Exploring Distress Among Patients Undergoing Cancer Rehabilitation

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Abstract

Objective: A potentially distressing aspect of having cancer is the loss of control over one's ability to carry out routine activities. Undergoing a Cancer Rehabilitation program may be a way to give patients back some of that control, as it aims to help them attain maximum physical, occupational, psychological and social functioning within the limits imposed by the cancer and its treatment. The aim of the present research was to describe distress, its correlates, and change over time in patients attending a cancer rehabilitation program.

Method: The Distress Thermometer, Problem Checklist, and Edmonton Symptom Assessment Scale were completed at initial assessment and at the end of the 8-week program. A subset of participants also completed a Beck Depression Inventory and a Beck Anxiety Inventory at initial and end evaluations by the psychologist.

Results: Sixty-five participants who were referred for a psychological consultation participated. Of these, there were 34 men and 31 women, and the average age was 51. Most (75%) endorsed a score of 4 or above on the Distress Thermometer. The most common problems patients reported as sources of their distress were fatigue, pain, difficulty eating, worry, sleep, and getting around. Greater distress was significantly correlated with symptoms on the ESAS, such as poor quality of life (r=.55, p<.001), pain (r=. 47, p<.001), depression, (r=.46, p<.001) nervousness (r = .43, p<.001) and strength (.40, p<.001). A subset of this sample (n=25) completed measures of anxiety and depression. Paired T-tests revealed significant improvement on the DT, ESAS, BDI and BAI at end of program in comparison to pre-program scores.

Conclusion: These preliminary findings suggest that distress is related to physical symptoms, and as these improve, distress decreases. This research also points to the positive impact that participation in a Cancer Rehabilitation program may have on patients' emotional distress.

Background

- Cancer and its treatment engender functional decline and physical impairments in those affected.
- Problems such as general weakness, loss of ability to fulfill activities of daily living, pain, difficulties with balance and ambulation, cognitive deficits, problems with family support, work, and finances are common (Lehmann et al., 1978) and are a source of distress.
- Rehabilitative interventions to encourage increased and/or adapted activities including ADL, exercise, leisure and vocational activities

The McGill Cancer Nutrition-Rehabilitation (CNR) Program comprises a collaborative, interdisciplinary, time-limited approach to help patients to

- function optimally and improve quality of life. The program includes:
  - symptom management
  - nutritional counselling and use of supplements
  - rehabilitative programs that encourage increased and adapted
  - physical activity, ADL, leisure, and occupational activities cognitive assessment and retraining
  - psychotherapy and social work support to patients and family members
  - psychoeducational and caregiver support groups
  - involvement in clinical trials when appropriate

Purpose

- To describe the psychological distress and symptoms of cancer patients attending a rehabilitation program
- To begin to evaluate whether participation in rehabilitation improves the severity of symptoms and level of distress

Method

Participants

- Participants in the CNR program who were referred for a psychological consultation (refer to Table 1 for details)

Procedure

- Participants with DT of 4 or more, or who developed distress in the program were referred for a psychological evaluation.

Measures

Distress Thermometer (DT; (NCCN), 2003)

- a 1-item, self-report, visual analogue scale that assesses psychological distress

Problem List (NCCN, 2003)

- accompanies the DT and consists of 34 problems experienced by cancer patients

Edmonton Symptom Assessment Scale (ESAS; Bruera et al., 1991).

- a modified version with 12-items was used

Beck Depression Inventory-II (BDI-II)

- a 21-item, multiple choice measure of depressive symptoms and their severity

Beck Anxiety Inventory (BAI)

- a 21-item, self-report measure of anxious symptoms and their severity

Results

- 65 patients who participated in the CNR program between Sept 2006 and July 2008 and who were referred for a psychological consultation participated.
- Of 65, 46 completed the DT and ESAS at initial and end evaluations; 19 patients were lost to follow-up.
- 25 completed the BDI and BAI at both time points

Table 1
Demographic and Clinical Characteristics of Participants

Variable	(N=65)	n	percent
Age	18 to 35 yrs	7	10.7
	36 to 65 yrs	41	63
	> 65 yrs	17	26
Gender	Male	34	52.3
	Female	31	47.7
Marital Status	Married	43	66.2
	Cohabitating	2	3.1
	Single	13	20
	Divorced	5	7.7
	Widowed	2	3.1
Cancer Diagnosis	GI	14	21.5
	Hepatobilliary	12	18.5
	Breast	10	15.4
	Hematologic	8	12.3
	Lung	6	9.2
	Head and Neck	4	6.2
	Urologic	3	4.6
	Other	8	12.3

Table 2
Mean Distress and Most Common Sources of Distress using the DT and the Problem Checklist at Initial Evaluation

Distress at initial visit:DT	**Mean 4.7**
Problems on the PL	% of participants(n=65)
Fatigue	73
Pain	62
Difficulty eating	47
Worry	43
Sleep	41
Getting around	35

As shown in Table 2, participants entering the CNR program were most concerned about their fatigue, pain, difficulties eating, worry, sleeping and getting around.

