

Adult oncology and chronically ill patients: comparison of depression, anxiety and caregivers' quality of life

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البالغون المصابون بالأورام أو بمرض مزمن: مقارنة الإصابة بالاكتئاب فيهم طارق شريف، تغريد الجهني، مصطفى السعدني، عبد الوهاب أندجاني

خلاصة: يمكن لتشخيص السرطان أن يدمر المريض ومن يحبه. وقد قارنّا في هذه الدراسة بين شدة القلق والاكتئاب لدى 30 من المرضى المصابين بحالة انتهازية من السرطان ولدى 30 من المرضى المصابين بمرض مزمن ونوعية حياة أقربائهم الذين يعتنون بهم. وقد استُخدم سلم قياس هاملتون للاكتئاب والقلق لدى المرضى كما استخدم سلم قياس جودة الحياة لدى أقربائهم الذين يعتنون بهم. وقد كان الاكتئاب والقلق لدى المرضى بالسرطان ولدى من يعتنون بهم أكثر بمقدار يعتد به إحصائياً مما لدى غيرهم من المصابين بالأمراض المزمنة ومن يعتني بهم. كما أن نوعية الحياة فيمن يعتنون بمرضى السرطان، هي أسوأ ممن يعتنون بالمصابين بأمراض مزمنة.

ABSTRACT A diagnosis of cancer can be devastating for patients and their loved ones. We compared the intensity of anxiety and depression for 30 terminally ill cancer patients and 30 chronically ill patients and the quality of life of their most attendant caregivers. Hamilton depression and anxiety scales were used with the patients and the quality of life scale (family) was used with the caregivers. Cancer patients and their caregivers had significantly higher scores on these scales and suffered more from depression and anxiety than chronically ill patients and caregivers. Cancer patient caregivers also had poorer quality of life than did caregivers of the chronically ill.

L'oncologie adulte et les malades chroniques : comparaison de la dépression, de l'anxiété et de la qualité de vie des personnes qui s'occupent des malades

RESUME Un diagnostic de cancer peut être accablant pour les patients et ceux qui leur sont chers. Nous avons comparé l'intensité de l'anxiété et de la dépression chez 30 patients atteints d'un cancer en phase terminale et 30 malades chroniques et la qualité de vie des personnes qui s'occupent d'eux et leur sont le plus attachées. L'échelle de dépression de Hamilton et l'échelle d'anxiété ont été utilisées avec les patients et l'échelle de la qualité de vie (familiale) a été utilisée avec les personnes qui s'occupent des malades. Les patients cancéreux et les personnes qui s'occupent d'eux avaient des scores considérablement plus importants sur ces échelles et souffraient davantage de dépression et d'anxiété que les malades chroniques et ceux qui s'occupent d'eux. Les personnes qui s'occupent des patients cancéreux avaient également une plus mauvaise qualité de vie que celles qui s'occupent des malades chroniques.

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Introduction

A diagnosis of cancer can be devastating for patients and for their loved ones. During the months after diagnosis, the cancer patient attempts to come to terms with the uncertainty, the threat to life and also with an often toxic and disabling treatment regime. Roles, relationships, employment and financial security may all be threatened [1]. Not surprisingly, therefore, there is now a considerable body of evidence to suggest that between one-quarter to one-third of cancer patients experience significant psychiatric morbidity in association with diagnosis and treatment [2].

Potential predictors of psychiatric morbidity in such patients include patient-related factors, disease-and treatment-related variables and caregiver's tolerance of the malignancy. Inadequate social support has been shown to be a risk factor for psychological morbidity in a variety of settings. A few studies have investigated the relationship between social support and adjustment to cancer. For example, it has been found that the patient's perceived quality of family support had no effect on the patient's social functioning, but positively correlated with the patient's sense of well-being [3].

A series of psychiatric syndromes has been described for patients with cancer. Depression occurs in as many as 25% of cancer patients [4] and, of the general cancer population, 5%–15% experience a major depression [5]. The incidence of depression increases with the severity of the illness. Similar rates (25%) have been found in end-stage renal disease patients awaiting cadaveric transplants [6].

