

Tech Report 1

Using the Bayley Scales of Infant and Toddler Development, Third Edition, to Assess Individuals with Severe Delays

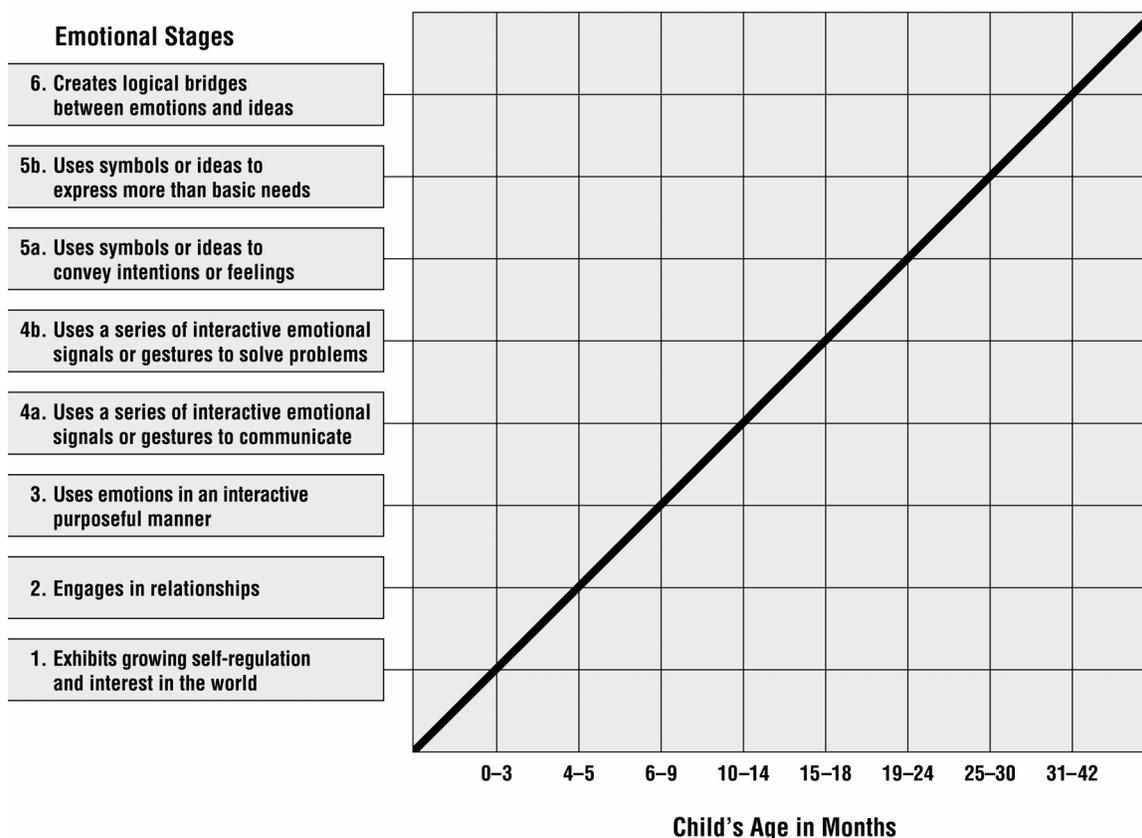
The *Bayley Scales of Infant and Toddler Development, Third Edition* (Bayley–III; Bayley, 2006) is designed to measure the developmental status of young children, ages 1 to 42 months. The Bayley–III now includes *growth scores* that can be calculated to monitor the individual’s progress over time. The Bayley–III also can be used to obtain an estimate of developmental level when more age-appropriate measures cannot be used for older children or individuals with severe delays, such as those with profound mental retardation. Both the *Bayley Scales of Infant Development* (BSID; Bayley, 1969) and the *Bayley Scales of Infant Development—Second Edition* (BSID–II; Bayley, 1993) have been used in the assessment of severely delayed individuals who are outside the age range for which the test was standardized (DeWitt, Schreck, & Mulick, 1998). The Bayley–III maintains the same types of tasks as those in previous editions, promoting task involvement through play-based activities for individuals with limited ability. The number of items that can be scored through examiner observation also make this instrument ideal for use with children who may not respond as well to elicited tasks. The Bayley–III should not be administered to individuals who are unable to respond to item stimuli.

