

Original Research Article

Prevalence and correlates of psychological distress among cancer patients in a tertiary care hospital in northern India

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ABSTRACT

Background: Patients diagnosed with cancer are usually exposed to high level of mental stress and hence invariably lend in psychological distress. This study aimed to estimate the prevalence of psychological distress amongst cancer patients and determine its association with socio-demographic factors.

Methods: This hospital based cross-sectional study was conducted at a cancer research institute of district Dehradun. Purposive sampling was used to select the hospital and recruiting patients. All eligible patients, giving written consent for the study were interviewed and distress related information was gathered using the Hospital Anxiety and Depression Scale (HADS). The data were collected for two months and sample size of 208 was achieved. Data was entered in SPSS 22.0 and association of different variables with psychological distress was determined by chi-square test.

Results: The mean age of the surveyed cancer patients was 51.05±15.68 years and the male female ratio was 1.7. Prevalence of psychological distress was found to be 38.5% and significantly more female patients than male patients (47.4% and 33.3% respectively) had distress. The association between psychological distress and increasing age, sex, literacy and employment status was found to be significant.

Conclusions: Approximately 39% of cancer patients had psychological distress (anxiety/ depression/ both). The prevalence of psychological distress was found to be significantly higher in female patients, older age, patients with no formal education, unemployment and lower socio-economic status. Appropriate psychiatric interventions/ counselling following diagnosis and during therapy may be effective in reducing distress and improving quality of life in cancer patients.

Keywords: Psychological distress, Prevalence, Cancer patients, tertiary care hospital, Northern India

INTRODUCTION

Cancer has become the second leading cause of mortality worldwide. It is responsible for an estimated 9.6 million deaths in 2018. Globally, about 1 in 6 deaths is due to cancer.¹ However, with improving preventive and screening services and advancing curative services,

nurtured by committed researchers across the globe, the chances of survival of cancer victims are increasing. With the growing number of cancer survivors, the need for evidence-based interventions to meet survivors' psychosocial needs is also scaling up.²

Diagnosis of cancer drastically changes the life of the patient as well his whole family, and it is not uncommon

to see substantial psychological and emotional stress in cancer patients because the disease is often perceived as life-threatening. Even the non-neoplastic diseases, with the worst prognosis, don't create the amount of distress that is evolved in a patient diagnosed with cancer. In public health, psychological distress has very frequently been used as an indicator of the mental health of the individuals. It is often applied to an undifferentiated array of symptoms ranging from depression to general anxiety.³

In patients diagnosed with cancer, high levels of mental torment for prolonged periods may lead to psychological distress viz anxiety, depression or both. If the patient is exposed to tremendous stress, he or she may end up in major depression. Significant anxiety levels with depression have been observed in almost two-third of the cancer patients.⁴

Depression, a psychiatric syndrome that has received the most attention in individuals with cancer, often leads to poorer quality of life (QOL). It compromises the patient's outlook towards life, resulting in much higher rates of mortality in cancer. So, it is desirable to identify and manage depressive symptoms in cancer patients so that their QOL can be improved.⁴

Most of the cancer patients do not discuss their psychological symptoms with treating physician, as well as many of the physicians do not inquire about it due to their busy schedule, indifference as well as ignorance; because of which majority of this kind of psychological morbidity goes unrecognized and untreated.

The patient, if not counselled for psychological distress, may discontinue medications and give up good health habits. He/she may sometime withdraw from family or other support systems and thus be unable to cope with emotional and financial problems. Irrespective of their religious beliefs and cultural background, all cancer patients undergo some amount of anxiety and depression.

As per 2016 projections, the ICMR expected new cancer cases totalling around 14.5 lakhs and the same is expected to touch nearly 17.3 lakhs by 2020.⁵ As the number of cancer patients will increase, so will increase the prevalence of psychological distress among them. So, research on the mental health aspect of cancer survivors is the need of the hour. There is a paucity of research towards psychological aspects of cancer patients in Uttarakhand and nearby states. So, this study was planned to help the treating physicians/ surgeons understand the gravity of the problem and provide evidence-based results.

Aims and objectives

- To estimate the prevalence of anxiety and depression amongst cancer patients.
- To determine the association of socio-demographic factors with psychological distress.

METHODS

This hospital based observational cross-sectional study was conducted at the Cancer Research Institute (CRI) of Swami Rama Himalayan University, district Dehradun. This hospital caters patients from hills, foothills and also from adjoining areas of neighbouring states. This study was part of the STS projects approved by ICMR. All the eligible cancer patients attending CRI for follow up were the potential candidates for the survey. The eligibility criteria included the diagnosis of any type of cancer in the preceding year of the survey, age 20 years and above and patient ready to give consent to participate in the study. Cancer patients who were critically ill, not able to communicate or having a previous diagnosis of any mental illness were excluded from the survey.

