Original Research Article

Determinants of Distress among Cancer Patients Admitted for the Day Care Treatment at a Tertiary Care Cancer Hospital, Amritsar, Punjab

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Abstract

Introduction: Distress is very common in patients with cancer but it often goes unidentified. Sociodemographic, clinical, and psychosocial variables have been identified as major risk factors for distress and it extends along a continuum, ranging from common feelings of vulnerability, sadness, and alarming to problems that can become disabling.

Objectives: To determine the level of distress among cancer patients and sociodemographic factors affecting distress among the cancer patients.

Materials & Methods: The study was a cross sectional study using purposive sampling technique. All the patients above 18 years who were admitted from 1st March 2021 to 31st August 2021 were included in the study. The information was collected from patients using NCCN Distress Thermometer (DT) and problem checklist, a validated tool to assess the distress levels and their association of distress with problems. The data was compiled and statistically analysed using Statistical package for social sciences (SPSS Software 23.0 version) IBM Chicago.

Results: out of 567 participants, 64.6% study subjects were above 50 years. This shows that the number of patients were increasing with increasing age. In all, 60.5 % were females and 39.5% were males. Majority of patients were having moderate to severe distress (50.6%) followed by 37.9% who had mild stress and 11.5% had no stress. It was observed that education, occupation and socio-economic status were significantly associated with the level of distress while age, sex and marital status had no association.

Conclusion: Holistic approach in cancer treatment including psychological, spiritual and emotional evaluation and its solution for the same at appropriate time enhances the quality of life of the patients. It is recommended that all health care providers should address these as a part of their routine practice.

Keywords: Distress in cancer patients, Chemotherapy, cancer patients, distress thermometer, unpleasant experience

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Introduction

Distress is most common in patients with cancer however, it often goes unidentified.[1] The National Comprehensive Cancer Network (NCCN) defines distress as a "multifactorial, unpleasant emotional experience of a psychological (cognitive, emotional), social, and/or spiritual nature that may intervene with the ability to endure effectively with cancer, its physical symptoms, and its treatment."[2]Sociodemographic, clinical, and psychosocial variables have been identified as major risk factors for distress, including sex, age, education level, lower perceived social support, functional dependence.[3,4,5] Distress extends along a continuum, ranging from common feelings of vulnerability, sadness, and alarming to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis." The NCCN in its distress management guidelines focuses on the need for screening of distress for patients who are diagnosed with cancer, as soon as cancer is detected.[6] The National Comprehensive Cancer Network recommends that all patients with cancer need to be evaluated on regular basis for psychosocial distress as a part of regular care.[2] The NCCN guidelines for distress management recommend using the Distress Thermometer as a screening tool.[2] The Distress Thermometer is a single-item scale which range from zero- to 10-point with a threshold score of 4 indicating significant distress that need further evaluation. The Distress Thermometer has been suggested as a quick and valid alternative to other psychometric instruments which are used in busy outpatient cancer clinics. Once a distressed patient is identified, there is little research in India that guide oncologists in determining which of the risk factors is most likely to cause distress. A proper understanding of the causes of distress would help streamlining the evaluation and guiding the interventions for decreasing the level of distress in patients as part of holistic approach.

As there is paucity of such studies in an Indian population. Therefore, we aimed to assess levels of distress experienced by patients receiving chemotherapy at the tertiary care cancer hospital in Amritsar District, Punjab.

Aims and objectives

1. To determine the level of distress among cancer patients
2. To determine the social and demographic factors affecting distress among the cancer patients

Materials and Methods

The study was done at tertiary care cancer hospital located in rural area of Amritsar. The outpatient day care is involved in administering chemotherapy and other procedures like hormone therapy, injections, etc. that don't require patient to stay overnight in hospital. The procedure of chemotherapy takes 4-6 hours depending upon protocol that has been planned during their previous visits.

Study design: A cross sectional study.

Sampling method: Purposive Sampling

Study Population: All the patients who were admitted for chemotherapy

Inclusion criteria: All the patients aged above 18 years

Exclusion criteria: Adult and paediatric patients admitted for procedures other than chemotherapy

Period of Study: The study was conducted from 1stMarch 2021 to 31 August 2021.

