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Which depression screening tools should be used in palliative care?

Mari Lloyd-Williams Community Studies Unit, University of Liverpool Medical School, Liverpool, **Juliet Spiller** Department of Clinical Oncology, Western General Hospital, Edinburgh, **Jason Ward** St. Gemma's Hospice, Leeds

Abstract: Depression is a significant symptom for many palliative care patients, but is difficult to diagnose and therefore treat. In an effort to improve detection, there has been increasing interest in the use of screening tools. Many tools, however, have been developed for physically well patients and it is important that tools are validated for the populations in which they are used. The present study was carried out on behalf of the Association of Palliative Medicine, Science Committee, to assess the available evidence for using screening tools in palliative care. The single question 'Are you depressed?' was the tool with the highest sensitivity and specificity and positive predictive value. Where the Hospital Anxiety and Depression Scale and the Edinburgh Depression Scale are used, the validated cut-off thresholds for palliative care patients should be employed. Patients who report thoughts of self-harm or suicide need prompt assessment and evaluation. *Palliative Medicine* 2003; **17:** 40–43

Key words: depression; palliative care; screening tools

Introduction

Depression is a significant symptom for approximately one in four palliative care patients, and is especially common in patients with a more advanced metastatic disease.[1,2] It is known that much of this depression is not diagnosed and therefore not treated.[3]

A reason for this low rate of detection is thought to be due to nondisclosure by patients who may either feel they are wasting the doctor's time or that they are in some way to blame for their distress and therefore choose to hide their feelings.[4] Additionally, medical and nursing staff may not be confident in eliciting psychological and psychiatric morbidity.[5] There are many antidepressants available with acceptable side effect profiles and patients identified as depressed even within the last four to six weeks of life may still benefit from treatment,[6] but few palliative care patients are prescribed antidepressant medication.[7]

There are no universally accepted criteria for diagnosing depression in the terminally ill. In the physically healthy population, depression is diagnosed if patients have a persistent low mood and at least four other symptoms, including loss of interest or pleasure; psychomotor retardation or agitation; feelings of worthlessness or excessive and inappropriate guilt; diminished ability to concentrate; recurrent thoughts of death and suicide; and somatic features, which include loss of energy, sleep disturbance and weight loss.

The complex problem of deciding which symptoms may be attributable to cancer and which may be due to depression has been discussed by Endicott,[8] who proposed that the somatic symptoms should be substituted for nonsomatic symptoms in the patient with cancer. Endicott also stressed the importance of asking patients with cancer about suicidal ideation.

There is increasing interest in the use of screening scales within palliative care. The majority of rating scales consist of a number of symptoms or feelings that the patient indicates his/her own response and the person administering the scale calculates the score.

This article reports the review undertaken by the authors on behalf of the Science Committee of the Association for Palliative Medicine in order to ascertain which current depression screening tools have been validated for use in palliative care and the available evidence for their efficacy in this population.

Method

The search for this review was undertaken by a librarian familiar with systematic review searching and in collaboration with the Cochrane collaboration. Searches were carried out on Embase 1980–; Psychlit 1967–; Medline 1966–; Cancerlit 1983–; Cinahl 1982–. The subjects for

Address for correspondence: Mari Lloyd-Williams, Community Studies Unit, Second Floor, Whelan Building, University of Liverpool Medical School, Liverpool L69 3GB, UK.
E-mail: mlw@liv.ac.uk

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all searches were adults. The search question was broken down into three main headings: depression, assessment palliative care, and the search strategy was based on exploding and combining these headings with others. Hand searches of key journals and of the grey literature were also carried out.

Three reviewers independently graded each paper according to the level of evidence. Studies were included if the rating tool had been validated against a psychiatric interview.

Results

The searches yielded 534 references and following the reading of abstracts, 44 papers were obtained. On further inspection, however, many of these papers did not relate to the assessment of depression in palliative care patients.

Studies including a psychiatric interview

Three studies were identified that compared seven different screening tools to 'gold standard' diagnoses derived from psychiatric interviews (see Table 1).

Le Fevre[9] administered the 14-item Hospital Anxiety and Depression Scale (HADS) and the 12-item General Health Questionnaire (GHQ-12) to 79 hospice inpatients (all except one were suffering from advanced cancer) and compared them with diagnoses generated from a Revised Clinical Interview Schedule. The GHQ-12 was adapted from the original 60-item General Health Questionnaire and was designed to give a general indication of psychiatric 'caseness' rather than a specific diagnosis of depression. The HADS was specifically designed for use in medically ill patients by avoiding the inclusion of somatic symptoms. The results show that in the palliative care inpatient population, the HADS appears to perform better than the GHQ-12 in identifying cases fulfilling Endicott Diagnostic Criteria for depression (area under the receiver operating characteristic curve for HADS 0.92 compared with 0.81 for GHQ-12). The authors' postulate that this may be because the GHQ-12 contains questions on somatic symptoms – they do not give sensitivities and specificities for the GHQ-12. In relation to the HADS, they conclude that the scores obtained on the anxiety and depression subscales should be summed rather than the depression subscale being used alone. A combined cut-off score of 20 achieves a sensitivity of 0.77 and a specificity of 0.85 and a positive predictive value of 0.48.

Lloyd-Williams *et al.* compared the 10-item Edinburgh Postnatal Depression Scale (EPDS) with a Present State Examination for depression according to International Classification of Diseases (10th edition) criteria in 100 inpatients with metastatic cancer who were receiving palliative care.[10] The EPDS was developed to assess depression in women in the postnatal period. It excludes the somatic symptoms of depression. The EPDS also has a statement enquiring about thoughts of self-harm. In this study, a cut-off threshold of 13 gives the optimum sensitivity (0.81) and specificity (0.79) and a positive predictive value of 0.53.

