

A pilot study to assess the level of depression and the coping strategies adopted by cancer patients receiving treatment in Mizoram State Cancer Institute, Aizawl

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Abstract

Background: Cancer, the second most common cause of death, has become a major health problem. Depression is the most common psychological problem encountered in patients with cancer. The coping skills adopted may affect the mental health of patients. Therefore, this research is undertaken to assess the level of depression and coping strategy adopted by the patients diagnosed with cancer.

Materials and methods: A descriptive study to assess the level of depression and coping strategy adopted by cancer patients receiving treatment in Mizoram State Cancer Institute, Aizawl was carried out from April to May 2014 with 30 convenient samples. Depression was assessed by using Hospital Anxiety and Depression Scale (HADS) developed by Zigmond and Snaith in 1983. Coping strategy adopted by patients were assessed by revised version of the Ways of Coping Checklist developed by Folkman and Lazarus in 1985.

Results: Findings of the study showed that depression was universal to all the cancer patients. Majority of cancer patients (66.5%) had moderate depression while 13.26% of the cancer patients had severe depression, and only 6.7% of them reported to have low depression. The most effective coping strategy adopted was reappraisal, followed by distancing. There is significant correlation between depression and reappraisal ($r=-0.538$, $p<0.002$), and also with depression and acceptance ($r=-0.415$, $p<0.022$) strategies.

Conclusion: As depression is universal to all cancer patients, use of appropriate coping strategy is very essential to improve their quality of life. The recognition of coping strategies by health team may enable appropriate information and interventions to be provided at optimal times for each individual.

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Introduction

Cancer, the second most common cause of death next to cardiovascular diseases, has become a major health problem.[1] Cancer is both a physical disease and a condition that has predominant psychosocial effects, contains uncertainties and threatens life leading to severe psychological

problems in an individual. Patients undergoing treatment for cancer face major physical and emotional challenges. Patients with cancer receiving chemotherapy experience psychological distress as a result of negative effects of chemotherapy agents, the uncertainty of post-treatment, and the

occurrence of psychosocial problems related to financial involvement and assumption of cancer as a fatal disease.[2,3]

Depression is believed to affect men and women with cancer equally, and gender-related differences in prevalence and severity have not been adequately evaluated.[4] Individuals and families who face a diagnosis of cancer will experience varying levels of stress and emotional upset. Depression in patients with cancer not only affects the patients themselves but also has a major negative impact on their families. A survey in England of women with breast cancer showed that among several factors, depression was the strongest predictor of emotional and behavioural problems in their children.[5] Fear of death, disruption of life plans, changes in body image and low self-esteem, changes in social role and lifestyle, and financial and legal concerns are significant issues in the life of any person with cancer. However, serious depression or anxiety is not experienced by everyone who is diagnosed with cancer.[6]

With the advances in diagnosis and treatment of cancer over the past several decades, majority of those who have cancer will become long term (five or more years) survivors.[7] Research documents that such cancer survivors continue to experience diminished quality of life (QOL) from physiological sequel, psychological distress, and social life disruption, even decades after diagnosis and initial treatment.[8,9] While long-term survivors do not typically face most of the stressors associated with diagnosis and treatment, they continue to face the uncertainties that survivorship brings and many also continue to have cancer treatment related symptoms. These chronic stressors may continue to generate depression in cancer patient. When the patient is in depression, the coping skills used for adaption with these situations may in turn affect the mental health of long-term survivors.[9]

Depression and cancer

Depression is the most common psychological problem encountered in patients with cancer.[10] There are many factors that can initiate the onset of depression especially in case of chronic illness like cancer. There are large numbers of cancer patients who suffer from depression. Normally, a patient's initial emotional response to a diagnosis of cancer is brief, extending over several days to weeks, and may include feelings of disbelief, denial, or despair. This normal

response is part of a spectrum of depressive symptoms that range from normal sadness to adjustment disorder with depressed mood to major depression. Sadness and grief are normal reactions to the crises faced during cancer. All people will experience these reactions periodically. Because sadness is common, it is important to distinguish between normal degrees of sadness and depressive disorders.[11]

Sadness, anxiousness, hopelessness, worthlessness, irritability, restlessness, isolation, and guilt are few of the symptoms that a person suffering from depression experiences.[12] Studies have shown that patients who are depressed may also have physical symptoms which are difficult to palliate and which may improve as their depression is appropriately treated.[13]