The data were collected using a pretested, semi-structured data collection tool, which included social-demographic information along with dietary habits and substance use history etc. Distress related information was gathered using HADS (Hospital Anxiety and Depression Scale). HADS is a 14-item questionnaire, consisting of two subscales: anxiety and depression.⁶ Each item is rated on a four-point scale, giving maximum scores of 21 for each anxiety and depression. Scores of 11 or more on either subscale are considered to be a significant 'case' of psychological morbidity, while scores of 8-10 represent 'borderline' and 0-7 'normal'.

Purposive sampling was adopted for inclusion of the study subjects. Eligible candidates were approached in the waiting area of OPD of CRI and explained about the purpose of the study. Those patients who agreed for the study were interviewed using the pretested data collection format after obtaining written informed consent. The data was collected in 2 months between July 2017 to August, 2017 and a sample size of 208 was achieved.

Collected data was entered in SPSS (22.0 version) and analysed. Percentages, mean, and standard deviations were calculated. The chi-square test was used to determine whether there is a significant relationship between categorical variables.

RESULTS

Overall 208 patients were interviewed with a male female ratio of 1.7 (male- 63.5%, female- 36.5%). The mean age of the surveyed patients was 51.05±15.68 years (CI: 48.91-53.20).

Table 1 shows the distribution of the surveyed population according to their socio-demographic profile. Majority of respondents were in the age group of 40-59 years (42.3%), followed by geriatric age group, i.e. 60 years and above (33.7%). The literacy status of the study population was found to be 93.8% (males-93.9%, females-93.4%). Slightly more than half (54.1%) of the respondents were engaged in one or other occupation.

(66.4% male and 32.9% females respectively). Majority of the respondents were married (87.5%), while 12.5% were unmarried/widowed/divorced/separated. Most of the

respondents belonged to upper class (51.9%), closely followed by upper middle class (27.4%).

Table 1: Distribution of cancer patients by socio-demographic characteristics.

Socio-demographic Variables	Male (n=132)		Female (n=76)		Total (n=208)	
	N	%	N	%	N	%
Age group (in years)						
20-39	23	17.4	27	35.5	50	24.0
40 – 59	54	40.9	34	44.7	88	42.3
≥60	55	41.7	15	19.7	70	33.7
Education						
Illiterate	8	6.1	5	6.6	13	6.2
Up to Primary	4	3.0	11	14.5	15	7.2
Middle school	11	8.3	11	14.5	22	10.6
High school- Intermediate	38	28.8	18	23.7	56	26.9
Graduate and above	71	53.8	31	40.8	102	49.0
Employment status						
Employed	87	66.4	25	32.9	112	54.1
Not Employed/ Retired	44	33.6	51	67.1	95	45.9
Marital status						
Single	7	5.3	19	25.0	26	12.5
Married	125	94.7	57	75.0	182	87.5
Socio-economic status*						
Upper	72	54.5	36	47.4	108	51.9
Upper middle	35	26.5	22	28.9	57	27.4
Lower middle	14	10.6	9	11.8	23	11.1
Upper lower	10	7.6	4	5.3	14	6.7
Lower	1	0.8	5	6.6	6	2.9

* For rural patients, modified BG Prasad classification and for urban patients Kuppaswamy classification was used.

Table 2: Prevalence of psychological distress among cancer patients.

Psychological distress	Male (n=132)		Female (n=76)		Total (n=208)	
	N	%	N	%	N	%
Present	44	33.3	36	47.4	80	38.5
Absent	88	66.7	40	52.6	128	61.5

χ^2 -4.014, df-1, p<0.05

The overall prevalence of psychological distress (anxiety/ distress/ both) among cancer patients was found to be 38.5%. More female patients than male patients (47.4% and 33.3% respectively) were found to be having distress, and this difference was found to be significant statistically.

Psychological distress increased with the increasing age of the patients and this difference was found to be statistically significant. The prevalence of psychological distress was highest in illiterate patients, while patients with schooling more than 12 years were having significantly less psychological distress (χ^2 - 19.515, p<0.001). Patients who were not having any definite employment at the time of survey had significantly more stress (2 times) as compared to people who were employed (52.6% and 26.8% respectively).

Married patients had more distress than unmarried ones, though the difference was not significant statistically. It was seen that patients belonging to highest strata of socio-economic status had significantly lesser psychological distress than all other categories combined (χ^2 -19.64, df-1, p<0.0001).

It was seen that patients having psychological distress did not differ significantly from those not having, in terms of behaviours like food habits, physical activity, substance use and meditation/ yoga practices. Though patients who were sedentary in their day to day activities had more distress as compared to moderately active patients, this difference was not significant statistically. Likewise, people with positive history of substance use had more distress, and patients doing regular meditation/yoga had less prevalence of psychological distress; these differences were not found to be statistically significant.

Table 3: Psychological distress among cancer patients by socio-demographic variables.

