

# Review of The: Conners' Adult ADHD Rating Scales (CAARS)

*By Tarah A. Watson, Bridgewater State University*

## **General Information**

Title: Conners' Adult ADHD Rating Scales (CAARS)

Authors: C. Keith Conners, Ph.D., Drew Erhardt, Ph.D., and Elizabeth Sparrow, Ph.D.

Publisher: Multi-Health Systems, Inc. P.O. Box 950 North Tonawanda, New York 14120

Date of Publication: The CAARS was published in 1999.

Forms, Groups to which applicable: The CAARS is an appropriate tool for reporting on and screening adults ages 18 and up. This is a paper-and-pencil assessment tool and includes both self-report and observer forms using a Likert-style format in which participants rate items pertaining to their behavior and problems.

General Type: The instrument addresses Attention-Deficit/Hyperactivity Disorder (ADHD) symptoms linked to the criteria for the disorder for both men and women in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (APA, 1994). The purpose of the instrument is to help the administrator gather information to make an appropriate assessment about the individual. The CAARS is designed to be a flexible tool and can be administered in various environments, such as an office, home or school setting.

Practical Features: This instrument is easy to administer. The instruments are brief self-report and observer measures that are best used by clinicians as part of an overall clinical evaluation. All test users need to take into account any factors that may influence an inaccurate report on symptoms, such as clients seeking medications, or if the client is distracted while answering (Conners, Erhardt & Sparrow, 1999).

Cost: According to Slosson's website, the complete kit is \$339.00. The kit includes one technical manual and 25 QuikScore Forms for self-report and 25 QuikScore observer forms. (<http://www.slosson.com>).

Time Required to Administer: This is not a timed assessment tool, the Long forms of the CAARS can take up to 30 minutes. The Shorter forms can take about 10 minutes. These forms differ by length and are used depending on the amount of information the administrator is gathering.

## **Purpose and Nature of the Instrument**

Stated Purpose: To assess symptoms and problem behavior for Attention-Deficit/Hyperactive Disorder (ADHD).

The Conners' Adult ADHD Rating Scales was developed to help assess adult ADHD symptoms and behaviors. The CAARS meets the need for valid and reliable measures of adult ADHD symptoms. This is an ideal assessment tool for obtaining information about adult ADHD and can be used as a diagnostic instrument in conjunction with other assessments and information. The CAARS provides an assessment of ADHD symptoms across clinically important domains such as home, work and interpersonal functioning (Conners et al., 1999).

Description of Test Items and Scoring: There are two forms of the CAARS. The Long Forms have 66 items and the Short Forms have 26 items. There are separate scoring forms for both males and females; the questionnaire uses a 4-point (0 = Not at all, never; 1 = Just a little, once in a while; 2 = Pretty much, often; 3 = Very much, very frequently), Likert-style format. For the self-report form participants (or client) rate their own experiences, and for the observer forms respondents (family member, peer, coworker) are asked to rate the particular person. The CAARS Forms are a set of easily administered self-report and observer-rated instruments designed to assess symptoms and behaviors related to ADHD in adults. The CAARS manual provides detailed steps to scoring protocols. Results are completed by hand and require a minimal amount of time (about 10 minutes), which includes transferring scores to columns, adding up each column, and interpreting the results (Macey, 2003). Because the forms contain transformation tables from raw score to standardized T-scores, there is no need to complete hand conversions (Conners et al., 1999).

### **Practical Evaluation**

Adequacy of direction, training required to administer: The CAARS should be administered in the presence of a trained mental health professional. The directions for the test are clear and straightforward, however the administrator will need to familiarize with the manual to understand the administration and scoring process of the instrument. The scoring interpretation can be difficult if the professional is not familiar with interpreting T-scores.

### **Technical Considerations**

Norms and Scoring: There were 2000 participants used for the standardized sample. The CAARS self-report and observer forms were normed on a large sample of nonclinical adults from several locations in the United States and Canada. The sample of individuals ranged from ages 18 to 80 years of both men and women.

Adequacy of Norms: There are possible effects of age and gender on the CAARS measures. Age and gender are considered in the norms as they have an impact on some of the CAARS results.

Reliability: Test-Retest Reliability, Mean Inter-item Correlations, Standard Error of Measurement/Prediction and internal consistency were used to measure reliability of the CAARS. It was found that the CAARS measures (both self-report and observer) are very

accurate in measuring the constructs they were developed to measure (Conners et al., 1999). Reliability coefficients are presented separately by gender and age within the normative group (Conners et al., 1999). Internal consistency reliability was calculated indicating whether or not items of a scale consistently measure the same construct. Cronbach's alpha across age, subscales and forms ranged from 0.64 to 0.91 and for women ranged from 0.49 to 0.90 (Macey, 2003). The coefficients were highly satisfactory across the various normative groups.

Validity: The CAARS has good factorial validity, meaning that the scale structure of the instrument is appropriate and make sense. The CAARS also demonstrates sufficient construct validity and warrants publication and recommendation for clinical and research use. Four CAARS subscales were created using factor analysis (Inattention/Memory Problems, Hyperactivity/Restlessness, Impulsivity/Emotional Lability, and Problems with Self-Concept) to appear on both the self-rater and observer forms (Conners et al., 1999). The CAARS results to date have demonstrated that the scales identify adult ADHD symptomatology.

Cross-Cultural Fairness: There were differences found for gender, male and female and age, 18 to 50 years and up. Scoring tables were separated by age and gender; race, background and socioeconomic status were not taken into consideration in the normative groups. This is a limitation to the normative group as there were no cultural considerations mentioned in the sample. No information is provided on the ethnic representation of the normative sample, and no studies address issues of ethnic difference or bias, caution should be exercised when using the CAARS with individuals of minority status, research is needed in this area (Macey, 2003).

## **Evaluation**

Practicality: The CAARS is an easy instrument to administer and score, however the interpretation can be difficult if the administrator is not familiar with the scoring procedures or interpreting T-scores. The tool can be easily ordered online through Slosson's website, however the cost of the kit is expensive. The CAARS manual indicates that this measure is appropriately used as a screening tool, the data from the CAARS was considered in the context of other clinical and collateral information when making a diagnosis (Van Voorhees, Hardy & Kollins, 2011).

Aids to User: Attention-Deficit/Hyperactivity Disorder was originally thought to be a condition specific to childhood or early adolescence. Research has demonstrated that ADHD is often chronic and persists into adulthood. The CAARS represents an important advancement in the assessment of ADHD symptoms in adults. This instrument is a helpful tool to use during the diagnostic process. The manual is complete with comprehensive descriptions and explanations of the tool and its overall purpose, and is easy to navigate through. The manual did not report on enough cross-cultural considerations within the normative group and is seen as a limitation. The CAARS is seen to be a reliable tool that focuses on an accurate report of symptoms and behaviors relating to adult ADHD.

## References

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- Macey, K.D. (2003). Review of "Conners" Adult ADHD Rating Scales (CAARS)'. *Archives of Clinical Neuropsychology*, *18*(4) 431-437. Doi:10.1016/S0887-6177(03)00021-0
- Van Voorhees, E.E., Hardy, K.K., Kollins, S.H. (2011). Reliability and Validity of Self- and Other-Ratings of Symptoms of ADHD in Adults. *Journal of Attention Disorders*, *15*(3) 224-234. Doi:10.1177/1087054709356163