

# Early Childhood Measurement and Evaluation Tool Review

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## Behavior Assessment System for Children – Second Edition (BASC-2)

### Measurement Areas:

The Behavior Assessment System for Children 2nd Edition (BASC-2) is a **norm-referenced** diagnostic tool designed to assess the behavior and self-perceptions of **children and young adults ages 2 to 25 years**. The BASC-2 is a multidimensional and multi-method tool since it measures numerous behavioral and personality characteristics through several report based measures. On the Parent and Teacher Rating Scales the tool consists of 16 primary measurement areas, however, not all 16 scales are measured on each Rating Scale:

- Activities of Daily Living
- Functional Communication
- Adaptability
- Hyperactivity
- Aggression
- Leadership
- Anxiety
- Learning Problems
- Attention Problems
- Social Skills
- Atypicality
- Somatization
- Conduct Disorder
- Study Skills
- Depression
- Withdrawal

### Purpose:

The BASC-2 is a behavioral assessment tool that can be used:

- for treatment program planning, evaluation, and intervention,
- to assist with differential diagnoses when used in conjunction with the *DSM-IV*,
- to determine educational classification and programming assistance eligibility,
- with other tools featuring overlapping norms for increased accuracy and reliability,
- to assist in determining causes of problem behavior for children with disabilities,
- for forensic evaluation.

### Length and Structure:

The BASC-2 administration time depends upon the kinds of rating scales used, and the number of teachers, parents, or caregivers selected for reporting. According to the manual, the Teacher Rating Scales (TRS) take approximately 10-15 minutes to complete, the Parent Rating Scales (PRS) take approximately 10-20 minutes, and the Self-Report on Personality (SRP) takes approximately 20-30 minutes.

A Structured Developmental History (SDH) interview/report is also available; however, the authors do not state the length of the administration. Finally, the Student Observation System (SOS) is an additional measure that allows the clinician to observe and evaluate the child or adolescent's daily classroom behavior directly, and takes approximately 15 minutes for observation. The new Portable Observation System (POP) can be placed on a PDA or laptop and offers a streamlined way of collecting observational data electronically. The amount of time required for the scoring and interpretation of any of these measures is not discussed in the manual.

The tool consists of 5 different kinds of reports/forms that are completed by an array of parents, teachers, caregivers, the examinee, and the clinician:

- The Teacher Rating Scales (TRS) are separated into 3 forms: preschool (ages 2 to 5), child (ages 6 to 11), and adolescent (ages 12 to 21). The TRS has between 100 and 139 items that are rated on a 4-point scale of behavioral frequency from "Never" to "Almost Always."
- The Parent Rating Scales (PRS) share the same age group forms, and have between 134 to 160 items using the same 4-point rating system.
- The Self-Report of Personality (SRP) uses 3 separate forms: child (ages 8 to 11), adolescent (ages 12 to 21), and college (ages 18 to 25). An oral interview-based form is also available (SRP-I) for children aged 6 to 7 years. Children are orally presented questions and asked to respond with a simple "yes" or "no" response.
- There is also a new Parent Relationship Questionnaire (PRQ) that can be used in conjunction with other parent report measures or alone to gather information about a child or adolescents relationship with their parents.
- Total raw scores for each scale are converted into composite scores, scaled (normative) scores, percentile scores, and plotted as behavioral profiles.

**Materials:**

The publisher classifies the BASC-2 as a “Level C” qualification that is targeted to institutions with personnel possessing masters or doctorates of psychology or education, and/or has licensure in a relevant area of assessment with a provincial or national organization.

The BASC-2 kit is available from the publisher in a variety of packages, ranging from CDN \$139 to \$1780. The BASC-2 Hand Scored Starter Set (CDN \$620) includes the manual, manual supplement for SRP-I, 25 of each hand-scored forms for the TRS, PRS, SRP, SRPI, Parent Feedback Report, SDH and SOS. Scoring software is available for scanners and manual entry for both Windows and Mac platforms. The publisher also carries additional scoring form packs, test items on CD, and training videos in DVD and VHS format. For parents and students that have difficulty with reading, test items are available on audio CD in both English and Spanish (PRS and SRP).

**Accessibility:**

The BASC-2 (manuals and forms) are available in the English and Spanish languages. The manual also notes that individuals with limitations of vision and hearing can be assessed using the tool, however when interpreting test scores these should be considered.

**Administration, Scoring, and Interpretation:**

Administration and scoring for the TRS, PRS, and SRP should be completed by professionals or paraprofessionals that are familiar with testing procedures and with appropriate supervision. As with other ‘Level C’ instruments, score interpretation must be completed by professionals with formal graduate-level training or clinicians with training in psychological assessment. The test is easy to administer, moderately easy to score, and moderately difficult to interpret based on the clinician’s experience and interpretation guidelines in the manual.

**Subscales:**

The BASC-2 consists of 16 primary scales and 7 optional scales, along with 5 composite scales. Since some scales are not applicable to certain age groups (i.e. the Activities of Daily Living scale does not apply to adolescents), the number of subscales used depends upon the age of the child being measured. Furthermore, some subscales are also not applicable to certain forms - for example the Learning Problems scale does not apply to the Parent Rating Scales form. The BASC-2 composite scales consist of: Adaptive Skills, Behavioral Symptoms Index, Externalizing Problems, Internalizing Problems, and School Problems. Depending upon the age groups and rating forms used, the individual will have 4-5 composite scores comprised of 11-16 primary scales. Depending upon the individual’s behavioural circumstances, 1-7 optional content scales can be examined at the discretion of the clinician.