Socio-demographic variables	Psychological distress		Chi-square, p value
	Present N (%)	Absent N (%)	
Age group (in years)			
20-39	11 (22.0)	39 (78.0)	χ^2 - 10.732, df-2, p<0.005
40-59	33 (37.5)	55 (62.5)	
60 and above	36 (51.4)	34 (48.6)	
Education (years of schooling)			
None	8 (61.5)	5 (38.5)	χ^2 - 19.515, df-3, p<0.001
Upto 5	7 (46.7)	8 (53.3)	
5-12*	41 (52.6)	37 (47.4)	
> 12	24 (23.5)	78 (76.5)	
Employment status			
Employed	30 (26.8)	82 (73.2)	χ^2 - 14.481, df-1, p<0.001
Not Employed	50 (52.6)	45 (47.4)	
Marital status			
Single	6 (23.1)	20 (76.9)	χ^2 - 2.971, df-1, p>0.05
Married	74 (40.7)	108 (59.3)	
Socio-economic status**			
Upper	26 (24.1)	82 (75.9)	χ^2 - 22.455, df-4, p<0.001
Upper middle	29 (50.9)	28 (49.1)	
Lower middle	11 (47.8)	12 (52.2)	
Upper lower	10 (71.4)	4 (28.6)	
Lower	4 (66.7)	2 (33.3)	

* figures in parentheses are percentages; ** No respondent had schooling between 10-12 years, so it was merged with 5-10 years schooling category

Table 4: Psychological distress among cancer patients by behavioural factors.

Behavioural factors	Psychological Distress		P value
	Present N (%)	Absent N (%)	
Food habits			
Vegetarian	35 (38.5)	56 (61.5)	X^2 - 0.00, df-1, p>0.05
Non-vegetarian	45 (38.5)	72 (61.5)	
Physical activity			
Moderately active	42 (31.3)	92 (68.7)	X^2 - 8.063, df-1, p>0.005
Sedentary habits	38 (51.4)	36 (48.6)	
Substance use			
Yes	44 (44.0)	56 (56.0)	X^2 - 2.496, df-1, p>0.05
No	36 (33.3)	72 (66.7)	
Meditation/yoga practices			
Yes	50 (36.5)	87 (63.5)	X^2 - 0.655, df-1, p>0.05
No	30 (42.3)	41 (57.7)	

*figures in parentheses are percentages

DISCUSSION

Cancer is mostly a life-threatening and feared diagnosis, and is a source of great distress in patients. It is one of the most stressful events that a person may experience and high levels of stress for sustained periods of time in cancer patients may lead to anxiety, depression or both. In the present study we tried to find the prevalence of psychological distress (both anxiety and distress) along with the factors.

It has already been established that psychological distress is a potential risk factor for the noncompliance of patients towards treatment. A meta-analysis showed that noncompliance was greater in patients with depression as compared to non-depressed patients.⁷ It is important to identify patients developing psychological distress during the course of treatment, so that appropriate actions can be taken in time.

In our study, the prevalence of psychological distress was found to be 38.5% (38.0% for anxiety and 34.1% for depression). Similar results were reported by Thapa et al in Nepal, Srivastava in India, Khalil A in Pakistan and Kim in S. Korea.⁸⁻¹¹ Lower prevalence was reported by other authors, while much higher prevalence was reported by Kumar et al (56.7% and 64.2% anxiety and depression respectively) at Patna, India.¹²⁻¹⁴ The main reason for this difference was that different studies used different types of scales/ methods to assess psychological distress in cancer patients.

We found that female patients were having significantly more distress than male respondents. Similar findings were reported by Pandey et al and Leimanis and Fitzpatrick, while Nikbakhsh et al found no significant relationships between anxiety and depression with gender.^{12,15,16}

In the present study, psychological distress in cancer patients increased with increasing age and this was found to be significant statistically. The association between education, employment and socio-economic status and psychological distress was found to be highly significant statistically. However, no significant association was found between marital status and psychological distress scores. Our findings are in concordance with Nikbakhsh et al, who observed significant relationships between anxiety, depression and the age group of the patients with higher frequency in older ages.¹⁶ No significant relationships could be established between anxiety &/or depression and marital status and the educational levels of the patients.

Though no significant association was found between distress among the cancer patients and their eating habits, substance use status and meditation/yoga practices, however, anxiety and depression were more prevalent in patients having sedentary lifestyle. Similarly, Leimanis and Fitzpatrick reported physical activity (METs score) to be negatively correlated with distress suggesting that as physical activities increased, distress levels decreased.¹⁵

CONCLUSION

Approximately 39% of cancer patients were suffering from one or other type of psychological distress, without their realization. The prevalence of psychological distress was found to be significantly higher in female patients, older age, patients with no formal education, unemployment and lower socio-economic status. If these patients are screened at the diagnosis of cancer and during the treatment of cancer, appropriate psychiatric interventions/ counselling may be effective in reducing distress and improving quality of life in cancer patients.

Limitations of the study

Sample consisted of patients attending the OPD for follow up of chemotherapy/ radiotherapy treatment, so the results may not be a true reflection of all cancer patients.

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