Method of Data Collection: The information was collected from patients using NCCN Distress Thermometer (DT) and problem checklist, a validated tool to assess the distress levels and their association of distress with problems. The informed consent was taken and confidentiality maintained. The general information regarding socio-demographic characteristics was also recorded. Socio-economic status was estimated according to the Udai Pareek scale.[7]

The first part comprises of inferences from DT, a graphical representation of thermometer marked from 0 to 10 representing the intensity of distress where 0 means no distress and 10 means extreme distress. The second part includes problem checklist which consist of 39 items which are divided into five different categories of practical problems, family problems, emotional problems, spiritual /religious

problems and physical problems. The NCCN-DT and problem checklist was administered to patients and it took 7-10 minutes to complete screening. All patients who reported score of 4 or higher were categorised of having moderate to severe distress and were encouraged to meet psychologist for individual sessions for holistic management.

Data Analysis: The data was compiled and statistically analysed using Statistical package for social sciences (SPSS Software 23.0 version) IBM Chicago. Demographic characteristics were summarized using descriptive statistics that included frequencies, percentages. Levels of distress and its association with problem areas of patients were analysed using chi square test.

Results

Out of 752 participants who were approached, 567 were included in the study. 153 were excluded as they were admitted to the day-care for procedures other than chemotherapy. 32 refused to participate.

Table no 1: Distribution of patients according to Socio demographic characteristics

Parameters		**n=567 No.**	**(100%) %age**
Age	<40 years	55	9.7
	40-50 years	146	25.7
	>50 years	366	64.6
Sex	Male	186	32.9
	Female	381	67.1
Religion	Sikh	473	83.4
	Others	94	16.6
Employment status	Employed	219	38.6
	Un employed	348	61.4
Marital status	Married	504	88.9
	Unmarried/ Separated	63	11.1
Educational status*	Illiterate	257	45.4
	Up to primary level	157	27.6
	Middle education	94	16.6
	High school and above	59	10.4
Socio-economic status*	Upper middle class	62	10.9
	Middle class	106	18.7
	Lower middle class	156	27.5
	Lower class	243	42.9

*Udai Parikh scale was used to assess socioeconomic status

Table-1 shows that out of 567 participants, 64.6% study subjects were above the age of 50 years. This shows that the number of patients were increasing with increasing age. In all, 60.5 % were females and 39.5%were males. Going by their religion, 83.4% were Sikhs followed by 16.6% who belonged to other religions which included Hindu, Muslim and Christians. The maximum no. of patients 45.4% were illiterate followed by 27.6% up to primary level, 16.6% up to middle education and 10.4% were in high school and above. The majority of patients i.e. 42.9% belonged to lower class, 27.5% to lower middle class, 18.7% to middle class and 10.9%belonged to upper middle class.

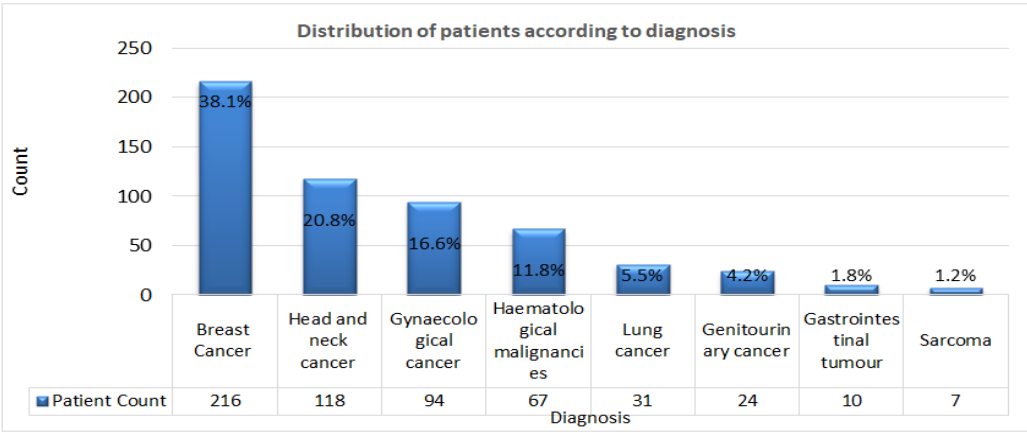

Figure 1: Distribution of patients according to diagnosis

Figure 1 shows that Breast Cancer (38.1%) was most common cancer followed by Head and Neck cancer (20.8%), Gynaecological cancer (16.6%), Haematological Malignancies (11.8%), Lung Cancer (5.5%), Genitourinary cancer (4.2%), gastrointestinal cancer (1.8%) and sarcoma (1.2%).

