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ABSTRACT

This report, one of several prepared for a comprehensive policy study of early childhood education in Illinois, provides a technical review of the following twelve instruments for screening, assessing, and diagnosing young children's readiness for school: Brigance Diagnostic Inventory of Early Development; Brigance K & 1 Screen for Kindergarten and First Grade; Denver Developmental Screening Test; Developmental Indicators for the Assessment of Learning; Gesell Institute School Readiness Materials; Joseph Preschool and Primary Self-Concept Screening Test; McCarthy Scales of Children's Abilities; McCarthy Screening Test; Metropolitan Readiness Test; Miller Assessment for Preschoolers; Peabody Picture Vocabulary Test--Revised; and Portage Guide to Early Education, Revised Edition. For each of the instruments, information is presented about the age range of the children, the purpose of the instrument, content information, procedures for giving the test, standardization of the instrument, and measures of reliability and validity. Strengths and limitations for each instrument and sources of further information are provided. (DST)

SELECTED PRESCHOOL SCREENING AND DIAGNOSTIC INSTRUMENTS
-- A TECHNICAL REVIEW --

ILLINOIS STATE BOARD OF EDUCATION

Walter W. Naumer, Jr., Chairman
State Board of Education

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Springfield, Illinois
January, 1985

FOREWORD

The purpose of this report is to provide a technical review of twelve screening and diagnostic instruments which are used in screening, assessing, or diagnosing young children's readiness for school. For each of the instruments, information is presented concerning the purpose of the instrument, age-range of children, the procedures for standardization of the instruments, and measures of reliability and validity. Further, the strengths and limitations for each instrument are provided. Last, information sources are identified. This report was prepared for the State Board of Education policy study on early childhood education by Maurine Brennan. The interpretations and conclusions expressed herein do not necessarily reflect the position or policy of the State Board of Education.

Ted Sanders
State Superintendent of Education

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Brigance Diagnostic Inventory of Early Development

Author: Albert H. Brigance

Publisher: Curriculum Associates, Inc.
6 Henshaw Street
Woburn, MA 01801

Date: 1978

Cost: About $50.00

Age Range: 0-7 Years

Purpose: The Inventory is 1) an assessment instrument, 2) an instructional guide, 3) a record-keeping tracking system, 4) a tool for developing and communicating an Individual Education Plan and, finally, 5) a resource for training parents and professionals in child growth and development.

Description: Included in the Inventory are both assessment guides and instructional objectives for:

- Pre-Ambulatory Motor Skills and Behaviors
- Gross Motor Skills and Behaviors
- Fine Motor Skills and Behaviors
- Self-Help Skills
- Pre-Speech Abilities
- Speech and Language Skills
- General Knowledge and Comprehension
- Readiness
- Basic Reading Skills
- Manuscript Writing
- Math Skills

A variety of assessment procedures can be used: parent interview, observation scales and the child's performance on structured tests. The Inventory is informal, criterion-referenced, and individually administered by teacher, specialist, or trained paraprofessional. The examiner selects the skills that are appropriate for each child, depending on age and purpose of testing.

Standardization: Standardization procedures are not available. The Inventory was field-tested in a wide variety of programs in 16 states.

Reliability: Not available (1980)

Validity: Inspection of the content of the inventories indicates comprehensive coverage, careful preparation, and meticulous selection of items (Salvia & Ysseldyke, 1981). Thus, content validity is evidenced.

Discussion

Strengths: The Inventory is a comprehensive instrument assessing a wide range of skills for both the infant and the preschooler. Many skills not usually assessed are included, such as use of wheel toys, brush painting, and knowledge of weather and time concepts. The inclusion of instructional objectives also increases the usefulness of the instrument for teachers who need to plan Individual Educational Plans. The built-in recordkeeping system is helpful.

The nature of the tool allows such variety in assessment procedures that it can be used with older low-functioning children.

Limitations: Although extensive field testing was done, no reliability or validity data are available (1980).

Sources:

Compton, Carolyn. A Guide to 65 Tests for Special Education. Belmont, California: Pittman Learning, 1980.

Salvia, John and Ysseldyke, James E. Assessment in Special and Remedial Education, Second Edition. Boston: Houghton-Mifflin, 1981.

The Brigance K & 1 - Screen for Kindergarten and 1st Grades

Author: Albert H. Brigance

Publisher: Curriculum Associates, Inc.
5 Esquire Road
North Bitlerica, MA 01862

Date: 1983

Cost: Unknown

Age Range: Kindergarten and First Grade

Purpose: The purpose of the Brigance K & 1 Screen is to identify youngsters who may need further evaluation to see if special services are necessary. Subsequent instruction may be designed either to deal with learning difficulties or to provide extra stimulus for capable individuals.

Description: The Brigance K & 1 Screen is a compilation of subtests for measuring the individual performance of kindergarten & first grade children. All but the picture vocabulary assessment were excerpted or adopted from the more comprehensive Brigance Diagnostic Inventory of Early Development (0-7 years) (1979), and the Brigance Diagnostic Inventory of Basic Skills (K-6th grade) (1976).

