

The prevalence of anxiety and depression in palliative care patients with cancer in Western Australia and New South Wales

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Palliative care patients with advanced cancer are vulnerable to a range of psychological and mental health problems, including anxiety and depression.¹ Prevalences of anxiety and depression vary depending on: how symptoms are assessed, and particularly on whether a self-report instrument or a psychiatric interview is used; the profile of the patients being studied; and the setting of the study. The authors of a 2002 systematic review of depression in palliative care patients with advanced cancer estimated a prevalence of major depression in this population of about 15%.² However, they argued that a far greater proportion of patients have symptoms that affect quality of life. This conclusion is supported by a recent study reporting a prevalence of 37% for possible depression and 44% for possible anxiety in palliative care patients with cancer.³ For palliative care patients who do not have cancer, depression has been reported in 50% of patients with Parkinson disease⁴ and in 20%–30% of those with dementia.⁵

Symptoms of anxiety and depression can create unnecessary suffering. Physical symptoms, including pain and fatigue, are less well tolerated by patients with advanced cancer, and their perceptions of these symptoms are amplified.³ Anxiety and depression are reported to impact significantly on the physical, psychological and social aspects of quality of life of palliative care patients with advanced cancer, after controlling for pain effects;⁶ the ability of patients to understand aspects of their illness and care may also be impaired. Depression has been found to be a predictor of a desire for hastened death among terminally ill patients with cancer, along with hopelessness,⁷ and, importantly in terms of holistic care, spiritual and existential concerns may become more prominent.⁸ Even mild to moderate distress can result in difficulties in finding closure and saying goodbye at the end of life, and this affects the wellbeing of family members and their ability to cope during a patient's illness and after his or her death.⁹

It is not inevitable that patients nearing the end of their lives need experience such as distress, and anxiety and depression are potentially treatable through a range of

ABSTRACT

Objectives: To examine the prevalence and predictors of depression and anxiety in palliative care patients with cancer in Western Australia and New South Wales.

Design, setting and participants: A descriptive study of 266 consecutive patients at a range of inpatient and outpatient settings including home care, hospices, and private and tertiary care hospitals in WA and NSW from 1 March to 30 June 2002.

Main outcome measures: Self-reported anxiety and depression using the Hospital Anxiety and Depression Scale (HADS) at a cut-off score of ≥ 8 on each subscale (depression and anxiety) for possible cases, and of ≥ 11 for probable cases; a cut-off score of ≥ 19 was used for probable combined depression and anxiety.

Results: Patients included 200 in WA and 66 in NSW. For the whole sample, 45.8% of patients were possibly depressed and 22.7% probably depressed; 36.9% were possibly anxious and 19.8% probably anxious. About 25% of patients had probable combined depression and anxiety. Logistic regression analyses indicated that past anxiety in the family predicted probable depression, while age, marital status and past depression predicted probable anxiety. Age and past depression predicted probable combined depression and anxiety.

Conclusions: These findings underscore the need for routine screening for anxiety and depression in palliative care settings, including questions about past personal and family history of anxiety and depression, and the need for a range of interventions and support services.

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pharmacological and psychological therapies. For example, cognitive behaviour therapy is used widely, and appears to be effective for treating moderate anxiety in palliative care patients with cancer. Palliative care professionals can also be trained to use this approach with patients with mild or moderate depression or anxiety.¹⁰ Guidelines of the United Kingdom National Institute for Health and Clinical Excellence (NICE) suggest cognitive behaviour therapy as an appropriate treatment for adult palliative care patients.¹¹

Despite the pervasiveness of anxiety and depression, and the clearly articulated ramifications for patients and families, anxiety and depression are underdetected and undertreated in palliative care patients with advanced cancer.⁸ There are a number of reasons for this, including the difficulty for palliative care professionals in differentiating depression from sadness,¹² and in distinguishing somatic symptoms of anxiety and depression from the physiological effects of cancer.¹³ In addition, many palliative care nurses do not feel confident in dealing with patient distress, and lack skills in identifying psychosocial concerns.¹⁴ Nurses are also

reluctant to introduce any further burden to patients and their families.¹⁵ Patients, likewise, are reluctant to burden the palliative care team, and fear that they will be stigmatised.¹⁶

There have been many calls for routine screening to identify people who need support.¹⁷ However, before introducing appropriate screening, the extent of anxiety and distress needs to be ascertained to ensure that adequate supports can be put in place. Predictors of anxiety and depression also need to be examined to determine who is most vulnerable.

Thus, the questions we addressed in this report were:

- What is the prevalence of anxiety and depression among palliative care patients with cancer in Western Australia and New South Wales? and
- What factors predict anxiety and depression in palliative care patients with cancer?

METHODS

We undertook a descriptive study of palliative care patients with cancer in WA and NSW from 1 March to 30 June 2002.