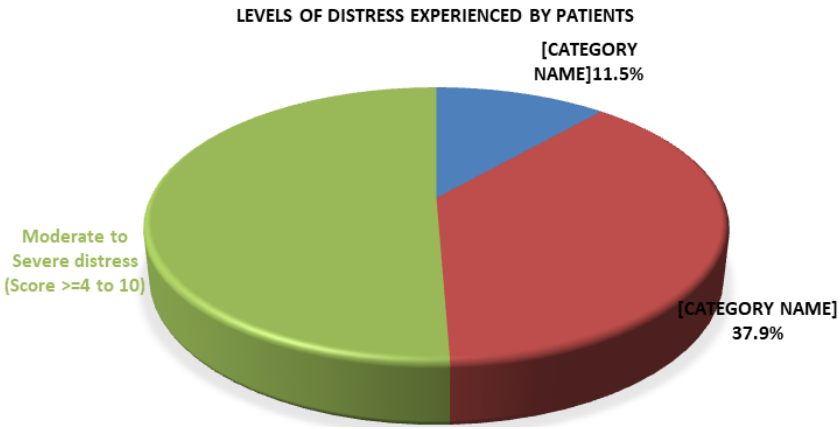

Figure 2: Levels of distress experienced among patients according to NCCN Distress Thermometer

Pie chart shows that majority of patients 50.6% were having moderate to severe distress followed by 37.9% who had mild stress and 11.5% had no stress.

Table 2: Distribution of patients according to problems faced by patients with oncological conditions

Problems		Number*	Percentage (%)
Practical Problems	Housing	328	58
	Insurance/ Financial	493	87
	Transportation	459	81
	Treatment Decisions	345	61
Family Problems	Ability to have children	249	44
	Family health issues	289	51
Emotional Problems	Depression	294	52
	Fear	402	71
	Nervousness	334	59
	Sadness	425	75
	Worry	362	64
	Loss of interest in normal activities	301	53
Spiritual / Religious concerns		238	42
Physical problems	Appearance	357	63
	Eating	272	48
	Fatigue	345	61
	Pain	402	71
	Sleep	357	63

*Number exceeds N due to multiple answers given by the patient

Table 2 shows the distribution according to problems faced by patients with oncological conditions according to problem list in NCCN DT. In physical Problems, majority 87% of patients faced Insurance / financial issues followed by 81 % who had transportation problem, 61% had treatment decision problems and 58% had housing related problems. However, in Family Problems, 51% had family health issues followed by 44% who had difficulty in ability to have children. In Emotional Problems, sadness was 75% followed by fear in 71%,worry in 64%, nervousness 59 % and depression in 52% patients. About 42% had spiritual concerns that why this happened to me. In physical problems, 71 % had pain as major problem followed by 63% who had appearance and sleep problems and 61% had fatigue.

Table 3: Distribution of patients showing association of demographic parameters with levels of distress

Parameters	Levels of Distress			X^2	df	p value
	No Distress (N= 65)	Mild Distress (N=215)	Moderate to Severe Distress (N=287)			
Age						
< 40 years	6	20	37	7.015[a]	4	.135
40-50 years	12	57	87			
>50 years	47	138	163			
Sex						
Male	20	66	97	.617[a]	2	.735
Female	45	149	190			
Employment Status						
Employed	48	63	117	41.265[a]	2	.000(S)
Unemployed	17	152	170			
Marital Status						
Married	53	194	252	3.597[a]	2	.166
Unmarried/ Widow	12	21	35			
Educational Status						
Illiterate	23	108	146	13.624[a]	6	.034 (S)
Upto Primary level	21	51	87			
Middle education	14	39	29			
High school and above	7	17	25			
Socioeconomic status						
Upper middle class	7	21	37	18.976[a]	6	.004 (S)
Middle class	15	53	44			
Lower middle class	23	39	85			
Lower class	20	102	121			