Number of studies reported that depressed patients tend to be less proactive in seeking more aggressive treatments, and have severe symptoms, poor response to systemic therapy, long recovery times, and poor outcomes.[14-16] In addition, management of depression and anxiety leads to reduction in disease progression, improvement in survival rates, reduction in healthcare costs, and improvement in QOL.[17-19]

Coping has been defined as the way in which people respond and behave to stressful events.[20] It has been stated that coping has two important functions including the handling of the problematic issue (problem-focused strategies) and arrangement of emotions (emotion-focused strategies).[21] Appropriate coping and adjustment are important in facing chronic diseases; coping strategies refer to the specific efforts, both behavioural and events. Studies have shown that various kinds of coping strategies are used in different types and stages of cancer. For instance, it has been reported that patients recruit the avoidance strategies for not wanting to accept the disease in the period of diagnosis and for encountering more stressful events in advanced stages of the disease.[22,23]

In addition, the coping strategies are frequently studied by their efficacy. Effective active coping alleviates the problem and reduces emotional distress. Ineffective passive coping, however, exacerbates and intensifies the problem.[14] Studies in the literature suggest that there is a relationship between the coping strategies recruited by patients with cancer and psychological symptoms including anxiety and

depression.[24-27] It has been stated that patients using ineffective coping strategies have higher levels of anxiety and depression, and that benefiting from social support results in a marked reduction in the levels of anxiety and depression.[22]

Therefore, the purpose of the study was to determine the levels of depression and coping strategies adopted by the cancer patients receiving treatment in Mizoram State Cancer Institute, Aizawl. Moreover, the study aims to find out the correlation between depression and coping strategies.

Materials and methods

Sample and sampling: A non probability convenient sampling method was utilised. The study population consisted of 30 patients who received treatment for cancer during April - May, 2014 at Mizoram State Cancer Institute. Thirty patients who were eligible for the study were enrolled into the study. Eligibility criteria included: 18 years or older cancer patient receiving treatment at this centre, easy to communicate with, able to understand Mizo language, had adequate cognitive capacity to answer the questions, were not in the terminal phase of the illness, and at least one month should have passed since the first diagnosis, and those who consented to participate in the study.

Tool: The tool used for this study was translated into Mizo language and has three sections:

Section A: Proforma for collecting selected variables such as age, sex, marital status, education, occupation, status of affording treatment costs, people that the patient lives with, stage of cancer, type of cancer, mode of treatment.

Section B: Hospital Anxiety and Depression Scale (HADS) to find out the level of depression. In this study we used only subscale depression.

Section C: Ways of Coping Checklist to find out the coping strategy.

Data regarding selected variables were collected by structured interview technique including demographic data and medical variables. Depression was assessed using HADS developed by Zigmond and Snaith.[28] This scale includes two subscales - anxiety and depression. In this study we used one subscale (depression). Possible scores range from zero to 21. In the present study, patients who score zero to seven are considered normal, who score eight to ten

are considered as mild, 11-14 are considered moderate, and 15-21 are considered to have severe depression.

Coping strategy was assessed with revised version of the Ways of Coping Checklist developed in 1985 by Folkman and Lazarus.[29] The Ways of Coping (Revised) is a 66-item questionnaire containing a wide range of thoughts and acts that people use to deal with the internal and/or external demands of specific stressful encounters. Each administration, however, is focused on coping processes in a particular stressful encounter.

The response format on the revised version is that the subject responds on a four-point Likert scale (zero=not used at all, one=used somewhat, two=used sometimes, three=used very often). The scores were added to obtain the scores on each coping. There are eight subscales of the Ways of Coping. These subscales consist of confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape avoidance, planful problem solving, and positive reappraisal.[21]

The eight coping strategies can be explained as follows:

- Confrontive coping describes aggressive efforts to alter the situation, and suggests some degree of hostility and risk-taking.
- Distancing describes cognitive efforts to detach one-self and to minimise the significance of the situation.
- Self-controlling describes efforts to regulate one's feelings and actions.
- Seeking social support describes efforts to seek informational support, tangible support, and emotional support.
- Accepting responsibility acknowledges one's own role in the problem with a concomitant theme of trying to put things right.
- Escape-avoidance describes wishful thinking and behavioural efforts to escape or avoid the problem. Items on this scale contrast with those on the distancing scale, which suggests detachment.
- Planful problem solving describes deliberate problem-focused efforts to alter the situation, coupled with an analytic approach to solving the problem.
- Positive reappraisal describes efforts to create positive meaning by focusing on personal growth. It also has a religious dimension.

