

Which self-report anxiety scale is optimal for measuring cancer related anxiety? A comparison of GAD7, GAD-DSMIV, and ET Anxiety Thermometer vs MINI semi-structured interview

Tessa Greenhalgh¹ Alex J Mitchell² Paul Symonds² ajm80@le.ac.uk Declarations None Funding None

¹ University of Oxford (UK) ¹, Department of Cancer & Molecular Medicine, University of Leicester (UK)

BACKGROUND Patients with cancer have an elevated rate of anxiety early after cancer and anxiety levels remain higher than in the general population for 2 to 5 years post diagnosis. However few studies have examined which anxiety scales are optimal in clinical practice. In this primary study we compared 3 self-report methods.

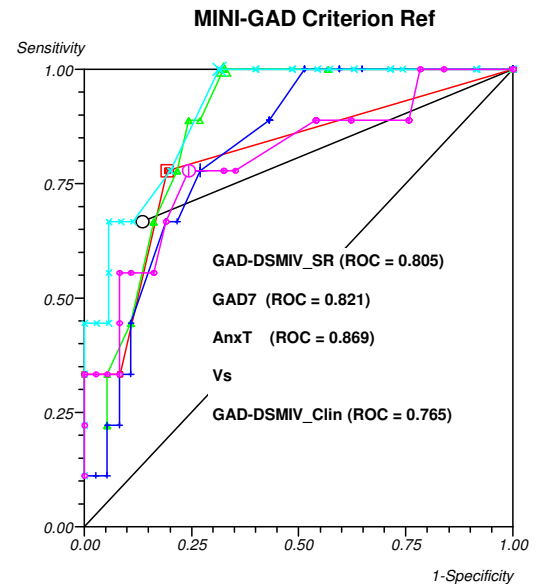
METHODS We conducted a diagnostic validation study using the semi-structured MINI neuropsychiatric interview as the gold standard. Four researchers collected data from the Leicester Cancer Centre between 2013 and 2014. We examined 46 patients following their breast cancer diagnosis. On the MINI the prevalence of Generalised Anxiety disorder (GAD) was 19.6%.

RESULTS

The GAD-DSMIV self-report version had a ROC curve area of 0.806 (95% CI = 0.639 to 0.971). The optimal cut-off was >1. Sensitivity was = 0.778 (0.399 to 0.972) and specificity (95% CI) was 0.805 (0.639 to 0.918)

The Anxiety thermometer from the Emotion Thermometer had a ROC curve area of 0.869 (95% CI = 0.767 to 0.971). Optimal cut-off was >2. Its Sensitivity was = 1 (0.663 to 1) and specificity (95% CI) = 0.675 (0.502 to 0.819)

The GAD7 had a ROC curve area of 0.821 95% CI = 0.691 to 0.952. The optimal cut-off was >15. Sensitivity was 0.777 (0.400 to 0.971); specificity (95% CI) = 0.729 (0.558 to 0.862)



GAD-DSMIV Tool

Generalized Anxiety Disorder Questionnaire for DSM5 (GA-DSM-5)
Self-Report Version

Over the last **2 weeks**, how often have you been bothered by the following problems?
(Use '✓' to indicate your answer)

| | Not at all | Several days | More than half the days | Nearly every day |
|---|------------|--------------|-------------------------|------------------|
| 1. Excessive anxiety or worry about a number of events or activities? | 0 | 1 | 2 | 3 |
| 2. Finding it difficult to control worrying? | 0 | 1 | 2 | 3 |
| 3. Feeling restless, keyed up or on edge? | 0 | 1 | 2 | 3 |
| 4. Being easily fatigued? | 0 | 1 | 2 | 3 |
| 5. Difficulty concentrating or your mind going blank? | 0 | 1 | 2 | 3 |
| 6. Being irritable? | 0 | 1 | 2 | 3 |
| 7. Having muscle tension? | 0 | 1 | 2 | 3 |
| 8. Having disturbed sleep, such as difficulty falling asleep, difficulty staying asleep or restless/unrefreshing sleep? | 0 | 1 | 2 | 3 |
| 9. Feeling distressed because of these problems? | 0 | 1 | 2 | 3 |
| 10. How difficult have these problems made it for you to manage? (to work, take care of things at home, or get along with people) | 0 | 1 | 2 | 3 |

Not difficult Somewhat difficult Very difficult Extremely difficult

Total score (add up items 1-10) =

Are you already getting help for these problems? No Yes %_A

Do you want further help for these problems from a clinician? No Yes %_A

Recommended scoring for this version => clinical anxiety < 10 (mild) < 15 (moderate) > 20 (severe)

GAD7 Tool

GAD-7

Over the last **2 weeks**, how often have you been bothered by the following problems?
(Use '✓' to indicate your answer)

| | Not at all | Several days | More than half the days | Nearly every day |
|--|------------|--------------|-------------------------|------------------|
| 1. Feeling nervous, anxious or on edge | 0 | 1 | 2 | 3 |
| 2. Not being able to stop or control worrying | 0 | 1 | 2 | 3 |
| 3. Worrying too much about different things | 0 | 1 | 2 | 3 |
| 4. Trouble relaxing | 0 | 1 | 2 | 3 |
| 5. Being so restless that it is hard to sit still | 0 | 1 | 2 | 3 |
| 6. Becoming easily annoyed or irritable | 0 | 1 | 2 | 3 |
| 7. Feeling afraid as if something awful might happen | 0 | 1 | 2 | 3 |

ET Tool (anxiety thermometer)

1. Distress 2. Anxiety 3. Depression 4. Anger

Extreme None

CONCLUSIONS Against the MINI GAD criteria; the optimal method to detect anxiety (GAD) after cancer appears to be the Anxiety thermometer from the emotion thermometers. This is also the briefest method. However the other methods also performed well.