Chochinov *et al.* assessed 197 palliative care inpatients with advanced cancer using four screening tools together with a diagnostic interview for depression according to Research Diagnostic Criteria.[11] The diagnostic interview was adapted from the Schedule for Affective Disorders and Schizophrenia (SADS). The 13-item Short Form of the Beck Depression Inventory was developed as a rapid screening technique for use with medical patients. Using a recommended cut-off score of 8 on the Beck, a sensitivity of 0.79 and a specificity of 0.71 and a positive predictive value of 0.27 were achieved. The 100-mm visual analogue scale for mood taken from the Memorial Pain Assessment Card had a sensitivity of 0.72 and a specificity of 0.50 using a cut-off score of 55 mm, and a positive predictive value of 0.17. A single question assessing depressed mood 'Are you depressed?' (from the full SADS interview) correctly identified the eventual diagnostic outcome of every patient (sensitivity 1.0,

Table 1 Cut-off scores for screening tools

Tool	Cut-off score	Population	Diagnostic criteria	Sensitivity	Specificity	Positive predictive value
1-item question (Chochinov)	N/A	197 inpatients with advanced cancer	RDC	1.00	1.00	1.00
2-item question (Chochinov)	N/A	197 inpatients with advanced cancer	RDC	1.00	0.98	0.86
EPDS (Lloyd-Williams)	13	100 palliative care inpatients with metastatic cancer	ICD-10	0.81	0.79	0.53
HADS (Le-Fevre)	20 combined	79 palliative care inpatients	Endicott	0.77	0.85	0.48
Visual Analogue Scale (Chochinov)	55 mm	197 inpatients with advanced cancer	RDC	0.72	0.50	0.17

specificity 1.0, positive predictive value 1.0). Extending the screening interview by adding a second question assessing loss of interest reduced the specificity (0.98) and the positive predictive value (0.86), but not the sensitivity (1.0).

Depression and desire for death

This review identified two studies evaluating the association of desire for death with measures of depression in the palliative care population.

Chochinov *et al.* looked at desire for death as part of a structured psychiatric interview in 200 patients admitted to the Palliative Care Units of two hospitals.[12] The Beck Depression Inventory was also used, as were measures of performance status, pain and social support. A strong association was identified between desire for death and the diagnosis of clinical depression ($P = 0.09$) and depression emerged as the only factor that independently predicted desire for death in the study population.

Brown *et al.* also assessed desire for death as part of a psychiatric interview and looked at the association with scores of the Beck Depression Inventory and with a diagnosis of clinical depression based on a psychiatric structured interview using the DSMIII criteria.[13] Desire for death and suicidal ideas were found exclusively in those who were found to be clinically depressed.

Summary of the evidence

Depression is an important symptom for many palliative care patients and the use of validated screening tools may be a means of improving recognition and hence treatment.

The question 'Are you depressed?' has a sensitivity of 1.0 and a specificity of 1.0, and a positive predictive value of 1.0.

The 10-item EPDS at a cut-off threshold of 13 has a sensitivity of 0.81 and a specificity of 0.79, and a positive predictive value of 0.53.

The 14-item HADS should be used as a combined scale, and at a cut-off threshold of 20 has a sensitivity of 0.77 and a specificity of 0.89, and a positive predictive value of 0.48.

All the above tools have been validated against a psychiatric interview

Asking about thoughts of self-harm when assessing a patient for depression may be particularly discriminating, with two studies suggesting that thoughts of self-harm and desire for death are independent predictors for depression.

Comments and questions arising from the review of evidence

This review has highlighted that very few studies have attempted to validate screening tools for depression in palliative care patients. This may reflect that depression has not, until recently, been given the same profile as other symptoms affecting palliative care patients, e.g., pain, nausea. The review focused on screening tools for clinical depression and not for general psychological distress or other psychiatric illnesses. The evidence base for the use of such tools in the palliative care patient population is very small. Most of the studies involving patients with advanced cancer have been performed in a single centre and include small numbers of patients.

The available evidence suggests that the single question 'Are you depressed?' has a sensitivity, specificity and a positive predictive value of 1.0, making it a highly valid screening tool. These findings were reported in a single study in one centre and the single question has not, until recently, been compared with other tools in other populations. However, a recent study revealed that when validated against a semi-structured psychiatric interview in a UK palliative care population, the single question had a sensitivity of 55% and a specificity of 74% (Taylor, personal communication), suggesting that cultural responses to asking this question may apply. Additionally, many cultures do not have the same understanding of the term 'depression', and indeed, in many Asian languages there is no single word to define low mood, making the single question difficult to evaluate in populations where the first language is not English.

The HAD and EPDS appear to be similar in terms of sensitivity, specificity and positive predictive value – i.e., the number of patients scoring above the threshold who will be true cases. It is also recommended that any patient expressing a desire for hastened death should be assessed for depression as the available evidence suggests a significant association between these two factors.

These recommendations are based on very scant research evidence and the overriding conclusion of this review is that there is an urgent need for further studies looking at this issue. The recent report by the European Association for Palliative Care working group[14] concluded that the issues of screening should also be considered together with the training of staff in how to diagnose depression. There is also little in the way of research carried out as to the most appropriate methods of treating palliative care patients who are found to be depressed and there is a need for studies to be carried out in this area.[15]

Areas for future research in depression in palliative care should include:

- Further validation of the single item question in another palliative care population against a gold standard psychiatric interview.
- A review of the efficacy of treatments for depression in palliative care patients.

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