Review: Questionnaires for detecting clinical depression in primary care have similar diagnostic accuracy

QUESTION

In primary care patients, what is the accuracy of questionnaires for diagnosing clinical depression?

DATA SOURCES

Studies were identified by searching MEDLINE and a specialized registry of depression trials (1970 to July 2000).

STUDY SELECTION

Published English-language studies were selected if they were done in a primary care setting, administered a case-finding instrument, and obtained a criterion-based diagnosis (e.g., *Diagnostic and Statistical Manual of Mental Disorders, 3d edition*). The case-finding instrument had to have average literacy requirements, be scored without a calculator, have a depression-specific component, and be evaluated in ≥ 1 study with ≥ 100 patients.

DATA EXTRACTION

2 reviewers independently extracted data on the instrument, time frame of questions, score range, cut point, literacy level, administration time, ability of the instrument to monitor severity or response, and likelihood ratios. The quality of studies was assessed.

MAIN RESULTS

28 studies (25 550 screened patients) with 37 evaluations of 11 questionnaires (1 to 30 items) met the selection criteria. All questionnaires could be self-administered in < 5 minutes. In 9 studies, > 50% of patients did not receive the diagnostic reference standard; 15 studies were rated as high-quality. Scales for detecting major depressive disorder (MDD) did not differ (Table). Heterogeneity was seen among studies assessing the following scales: Beck Depression Inventory, Center for Epidemiologic Studies Depression, Hopkins Symptom Checklist, and Zung Self-Rating Depression Scale.

CONCLUSION

In primary care patients, questionnaires for detecting clinical depression have similar diagnostic accuracy.

Test characteristics of case-finding instruments for major depressive disorder in primary care*

Instruments	Number of studies	Summary +LR (95% CI)	Summary −LR (CI)
Beck Depression Inventory	4†	4.2 (1.2 to 14)	0.17 (0.1 to 0.3)
Center for Epidemiologic Studies Depression	10†	3.3 (2.5 to 4.4)	0.24 (0.2 to 0.3)
Geriatric Depression Scale	2	3.3 (2.4 to 4.7)	0.16 (0.1 to 0.3)
Hopkins Symptom Checklist	2†	3.2 (1.7 to 6.2)	0.24 (0.1 to 0.5)
Primary Care Evaluation of Mental Disorders (PRIME-MD)	2	2.7 (2.0 to 3.7)	0.14 (0.1 to 0.3)
PRIME-MD Patient Health Questionnaire	1	12 (8.4 to 18)	0.28 (0.2 to 0.5)
Symptom Driven Diagnostic System—Primary Care	4	3.5 (2.4 to 5.1)	0.22 (0.1 to 0.4)
Zung Self-Rating Depression Scale	4†	3.3 (1.3 to 8.1)	0.35 (0.2 to 0.8)
Single Question	1	2.3 (1.8 to 2.9)	0.16 (0.0 to 0.6)

*Diagnostic terms defined in Glossary.
†Statistically significant heterogeneity existed among studies.

COMMENTARY

Williams and colleagues offer a rigorous review and synthesis of the test characteristics of various depressive diagnostic survey tools derived from primary care populations. The U.S. Preventive Services Task Force recently published a recommendation for screening patients in primary care (1), so this review is particularly relevant. Evidence suggests that screening for depression can improve outcomes, particularly when coupled with system changes that ensure adequate treatment and follow-up (1).

The synthesis of literature in this study was methodologically sound. It would have been helpful to know the prevalence of MDD in each study because the test characteristics of the tools were derived in "case-finding" screening settings (i.e., low-prevalence settings). The derivation of test characteristics is subject to "disease spectrum bias"; thus, the test characteristics may not behave similarly in cohorts with a higher prevalence of disease (i.e., persons who are stressed or have multiple unexplained physical symptoms).

Health systems that plan on incorporating a systematic tool to assist in the diagnosis and monitoring of patients with MDD will benefit from the analysis by Williams and colleagues (a useful list of Web-based resources to access each tool is provided), and given that the available tools are similar in their diagnostic accuracy, the choice of which tool to use should depend on ease of use and the ability to track disease severity. It appears that the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire fits these needs best. It is limited only by its inability to specifically diagnose dysthymia, a condition known to be responsive to antidepressant therapy. Busy clinicians should also note the accuracy of the Single Question instrument.

We have come a long way in developing tools that help to detect and diagnose MDD in primary care settings, but further work is needed before we can implement these tools practically and efficiently to improve depression outcomes in primary care.

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Reference

1. **Pignone MP, Gaynes BN, Rushton JL, et al.** Screening for depression in adults: a summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med. 2002;136:765-76.