Eligible patients were aged 18 years or older, receiving palliative care for cancer, able to read and communicate in English, and able to give informed consent. Patients were excluded from the study if they were unable to read, write and speak English, if they were confused, had dementia, were deemed to be very close to death, or too weak or too unwell to participate in the study.

In WA, inpatient settings were:

- Two palliative care units in tertiary hospitals, both in northern Perth metropolitan areas, with a total of eight publicly funded beds. One of these hospitals was situated in an affluent suburb and one served a more socioeconomically mixed population;
- One 20-bed southern metropolitan hospice in which about half of the beds were public;
- One 26-bed northern metropolitan hospice with 26 beds, half of which were public only;
- One palliative care unit in a northern metropolitan private hospital with 20 beds, around three to four of which were public beds.

The community palliative care service in WA from which we recruited participants had approximately 550 clients at the time of the study. This service covered a large geographical area with a mixed socioeconomic profile, from affluent through to lower socioeconomic status. In all of the WA institutions, services were provided predominantly to patients with cancer.

In NSW, data were collected from two inpatient hospices with specialist palliative care community outreach services. Both institutions provided services predominantly to patients with cancer. Both were publicly funded and run by not-for-profit organisations, and provided a free service to all patients. Both covered large geographical areas with a very mixed socioeconomic profile, from affluent through to lower socioeconomic status. One hospice had 75 public beds. The other hospice had 35 public beds and served a more ethnically, culturally and linguistically diverse population.

We used the Hospital Anxiety and Depression Scale (HADS)¹⁸ because it is the most frequently adopted tool for screening for depression in cancer and palliative care settings and it is easy to complete. The HADS consists of 14 questions, has two subscales (anxiety and depression), and the focus is on anhedonia. The instrument is deemed reliable and valid for use with palliative care inpatients¹⁹ and outpatients.²⁰ We

used previously recommended cut-off scores to identify anxiety and depression of 8 or higher for possible cases and 11 or higher for probable cases.¹⁸ It has also been suggested that anxiety and depression scores should be summed and that the optimum threshold is a combined cut-off score of 19 or higher,²¹ and we also applied this summation and cut-off.

Consecutive patients at the study sites who met the inclusion criteria were approached over a period of 3 months by the clinical nurse specialist or registered nurse in each setting and invited to participate in the research. The research nurse at each site would give consenting patients the information sheet (and read it to the patient) and obtain informed consent. The HADS and demographic information sheet would then be completed by the patient, and illness and treatment details were obtained by the research nurse from the patient's file. Simple questions on whether the patient had a past personal or family history of anxiety and depression were asked as part of the demographic information, and the information was checked against the patient's file notes by the research nurse. Information on medications was obtained from patients' files.

Ethics approval was obtained from the ethics committees at all sites and also from Edith Cowan University Human Research Ethics Committee.

Statistical analysis

Data were analysed with SPSS, version 10 for Macintosh (SPSS Inc, Chicago, Ill, USA). A significance level of less than 0.05 was used for all statistical tests. Descriptive statistics were used to describe the sample and to calculate the prevalence of anxiety and depression. Cronbach's α coefficient was used to assess the reliability (internal consistency) of the HADS. Logistic regression analyses were performed to assess the prediction of probable depression, probable anxiety; and probable anxiety and depression (as measured by adding the scores on the two HADS subscales) with a cut-off score of 19 or higher.

RESULTS

There were 266 participants in the study: 200 from WA and 66 from NSW. The sample comprised 145 men and 121 women from three outpatient (community home care) and eight inpatient palliative care settings. Partici-

1 Illness-related details for the 266 participants

Details	No. of participants
Primary cancer diagnosis	
Lung	45
Colon	14
Breast	30
Prostate	34
Melanoma	15
Other	128
Secondary involvement	
Bone	94
Brain	11
Liver	55
Lung	59
Other	61
Past treatment	
Surgery	142
Radiotherapy	134
Chemotherapy	107
Current treatment	
Surgery	7
Radiotherapy	30
Chemotherapy	42

pants' mean age was 70.7 years and their ages ranged from 30 to 96 years. In total, 150 patients were in community home care and 116 were inpatients at the time of the study. Most patients were born in Australia (168) or the UK (53). Illness-related data for the study participants are shown in Box 1.

Prevalence of anxiety and depression

The mean HADS score for all participants on the combined depression and anxiety subscales was 13.81. For the total sample (at the respective cut-off scores of ≥ 8 for possible and ≥ 11 for probable), the HADS identified 45.8% of patients with possible depression and 22.7% with probable depression, and 36.9% with possible anxiety and 19.8% with probable anxiety. When scores were summed to identify combined anxiety and depression, the HADS identified 54.7% of patients with possible anxiety and depression and 24.8% of patients with probable anxiety and depression at a cut-off score of 19 or higher.

A Cronbach's α coefficient of 0.85 was obtained for the HADS using the total sample.

