CancerSupportSource®-Caregiver: Psychometric Properties of 2-item Depression and Anxiety Risk Screening Measures for Family and Informal Cancer Caregivers

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Background
- Caring for loved ones with cancer can affect the quality of life and health of caregivers; screening for caregiver depression and anxiety can mitigate the risks of under-identifying and under-treating these conditions.
- CancerSupportSource® (CSS-CG) is a 33-item multidimensional caregiver distress screening and referral program, with items related to depression (feeling sad or depressed; feeling lonely or isolated) and anxiety (feeling nervous or afraid; worry about the future and what lies ahead).

Aims
- This study evaluated the psychometric performance of CSS-CG depression (CSS-D2) and anxiety (CSS-A2) risk screening subscales among community-based family and informal caregivers to people living with cancer.

Methods
- 328 caregivers enrolled in Cancer Support Community’s online Cancer Experience Registry, provided information on caregiving history, rated CSS-CG items (0 = Not at all; 4 = Very seriously), and completed criterion validity measures including PROMIS-29 v2.0 Depression & Anxiety Short Forms 4a (CSS-D2; PROMIS-D; PHQ-2) and Depression & Anxiety (CSS-A2).
- We calculated 2-item CSS-D2 and 2-item CSS-A2 risk scales (possible range: 0-8 for each scale); calculated Pearson correlations; sensitivity/specificity and positive/negative predictive values (PPV/NPV) for CSS-CG risk scale cutoffs; and area under the curve (AUC). Reference scores included PROMIS-D T-score ≥60 and PHQ-2 ≥3 to classify depression risk, and PROMIS-A T-score ≥62 and GAD-2 ≥3 for anxiety risk.

Participants
- N = 328
- Mean / SD
  - Age (years): Range 20 – 89, Mean 52.13
  - Race and Ethnicity:
    - Non-Hispanic White: 84%
    - Hispanic/Latino/Latina: 19%
    - Female: 81%
  - Caregiver relationship to patient:
    - Caring for spouse: 47%
    - Caring for parent: 22%
    - Caring for child: 7%
    - Currently providing care: 79%
  - Hours of care provided weekly:
    - 60 or more hours: 39%
    - 20-60 hours: 27%
    - 10-19 hours: 26%
    - <10 hours: 16%
  - Years providing care:
    - <1 year: 24%
    - 1-2 years: 40%
    - 3-5 years: 20%
    - >5 years: 6%

Results
- Pearson Correlations with Criterion Validity Measures
  - CSS Depression (CSS-D2) & PHQ-2: .76
  - CSS Anxiety (CSS-A2) & GAD-2: .74
- Sensitivity, Specificity, and Predictive Values
  - AUCs were >.86 for depression and anxiety, indicating strong performance in classifying people at risk.
- Receiver Operating Characteristic (ROC) Curve Analysis
  - CSS-D2 and PHQ-2
    - CSS-D2 total score ≥3 and CSS-A2 total score ≥3 maximized sensitivity, with acceptable specificity.
    - AUCs were >.86 for depression and anxiety, indicating strong performance in classifying people at risk.
  - The ROC curve (red) shows the tradeoff between specificity and sensitivity.

Conclusions and Implications
- CancerSupportSource-Caregiver depression and anxiety risk subscales demonstrated good concurrent validity and sensitivity among cancer caregivers, with lower specificity.
- Embedding clinical risk screening within the CSS-CG screening and referral program provides flexibility in assessing unmet caregiver needs and clinical distress while minimizing respondent and clinician burden.
- In implementation of CSS-CG, follow-up procedures should be well-defined for individuals who screen positive, including referral and further assessment.
- Future work will evaluate psychometric support for a shortened CSS-CG tool and how best to engage caregivers in diverse care settings.

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References

Risk for Clinically Significant Depression and Anxiety
- 68%
- Not at Risk
- 36%
- Anxiety & Depression

Confounder Factor Analysis
- Feeling nervous or afraid: .88
- Feeling sad or depressed: .82
- Feeling stressed or depressed: .77

The Registry is for all cancer patient, survivors and caregivers, and also includes 13 disease-specific surveys.

To find out more about the Registry at www.cancersupportregistry.org.