Patient Health Questionnaire-2 (PHQ-2)

INSTRUMENT REVIEW

Background
The Patient Health Questionnaire 2-item (PHQ-2) is a brief screening tool for major depression. The PHQ-2 consists of the first two questions of the Patient Health Questionnaire-9 (PHQ-9), which target core symptoms of depression (depressed mood and anhedonia). This review identifies psychometric properties of the PHQ-2 for use as a depression screening among youth 12 years through 20 years of age.

Criteria

Instrument purpose
The purpose of the PHQ-2 is to provide a brief, initial screening for major depression. Adapted from the PHQ-9, this tool has been used as a first step in depression screening to identify individuals who require additional evaluation.

Mental health domains
The PHQ-2 covers only major depressive disorder.

Reliability
Limited research has been published regarding the PHQ-2’s reliability in adults or adolescents. International studies have found good internal consistency scores (α=0.84) and acceptable test-retest reliability (0.80) for adolescent and college-aged populations. \(^1,2\)

Validity
The majority of validation studies have been with adult populations. The PHQ-2 has shown sufficient validity across studies, though it often varies based on population. A cutoff score of 2 or higher is recommended for optimum sensitivity, resulting in more depressed individuals being correctly identified.\(^3\) Individuals scoring 2 or higher on the PHQ-2 should receive the remainder of the PHQ-9 or be assessed with another validated mental health screening tool at the same clinical visit.\(^4\)
**Sensitivity & Specificity**

A diagnostic meta-analysis reviewing 21 validation studies of the PHQ-2 in adolescent and adult populations shows at cutoff point ≥ 2, the instrument has a pooled sensitivity of 0.91 and pooled specificity of 0.70. At a cutoff score of ≥ 3, pooled sensitivity was 0.76 and pooled specificity was 0.87. In studies targeting only adolescents, sensitivity data have ranged from 0.737-0.962, and specificity data have ranged from 0.752-0.823.4

**Other validity criteria**

Using a cutoff score of ≥ 2 favors sensitivity over specificity, so may result in a higher number of false positive results.4 Considerations of the population, disease prevalence, and cultural factors should be taken into account when establishing a threshold for efficient and effective screening.

**Recent standardization**

Validation studies for the PHQ-2 have spanned from 2003 to 2016, with the most robust supporting its use as a first step screening measure for depression.

**Other Considerations**

**Practicality**

The PHQ-2 is a brief and easy to score instrument, making it a suitable option for first line depression screening in busy clinical settings. It is recommended as a first step screener, as any individuals that receive a score ≥ 2 should be asked to complete the full PHQ-9 (or other fully validated depression screening tool) at the same visit.

**Population and age span**

Studies have validated the PHQ-2 for individuals aged 12 years and older across multiple population and cultural settings. The PHQ-2 and PHQ-9 are offered in over 50 languages, though not necessarily validated in the populations who speak those languages.3

**Recommendations from National Bodies**

National organizations such as the American Psychological Association, the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the US Preventative Services Task Force emphasize the importance of depression screening in adolescence. The PHQ-9, Beck Depression Inventory (BDI), and Center for Epidemiologic Studies Depression Scale CES-D are more commonly cited as potential screeners. Mentions of the PHQ-2 reinforce its recommendation as a first step screening tool.
National bodies also agree that patients who screen positive on the PHQ-2 should be further evaluated with the PHQ-9 to determine if they meet the criteria for depressive disorder.5

Summary and Conclusions

The PHQ-2 is a useful tool for adolescents and adults in busy clinical settings as it is a brief, easy to score screener. While it is preferable to use a more robust screening instrument, particularly in clinics and systems that have not yet developed rigorous screening practices, or where prevalence of depression is low, the PHQ-2 has been validated in numerous studies, showing high sensitivity and sufficient specificity at a cutoff score ≥ 2. Scores at or beyond this cutoff should be further screened with the PHQ-9 or another validated screening measure.

Bibliography


The Child and Teen Checkups (C&TC) program is administered through a partnership between the Minnesota Department of Human Services and the Minnesota Department of Health.

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