Predictors of anxiety and depression

Logistic regression analyses were performed to identify predictors of probable depression and probable anxiety at a cut-off score of ≥ 11 and probable anxiety and depression at a cut-off score of ≥ 19 . Twelve predictor variables were examined: sex, age, cancer site, inpatient or outpatient setting, marital status, state (WA or NSW), past depression in the family, past anxiety in the family, treated for past anxiety, treated for past depression, drugs used for depression, and drugs used for anxiety.

Of the original 266 participants, 28 had missing data; missing data for these 28 patients were randomly scattered over outcomes and predictors.

Anxiety: The logistic regression analysis with probable anxiety as the outcome variable indicated that age, marital status and past depression were significant predictors ($P < 0.05$). Box 2 shows the odds ratios, 95% confidence intervals and P values for age and past depression ($P < 0.05$).

Depression: The logistic regression analysis with probable depression as the outcome variable indicated that past anxiety in the family was a significant predictor for depression ($P < 0.05$). Box 2 shows the odds ratio, 95% confidence interval and P value for past family anxiety.

Combined anxiety and depression: The logistic regression analysis for probable overall anxiety and depression indicated that age and past depression were significant predictors for combined anxiety and depression. Box 2 shows the odds ratio, 95% confidence interval and P value for past depression ($P < 0.05$).

DISCUSSION

Our findings on the prevalence of anxiety and depression in palliative care patients with cancer in WA and NSW support those of other studies and further indicate a clear need for routine screening with a range of timely and sensitive interventions. Routine screening needs to be introduced early in palliative care so that exacerbation of anxiety and depression can be prevented where possible. Our prevalence figures also support the impetus in Australia to educate health professionals to elicit and respond appropriately to emotional signs and communicate with patients who have cancer and their family members about psychosocial concerns.²¹

Our findings of predictors of anxiety and depression also mirror those reported else-

2 Predictor variables for probable depression, probable anxiety, and probable combined anxiety and depression

Predictor variable	Odds ratio	95% CI	P
Probable anxiety*			
Age (years)			
< 66	1.00		0.036 [§]
≥ 66	2.18	1.05–4.50	
Past depression			
No	1.00		0.04 [§]
Yes	0.34	0.17–0.71	
Probable depression[†]			
Past anxiety in the family			
No	1.00		0.031 [§]
Yes	5.03	1.16–21.82	
Probable combined anxiety and depression[‡]			
Past depression			
No	1.00		0.004 [§]
Yes	0.37	0.19–0.73	

* Determined by a score of ≥ 11 on the anxiety subscale of the Hospital Anxiety and Depression Scale (HADS). † Determined by a score of ≥ 11 on the depression subscale of the HADS.

‡ Determined by a score of ≥ 19 on the summed scores for anxiety and depression on the HADS.

§ Significant at the α level of 0.05. ◆

where. One study found that unmarried palliative care patients reported significantly higher depression scores,¹⁶ which supports our finding that not being married is a predictor of probable anxiety. This could be because unmarried patients lack social support and ongoing care, or because they are anxious about being alone. The association between younger age and a past history of major depression has also been linked with psychological distress in terminally ill patients, which supports our findings.²² Younger adults appear to be more vulnerable to anxiety and depression and, interestingly, this appears to be consistent across a range of other settings including primary care.²³

The comorbidity between anxiety and depression has been clearly articulated.²⁴ Further, a review of anxiety in patients with advanced cancer reported that anxiety may be a symptom of depression.²⁵ This could explain why, in our sample, past anxiety in the family predicted probable depression

and past depression predicted probable anxiety.

We must be mindful that the HADS is not a diagnostic tool, and that the gold standard for diagnosing depression in any population is a psychiatric interview. If significant distress is indicated, then a more detailed assessment is needed. However, the HADS is a useful tool for assessing prevalence of self-reported anxiety and depression in this population.

A limitation of our study was the use of self-report data for past personal and family history of anxiety and depression. This information was supplemented by data from patients' files, but these data were not always complete. Further limitations of our study were that patients who were deemed very close to death were excluded from participating and that the sample was limited to people who could speak and understand English. Therefore, a full picture of distress was not possible. Future studies should include participants from culturally and linguistically diverse communities. More patients were recruited from WA than NSW. However, analyses showed no significant differences in results between the two states, and the prevalences of anxiety and depression across the two states were very similar.

It needs to be noted that this study looked at prevalence at a particular point in time and not incidence rates over time.

In conclusion, our findings underscore the urgent need for routine screening for anxiety and depression in palliative care settings; such screening should include questions about personal and family history of anxiety and depression and whether patients have a carer or someone to support them. The palliative care philosophy and ethos is clear — care is holistic and includes psychosocial support. In order to align clinical practice with philosophy, we need to:

- provide ongoing training for health professionals to communicate effectively with patients and family members to enable them to voice their psychosocial concerns;
- have policies and processes in place for routine and regular screening; and, importantly,
- ensure that a range of support services and interventions are in place.

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COMPETING INTERESTS

None identified.

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