3%) were diagnosed with breast cancer. Most of cancer patients (57%) had duration of diagnosis between 6months-1year, Most (50%) of cancer patients were in III stage of the disease. With regard to the type of treatment received (51%) received chemotherapy as the treatment.

Table 1 Co-relation matrix between Post traumatic growth, Ways of coping and State-Trait anxiety. **N=100**

Correlation matrix	Accepting responsibility	Confrontive coping	Distancing	Escape avoidance	Positive reappraisal	Plan problem solving	Seeking social support	Self controlling	Ways of coping total	State anxiety invention	Trait anxiety inventory	Anxiety inventory total	New possibilities	Personal strength	Relating to others	Spiritual strength	Appreciation of life
Confrontive coping	-0.39*																
Distancing	-0.60*	0.69*															
Escape avoidance	0.67*	-0.36*	-0.59*														
Positive reappraisal	-0.50*	0.74*	0.85*	-0.48*													
Plan problem solving	-0.44*	0.72*	0.84*	-0.51*	0.88*												
Seeking social support	-0.18 NS	0.64*	0.57*	-0.26*	0.72*	0.70*											
Self controlling	-0.15 NS	0.68*	0.60*	-0.29*	0.67*	0.67*	0.59*										
Ways of coping total	-0.20*	0.82*	0.74*	-0.23*	0.89*	0.88*	0.82*	0.80*									
State anxiety inventory	0.53*	-0.63*	-0.85*	0.62*	-0.85*	-0.83*	-0.6*	-0.64*	-0.76*								
Trait anxiety inventory	0.62*	-0.62*	-0.86*	0.7*	-0.84*	-0.80*	-0.53*	-0.59	-0.69*	0.91*							
Anxiety inventory total	0.59*	-0.64*	-0.88*	0.68*	-0.87*	-0.83*	-0.58*	-0.63	-0.74*	0.97*	0.98*						
New possibilities	-0.56*	0.71*	0.87*	-0.51*	0.93*	0.83*	0.63*	0.63*	0.82*	-0.85*	-0.85*	-0.87*					
Personal strength	-0.60*	0.65*	0.81*	-0.55*	0.84*	0.78*	0.53*	0.56*	0.71*	-0.79*	-0.81*	-0.82*	0.90*				
Relating to others	-0.18 NS	0.60*	0.50*	-0.23*	0.61*	0.63*	0.65*	0.54*	0.68*	-0.56*	-0.51*	-0.54*	0.60*	0.55*			
Spiritual strength	0.12 NS	0.13 NS	-0.05 NS	0.17 NS	0.11 NS	0.06 NS	0.18 NS	0.11 NS	0.16 NS	-0.04 NS	0.06 NS	0.01 NS	0.06 NS	0.07 NS	0.42*		
Appreciation of life	-0.35*	0.69*	0.73*	-0.42*	0.78*	0.8*	0.65*	0.68*	0.80*	-0.74*	-0.68*	-0.72*	0.74*	0.67*	0.65*	0.17 NS	
Post traumatic growth inventory total	-0.46*	0.75*	0.80*	-0.46*	0.89*	0.85*	0.70*	0.68*	0.85*	-0.82*	-0.79*	-0.82*	0.92*	0.88*	0.84*	0.27*	0.84*

* significant at 0.05, df 98 = 0.197   NS = Not significant

The findings of the table 1 indicated that Post traumatic growth and ways of coping were found to be significantly highly positively correlated (0.85) at 0.05 level of significance. Which suggest that the cancer patients who were using various coping behavior they were having higher positive growth. In the further analysis it was found that new possibilities, personal strength, relating to others, and appreciation of life, all the subscale of post traumatic growth inventory were having significantly highly positive correlation with the ways of coping whereas spiritual strength one of the subscale of post traumatic growth inventory found insignificant with ways of coping at the level of significance 0.05.

The subscales of ways of coping namely confrontive coping, distancing, positive reappraisal, plan problem solving, seeking social support and self controlling were found significantly highly positive correlation with the post traumatic growth inventory subscales namely new possibilities, personal strength, relating to others and appreciation of life and which suggest that these behavior goes in same manner whereas accepting responsibility and escape avoidance were found negatively related with the new possibilities, personal strength, relating to others and appreciation of life but the relationship between the accepting responsibility and relating to others was found insignificant at 0.05 level of significance.

In further analysis it was found the relationship between all the subscales of ways of coping namely accepting responsibility, confrontive coping, distancing, escape avoidance, positive reappraisal, plan problem solving, seeking social support and self controlling was found insignificant with the spiritual strength which suggest that cancer patients were not using their spiritual strength as a coping behavior for cancer diagnosis.

The analysis was indicating that post traumatic growth and its subscales except spiritual strength were related to ways of coping and its subscales and most of them were having positive relationship.

From the further analysis it was found that Post traumatic growth and state-trait anxiety were found significantly highly negatively co-related to post traumatic growth (-0.82) at the level of 0.05 significance and it was which suggest that those cancer patients who had positive growth after diagnosis with cancer they have low state-trait anxiety. In the further analysis it was found that new possibilities, personal strength, relating to others and appreciation of life subscales of post traumatic growth inventory were significant highly positively correlated with state-trait anxiety. Whereas the relationship between spiritual strength and state-trait anxiety was insignificant.

The ways of coping was found to be significantly highly negatively correlated with state-trait anxiety (-0.74) at 0.05 level of significance which suggest that the cancer patients who were using various coping behavior to cape with cancer diagnosis have low state-trait anxiety. Thus it can be concluded that post traumatic growth and ways of coping goes in same manner which suggest that the better the coping behavior used by cancer patients more will be the post traumatic growth and there was negative relationship between post traumatic growth, ways of coping and state-trait anxiety.

IV. Discussion

It was observed that (51%) of the subjects belonged to the age group of 48 years and above. The findings were similar to findings reported in literature by McPherson, Steel and Dixon (2000) i.e. the incidence of breast cancer increases with age and it is common among the age group of above 40 years [14].
There is positive relationship between post traumatic growth and ways of coping (0.85) which are found to be consistent with the findings of Andrea A. Thornton, Martin A. Perez coping are related to PTG in prostate cancer survivors and their partners [15].

V. Conclusion

There was positive relationship between ways of coping and post traumatic growth which suggests that better the coping mechanisms used by the patients higher will be the post traumatic growth and they will better be able to cope with disease condition and can look forward for their life and there will decreased level of anxiety level in patients

Implications For Nursing Practice:
Cancer affects the individual both psychologically and physiologically so it leads to various psychological problems in the patients. Nurse's being the direct care providers of the patients they needs to understands the psychological processes occurring in the patients being diagnosed with a chronic and debilitating disease condition. The scales used in present study help the nursing personnel to gather information regarding patient psychological condition and plan their care accordingly.

Limitations
The data for assessing post traumatic growth (PTG), was collected at one point of time while it should be done after an interval of time.

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