There are 18 subtests of which five are solely for kindergarteners and six, solely for 1st graders. Seven subtests are for both age levels. These include personal data response (child provides orally his or her first name, last name, age, address, birthdate), color recognition (ten colors), picture vocabulary (child names objects in ten drawings), visual motor skills (child copies five shapes), rote counting (child counts to ten), numeral comprehension (child associates quantities with numerals), and personal data printing (child's name).

In addition to the basic assessments, five advanced tasks are provided for individuals who score above 95% on the basic battery.

The Brigance screen also provides checklists for the examiner, teacher and parents. The examiner's observation checklist is for noting behaviors that reflect possible difficulties in the child's visual, auditory, speech, affective, motor and physical performances or conditions.

Reliability and Validity: No information on statistical reliability or validity is provided. To judge from the similarity between the Brigance Screen assessment and other measures (i.e., -

Metropolitan Readiness Tests) and from the opinion of many professionals in the field of testing, this screening battery has appropriate content validity, however.

Conclusion: The Brigance Screen has the potential for being a good screening instrument because of its straight-forward format, its organization, and its content. No special training is required and the Brigance Screen can usually be given in about 10 minutes.

Source: Helfeldt, John P. "The Brigance K & 1 Screen for Kindergarten and First Grade." The Reading Teacher, May 1984.

Denver Developmental Screening Test (DDST)

Authors: William K. Frankenburg
Joseph B. Dodds

Publisher: LADOCA Project & Publishing Foundation
East 51st Avenue and Lincoln Street
Denver, CO 80216

Date: 1967, 1970

Cost: Approximately $10 for Test Kit, Reference Manual and 25 test forms.

Age Range: 1 month to 6 years

Purpose: To detect significant motor, social and/or language delays through a series of developmental tasks.

Description: The Denver consists of 105 items that are grouped in 4 sections:

Personal-Social (ability to get along with others and look after oneself)

Fine-Motor-Adaptive (ability to use hand to pick up objects and draw)

Language (hearing, following directions, speaking)

Gross Motor (sitting, walking, jumping)

On the one-page score sheet, an age range for expected performance is shown for each item. Initially, only tasks specific to child's chronological age (about 20 items) are administered. These are scored on the form as pass, fail, or questionable and taken together give a profile of the child's performance. Details are given of the exact age at which 25%, 50%, 75%, and 90% of the standardization sample could "pass" each of the 105 items. Final results are categorized as "normal," "abnormal," or "questionable."

During the administration, the mother is present, when possible, and some items can be based on her report, but direct observation by the examiner should be used whenever possible.

Standardization: The Denver was standardized on 1036 children, 543 males and 493 females, between the ages of two weeks and 6.4 years. The sample was controlled for ethnic and occupational status according to the 1960 census from the City of Denver. No premature, handicapped, or adopted children were used in the sample.

Reliability: The reliability studies have produced test - retest correlations ranging from a low of .66 to a high of .93 depending on the child's age. Some items are more stable than others; most of these items (63%) are the ones requiring the mother to report.

Validity: In a preliminary study, the Denver correlated highly (.97) with the Yale Developmental Examination. Validity studies showed that paraprofessionals using the Denver correctly identified abnormal children 92% of the time.

Discussion

Strengths: The Denver is a widely used screening measure designed to be used by trained paraprofessionals. The test manual is well written and the test materials are easy to administer and inexpensive.

Limitations: The norm group contains a significantly higher proportion of white children and children whose fathers are in the professional, managerial, or sales occupations than the census distribution would warrant.

Its use under the age of 30 months should be discouraged since it is of questionable reliability in the first two years of life and misses a higher proportion of children identified by technically more superior tests (Bayley and Cartell).

In a validity study when the Denver was correlated with the Revised Yale Developmental Schedule, there was a considerable over-selection of normal children in the third year of life: 42 percent of normal children on the Revised Yale were called abnormal on the Denver.

The Denver appears to be a fairly satisfactory screening tool at 4 - 4 1/2 years of age, but even here its concurrent validity is lower than that of other screening tests, such as the Peabody Picture Vocabulary Test.

Sources:

Barnes, Keith E. Preschool Screening: The Measurement and Prediction of Children at Risk. Springfield, IL: Charles C. Thomas 1982.

Johnson, H. Wayne. Preschool Test Description, Springfield, IL: Charles C. Thomas, 1979.

Moriarty, Alice E. in Buros, O.K. (Ed.) The Seventh Mental Measurement Yearbook. Lincoln, NB: University of Nebraska, Buros Institute of Mental Measurements, 1972, 405.

Southworth, Lois E.; Burr, Rosemary L.; and Cox, Andren Ewell. Screening and Evaluating the Young Child, Springfield, IL: Charles C. Thomas, 1980.

Developmental Indicators for the Assessment of Learning (DIAL)

Authors: Carol Mardell and Dorothea Goldenberg

Publisher: DIAL, Inc.
Box 911
Highland Park, IL 60035

Date: 1973

Cost: $125 for Dial Assessment Kit and $13 for a set of parent cards.

Age Range: 2.6 to 5.6 years

Purpose: To identify children in need of follow-up service because of learning problems.

Description: DIAL is a multidimensional screening test that requires an approach whereby four stations are set up to screen for the following areas of functioning: Gross Motor, Fine Motor, Concept, Communications.