Table 3
Frequency of Symptoms on ESAS by Severity at Initial Evaluation

Problems on ESAS N=65	Moderate (4-6) %	Severe (7-10) %	Combined (4-10) %
Strength	46.2	41.5	88
Appetite	27.7	32.3	60
Quality of Life	40.0	32.3	72
Nervousness	36.9	27.7	68
Sleep	40	27.7	68
Sleepiness	46.2	26.2	72
Pain	33.8	24.6	58
Depression	41.5	18.5	60
Constipation	20	16.9	37
Shortness of Breath	29.2	16.9	46
Nausea	15.4	7.7	23
Vomiting	3.1	1.5	5

It is evident by Table 3 that the most severe symptoms of patients referred to CNR who were also in distress were lack of strength, loss of appetite, quality of life, nervousness, and difficulties with sleep. The symptoms captured in the Problem List are similar to the symptoms assessed by the ESAS.

Table 4
Correlations of Symptoms on the ESAS by Severity at Initial Evaluation

Symptoms on ESAS	Distress on the DT
Quality of Life	r =.55**
Pain	r = .47**
Strength	r = .40**
Appetite	r = .22ns
Sleep	r = .14ns
Sleepiness	r = .08ns
Nausea	r = .17ns
Vomiting	r = .09ns
Constipation	r = .14ns
Shortness of breath	r = .98ns
Depression	r =.43**
Nervousness	r =.46**

In Table 4, one can see that as severity of symptoms increase, distress level also increases. That is, the more severe the symptoms were, the more distressed participants were likely to be.

Changes over time in Distress were investigated by examining frequency distributions as well as conducting t-tests of mean scores at initial and end evaluation.

Figure 1
Distribution of Distress at Initial and End Evaluations

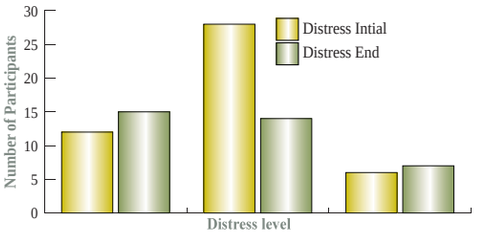
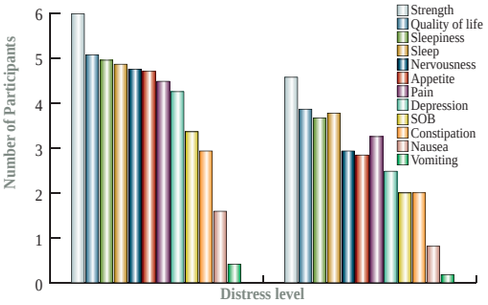


Figure 1 illustrates a change in the distribution of distress across different levels of severity. Fewer participants had moderate levels of distress at end evaluation than at initial, whereas more participants had low levels of distress as compared to initial evaluation.

T-tests comparing the mean DT scores at Initial and End Evaluations revealed a significant decrease in distress at the end of program (Mean DT initial = 4.5; Mean DT end = 3.6, t(45)= 2.24, p<.05).

Figure 2
ESAS Symptom Means at Initial and End Evaluations



In Figure 2, one can see that mean scores on the ESAS decreased at end evaluation, suggesting an improvement in symptoms after participation in the CNR program.

T-tests on the total ESAS scores revealed that there was a significant decrease in symptoms at end of program (Mean ESAS initial = 50.2, Mean ESAS end = 33.70; t(43)= 6.59, p<.001).

Table 5 T-tests on Mean Scores of Anxiety and Depression

Variable (n=25)	Mean T1	Mean T2	T-value
Anxiety(BAI)	15.52	10.76	t(24)=3.34, p<01
Depression (BDI-II)	17.04	12.72	t(24)=2.14, p<05

There was significant improvement in anxious and depressive symptoms (refer to Table 5).

Discussion and Conclusion

Main findings:

- Participants in the CNR program that were referred to a psychologist were experiencing moderate levels of distress.
- The most common sources of their distress were fatigue, pain, difficulties eating, sleeping and getting around.
- The most severe of their symptoms were lack of strength, loss of appetite, poor quality of life, nervousness, and difficulties with sleep.
- Greater severity of symptoms was associated with greater distress.
- Significant improvement in both symptoms and distress occurred by the end of the CNR program.

An interdisciplinary cancer rehabilitation program is a promising way to address the multiple physical and psychosocial needs of cancer patients.

Limitations

- The lack of a control group makes it difficult to rule out that improvement may have occurred without intervention.
- This was a small and heterogeneous sample of patients at different stages of the cancer trajectory.

References

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