Procedure of data collection: The study was carried out with both inpatients and outpatients. Formal permission was obtained from the Director and the hospital staffs were informed of the study. Consent was taken from the participants after explanation of the purpose and procedures of the study. Patients were assured of their rights to refuse to participate or to withdraw from the study at anytime. The anonymity and confidentiality of the patients were assured.

An interview based approach and patient's medical records were used to obtain relevant information regarding demographic and related medical variables, depression and coping strategy.

Data analysis: The Statistical Package for the Social Sciences (SPSS) was utilised to analyse the data. Descriptive statistics were generated for each demographic variable. Frequencies, percentages, means, and standard deviations were utilised to measure the respondents' coping skills and levels of depression. Pearson's correlation (r) was utilised to assess the relationship between depression and coping strategy.

Results

Sample description

The study sample included 30 cancer patients receiving treatment from Mizoram State Cancer Institute. The demographic characteristics of the sample are presented in Table 1. The mean age of the sample was 47.50 years of age. Majority of cancer patients (33.3%) was from the age group of 41-50 years of age followed by less than 40 years of age, and least number of patients was from above 70 years of age. Out of 30 samples, 53.3% of them were females while 46.7% of them were males. Majority of the cancer patients (90%) accounted for those who were living with spouse. Majority of the participants (60%) were in stage II followed by stage III (30%), and the least number of sample were in stage I (3.3%). Regarding treatment, majority of the patients (43.3%) were under chemotherapy. In relation to financial status, 50% of the participants had government support and the rest of them had to bear their treatment expense by themselves. Among the samples under study, all types of cancer were found; among which, oesophagus cancer was most common (40%) followed by stomach cancer (20%) and then by cervix cancer (13.3%). Half (50%) of the samples were inpatients and another half (50%) were from outpatient.

Table 2 shows the mean scores for depression. It has shown that all the cancer patients were found to have depression. Majority of the patients had moderate depression (66.6%), while 26.6% of them had high depression, and only 6.7% of them had low depression. The mean depression score was 13.263.

Present study result showed (Table 3) that those who were above 70 years of age had highest mean depression score (i.e. 15), followed by the patients whose age ranged from 41-50 years (i.e. 14.1). Lowest depression score was found among those who were below 40 years of age (i.e. 11.78). The mean score of depression did not follow any specific distribution pattern. Females and males were

Table 1: Characteristics of the sample (n=30)

Characteristics	Frequency	Percentage
Age		
<40 years	9	30%
41-50 years	10	33.3%
51-60 years	6	20%
Above 70 years	5	16.6%
Sex		
Male	14	46.7%
Female	16	53.3%
Stage of cancer		
Stage I	1	3.3%
Stage II	18	60%
Stage III	9	30%
Stage IV	2	6.7%
Living arrangement		
Alone	1	3.3%
With mother/father	1	3.3%
With spouse	27	90%
With other relative	1	3.3%
Mode of treatment		
Surgery	1	3.3%
Radiation	3	10%
Chemotherapy	13	43.3%
Surgery and radiation	4	13.3%
Surgery and chemotherapy	6	20%
Radiation and chemotherapy	3	10%
Status of affording treatment cost		
With govt. support	15	50%
Without govt. support	15	50%
Type of cancer		
Stomach	6	20%
Oesophagus	12	40%
Lung	2	6.7%
Cervix	4	13.3%
AML	1	3.3%
Pharynx	1	3.3%
Ovary	3	10%
Breast	1	3.3%
Status of hospitalization		
Inpatient	15	50%
Outpatient	15	50%

AML=acute myeloid leukaemia

Table 2: Assessment of depression (n=30)

No depression (0-7)	0
Low depression (8-10)	2 (6.7%)
Moderate (11-14)	20 (66.6%)
High depression (15-21)	8 (26.6%)
Mean depression	13.263

showing almost similar depression scores. Highest depression scores were observed among those who were in stage I (i.e. 16) and stage IV (i.e. 16), while lowest depression scores were found in patients who were in stage II (i.e. 12.56). While talking about the living arrangement, the data has shown that those who were living alone had the highest mean depression scores (i.e. 17), followed by those who were living with other relatives (i.e. 16), and lowest depression score was found among those who were living with father or mother (i.e. 11). Regarding the availability of financial support, the depression score was slightly higher among those patients who did not have government financial support (i.e. 13.4) than those who had government financial support (i.e. 13.3). Regarding status of hospitalisation, inpatients had shown slightly higher depression scores than those who were taking treatment as outpatients.