Four examiners, who function as a team, can be teachers, parent volunteers, or paraprofessionals who are trained to administer the DIAL. The coordinator or team leader should be a professional in special education, early childhood, psychology, speech and language, or related fields. Its administration requires 20 to 30 minutes per child. Six to eight children can be tested in an hour.

The examiner at each station also notes his/her subjective impressions of 12 behaviors. Cards, which may be given to parents, contain suggested enrichment or remedial experience that parents may provide at home.

Standardization & Norms: In 1983, norms were reconstituted by randomly sampling 100 subjects from each month of age from 36 to 66 months (1550 males and 1550 females) from the 1972 subject pool. While controlling for age and sex, the revised norms may still over-represent rural subjects, black subjects, and subjects from low SES. That is, their representation in the sample is disproportionate to the numbers of these groups in the general population. Also, a greater geographic representation (outside of Illinois) would have allowed more confidence in the norms.

Reliability: Inter-rater reliability (.81 to .99) was determined by having 16 examiners score videotapes of eight children. For 520 children tested in 1972 and retested in 1983, correlations were from .43 to .67. Given the fact that many of the test items are measuring developmental function susceptible to changes with chronological age, this finding is quite respectable (Barnes, 1982).

Validity: The correlation coefficient between the DIAL and the Peabody Picture Vocabulary Test was .60; between the DIAL and the Stanford-Binet it was .74.

In a 1976 study, 249 children were tested with the DIAL and the Metropolitan Readiness Tests, the Iowa Test of Basic Skills, the Metropolitan Achievement Test, the Stanford Achievement Test and a teacher rating scale of social-affective behaviors. The multiple correlations between DIAL scores and these measures ranged from .47 to .60, all statistically significant.

Concurrent validity (.92) was found in a study of 12 children assessed on DIAL and reassessed by a diagnostic team of psychologists, social workers, nurses, and elementary education counselors.

Discussion: "DIAL is intended for screening groups of children in preschool programs to identify those with serious delays in need of further assessment. The cutoff points are set to identify the lowest 10%. Middle-class or other groups with extensive nursery school experience rarely fall below cutoff, but they may well have significant learning disabilities that will show up in an academically oriented kindergarten. The DIAL should be considered a gross screening instrument - not one that will identify the child with marginal disabilities." (Compton, 1980)

Sources:

Barnes, Keith E. Preschool Screening: The Measurement and Prediction of Children At-Risk. Springfield, IL: Charles C. Thomas, 1982.

Compton, Carolyn. A Guide to 65 Tests for Special Education. Belmont, CA: Pittman Learning, 1980.

Illinois State Board of Education. Handbook for Preschool Screening in Illinois, March 1981.

McCarthy, James J. in Buros, O. K. (Ed.) The Eighth Mental Measurement Yearbook. Lincoln, NB: University of Nebraska, Buros Institute of Mental Measurement, 1978, 428.

Salvia, John and Ysseldyke, James E. Assessment in Special and Remedial Education, Second Edition. Boston: Houghton-Mifflin, 1981.

Southworth, Lois E.; Burr, Rosemary L.; and Cox, Andrea Ewell. Screening and Evaluating the Young Child. Springfield, Illinois: Charles C. Thomas, 1980.

Werner, Emmy E. in Buros, O. K. (Ed.) The Seventh Mental Measurement Yearbook. Lincoln, NB: University of Nebraska, Buros Institute of Mental Measurements, 1972, 405.

Gessell Institute School Readiness Materials

Authors: Frances L. Ilg and Louise Bates Ames

Publisher: Programs for Education, Inc.
Western Psychological Services
12031 Wilshire Blvd.
Los Angeles, CA 90025 (distributer for manual and kit)

Copyright Dates: 1965, 1980

Cost: School Readiness Screening Test--$87.00 for developmental kit, school readiness textbook, recording sheets for 50 children. School Readiness Test Complete Battery--$91.00 for developmental kit, school readiness textbook, recording sheets for 50 children.

Age Range: School Readiness Screening Test 4 1/2 - 5
School Readiness Test Complete Battery 4 1/2 - 9

Purpose: Screening determination of school readiness on the basis of developmental age, rather than chronological age or IQ.

Description: Screening Test includes cube test, interview questions, writing name, writing numbers, copying forms, incomplete man test, naming animals, home, and school preferences.

Complete Battery includes the same tests as the Screening Test plus right and left subtests (naming body parts, single commands, double commands, verbal and motor response to right and left pictures), matching forms, memory for designs, visual projective test.

The tests are administered individually by a person trained by the Gessell Institute. The Screening Test takes about 20 minutes; the Complete Battery about 40 minutes. The results of the tests are expressed in developmental ages.

Standardization: 50 boys and 50 girls from North Haven Connecticut at each of seven age levels including 5.5 controlling for SES.