Faced with terminal illness, patients experience a complex mix of physical and psychological symptoms in the context of a frightening reality. Thus, the recognition of anxiety symptoms requiring treatment can

be challenging. Patients with anxiety complain of tension and restlessness, or they exhibit jitteriness, autonomic hyperactivity, vigilance, insomnia, distractibility, shortness of breath, numbness, apprehension, worry or rumination [7]. Often the physical, or somatic, manifestations of anxiety overshadow the psychological, or cognitive, ones; these are the symptoms that the patient most often presents with [8]. The physician must use these symptoms as a cue to inquire about the patients' psychological state, which is commonly one of fear, worry or apprehension. Anxiety may be encountered as a component of an adjustment disorder, panic disorder, generalized anxiety disorder, phobia or agitated depression. Additionally, in the terminally ill cancer patient, symptoms of anxiety are most likely to arise from some medical complication of the illness or treatment such as organic anxiety disorder, delirium, or other organic mental disorders [9].

Family members of cancer patients often feel very helpless despite their best attempts if symptoms persist. Family caregivers may deny the presence of symptoms as a means of coping with the situation. Day-to-day family activities, roles and relationships, and the meaning of life itself become altered once life shifts from health to illness. During terminal illness, patients and families struggle not only with the present and all that comes with terminal illness care, but also with the overwhelming issues associated with death and transcendence beyond death [10].

In this study we compared the intensity of anxiety and depression for a group of cancer patients and the quality of life of their most attendant caregivers with a group of chronically ill patients and their caregivers.

Methods

During January–June 1999, 37 patients admitted to King Khalid National Guard Hospital (KKNHG) were interviewed. Five adult oncology patients refused to participate in the study and two caregivers declined to answer questions about their quality of life. These patients and their caregivers were thus excluded from the study. The remaining 30 patients were diagnosed with a variety of advanced, or terminal, cancers and were candidates for palliative care (Table 1). Ages of the cancer patients ranged from 24 years to 79 years.

Another 39 chronically ill patients with various endocrine, cardiac, respiratory and other medical conditions were assessed to form the control group. Cases of renal failure and neurological disorders were excluded. Of the 39, 9 patients were excluded as they refused psychological assessment. The remaining 30 patients with chronic illnesses and their main caregivers were subjected to the same psychological assessment as the terminally ill cancer patients. The chronically ill patients were also admitted to KKNHG during the same period. Ages of the chronically ill patients ranged from 16 years to 70 years.

All the patients were chosen by non-random sampling technique as there were not enough terminally ill cancer patients during the time period mentioned to do otherwise. Both groups were matched regarding socioeconomic and demographic data. Informed consent was taken from every participant in the current study.

The cancer group and the control group were assessed using the Hamilton depression and anxiety scales [11,12]. Quality of life scale (family) [13] was also given to the terminally ill cancer patient's most attendant caregiver and to the chronically ill patient's most attendant caregiver. All patients were assessed according to DSM IV clinical criteria [14].

Statistical analyses were performed with SPSS. The data were expressed as mean values \pm standard deviation. *P*-values < 0.05 were considered statistically significant. The Student *t*-test was used to compare differences of means between the two groups of patients [15].

Results

There were 17 women and 13 men in the cancer group and 20 women and 10 men in

Table 1 Distribution of the patients by age, sex and type of illness

Cancer group ^a		Chronic illness group ^a	
Breast cancer	9 (30%)	Diabetes	10 (33.3%)
GIT cancer	10 (33.3%)	Chest problem ^b	13 (43.3%)
Other cancer	11 (36.7%)	Other chronic illness	7 (23.3%)
Total cancer	30 (100%)	Total chronic illness	30 (100%)

^aThe mean age of the cancer group was 50.1 ± 2.39 years and the female/male sex ratio was 17/13. The mean age of the chronically ill group was 44.3 ± 3.00 years and the female/male sex ratio was 20/10. The differences were not statistically significant (*t*-test = 0.14, $\chi^2 = 0.63$, *P* = 0.43).

^bCardiac or respiratory illnesses.
GIT = gastrointestinal tract.

the control group of chronically ill patients. The mean age difference between both groups of patients was not statistically significant (2-tail significance = 0.14) (Table 1). The sex distribution of the two groups was not significant ($\chi^2 = 0.63$).

In the group of cancer patients there were 9 patients with breast cancer, 10 with different types of gastrointestinal tract cancer and 11 patients with other types of cancer (2 with multiple myelomas, 2 with lung cancer, 2 with sarcomas, 1 with kidney cancer, 1 with thyroid cancer, 1 with ovarian cancer, 1 with lymphoma and 1 with nasopharyngeal carcinoma). The group of chronically ill patients consisted of 10 patients with diabetes mellitus, 13 with cardiac or respiratory chest problems and 7 with other chronic medical diagnoses (Table 1).