**Documentation:**

The manual included in the BASC-2 kit contains specific procedures for administration, scoring, and extensive sections on interpretation. The manual also has lengthy sections discussing the normative sample, standardization, validity and reliability.

Since the BASC-2 is the newest version of the Behavior Assessment System for Children, very few academic reviews or studies of the test are available.

### **Normative Sample:**

The BASC-2 was normed using two populations: (1) a general population sample of American children and adolescents from various settings: public/private schools, mental health clinics/hospitals and preschools/daycares, and (2) a clinical norm sample of American children and adolescents (ages 4-18) who were diagnosed with emotional, behavioural, or physical problems.

The general population sample had a total of 4,650 Teacher Rating Scales reports, 4,800 Parent Rating Scales reports, and 3,400 Self-Report on Personality reports. In terms of age groups, there were 2,250 TRS and PRS for pre-school ages 2-5, 3,600 TRS, PRS and SRP for children ages 6-11, and 5,500 TRS, PRS and SRP for adolescents (ages 12-18). It should be noted that limited sample sizes are available for ages 2 and 18, although the authors claim that this has had a negligible effect on the norms. In terms of gender and ethnic representation, the general sample is extremely close to U.S. population estimates. Data were also collected for the SRP-COL (College-level SRP) for ages 18-25 using an American sample of 706 students.

The clinical sample had a total of 5,281 reports across the TRS, PRS and SRP scales. The sample was comprised of 317 pre-school aged (2-5) children, 673 children ages 6-11, and 789 adolescents ages 12-18. The children used in this sample had a variety of diagnoses, including specific learning disabilities, speech/language impairments, emotional/behavioural disturbances, hearing impairment and ADD/ADHD. Additional demographic information for both samples is detailed in the manual.

### **Reliability:**

The BASC-2 manual discusses three kinds of reliability measures that were established based on the two aforementioned samples.

**Internal Consistency:** An analysis of internal consistency yielded coefficient alpha reliabilities generally in the .90s for the composite scales, and reliabilities generally in the .80s for individual scales across all forms (TRS, PRS, SRP) in both the general sample and the clinical sample.

**Test-retest Reliability:** Samples of individuals distributed across the three age groups, that were part of both the general and clinical samples, were retested with the BASC-2 one to eight weeks after the first administration. The test-retest reliabilities were calculated for TRS, PRS and SRP, and yielded average correlations in .80s for composite scores and between the .70s and .80s for individual scales across all age groups.

**Interrater Reliability:** Interrater reliability analysis was performed for the Teacher and Parent reports for a significant amount of the scores. Two samples (for TRS and PRS) were tested and rated by 2 teachers and 2 parents respectively. Median reliabilities for composite scores ranged from .57 to .74, and median reliabilities ranged from .53 to .65 across individual scales for the TRS sample. The PRS sample had median reliabilities for both composite scores and individual scales in the .70s.

### Validity:

The BASC-2 includes an extensive section on test validity. According to the authors, the BASC-2 was developed using content that came from teachers, parents, children and psychologists. The tool was also developed using diagnostic criteria from the *DSM-IV* and *DSM-IV-TR*, as well as other behavioural instruments.

**Construct, Convergent, and Discriminative Validity:** The manual discusses several validation measures that were designed to assess the BASC-2's similarity to other kinds of behavioural scales. For the Teacher Rating Scales form, the tool was compared to several related behavioural assessment tools, such as: the Achenbach System of Empirically Based Assessment Caregiver-Teacher Report Form (ASEBA), Conners' Teacher Rating Scale- Revised (CTSR-R), and the previous version of the Behavior Assessment System for Children (BASC). In general, correlations between subscales were high (in the .70s and .80s) when they addressed similar content; as expected the BASC-2 was highly correlated (in the .90s) with the previous BASC.

Similarly, the PRS scale was compared with other behavioural measures such as the ASEBA Child Behavior Checklist for Ages 1-5, the Conners' Parent Rating Scale-Revised, the Behavior Rating Inventory of Executive Functioning (BRIEF), and the BASC. Generally, the BASC-2 correlated in the .70s and .80s with the first three scales, and in the .90s with the previous BASC.

Finally, adolescent and college scores on the SRP scale were correlated with related selfreport measures in the ASEBA Youth Self-Report, the Conners-Wells' Adolescent Self-Report Scale (CASS), Children's Depression Inventory (CDI), Revised Children's Manifest Anxiety Scale (RCMAS), Brief Symptom Inventory (BSI), Beck Depression Inventory-II (BDI-II), Minnesota Multiphasic Personality Inventory-2 (MMPI-2) and the BASC. Correlations between the tools varied widely depending upon the specific subscales that were compared, however in general the correlations fell in the .50s and .60s. The manual also includes profiles for clinical samples for the TRS, PRS and SRP scales; however this information is beyond the scope of this review.

### Publication Information:

The Behavior Assessment System for Children – Second Edition (BASC-2) was developed by Cecil R. Reynolds and Randy W. Kamphaus. This review is based on the 2nd edition published in 2004 by AGS Publishing.

### Materials Used for Tool Review:

- Manual
- Publisher's website

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