Reliability: Not formally developed. However, in an initial study of 100 kindergarten children, the investigators' global judgments as to readiness were in close agreement with global teacher judgments, and also were highly related to academic section assignment 6 years later. (Buros)

Validity: Not formally developed. In a study done in 1980-81, Wood, Powell and Knight examined the predictive validity of the Gessell School Readiness Screening Test. Test results obtained by certified examiners of 84 kindergarten-age children were compared with subsequent

school success or "special needs" designations. The study suggested that the Gessell developmental screening procedure which results in a developmental age is effective for predicting success or failure in kindergarten. "Furthermore, it demonstrates that the chronological age of children entering kindergarten within the range of 4 to 6 years is unrelated to eventual success or failure. Correct developmental placement would result in between one-third to one-half of all chronologically eligible kindergarten students being recommended as developmentally unready for kindergarten. The exact critical age for recommending placement in kindergarten should be calculated locally because average developmental ages of children as well as the developmental level of kindergarten curricula vary across school districts." (Woods et al., 1984).

Sources:

Buros, O.K. (Ed.) The Seventh Mental Measurement Yearbook. Lincoln, NB: University of Nebraska Buros Institute of Mental Measure, 1972, 750.

Johnson, H. Wayne. Preschool Test Descriptions. Springfield, IL: Charles C. Thomas, 1979.

Wood, Chip; Powell, Sarah; and Knight, Chris. "Predicting School Readiness: The Validity of Developmental Age," Journal of Learning Disabilities 17(1) (January, 1984): 8-11.

Joseph Pre-School and Primary Self-Concept Screening Test

Author: Jack Joseph

Publisher: Stoelting
1350 South Kostner Avenue
Chicago, Illinois 60623

Date: 1979

Cost: $56.00 for manual, 56 stimulus cards, 100 identity reference drawings, 100 record forms.

Age Range: 3.6 to 9.11 years

Purpose: The Joseph Pre-School and Primary Self-Concept Test was developed to objectively screen and identify children at the preschool and primary levels, who, due to negative self-appraisals may experience learning problems or develop other adjustment difficulties.

Description: The test is individually administered. The child draws his own face on a figure of the same sex with a totally blank head area. He is then required to respond to a series of 15 questions, 13 of which are illustrated by dichotomous sets of pictures, and indicates the one with which he identifies more closely. The 15 questions are objectively scored, and the face drawing is qualitatively evaluated.

A global self-concept score is computed by summing the subject's score across the 15 items. These scores are interpreted in light of five levels of self-concept classification: high positive, moderate positive, watch list, poor, and high-risk negative.

Scores for children whose responses place them in the poor or high-risk negative categories may be analyzed further using the Diagnostic Dimensional Evaluation. This procedure associates each item with five constructs determined by the test author to be related to self-concept: Significance, and its derivative, Virtue; Competence, and its derivative, Power; and General Evaluative Contentment.

A final rating can be provided by an independent observer's evaluating the subject's self-concept on a 10-point scale. (Telzrow).

Standardization: The standardization sample of 1245 children in urban, rural and suburban regions of Illinois was 91% white, and 9% black and other minorities. Each of the three normative age groups (3.6 to 4.6, 4.7 to 5.11, and 6.0 to 9.11) included approximately 8% handicapped children.

Reliability: A test-retest reliability coefficient of .87 was seen on the Joseph for a limited sample of 18 preschoolers (median age of 4.0) with a four-week interval between administrations.

Internal consistency reliability coefficients ranged from .59 to .81 with a media correlation of .73.

Validity: Construct validity for the Joseph was established by correlating Global Self-Concept Scores with scores derived from two self-concept rating scales that were completed by teachers.

Scores from the Inferred Self-Concept Judgment Scale were correlated to Joseph Global scores for a group of 25 preschoolers. The correlation was .51 at .01 level of significance.

Scores from the Behavior Rating Form for four different groups of children were correlated with Joseph scores. All of the correlations were significant.

Joseph scores in the poor or high-risk negative categories correctly identified poor academic achievement four years later for 83% of preschool children and 70% of kindergarteners, which was significant at the .0001 level (Joseph, in preparation) thus showing predictive validity.

Discussion

Strengths: The test materials are generally well-designed and easy to administer. The manual is very thorough and reports favorable reliability and validity results. It seems to be a useful screening tool for social-emotional disabilities in young children.

Limitations: The test user should be aware of the potentially threatening nature of some of the items (e.g., those that ask whether a parent likes the subject or a sibling better) especially for parents. It is recommended that the nature of the items and the purpose for such a test be explained thoroughly to parents prior to the test administration.

Sources:

Joseph, J. A Predictive Validity Study of the Joseph Pre-School and Primary Self-Concept Screening Test, in preparation.

Southworth, Lois E., Burr, Rosemary L.; and Cox, Andrea Ewell. Screening and Evaluating the Young Child. Springfield, Illinois: Charles C. Thomas, 1980.

Telzrow, Cathy Fultz. "Joseph Pre-School and Primary Self-Concept Screening Test" (review) submitted to the Buros Institute for inclusion in the next publication of Tests in Print.

McCarthy Scales of Children's Abilities (MSCA)

Author: Dorothea McCarthy

Publisher: The Psychological Corporation
757 Third Avenue
New York, New York 10017

Date: 1972

Cost: $70.00 for complete set, which includes equipment, manual, 25 record forms, 25 drawing booklets and carrying case.

Age Range: 2.5 to 8.5 years

Purpose: It is designed to provide both a diagnostic profile of abilities and a summary score comparable to the standard deviation IQ.

