Developmental Profile 3

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Theory Underlying the Measure

○ The Developmental Profile 3 is based on the Binet-Simon Scale which measured a child's "mental age".

○ The Binet-Simon Scale would determine a child's mental age by having the child complete tasks and score their mental age by completion of tasks.

○ This scale was originally created with the intent of classifying children as a means for them to receive special education; however, over time developed into a measurement of intelligence for all children.

○ Example: a 6 year-old child who passed all the tasks usually passed by 6 year-olds—but nothing beyond—would have a mental age that exactly matched his chronological age, 6.0.

Theory Underlying the Measurement

○ The Developmental Profile 3 is based on Edgar Doll's Vineland Social Maturity Scales which he developed after studying birth injuries, EEG technologies and adaptive behaviors.

○ The Vineland Social Maturity Scales (VSMS), published by Edgar Doll in 1935, measures social maturity or social competence in individuals from birth to adulthood.

○ Doll classified eight categories of items on the VSMS (Doll, 1935): self-help general, self-help dressing, self-help eating, communication, self-direction, socialization, locomotion, and occupation.

Development of Test

○ The Developmental Profile was created in 1971 and consisted of 318 items grouped into skill areas and approximate ages levels based on the analysis of the literature on child development and the preliminary work with the inventory.

○ Item selection and placement in the age categories were accomplished using empirical procedures.

○ Items were retained if they were passed by 75% of the students in the appropriate age group. (75% being a clear majority)

○ Items did not discriminate against sex, ethnicity, or socioeconomic status.

Development of Test

○ Items were evaluated to confirm that they were placed at the appropriate age levels, possessed a high degree of age discrimination and were accurately responded to by parents.

○ Items were deleted if there was a discrepant passing rate between males and females.

○ Items were deleted if there was a lack of agreement between mothers' reports and observed behavior.

○ The final count of items after deletion discrepant items went from 318 to 217.

Development of Test

- The Developmental Profile II was published in 1980.

- Original inventory was refined .

- Items that assessed functioning levels above 9 years, 6 months were deleted.

- Items that appeared sexist (e.g., an item asking about gender-stereotypical play) were deleted.

- Modifications consisted of wording changes to remove ambiguity and unnecessary use of gender-specific pronouns. ("he" was deleted from all items)

- The length of the inventory went from 217 items to 186 items.

Development of Test

○ In 1986 the DP-II was updated again with the addition of a computer scoring program.

○ Although the DP-II was widely used and appreciated for many reasons, it lacked standard scores and needed updated items and a current representative standardization sample.

Development of Test

○ The Developmental Profile 3 maintains the positive aspects of the previous versions.

○ Many items on the current DP 3 have the same content as in the earlier versions, but many items required updated wording, some items needed to be deleted and new items needed to be added to reflect the current culture and state of technology.

○ A survey was completed by 147 experienced DP-II test users.

○ School Psychologists comprised half of this survey group.

Development of Test

○ Revisions included: interpretation guidelines were expanded and clarified, norm-based standard scores were provided, test times were clarified to give more accurate guidelines as to what exactly a child needs to do to pass and item, and the age ceiling of the test was increased to 12 years, 11 months.

○ Each scale measured is comprised of 36-40 items.

○ Suggested starting points are given and a basal and ceiling procedure are utilized to shorten administration time.

Standardization Study

- Standardization sample was obtained by recruiting interviewers from across the United States who had access to typically developing children through schools, neighborhoods, and community centers.

- 59 interviewers from 21 states across the country were used.

- The four major U.S. Census Bureau regions were represented.

- Participation of numerous sites helped to ensure that the sample was diversely representative and not influenced by special conditions at one or a few locations.

Standardization of Study

○ The final standardization sample consisted of 2,216 children.

○ Majority of interviews were conducted with mothers (85%), while the remaining were conducted with fathers (12%) and other relatives (3%).

Reliability

○ Internal consistency reliability was calculated using the standardization and clinical samples combined.

○ Utilizing this combined sample increased the variance of the test and better represents the population for which the test will be used.

○ Internal consistency was computed using split-half analysis, which is the most appropriate for a test with a developmental gradient.

○ All correlations are above .80, indicating that they range from good to excellent.

Reliability

- Two-third of the correlations are .90 or above.

- These internal consistency estimates support the strong reliability of the DP-3.

- Sixty-six individuals were administered the DP-3 interview a second time with an average interval of two weeks.

- Test-Retest correlations range from .81- .92 for the five scales and the General Development score, representing good reliability over time across different ages and demographic groups.

Validity

- Content Validity was used from the onset.

- The selection and development of the items were conducted to ensure that items were age appropriate and representative of their respective skill area.

- Teachers serving handicapped children were surveyed to check the instrument's clarity and usefulness for designing and evaluating instructional interventions, which provided a check on the content validity of the inventory.

Validity

○ Construct validity was measured by examining the structural characteristics of the scales through use of interscale correlations, factor analysis, and item response theory analysis.

○ The scales all exhibit correlations in the moderate range, which is not unanticipated.

○ There is a higher correlation with the General Development score than with any of the other scales, and the correlations between the five scales are lower than the reliability estimates for each scale. This provides support for the separate scoring and interpretation of the five scales.

Test Structure

○ The Developmental Profile 3 is grouped into five scales that correspond to the developmental ages of children from birth to 12 years, 11 months.

○ The five scales include: Physical, Adaptive Behavior, Social-Emotional, Cognitive and Communication.

○ A General Development Score is also measured.

○ Each scale consists of 36-40 items, with suggested start points based on age.

○ Each scale has basal and ceiling procedures.

○ Basal is reached when 5 consecutive items are marked "yes".

Test Structure

○ Ceiling is reached when 5 consecutive items are marked, "no".

○ The General Development Score is obtained by adding the sum of standard scores for the five scales together.

○ Descriptive categories are: Well Above Average >130

Above Average 116 – 130

Average 85 – 115

Below Average 70 – 84

Delayed   < 70

Diagnostic Use

○ Can be used in multiple settings which include: schools, clinics, hospitals, or any other setting where an evaluation of a child's developmental status, strengths, and weaknesses could be useful.

○ Can be used as a screening device or a multidimensional tool used to provide information leading toward the diagnosis of developmental delays or other difficulties.

○ DP 3 is a screening tool that determines whether a child needs a more comprehensive diagnostic evaluation.

Diagnostic Use

○ If a child falls below the critical cut-off point for communication, they might be referred for further speech, hearing, visual or language evaluations.

○ If a child falls below the critical cut-off point for Social-Emotional or Adaptive Behavior, they might be referred for further psychological or psychiatric evaluation.

○ If a child falls below the critical cut-off point for Physical scale, they might be referred for further orthopedic, metabolic, or nutritional evaluation.

○ If a child falls below the critical cut-off point for Cognitive scale, they might be referred for comprehensive learning disability testing, or intellectual or achievement evaluations.

Review of the Literature

○ The DP-3 is an excellent way to identify developmental strengths and weaknesses early in a child's life. Its norm-based standard scores allow you to compare children's functioning with that of their peers, design interventions that meet their particular needs, and monitor their progress over time. (Alprin)

○ The DP-3 is a good way to progress monitor a child's progress.

Impressions of the Measure

○ DP 3 was very easy to administer.

○ Parent checklist was well organized and questions were objective.

○ Some skills I had to ask my child to demonstrate because I wasn't sure if he could perform the tasks.

○ Outcomes of scores weren't surprising in most areas; especially in Physical and Adaptive Behavior scales.

Referrences

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