Table 4 shows that based on the mean scores of coping strategy adopted by cancer patients, reappraisal was most frequently adopted by cancer patients (mean: 11.967), followed by distancing (mean: 11.867), and then self-controlling (mean: 11.433). Other coping strategies like confronting, social support, avoidance, problem solving were not used frequently. Acceptance was least frequently used by the cancer patients (mean: 5.200).

Table 5 shows that there was significant negative correlation between depression and reappraisal ($r=-0.538$, $p<0.002$), and also with depression and acceptance ($r=-0.415$, $p<0.022$), which signifies that the higher the level of depression the lesser reappraisal and acceptance. It was also found that there was no significant relation between depression and other coping strategies.

Discussion

A descriptive study was conducted to assess the level of depression and coping strategy adopted by cancer patients receiving treatment in Mizoram State Cancer Institute. The mean age of the sample is 47.50 years of age. In a study conducted by Jadoon et al.[30], the mean age of cancer patients was 40.85 years.

Highest number of cancer patients participating in the study (33.3%) was from the age group of 41-50 years of age. Majority of the cancer patients (90%) were living with spouse. Majority of the participants (60%) were in stage II cancer. Regarding treatment, majority of the patients

Table 3: Depression scores among the samples (n=30)

Characteristics	Frequency	Mean depression score	SD
Age			
<40 years	9	11.778	0.667
41-50 years	10	14.1	1.370
51-60 years	6	12.667	2.338
Above 70 years	5	15	2.336
Sex			
Male	14	13.214	2.007
Female	16	13.312	1.991
Stage of cancer			
Stage I	1	16	0
Stage II	18	12.556	1.756
Stage III	9	13.778	1.787
Stage IV	2	16	0
Living arrangement			
Alone	1	17	0
With mother/father	1	11	0
With spouse	27	13.11	1.804
With other relative	1	16	1.02
Mode of treatment			
Surgery	1	11	0
Radiation	3	14	1.732
Chemotherapy	13	13.538	1.808
Surgery and radiation	4	14.25	2.062
Surgery and chemotherapy	6	11.167	0.408
Radiation and chemotherapy	3	15	1.732
Status of affording treatment cost			
With govt. support	15	13.333	2.066
Without govt. support	15	13.4	1.19
Status of hospitalization			
Inpatient	15	13.4	1.19
Outpatient	15	13.333	2.066

SD=standard deviation

(43.3%) were under chemotherapy. The present study had revealed that oesophageal cancer was most commonly seen (40%), followed by stomach (20%), and then by cervix (13.3%). This could be attributed to the habit of chewing betel nut, tobacco consumption which has been practiced widely as a tradition, and heavy consumption of smoked and fermented food items which is largely practiced in Mizo community.

The present study had shown that all the cancer patients had depression. The mean depression score in the present study was 13.263. Majority of the patient had moderate depression (66.6%) while 26.6% of them had high depression and only 6.7% of them had low depression. The results of this study may be explained with the presence of hospital induced stressors, financial problems faced which added their burden, isolated location of the hospital, accommodation and transportation problems faced by the cancer patients apart from their illness.[31] According to Karabulutlu et al.'s study,[32] patients diagnosed with cancer were confronted with a severe stressor that can result in depression, which also showed the mean depression scores of cancer patients to be 11.44 ± 5.26 . According to Burgess et al.,[33] more than 30% of the women with early breast cancer had depression, anxiety, or both at the time of diagnosis.

There were interpersonal differences in the level of depression, which may include demographic characteristics such as age, financial problems, marital status, and level of social support.[34] In this study, we found that demographic characteristics were significantly associated with depression. Especially age, living arrangement, financial support, and staging of cancer were showed to have relationship with depression level of the cases.

The statistical analysis showed that depression score was highest among the patients who were above 70 years old (i.e. 15), compared to those of 61-70 years, 51-60 years, and <40 years old. A possible explanation of this result is that the elderly patients with cancer, after having lost their previous healthy status, often come along with additional situations that change one's life such as functional impairment, loss of spouse, poor network of social support, and loss of interest for activities. Another possible explanation of the same result is attributed to age-related factors such as poor absorption of medicine resulting from the loss of body mass, low metabolism, etc.