Of the terminally ill cancer patients, 15 (50%) patients were diagnosed with a mental disorder according to DSM-IV. Of these, 9 had an adjustment disorder, 3 had a major depression and 3 had generalized anxiety disorder.

Of the chronically ill patients, 12 (40%) patients had DSM-IV diagnoses. Of these, 6 had adjustment disorder, 5 had mood dis-

orders due to a general medical condition and 1 patient had a phobia disorder.

The mean values of Hamilton depression and anxiety scales showed significant differences between both groups in this study (2-tailed significance was 0.008 and 0.007 respectively) (Table 2). The cancer patient group had significantly higher mean values on the Hamilton depression and anxiety scales. The most attendant caregivers in the cancer patients' group also had significantly higher mean scores on quality of life physical, psychological, social and spiritual subscales as well as higher mean total scores than did caregivers of the chronically ill patients (2-tailed significance was 0.0003, 0.0002, 0.021 and 0.0001 respectively) (Table 2).

Correlation coefficients were applied to the values of the different scales that were used in the study for both groups of patients. There was significant correlation between patient's Hamilton depression and anxiety scores and most attendant caregiver's scores on the quality of life scales (family) (Table 3).

Table 2 Mean values (\pm standard deviation) for Hamilton depression and anxiety scores of patients and quality of life for the most attendant caregivers

Variable	Cancer group	Chronic illness group	Significance ^a
Hamilton depression scale	30.1 \pm 9.1	23.3 \pm 10.0	0.008
Hamilton anxiety scale	33.6 \pm 8.7	26.9 \pm 10.1	0.007
Caregiver quality of life			
Physical well-being	23.8 \pm 7.5	15.2 \pm 6.9	0.0003
Psychological well-being	48.0 \pm 12.9	29.0 \pm 13.1	0.0002
Social concerns	31.8 \pm 7.9	20.6 \pm 8.9	0.0002
Spiritual well-being	23.1 \pm 7.2	18.2 \pm 8.9	0.0210
Total score	127.3 \pm 29.9	79.8 \pm 32.1	0.0001

^aTest of significance 2-tailed t.

Table 3 Correlations between Hamilton depression and anxiety of patients and quality of life of caregivers

Variable	Hamilton anxiety	Hamilton depression	Physical QOL	Psychological QOL	Social QOL	Spiritual QOL	Total QOL
Hamilton anxiety	1.000	0.81	0.48	0.47	0.72	0.42	0.50
	–	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00
Hamilton depression	0.81	1.000	0.38	0.39	0.43	0.4	0.44
	<i>P</i> = 0.00	–	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00
Physical QOL	0.48	0.38	1.000	0.87	0.65	0.57	0.89
	<i>P</i> = 0.00	<i>P</i> = 0.00	–	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00
Psychological QOL	0.47	0.39	0.87	1.000	0.81	0.62	0.92
	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	–	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00
Social QOL	0.47	0.43	0.65	0.81	1.000	0.50	0.86
	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	–	<i>P</i> = 0.00	<i>P</i> = 0.00
Spiritual QOL	0.42	0.40	0.57	0.62	0.50	1.000	0.70
	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	–	<i>P</i> = 0.00
Total QOL	0.5	0.44	0.90	0.95	0.86	0.70	1.000
	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	<i>P</i> = 0.00	–

QOL = quality of life for the most attendant caregiver.
Significant at *P* < 0.05.

Discussion

There have been many myths about the psychological state of cancer patients. The Psychosocial Collaborative Oncology Group reported a study of 215 randomly selected hospitalized and ambulatory patients at 3 major cancer centres [16]. Using DSM-III diagnostic criteria, 47% of patients met the criteria for a psychiatric disorder and 53% did not. Of the 47% who had a recognizable psychiatric disorder, 68% had an adjustment disorder with depressed, anxious or mixed mood; 13% had major depression; 8% had an organic mental disorder; 7% had a personality disorder; and 4% had an anxiety disorder.

Estimates of the prevalence of depressive symptoms in patients with cancer vary but are found to be approximately twice the

level found among general medical patients (20%–74% versus 12%–30% respectively) [17]. In our study, 50% of the cancer group had psychiatric disorders according to DSM-IV criteria. Of the chronically ill patient group, 40% had psychiatric disorders. This was higher than the percentage in relatively similar studies but might be because all chronically ill patients were chosen from patients admitted during the study period and were not randomly selected.

There were no significant differences as regards age or gender in both study groups. We did not assess other confounding variables such as occupation, marital status and education because both groups of the study were of similar sociocultural level.