Description: The Scales are administered individually by a psychologist, learning disabilities specialist or other professionals well trained in individual testing. The McCarthy is made up of 6 scales as follows:

I. Verbal
- Pictorial Memory
- Word Knowledge
- Verbal Memory
- Verbal Fluency
- Opposite Analogies

II. Perceptual-Performance Scale
- Block Building
- Puzzle Solving
- Tapping Sequence
- Right-Left Orientation (age 5 and above)
- Draw-A-Design
- Draw-A-Child
- Conceptual Grouping

III. Quantitative Scale
- Number Questions
- Numerical Memory
- Counting and Sorting

IV. General Cognitive Scale: Composed of all of the tests in the verbal, perceptual-performance and quantitative scales.

V. Memorial Scale
- Pictorial Memory
- Tapping Sequence
- Verbal Memory
- Numerical Memory

VI. Motor Scale
- Leg Coordination
- Arm Coordination

The time for administering is from 45-60 minutes.

Standardization: The standardization sample included 1032 children with at least 100 in each half-year age grouping from 2 1/2 to 8 1/2 years. The nationwide sample reflected the U.S. population at the 1970 census for race, geographic region, and father's occupation. The sample included equal numbers of each sex and excluded children with marked handicaps and bilingual children with limited comprehension of English.

Reliability: Split-half reliability for the General Cognitive Index averaged .93 within age levels; average coefficients for the other five scales ranged from .79 to .88. Retest reliabilities over a one-month interval for 125 children classified into 3 age groups averaged .90 for General Cognitive Index (GCI) and ranged from .69 to .89 for the separate scales.

The Motor Scale is least reliable at the older age of the test.

Validity: Thirty-six six-year-olds were tested during a span of a few weeks on the MSCA and also on the Stanford-Binet Intelligence Scale, Form L-M and the Wechsler Preschool and Primary Scale of Intelligence. The correlation between the GCI of the MSCA and the Stanford-Binet IQ was .81; between GCI and the WPPSI Full-Scale IQ, it was .71.

Thirty-one children were tested four months later on the Metropolitan Achievement Tests and the GCI correlated significantly with most achievement scores. Kaufman and Kaufman report studies of good construct validity of the MSCA for both white and black racial groups. Kaufman also reports that the black preschool children did not differ significantly from the white children on the mean GCI, but for school age children the black children obtained a lower mean GCI.

Discussion: Hunt notes that the advantage of the MSCA over other tests is in the diagnostic potential of the separate scales. The intent of the author was that this test would provide information across a number of behaviors that are of diagnostic importance in early childhood and that it would have enough developmental range to be used meaningfully with young retarded children and others with uneven developmental patterns.

Compton notes that a number of the subtests are particularly appropriate for children with suspected learning disabilities. He also notes that the MSCA can be administered only by a professional and requires a good amount of time to administer, score and interpret. The Scales are lacking in items that assess social practical judgments as well as abstract problem-solving skills.

Sources:

Anastasi, Anne. Psychological Testing, 5th Edition, New York: MacMillan, 1982.

Bate, Margaret; Smith, Marjorie; and James, Jeannette. Review of Tests and Assessments in Early Education (3-5 years). Great Britian: The NFER-Nelson Publishing Company Ltd., 1981.

Compton, Carolyn. A Guide to 65 Tests for Special Education, 2nd Edition. Boston: Houghton-Mifflin, 1981.

Hunt, Jane V. in Buros, O. K. (Ed.) The Eighth Mental Measurement Yearbook. Lincoln, NB: University of Nebraska, Buros Institute of Mental Measurement, 1978, 219.

Johnson, H. Wayne. Preschool Test Descriptions. Springfield, IL: Charles C. Thomas, 1979.

McCarthy Screening Test (MST)

Author: Adapted from the McCarthy Scales of Children's Abilities by Dorothea McCarthy

Publisher: The Psychological Corporation
757 Third Avenue
New York, NY 10017

Date: 1978

Cost: About $50.00 for test kit including Manual, 25 Record Forms, and 25 drawing booklets.

Age Range: 4.0 to 6.5 years

Purpose: To identify children who are likely to need special educational assistance.

Description: The McCarthy Screening Test can be administered by teachers and paraprofessionals who have been thoroughly instructed in its use by experienced administrators of the McCarthy Scale of Children's Abilities and who have had supervised practice. It can be administered in approximately 20 minutes.

The test consists of six tests of the McCarthy Scales of Children's Abilities.

Right-Left Orientation (only ages 5 and up)
Verbal Memory
Draw-A-Design
Numerical Memory
Conceptional Grouping
Leg Coordination

The 65-page manual gives instructions for determining the risk classification based on transferring raw scores to percentiles for chronological age and recommends that "at risk" children undergo further assessment.

Standardization: McCarthy Screening Test norms are based on the subset of 516 children from the McCarthy Scales national standardization sample. Approximately 100 children were included at each half-year age range from 4-6 1/2 with the exception of age 6, for which norms were interpolated.

