

# Standardization and cross-cultural comparisons of the Swedish Conners 3® rating scales

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## Abstract

### PURPOSE:

The Conners Rating Scales are widely used in research and clinical practice for measuring attention deficit/hyperactivity disorder (ADHD) and associated problem behaviors, but country-specific norms are seldom collected. The current study presents the standardization of the Swedish Conners 3® Rating Scales. In addition, we compared the Swedish norms to those collected in the U.S. and Germany.

### MATERIAL AND METHODS:

The study included altogether 3496 ratings of children and adolescents aged 6-18 years from population-based samples.

### RESULTS:

The scores obtained for the Swedish Conners 3® showed satisfactory to excellent internal consistency for most subscales and excellent test-retest reliability. Across-informant correlations were modest. Cross-country comparisons revealed that aggression symptoms rated by teachers and ADHD symptoms rated by parents differed between Sweden, Germany and the U.S. Executive functioning deficits also varied as a function of rater and country, with German and Swedish teachers reporting increasing behavior problems with age, whereas a decrease was observed in the U.S. For some subscales, the observed cross-cultural differences were large enough for a child to be classified as being within the normal range (t-score <60) in one country and within the clinical range (t-score > 70) in another country.

### CONCLUSION:

The present study shows that the Swedish adaptation of the Conners 3® provides consistent and reproducible scores. However, across-informant ratings were only modest and significant cross-cultural differences in scoring were observed. This emphasizes the need for multi-informant assessment as well as for national norms for rating instruments commonly used within child and adolescent psychiatry research and clinical settings.