Diagnostic Accuracy of Rating Scales for Attention-Deficit/Hyperactivity Disorder: A Meta-analysis

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Abstract

CONTEXT:
The Child Behavior Checklist–Attention Problem (CBCL-AP) scale and Conners Rating Scale–Revised (CRS-R) are commonly used behavioral rating scales for diagnosing attention-deficit/hyperactivity disorder (ADHD) in children and adolescents.

OBJECTIVE:
To evaluate and compare the diagnostic performance of CBCL-AP and CRS-R in diagnosing ADHD in children and adolescents.

DATA SOURCES:
PubMed, Ovid Medline, and other relevant electronic databases were searched for articles published up to May 2015.

STUDY SELECTION:
We included studies evaluating the diagnostic performance of either CBCL-AP scale or CRS-R for diagnosing ADHD in pediatric populations in comparison with a defined reference standard.

DATA EXTRACTION:
Bivariate random effects models were used for pooling and comparing diagnostic performance.

RESULTS:
We identified and evaluated 14 and 11 articles on CBCL-AP and CRS-R, respectively. The results revealed pooled sensitivities of 0.77, 0.75, 0.72, and 0.83 and pooled specificities of 0.73, 0.75, 0.84, and 0.84 for CBCL-AP, Conners Parent Rating Scale–Revised, Conners Teacher Rating Scale–Revised, and Conners Abbreviated Symptom Questionnaire (ASQ), respectively. No difference was observed in the diagnostic performance of the various scales. Study location, age of participants, and percentage of female participants explained the heterogeneity in the specificity of the CBCL-AP.

CONCLUSIONS:
CBCL-AP and CRS-R both yielded moderate sensitivity and specificity in diagnosing ADHD. According to the comparable diagnostic performance of all examined scales, ASQ may be the most effective diagnostic tool in assessing ADHD because of its brevity and high diagnostic accuracy. CBCL is recommended for more comprehensive assessments.