Reliability: All research data presented in the McCarthy Screening Test manual are derived from studies with the McCarthy Scales, for which scores were recomputed to simulate McCarthy Screening Test results. Reliability correlation coefficients, reported for individual subtests only, ranged from .32 to .69, with a median of .57. (Lichtenstein and Ireton, 1984)

Validity: The manual describes a validity study in which 46 "learning disabled" and 14 "emotionally disturbed/behaviorally disordered" children ages 3.11 to 6.8 were administered the McCarthy Scales. The only outcome reported is a comparison between the percentage of this identified group that was referred by the McCarthy Screening Test and by the McCarthy Scales. The McCarthy Screening Test referred 67% of this group compared to 88% identified by the McCarthy Scales.

A predictive validity study correlated scores on the McCarthy Screening Test (administered in the fall of the kindergarten year) and Level II of the Metropolitan Readiness Tests (administered in the spring of the kindergarten year) for 52 children. Correlations between the McCarthy subtests and the Metropolitan Pre-Reading Skills Composite, which includes auditory, visual, and language skills, ranged from .10 for leg coordination to .54 for numerical memory, with a median of .35. (Lichtenstein and Ireton, 1984).

Discussion: The McCarthy Screening Test correlated significantly and positively with the Peabody Individual Achievement Test. (Naglieri and Harrison, 1982).

The McCarthy Screening Test displays a moderately high, positive association with receptive vocabulary, a skill area considered important in the successful completion of academic tasks (Vance, Kitson, and Singer, 1983).

"The manual is well organized. Instructions to the examiner are very clear in the administration directions, instructions to be spoken verbatim by the examiner are highlighted in red. Scoring criteria are explicit for all subtests, and ample scoring samples accompany the Draw-A-Design subtest.

Limitations: "The lack of psychometric data on the McCarthy Screen, as distinct from the McCarthy Scales, is a serious problem. The McCarthy Screen was apparently never administered as a set prior to publication. The collection of subtests may not yield the same results by itself as when embedded within the complete McCarthy Scales...

"There is insufficient evidence to allay the suspicion that the McCarthy Screen, as a commercial spin-off of a well-known test, was not adequately developed in its own right." (Lichtenstein and Ireton, 1984)

Sources: Lichtenstein, Robert and Ireton, Harry. Preschool Screening Identifying Young Children with Developmental and Educational Problems. Orlando: Greene and Stratton, 1984.

Naglieri, Jack A.; and Harrison, Patti L. "McCarthy Scales, McCarthy Screening Test, and Kaufman's McCarthy Short Form Correlations with the Peabody Individual Achievement Test." Psychology in the Schools 19, 2 (April, 1982).

Vance, Booney; Kitson, Donald L.; and Singer, Marc. "Comparison of the Peabody Picture Vocabulary Test-Revised and the McCarthy Screening Test." Psychology in the Schools 20, 1 (January, 1983).

Metropolitan Readiness Test: 1976 Edition (MRT)

Author: Joanne R. Nurss and Mary McGauvran

Publisher: The Psychological Corporation
757 Third Avenue
New York, NY 10017

Date: 1976

Cost: For each level: $12.35 for package of 35 hand-scorable test booklets, 35 practice booklets, manual for Parts I and II, key for hand scoring, class record, and copying sheets.

Age Range: 1st half kindergarten, 2nd half kindergarten, 1st grade entrants.

Purpose: The Metropolitan Readiness Test is designed to measure readiness for first grade and to provide teachers with information helpful in classifying pupils.

Description: The test is administered by a teacher to a group of children, kindergarten to first grade. The answers are written. There are two levels. Level I is for use with children in the first half of kindergarten and measures auditory memory, rhyming, visual skills, language skills, and copying. The 25-page test booklet requires a total of 105 minutes to complete in 7 sessions. Level II is administered during the second half of kindergarten or to first-grade entrants and measures auditory skills, visual skills, language skills, quantitative skills, and copying. The 23-page test booklet requires a total of 110 minutes to complete in 5 testing sessions.

Standardization: The Metropolitan Readiness Test norms were derived from a representative national sample of about 100,000 kindergarten and first-grade children. Norms are given for the beginning of first grade, but not for kindergarten. Since some schools now have some reading instruction in kindergarten, perhaps norms, recommended groups and validity data for this school level would be desirable. (Singer, in Buros, 1978).

Reliability: Reliability data were computed using both split half and alternate form techniques. Reliabilities for the total test are generally above .90 for pupils tested at the end of kindergarten or early in grade one.

Validity: The manual thoroughly discusses the validity of the test in terms of its content validity, construct validity, and predictive validity. Predictive validity is reported for a number of different samples including correlations in the .70s with the Stanford Achievement subtests. In addition, test users are supplied with additional data from recent validation studies of the instrument.

Discussion

Strengths: A major strength of the Metropolitan Readiness Test is the extensive discussion devoted to interpreting test results. Emphasis is placed on pupil performance on the total battery, and the test authors very clearly caution against undue weight being attributed to subtest scores because of the relatively low reliabilities associated with these shorter tests.

Interpretation of total test performance is enhanced by the assignment of letter ratings to raw scores. Five letter ratings are set up in terms of standard deviation distances and are accompanied by specific suggestions concerning the instructional significance of the various levels of performance. (Dykstra, 1972)

Limitations: Bilingual children are likely to be handicapped on the Metropolitan Readiness Test, even when given in the other language, because bilingual children tend to be deficient in both languages. The evidence also indicates that the predictive validity coefficients for blacks versus whites are similar, but low-socioeconomic status is associated with less reliable scores on the Metropolitan. However, readiness level on the Metropolitan may be improved as a result of reading instruction given in kindergarten. (Singer, 1972)

Sources;

Anastasi, Anne. Psychological Testing, Fifth Edition. New York: MacMillan, 1982.