Administration Guidelines

Standard administration and scoring procedures must be followed, including adherence to reversal and discontinue rules, when using the Bayley–III with individuals who are older than 42 months. If information indicates that an individual’s developmental age is different than his or her chronological age, begin administration one start point before his or her chronological age. For individuals whose developmental age is unknown, begin administration at start point Q (ages 39 months 0 days to 42 months 15 days) or the start point closest to the individual’s chronological age and reverse administration as necessary. The clinician must note any accommodations or modifications made and consider them when interpreting the individual’s performance.

The Social-Emotional Scale is an observational rating scale. Responses from the clinician and parents provide a general indication of an individual’s level of social-emotional development and information about whether or not sensory processing difficulties are present. The Social-Emotional Growth Chart on the following page shows the age (in months at the bottom of the chart) at which each emotional stage (beginning at the bottom of the left side of the chart) is likely to be mastered.

Social-Emotional Growth Chart



Social-Emotional Growth Chart

When evaluating an individual with mental retardation, it may be necessary to assess his or her adaptive skills. In this case, the *Adaptive Behavior Assessment System®—Second Edition* (ABAS–II; Harrison & Oakland, 2003) may be administered instead of the Bayley–III Adaptive Behavior Scale. The ABAS–II has five rating forms to be completed by parents/primary caregivers, teachers/daycare providers, and the adult individual who is being assessed. Respondents provide information about an individual’s adaptive skills across a variety of settings. The ABAS–II is appropriate for use with individuals ages birth to 89 years old.

Calculating Scores

The clinician must follow the standardized administration and scoring procedures to calculate Bayley–III developmental age equivalents and growth scores. An individual’s growth score (Table B.6, Bayley–III Administration Manual) and developmental age equivalent (Table B.7, Bayley–III Administration Manual) are derived from subtest total raw scores.

After administering the Bayley–III, score and use only the series of items within the basal and ceiling to calculate the total raw score for each subtest. If more than one basal was used, use the basal at the highest start point. If more than one ceiling was reached, use the one at the lowest item level.

Using Developmental Age Equivalents and Growth Scores

When using developmental age equivalent scores, some limitations must be considered when interpreting these scores. For example, an age equivalent of 18 months does not indicate the individual is functioning like an infant; it simply represents the average age in months at which a given raw score is typical. See the Bayley–III Administration Manual (page 7) and the Bayley–III Technical Manual (Appendix B) for detailed descriptions of factors to consider in the use of age equivalents.

When using growth scores to monitor progress through periodic Bayley–III testing, the clinician must develop his or her own Growth Chart to plot scores. The curves in the Bayley–III Growth Charts indicate percentile ranks appropriate only for children ages 1–42 months.

Cautions to Observe When Interpreting Scores

The clinician must exercise caution when using the Bayley–III to measure the developmental level of individuals who are older than 42 months.

- ▶ The Bayley–III is *not* designed as a tool for determining intellectual ability. Developmental age equivalents cannot be used to calculate an IQ or developmental quotient.
- ▶ The Bayley–III items, though representative of abilities typically exhibited in the course of early development, cannot provide a comprehensive sample of an individual’s skills. Parents and caregivers should be present during testing to provide anecdotal information to assist in interpretation and report (c.f., Demeter, 2000).
- ▶ The Bayley–III is still new to the market; its utility as an instrument used in the assessment of individuals who are severely and profoundly delayed has not been fully examined.

The Bayley–III Technical Manual, Appendix B, contains a list of Developmental Risk Indicators that may be helpful in developing hypotheses and focusing intervention planning.

References

- Bayley, N. (1969). *Manual for the Bayley scales of infant development*. San Antonio, TX: The Psychological Corporation.
- Bayley, N. (1993). *Bayley scales of infant development—Second edition*. San Antonio, TX: The Psychological Corporation.
- Bayley, N. (2006). *Bayley scales of infant and toddler development, third edition*. San Antonio, TX: Pearson Education, Inc.
- Demeter, K. (2000). Assessing the developmental level in Rett syndrome: an alternative approach? *European Child & Adolescent Psychiatry, 9*, 227–233.
- DeWitt, M. B., Schreck, K. A., & Mulick, J. A. (1998). Use of Bayley scales in individuals with profound mental retardation: Comparison of the first and second editions. *Journal of Developmental and Physical Disabilities, 10*(3), 307–313.
- Harrison, P. L., & Oakland, T. (2003). *Adaptive behavior assessment system—Second edition*. San Antonio, TX: The Psychological Corporation.