

## DEVELOPMENT OF THE OUNCE SCALE

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The Ounce Scale, an observational assessment for infants, toddlers, and families, was developed at the University of Michigan between 1995 and 2003 with support from the Ounce of Prevention Fund, the Head Start Bureau, the Irving B. Harris Foundation, EightCAP Community Action Program (Greenville, MI), and the A. L. Mailman Family Foundation, in addition to funds from the Minnesota Department of Children, Families, and Learning (Early Childhood and Family Initiatives), FiveCAP, Inc. (Scottsville, MI), and the Jackson (MI) Community Action Agency. The team that developed the Scale represented a wide range of experience and knowledge about the infant/family field and assessment. Three strategies were used in creating the Scale:

1. Review of existing instruments and the research literature
2. Convening of an Expert Panel
3. Extensive Field and Pilot testing

Literature Review. More than 100 books, articles, and other documents were reviewed by the Ounce Scale authors to determine professional consensus on young children's development. In addition, 15 infant/toddler assessments were consulted to explore how development in the first three years of life was measured by others. Based on this close examination of the literature, prototypes of the Scale were developed over a period of two – three years and standards for the Scale were created. These prototypes were reviewed informally by program directors, researchers, and others in the infant/family field. Based on these reviews and those of an expert panel (see below), several major revisions took place. Throughout the development process, the Ounce authors made reference to the literature and to already existing assessments. A complete list of citations is included in the *Standards for the Developmental Profiles*.

Expert Panel. Two two-day meetings were held with an expert panel over a three year period in order to review early versions of the Scale, recommend potential revisions, and come to consensus on content. The panel consisted of the following individuals:

- Gina Barclay-McLaughlin, PhD, Associate Professor, School of Education, University of Tennessee
- Susan McDonough, PhD, MSW, Associate Professor of Social Work and Associate Research Scientist, University of Michigan
- Martin Maldonado-Duran, MD, Child and Adolescent Psychiatrist, Topeka, KS
- Jeree Pawl, PhD, Clinical Professor, Department of Psychiatry, University of California at San Francisco
- Amy Wetherby, PhD, CCC-SLP, Professor, Department of Communication Disorders, Florida State University
- Gordon Williamson, PhD, OTR, Director of Research and Training Projects in Pediatric Rehabilitation, JFK Medical Center, Edison, NJ
- Kathryn Barnard, PhD, Professor of Nursing, University of Washington

Based on the feedback from the panel members, revisions in content and form of the Scale were completed and the *Standards for the Developmental Profiles* were completed.

Pilot and Field Tests. Pilot and field testing of the Scale took place over a two year period in more than a dozen early childhood sites (primarily Early Head Start, though also including early intervention programs for disabled children, child care centers, and other community programs for at-risk and for typically developing children and families). These sites were located in Massachusetts, New York, Michigan, Illinois, Minnesota, and California.

The purpose of the pilot and field testing was to obtain feedback from program staff and families in order to create a set of clear, useful, and practical materials. The education and training of staff engaged in the pilots ranged from high school graduates with CDA certification to those with advanced graduate degrees in a variety of disciplines. The piloting and field testing was arranged so that two short pilots took place during one year with opportunity for the developers to collect feedback between the pilots and then incorporate revisions into the Scale before the next pilot took place. After the first two (two – four month) pilots a full year field test was arranged which allowed for more extensive monitoring and feedback to the developers. Programs that had been part of the initial pilot tests participated in the field test, as did programs that had not had previous experience with the Scale. Final revisions were made after the field test.

Future Plans for Validation. We will soon begin collecting research data on approximately 200 children, their families, and their caregivers. A cross-sectional design will be utilized. Children will be assessed with the Bayley Scales and other measures of language and socio-emotional development; parents will be asked to complete questionnaires concerning their knowledge of child development and their sense of empowerment and self-efficacy; caregivers will complete similar questionnaires. In addition, a sample of parents and caregivers will participate in audiotaped personal interviews with research staff. These data will be collected over a three-year period.

Analyses will focus on evaluating the accuracy of the Scale in classifying infants and toddlers as “at-risk”; the proportion of true and false predictions as compared to the criterion measures; the relationship of the Scale to the outcome measures as shown by age-corrected correlations, ROC curves, and logistic regression; and comparisons of parent and provider judgments about children. Evaluation of the impact of the Scale on parents’ and providers’ sense of empowerment and their knowledge of child development will be also be studied.

The proposed validation will have potentially significant benefits for the children and families participating in it, other infant-toddler programs, and researchers, professionals, parents, and caregivers in birth to three programs nationwide. It will provide an empirical basis to enable early intervention programs to adopt a research-based, standards-driven, continuous progress assessment that is responsive to families, supportive of staff, and facilitative of child development.