Dykstra, Robert. in Buros, O.K. (Ed.). The Seventh Mental Measurement Yearbook. Lincoln, NB: University of Nebraska, Buros Institute of Mental Measurements, 1972, 757.

Johnson, H. Wayne. Preschool Test Description. Springfield, Illinois: Charles C. Thomas, 1980.

Singer, Harry. in Buros, O.K. (Ed.). The Seventh Mental Measurement Yearbook. Lincoln: University of Nebraska, Buros Institute of Mental Measurements, 1972, 757.

Southworth, Lois E.; Burr, Rosemary L.; Cox, Andrea Ewell. Screening and Evaluating the Young Child. Springfield, Illinois: Charles C. Thomas, 1980.

Miller Assessment for Preschoolers (MAP)

Author: Lucy Jane Miller

Publisher: KID Technology, Inc.
11715 East 51st Ave.
Denver, Colorado 80239

Date: 1982

Cost: $225.00 for MAP Test Kit which includes manual and scoring materials for 30 children.

Age Range: 2 years, 9 months to 5 years, 8 months

Purpose: The Miller Assessment for Preschoolers is designed to identify children who exhibit mild to moderate developmental delays.

Description: The Miller Assessment for Preschoolers takes 20 to 30 minutes to administer. An examiner familiar with standardized testing procedures and with previous experience with preschoolers will probably be able to administer the test based on instructions in the manual. The test has been specifically designed so that paraprofessionals with less specialized education can be trained to administer it and determine appropriate referrals.

The test consists of 27 items divided into the following subtests:

Foundations: basic motor and sensory abilities which are thought to provide the fundamental building blocks for more complex activities.

Coordination: complex gross, fine, and oral motor abilities which combine sensory and motor components.

Verbal: cognitive language abilities including memory, sequencing, comprehension, association, following directions.

Non-verbal: cognitive abilities not requiring spoken language such as memory, sequencing, visualization, and mental manipulations.

Complex tasks: tasks requiring an interaction of sensory, motor, and cognitive abilities, and requiring the interpretation of visual-spatial information.

The record booklet also has a place for a developmental history, supplemental observations sheet, and performance indices. A separate item score sheet with space on the back for behavior during testing is also included.

Standardization: The Miller Assessment for Preschoolers was standardized on a randomly selected, stratified sample of 1,200 preschoolers in all nine Census Bureau regions. The sample was stratified based on age, sex, race, size of residence community, and socioeconomic factors.

Reliability: Inter-rater reliability on a sample of 40 was .978. Test-retest reliability with a sample of 90 was .81. Internal reliability with the complete sample of 1,200 was .79.

Validity: Content validity - Every item on the MAP discriminates between age groups either in the basis of raw score or because different specific items were included at each age level. All items were found to be contributing significantly to the final MAP score at .01 level.

In regard to construct validity, the Miller identified 75% of a population (N=90) with preacademic problems (perceptual, behavioral, or language problem), but no identifiable diagnosis.

Predictive Validity: In the Manual (1982), Miller states: "Until predictive validity studies are complete, it is not possible to know whether the MAP correctly identifies children who are likely to have future school-related problems. Thus, no statements can be made implying a relationship between a child's low score on the MAP and his/her future school-related abilities."

In personal correspondence (1984), Miller indicates that the predictive validity study is progressing and results are expected by the end of May 1985. The preliminary predictive validity data from the Green River, Wyoming school district indicate that the total MAP score and all subtest scores were predictive at the .01 level. This school district conducted a study with their kindergarteners using the MAP and a teacher checklist one year later.

Discussion
Strengths: Item development and selection has spanned 10 years, involving research with over 4,000 children and 800 items.

With children who demonstrated more severe developmental deviations, the Miller may be used to provide a developmental overview. In addition a child's progress over time can be determined which is helpful in evaluating treatment efficacy.

Limitations: The Miller cannot be used to identify children functioning at the upper end of the spectrum. It has been developed only to identify those functioning at the low end of the scale.

Sources:

Miller, Lucy Jane. Overview of the Miller Assessment for Preschoolers. Denver: The Foundation for Knowledge in Development, 1984.

Miller, Lucy Jane. Miller Assessment for Preschoolers Manual. Littleton, Colorado: The Foundation for Knowledge in Development, 1982.

Peabody Picture Vocabulary Test - Revised

Author: Lloyd M. Dunn and Leota M. Dunn

Publisher: American Guidance Service, Inc.
Publishers' Building
Circle Pines, MN 55014

Revision Date: 1981

Cost: PPVT-R Test Set (Forms L and M), Regular Edition, $52.00; includes 175 test plates, 25 Individual Test Records for both forms, and manual.

Age Range: 2.5 to 18 years

Purpose: To estimate verbal intelligence through measuring hearing vocabulary.