The most common type of cancer in the study was breast cancer, followed by colon

cancer. This was similar to the distribution of types of cancer in other studies [18–20].

Chronically ill neurological and renal patients were excluded from the present study. Several researchers have discussed the relationships between these illnesses and psychiatric disorders, especially anxiety and depression [21–23].

Cancer patients had significantly higher mean values of anxiety and depression on the Hamilton anxiety and depression scales than did chronically ill patients. Acute anxiety occurs for cancer patients at several points, e.g. while awaiting the diagnosis of cancer, while awaiting procedures and tests (bone marrow aspiration, wound debridement, chemotherapy or radiation), while awaiting test results, with a change of treatment, after learning of relapse, and on the anniversary of illness-related events. Pain, hypoxia, endocrine abnormalities, drug withdrawal and medications may also produce symptoms of anxiety [24]. Chronic anxiety may be present especially if the patient has had an avoidant personality before the diagnosis of cancer [25]. Furthermore, depression in cancer patients may result from: stress related to cancer diagnosis and treatment; medications such as steroids, interferon or other chemotherapeutic agents; biologically determined depression, which is not related to a precipitating event or recurrence of a bipolar mood disorder [26].

It is very difficult to determine with certainty whether depression appearing in cancer is related to a pre-existing mood disorder. Whereas the diagnosis of depression in physically healthy patients depends heavily on the somatic symptoms of anorexia, fatigue and weight loss, these indicators are of little value in the assessment of a cancer patient since they are common to both cancer and depression. Diagnosis

must rest on psychological, not somatic symptoms: anhedonia, dysphoric mood and feelings of helplessness, suicide or guilt [27]. Cancer patients who are at higher risk of depression are those with poor physical condition, inadequately controlled pain, advanced stages of illness (like the patients in our study) or pre-existing mood disorders [28].

The patient's or family's perception of a "sense" of terminal disease results from an increase in the severity of medical problems, delirium, development of pain, organ failure, a rapid course irrespective of adequate medical management, or the level of care given by the health care team [29]. A patient's and family's acceptance of terminal illness depends on many cultural and religious factors [30]. In our study, the caregivers of cancer patients had higher mean values on subscales and total quality of life scale. This implies that there is a significantly poorer quality of life for the caregivers of cancer patients than for caregivers of the chronically ill patients. Moreover, the psychological, medical, surgical, social, spiritual and financial problems that the caregivers and cancer patients face [31,32] through the stages of the malignant disease and its management make coping strategies more difficult. This needs further comparative study between cancer patients and their most attendant caregivers. Dunkel-Schetter surveyed 79 cancer patients and found that 81% defined emotional support as most helpful, followed by informational support (41%) and instrumental aid (6%). The demands for emotional support naturally fall on those with whom patient has the most social contact, which is most often, although not exclusively, an immediate family member, particularly the spouse [33]. Physical, psychological, spiritual and social support to the caregivers of cancer patients is, therefore, required.

Conclusions and recommendations

Terminally ill cancer patients are more likely to suffer from anxiety and depression than other chronically ill patients. Caregivers of such cancer patients have a poorer quality of life than do the caregivers of patients who are chronically ill. Therefore, palliative care should give more psychological, physical, social and spiritual attention to the caregivers of terminally ill cancer patients. A patient's high score on the Hamilton depression and anxiety scale in the current study was directly proportional to his/her caregiver's high scores on the qual-

ity of life subscales and total. Thus it is very important to give psychological care and attention to caregivers as well as to patients themselves.

Mental health programmes should be planned for the caregivers of terminally ill patients regardless of the diagnoses of the patients. Psychological support is still needed for many cancer patients, from the day of diagnosis of malignant disease through to recovery or death. Furthermore, clinical research is needed to investigate the psychological problems of the adult oncology patient's caregiver during the different stages of the patient's illness.

