Research Brief

Social Development Research Group

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Monitoring Levels of Depression in a Community's Youth

The Communities That Care Brief Depression Scale: Psychometric Properties and Criterion Validity

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MISSION of SDRG

To understand and promote healthy behaviors and positive social development among diverse populations, we:

- Conduct research on factors that influence development
- Develop and test the effectiveness of interventions
- Study service systems and work to improve them
- Advocate for science-based solutions to health and behavior problems
- Disseminate knowledge, tools, and expertise produced by this research

Community Need

Although a number of community-wide strategies for improving youth outcomes have focused on reducing behavioral problems such as drug use and delinquent behaviors, few attempt to monitor mental health problems such as depression. To some extent, this is due to the length and cost of clinical depression assessments. These assessments often require substantial training for correct administration.

Assessments of depression administered community wide would assist communities in evaluating the level of youth depressive symptoms in the community and help guide prevention programming. The measure must be accurate and validated for use with an adolescent population. If incorporated into a school-based survey, the measure would also need to be brief given the competing desire to assess multiple other outcomes such as drug use, delinquency, and associated risk factors within a limited period of time.

This study looks at one measure with the potential to accomplish these goals. It has found that the Communities That Care Brief Depression Scale (CTC-BDS) , which is part of the Communities That Care (CTC) Youth Survey, is a valid four-item measure of depressive symptoms in adolescents.

Methods

Data for this study came from the Community Youth Development Study, a community-randomized trial of CTC in 24 incorporated towns across seven states. As part of the randomized trial, a longitudinal panel of 4,407 fifth graders was followed, starting in 2004, using a

Key Messages

- *The Communities That Care Youth Survey includes the CTC Brief Depression Scale (CTC-BDS).*
- *The CTC-BDS is an internally reliable and valid measure of depressive symptoms when compared to a criterion standard of major depressive disorder as assessed by the Patient Health Questionnaire (PHQ-9). At a cut point of 6, the CTC-BDS displays adequate sensitivity and specificity.*
- *As communities consider prevention strategies to address depression among youth, it will be important to assess and monitor levels of depression in the population using valid and brief measures such as the CTC-BDS in community-wide surveys.*

The Four-Item Communities That Care Brief Depression Scale (CTC-BDS)

Sometimes I think life's not worth it.	*NO!*	*no*	*yes*	*YES!*
I think I am no good at all.	*NO!*	*no*	*yes*	*YES!*
I am inclined to think I am a failure.	*NO!*	*no*	*yes*	*YES!*
In the past year, I have felt sad most of the days.	*NO!*	*no*	*yes*	*YES!*

Cronbach's alpha reliability coefficient = .93. Correlation between CTC-BDS and PH-9: Spearman's $\rho = .62$, $p < .001$. Scale sensitivity = .88 and specificity = .82 in predicting PHQ-9 depressive symptoms. Model fit: RMSEA = .042; TLI = .999; CFI > .999.

modified version of the CTC Youth Survey. Close to 4,000 of these young people participated in this study. The analysis examined the properties of the CTC-BDS and compared it against the Patient Health Questionnaire (PHQ-9), a standard diagnostic tool for diagnosis of major depressive disorder.

Results

Young people answered both sets of questions. We found that internal consistency for the CTC-BDS was high ($\alpha = .93$). Confirmatory factor analysis findings indicate that the scale represents a unidimensional construct. In a comparison of the CTC-BDS with the PHQ-9 , correlation between the total scores was strong (Spearman's $\rho = .62$, $p < .001$).

At a cut point of 6, the CTC-BDS also displays adequate sensitivity (ability to correctly identify individuals who display elevated depressive symptoms, or true-positives) and specificity (ability to correctly identify those individuals without depressive symptoms, or true-negatives). Sensitivity and specificity of the CTC-BDS were both greater than .80, indicating that the scale is able to predict elevated depressive symptoms correctly more than 80% of the time.

Conclusion

As communities consider prevention strategies to address mental health problems such as depression among youth, it will be important to assess and continue to monitor levels of depressive symptoms in the population using valid and brief measures that can be easily incorporated in community-wide surveys. Findings from this study support the use of the CTC-BDS to estimate the prevalence of youth who are likely experiencing elevated depressive symptoms.

For additional information on this topic, please refer to the original article:

Rhew, Isaac C., Monahan, Kathryn C., Oesterle, Sabrina, Hawkins, J. David (2016). **The Communities That Care Brief Depression Scale: Psychometric properties and criterion validity.** *Journal of Community Psychology, 44*(3), 391-398.

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