Description: Peabody Picture Vocabulary Test-Revised consists of a series of 175 plates, each containing four pictures. As each plate is presented, the examiner provides a stimulus word orally; the examinee responds by pointing to or in some other way designating the picture on the plate that best illustrates the meaning of the stimulus word. The words become increasingly difficult, but instructions are given for establishing the basal and ceiling levels so the test is administered over only the examinee's range of competence. Raw scores can be converted to standard scores, percentile ranks, and stanines. Age-equivalent scores are also provided. The test is administered by a teacher or diagnostician and takes from 10 to 20 minutes. It is administered individually to children nine and under.

Standardization: The Peabody Picture Vocabulary Test-Revised was standardized on a national sample of 4200 children and adolescents between 2 1/2 to 18 years of age. Included in the sample were 100 males and 100 females at each age level representative of the population of the United States with regard to geographical region, parental occupation, community size, and ethnic group.

Reliability: Reliability coefficients within single age groups were found by several procedures. Internal consistency coefficients fell mostly in the .70s and .80s, with medians in the low .80s. Alternate form reliabilities with immediate retest yielded similar values, with a median of .82. With retest intervals ranging from 9 to 31 days, alternate form reliabilities had a median value of .78.

Validity: There is a .70 correlation between the scores on the two editions of the Peabody. Therefore, validity data

gathered with the first edition can contribute substantially toward an interim evaluation of the revised edition.

In a 1981 study, Naglieri found that the revised Peabody correlated significantly with the verbal scales of the McCarthy Screening Test. This suggests that while the revised Peabody measured verbal scores and yielded scores similar to the McCarthy General Cognitive Index, nonverbal intelligence was not assessed. "Therefore, the Peabody Picture Vocabulary Test-Revised appears to be most appropriate as a brief measure of verbal comprehension, rather than as a substitute for the McCarthy Scales, which should be used in conjunction with more complete measures of intelligence." (Naglieri, 1981)

Discussion

Strengths: The test has high interest value for children, and therefore, is a good rapport establisher. The test is also untimed and thus a power, rather than a speed, test. No oral responses are required and alternate forms of the test are provided.

Limitations: The test measures hearing vocabulary only, and when it is used with that awareness, the Peabody Picture Vocabulary Test-Revised can serve as a useful screening device.

Sources:

Anastasi, Anne. Psychological Testing, Fifth Edition. New York: MacMillan, 1982.

Barnes, Keith E. Preschool Screening. Springfield, Illinois: Charles C. Thomas, 1982.

Johnson, H. Wayne. Preschool Test Descriptions. Springfield, Illinois: Charles C. Thomas, 1979.

Naglieri, Jack A. "Concurrent Validity of the Revised PPVT". Psychology in the Schools XVIII, 3 (July, 1981): 286-289.

Salvia, John and Ysseldyke, James E. Assessment in Special and Remedial Education, Second Edition. Boston: Houghton-Mifflin, 1981.

The Portage Guide to Early Education, Revised Edition

Authors: Susan Bluma, Marsha Shearer, Alma Frohman, Jean Hilliard

Publisher: Cooperative Educational Service Agency No. 12
Portage Project
412 East Slifer Street
Portage, Wisconsin 53901

Date: 1976

Cost: Approximately $50.00 for manual, one set of curriculum cards and 15 checklists.

Age Range: 0-6 mental age

Purpose: To evaluate a child's developmental level, either handicapped or normal, in order to plan an educational program.

Description: The Portage Guide is individually administered by teacher or parent in a time ranging from 20 to 40 minutes. There are six subtests in the checklist: cognitive, self-help, motor, language, socialization, infant stimulation. The behavioral checklist consists of a 25-page booklet which contains 580 developmentally sequenced behaviors. The examiner begins with items at the age level one year below the child's chronological age. The child should be able to perform at least the first 10-15 items. If the child cannot, the examiner goes back further. The authors say it is important to do this to make sure that you have not missed a skill the child cannot perform as the list of skills is developmentally sequenced. The examiner continues until the child misses 10 to 15 in a row. The instructor chooses from among these missed behaviors the skills to be taught.

For each of the 580 items, there are curriculum cards that provide teaching suggestions. These cards are contained in a card file and are color-coded to match corresponding sections in the checklist. When the cards and other teaching guides are used as a home-based program, the teacher can help the mother educate her own child.

Standardization: Children used in standardization population included a variety of handicapping conditions, e.g., mental retardation, physical handicaps, speech and language deficits, behavioral problems, visual impairments, learning impairments, and cultural deprivations.

Reliability: None reported.

Validity: None reported.

Discussion: The Guide was developed because the Portage staff was looking for a curriculum suitable for use with children from birth to five years of age. The Guide is not intended to yield any type of developmental age. The Portage staff wanted the curriculum to accomplish the following:

1. to enhance a developmental approach to teaching;
2. to focus the concern of staff on several areas of development including cognitive, language, motor, social, and self-help skills;
3. to provide a method of recording existing skills and recording skills learned;
4. to provide suggestions on how new skills can be taught.

Sources:

Johnson, H. Wayne. Preschool Test Descriptions. Springfield, Illinois: Charles C. Thomas, 1979.

Southworth, Lois E.; Burr, Rosemary L.; and Cox, Andrea Ewell. Screening and Evaluating the Young Child. Springfield, Illinois: Charles C. Thomas, 1980.

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