References

- Harrison J, Maguire P. Predictors of psychiatric morbidity in cancer patients. *British journal of psychiatry*, 1994, 165: 593-8.
- Fallowfield LJ. Psychosocial adjustment after treatment for early breast cancer. *Oncology*, 1990, 4:89-97.
- Fawzy FI et al. Critical review of psychosocial interventions in cancer care. *Archives of general psychiatry*, 1995, 52: 100-13.
- Cherny NI, Coyle N, Foley KM. Suffering in the advanced cancer patient: a definition and taxonomy. *Journal of palliative care*, 1994, 10:57-70
- Kathol RG et al. Diagnosis of major depression in cancer patients according to four sets of criteria. *American journal of psychiatry*, 1990,147:1021-4.
- Noyes R Jr et al. Distress associated with cancer as measured by the illness distress scale. *Psychosomatics*, 1990, 31:321-30.
- Rodin G, Voshart K. Depressive symptoms and functional impairment in the medically ill. *General hospital psychiatry*, 1987, 9:251-8.
- Holland JC. Anxiety and cancer: the patient and the family. *Journal of clinical psychiatry*, 1989, 50(suppl.):20-5.
- Massie MJ. Anxiety, panic and phobias. In: Holland JC, Rowland J, eds. *Handbook of psycho-oncology: psychological care of the patient with cancer*. New York, Oxford Medical Publications, 1989:300-9.
- Bergen A. Nurses caring for the terminally ill in the community: a review of the literature. *International journal of nursing studies*, 1991, 28:89-101.
- Hamilton M. A rating scale for depression. *Journal of neurology, neurosurgery and psychiatry*, 1960, 23:56-62.
- Hamilton M. The assessment of anxiety states by rating. *British journal of medical psychology*, 1959, 32:50-5.
- Ferrel BR. The family. In: Doyle D, Hanks GW, McDonald N, eds. *Oxford textbook of palliative medicine*, 3rd ed. New York, Oxford Medical Publications, 1998:909-17.

14. *Diagnostic and statistical manual of mental disorders*, 4th ed. Washington DC, American Psychiatric Association, 1994.
15. Kirkwood BR. *Essentials of medical statistics*. London, Blackwell, 1988:41-5.
16. Derogatis LR, Morrow GR, Fetting J. The prevalence of psychiatric disorders among cancer patients. *Journal of the American Medical Association*, 1983, 249:751-7.
17. Irvine D, Crooks D, Browne G. Psychosocial adjustment in women with breast cancer. *Cancer*, 1991, 67:1097-117.
18. Whelan IJ, Mohide EA, Willan AR. The supportive care needs of newly diagnosed cancer patients attending a regional cancer center. *Cancer*, 1997, 80:1518-24.
19. Nijbore C, Triemstra M, Tempelaar R. Determinants of caregiving experience and mental health of partners of cancer patients. *Cancer*, 1999, 86:577-88.
20. Kurtz ME et al. The interaction of age, symptoms, and survival status on physical and mental health of patients with cancer and their families. *Cancer*, 1994, 74:2071-8.
21. Ormel J et al. Chronic medical conditions and mental health in older people: disability and psychosocial resources mediate specific mental health effects. *Psychological medicine*, 1997, 27:1065-77.
22. Keoning HG et al. Depression in elderly hospitalized patients with medical illness. *Archives of internal medicine*, 1988, 148:1929-36.
23. Sherbourne CD et al. Subthreshold depression and depressive disorder: Clinical characteristics of general medical and mental health specialty outpatients. *American journal of psychiatry*, 1994, 151:1777-84.
24. Massie MJ, Heiligenstein E, Lederberg MS. Psychiatric complications in cancer patients. In: Holleb AI, Fink DJ, Murphy GP, eds. *Textbook of clinical oncology*. Atlanta, Georgia, American Cancer Society, 1991:576-86.
25. Melendez JC, McCrank E. Anxiety-related reactions associated with magnetic resonance imaging examinations. *Journal of the American Medical Association*, 1993, 270:745-7.
26. McDaniel JS et al. Depression in patients with cancer: diagnosis, biology, and treatment. *Archives of general psychiatry*, 1995, 52:89-99.
27. Massie MJ, Gagnon P, Holland JC. Depression and suicide in patients with cancer. *Journal of pain symptoms management*, 1994, 9:325-40.
28. Minagawa H et al. Psychiatric morbidity in terminally ill cancer patients: a prospective study. *Cancer*, 1996, 78:1131-7.
29. Cassileth BR et al. A psychological analysis of cancer patients and their next-of-kin. *Cancer*, 1985, 55:72-6.
30. Rifkin A et al. Religious and other predictors of psychosocial adjustment in cancer patients. *Psychosomatics*, 1999, 40:251-6.
31. Lewis FM. Psychosocial transition and the family's work in adjusting to cancer. *Seminars for oncology nurses*, 1993, 9:127-9.
32. Liang LP et al. Identifying priorities of psychosocial need in cancer patients. *British journal of cancer*, 1990, 62:1000-3.
33. Dunkel-Schetter C. Social support and cancer: findings based on patients interpreting their implications. *Journal of social issues*, 1984, 40:77-98.