Table 4: Mean score and variation of different coping strategy

Coping strategy	Mean scores	SD
Confronting	6.033	2.798
Distancing	11.867	3.530
Self-controlling	10.433	3.025
Social support	7.533	2.501
Acceptance	5.200	4.294
Avoidance	6.333	2.998
Problem solving	6.267	4.059
Reappraisal	11.967	4.752

SD=standard deviation

Table 5: Pearson correlation coefficient between depression and various coping strategy

Coping strategy	r	p-value
Confronting	0.080	0.675
Distancing	0.080	0.957
Self-controlling	-0.258	0.169
Social support	0.103	0.587
Acceptance	-0.415*	0.022
Avoidance	-0.150	0.428
Problem solving	-0.096	0.615
Reappraisal	-0.538**	0.002

r=correlation co-efficient

*Correlation is significant at 0.05 level,

**correlation is significant at 0.01 level

It had also been found that depression scores were relatively higher among those who live alone (i.e. 17), followed by those who live with other relatives (i.e. 16), and then followed by those who live with spouse (i.e. 13.11); and lowest depression score was found among those who were living with father or mother (i.e. 11). This may be attributed to the fact that the patients had less emotional and physical support from their siblings which was in agreement with Bemana's study.[35] Das and Sarma,[36] in their study on women with human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS), found positive coping if the support from primary caregiver (son or own mother) was rendered.

The statistical analysis had shown that those cancer patients who had stage I and IV had relatively high depression scores (i.e. 16), and this finding may be explained by the natural concept that the patient had undergone a more

severe emotional turmoil during the initial period of illness and during the terminal phases of illness which is usually manifested in the form of depression. In regard to sex, female cancer patients showed higher mean depression scores than that of their male counterpart.

The present study had shown that the level of depression was slightly higher among those patients who do not have government financial support (i.e. 13.4) than those who have government financial support (i.e. 13.3). These findings showed that the financial problem also was one of the factors which heightened the level of depression. It was expected that this difference might be more pronounced if samples were larger than the present study. Study done by Polikandrioti et al.[34] also had the similar findings that depression was highest among the low income group and among the pensioners. According to a study conducted by Ell et al.,[37] a correlation was found between financial stress and depressive symptoms in patients with cancer. While studying mental illnesses also, Barman and Chakravorty[38] observed that family members had severe stress regarding finance.

Coping can generally be defined as an individual's cognitive or behavioural efforts to manage situations that are appraised as stress to individuals. Coping with the stress is an art.[39] Coping strategies should be prompt so that well-being can be increased that may lead to improved QOL by alleviating the suffering.[40] Many cancer patients adapt positive reappraisal, followed by distancing and social support to deal with the physical and psychological challenges of the disease.[41] The present study had shown that reappraisal was the most frequently adopted strategy by cancer patient (11.967), and least frequently used strategy was acceptance (5.200). The findings could have some connection with the spiritual belief of the cancer patients, as all of them were Christians and seeking help, strength, and putting faith in God was the integral philosophy of Christianity. Spirituality has an impact on psychological skills. Those having an active spiritual life, have a better perception of their life skills. It helps to deal with stress and emotions.[42] Spirituality is the need of the hour both for our own healing and stress reduction, and also for healing our patients in need.[43] According to Karabulutlu et al.,[32] patients benefited most from social support-seeking strategy. This had been followed by problem solving strategy and avoidance strategy. The present study also revealed that there was signifi-

cant negative correlation between depression and reappraisal ($r=-0.538$, $p<0.002$), and also with depression and acceptance ($r=-0.415$, $p<0.022$), which signifies that the higher the level of depression, reappraisal and acceptance was less.

Limitations

The present study utilised a non probability convenient sampling technique. Thirty cancer patients who were undergoing treatment at Mizoram State Cancer Institute participated in the study. This represents a small percentage of the entire cancerous population; therefore, the findings cannot be generalised to the entire cancer population. It would be important to obtain a larger sample of cancer patients.

Implications for future research

It was evident from the findings that all the cancer patients had some sort of depression as the disease itself was very tragic. The depression level can be heightened by the stage of cancer, presence/absence of family support, presence/absence of government financial support. Even though many changes cannot be made, but these findings reflect that there are many things like psychological, social, and financial aspects which needs to be considered while giving holistic care[43] to the cancer patients apart from their physical needs.

Again in the coping strategy, it was observed that depression had negative correlation with reappraisal and acceptance. Though these findings go along with the natural law, fewer acceptances and less reappraisal strategy could make the patients more depressive, and that could even lead to suicidal tendency. In addition, weak will-power could make the person more ill and they would deteriorate faster than those who are less depressed.

Further research may continue to explore the relationship between depression and coping skills, and what factors heightened the level of depression among a larger random sample, and with a more diverse population of cancerous patients in terms of ethnicity and geographical location. This would provide a better understanding of the psychological effects of living with cancer. Future research could be replicated to compare and contrast the findings of this study. The recognition of coping strategies by health team may enable appropriate information and interventions to be provided at optimal times for each individual.

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