Table 3 shows that patients who were unemployed has more distress as compared to those who were employed and it was statistically significant (p value<0.000). It was also observed that patients who were illiterate were having more distress as compared to those educated and association was statistically significant (p value<0.000).It was also seen that patients belonging to lower class were having more distress as compared to upper class and relation was statistically significant (p value<0.000). However, factors like age, sex, marital status were not significantly associated with the level of distress.

Table 4: Distribution of patients according to the association of most common area of distress with levels of distress

Most common area of concern by patient	Levels of Distress			
	No Distress	Mild Distress	Moderate to Severe Distress	
Pain	16	92	135	X^2= 30.818
Financial issues	9	53	71	df=10
Fatigue	17	24	31	
Fear	14	25	22	p value<0.001
Sleep	5	14	16	
Skin dry	4	7	12	
Total	65	215	287	

Table 4 shows that pain was most common area of concern which lead to moderate to severe distress in patients followed by financial issues, fatigue, fear, sleep and skin dry and relation was statistically significant (p value<0.001).

Discussion

In the present study, our main objective was to assess distress using the NCCN DT and problem checklist among patients receiving chemotherapy from outpatient unit of tertiary care centre. Table-1 showed that out of 567 participants, 64.6% study subjects were above type age of 50 years. In all, 60.5 % were females and 39.5% were males. Going by their religion, 83.4% were Sikhs, 45.4% were illiterate and the majority of patients i.e., 42.9% belonged to lower class. Similar socio-demographic findings of cancer patients were found in other studies by Singh RP et al, Zabora J et al, Breen S J et al and Nerenze DR et al where majority of the patients were 40-60 years, with female preponderance.[7,8,9,10]

Perusal of figure 2 and 3 shows that breast cancer (38.1%) was most common cancer followed by head and neck cancer (20.8%). Majority (50.6%) of patients were having moderate to severe distress as recorded by NCCN distress thermometer. Study by Singh RP et al[7] observed that distress was more in breast cancer patients. Similar findings were observed by Zabora J et al and Love RR et al[8,11]in their studies.

Table 2 shows the problems faced by patients with oncological conditions. As far as practical problems are concerned, majority (87%) of the patients faced Insurance / financial issues followed by transportation problem, treatment decision problems housing related problems. 51% had family health issues and 42% had spiritual concerns. Sadness was 75% followed by fear 71%and depression in 52% patients. In physical problems, 71 % had pain followed by 63% facing appearance and sleep problems. Above findings are consistent with studies that reported significant distress during chemotherapy in relation to patient's physical and emotional well-being.[11-16]

Table 3 shows that patients who were unemployed has more distress as compared to those who were employed (p value<0.000). It was observed that patients who were illiterate were having more distress as compared to those educated and association was statistically significant (p value<0.000). It was also seen that patients belonging to lower class were having significantly more distress (p value<0.000). However, factors like age, sex, marital status were not found statistically significant. Hong JS et al in their study also found poor psychological status and sleep disturbances in cancer patients.[17]

Table no 4 shows that pain was most common area of concern which led to moderate to severe distress in patients followed by financial issues, fatigue, fear, sleep and dry skin (p value<0.001). Bergerot CD et al and Sah GS et al also reported almost similar results.[18,19]

Conclusion

Present study showed that distress was prevalent among cancer patients undergoing chemotherapy. Holistic approach in cancer treatment including psychological, spiritual and emotional evaluation and

its solution for the same at appropriate time enhances the quality of life of the patients. It is therefore recommended that all health care providers should address these health needs as a part of their routine practice especially in patients who are diagnosed with cancer or undergoing cancer treatment.

Conflicts of interest: Nil

Ethical Clearance: Ethical clearance was taken from Ethical Committee of Institution(SGRD INSTITUTE OF MEDICAL SCIENCES AND RESEARCH) .Date of Clearance: 24/02/2020 Ref No. Patho 13584/20

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