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Introduction

The Developmental Profile 4 (DP-4) is designed to assess the development and functioning of individuals from birth through age 21 years, 11 months. The DP-4 is administered as a direct interview of a parent or caregiver, as a checklist completed by a parent/caregiver or teacher, or as a rating form completed by the clinician. This allows for evaluation of a child's¹ development across both home and school settings, and from the perspectives of different respondents. Each of the four DP-4 forms measures the same five areas of development: Physical, Adaptive Behavior, Social–Emotional, Cognitive, and Communication.

The DP-4 is a revision of the Developmental Profile 3 (DP-3; Alpern, 2007), a well-established measure of development that, along with its previous versions, has long been considered by users as quick, easy, informative, reliable, and valid. This revision maintains the strongest aspects of the previous versions while incorporating new features and improvements, such as the addition of two new forms (Teacher Checklist and Clinician Rating forms) and one new score type (growth score).

The DP-4 can be used effectively in a variety of settings to provide a detailed account of a child's developmental strengths and weaknesses while simultaneously identifying developmental delay. Research suggests that early identification of and intervention for developmental disabilities are essential (Adams & Tapia, 2013), highlighting the need for an efficient and accurate assessment of development such as the DP-4. In defining a child with a disability, current federal special education legislation (Individuals with Disabilities Education Improvement Act [IDEIA], 2004) delineates the five areas of development that are required for determining developmental delay. The DP-4 meets the criteria outlined by current government regulations as a diagnostic instrument for identifying concerns in a child's development.

¹ Although the DP-4 can assess development and functioning of individuals aged up to 21 years, 11 months, the term *child* is used throughout this manual to reflect the developmental content of the DP-4 and the age range in which it is most commonly used.

DP-4 Materials

The DP-4 can be administered using print materials or via the WPS Online Evaluation System (OES) at platform.wpspublish.com. The print components of the DP-4 include this manual and four forms. Administration of these forms is discussed further in Chapter 2. The OES provides online access to electronic versions of the same components as the print version, and also includes convenient online scoring and several automatically generated reports.

Parent/Caregiver Interview This is the recommended administration of the DP-4. The interview takes approximately 20 to 40 minutes and can be conducted with a parent or caregiver who is familiar with the developmental functioning of the child. The age range for this form is birth to 21 years, 11 months. A Spanish version of this form is also available.

Parent/Caregiver Checklist When an interview is not possible, the DP-4 offers this checklist version, which consists of the same item content as the Parent/Caregiver Interview form and can be given to a parent or caregiver to complete. The age range for this form is birth to 21 years, 11 months. A Spanish version of this form is also available.

Teacher Checklist This new form is used to gather information about the child in their educational setting. The item content of the Teacher Checklist is almost identical to that of the Parent/Caregiver Interview and Parent/Caregiver Checklist; however, some items have been altered for more relevance to the school setting, and 10 others have been removed. The age range for this form is 2 years, 0 months to 21 years, 11 months. A Spanish version of this form is also available.

Clinician Rating This new form is identical in content to the Parent/Caregiver Interview and differs only in its method of administration and in the scores it yields (it does not yield standard scores; see Chapter 2 for more details). It is provided as a means for the clinician to answer the same items, based on their own knowledge and experience with the child. The age range for this form is birth to 21 years, 11 months.

This manual also contains an appendix titled Intervention Activities, which offers suggested activities for each skill measured by the DP-4. These activities can be used to develop a treatment plan for the child and can be implemented by parents, caregivers, clinicians, and teachers.

DP-4 Content and Scores

Each of the DP-4 forms assesses the respondent's perceptions of a child's developmental skills that typically emerge throughout infancy and childhood. The full range of development can be measured in children up through the elementary school years; however, norm-referenced scores are available through age 21 years, 11 months to allow assessment of delayed development at any point in this age range.

The DP-4 measures a child's development by providing scores for scales in the following five key areas of development: Physical, Adaptive Behavior, Social–Emotional, Cognitive, and Communication. (Note: The Teacher Checklist has fewer items than indicated in parentheses.)

Physical (37 items) This scale measures the respondent's perceptions of the child's ability to perform tasks requiring large- and small-muscle

coordination, strength, stamina, flexibility, and sequential motor skills. The items are categorized into those that assess gross-motor skills and those that assess fine-motor skills.

Adaptive Behavior (41 items) This scale measures the respondent's perceptions of the child's competence in activities of daily living. It evaluates the child's ability to perform tasks such as eating, dressing, self-care, functioning independently, and utilizing modern technology.

Social–Emotional (36 items) This scale measures the respondent's perceptions of the child's interpersonal relationship skills, social and emotional understanding, and functional performance in social situations. Specifically, this scale assesses the manner in which the child relates to friends, relatives, and unrelated adults.

Cognitive (42 items) This scale measures the respondent's perceptions of the child's development of skills necessary for successful academic and intellectual functioning. At younger ages, this scale assesses skills that are prerequisite to scholastic functioning in academic areas such as reading, writing, arithmetic, computer use, and logic. At the preschool and older ages, the skills measured are more directly tied to actual school curriculum.

Communication (34 items) This scale measures the respondent's perceptions of the child's expressive and receptive communication skills, as indicated through both verbal and nonverbal language. The use and understanding of spoken, written, and gestural language are assessed by this scale, as is the ability to effectively use communication devices (e.g., phone, computer). The items are categorized

into those that measure receptive communication and those that measure expressive communication.

In addition to the five scale scores, the DP-4 also offers a General Development Score (GDS), which is a comprehensive measure of development across the five scales. See Chapter 4 for more on how this score was derived.

Normative reference scores (standard scores) are available for the five scales, and an overall composite (General Development Score) is available for the Parent/Caregiver Interview, Parent/Caregiver Checklist, and Teacher Checklist forms. The development of the Clinician Rating form did not permit the derivation of standard scores. See Chapter 4 for additional information on the derivation of standard scores.

Growth scores, a robust method for progress monitoring, are available for the five scales on all four forms.

DP-4 Improvements

This revision preserves the essential features of the DP-3 while providing updates and additions that enhance the assessment's value and utility. These improvements include:

1. An updated, nationally representative normative sample (including Spanish-language speakers) that closely approximates the gender, ethnic, geographic, and socioeconomic composition of the U.S. population. This sample also includes children diagnosed with clinical conditions that are relevant to the intended use of the DP-4 (e.g., autism, developmental delay). The standardization sample and study are described in Chapter 4.
2. An expanded age range, with norm-referenced scores available for ages birth through 21 years, 11 months, which allows for assessment of development in delayed adolescents and young adults as well as in children.
3. Two new forms: (a) the Teacher Checklist form, to be completed by a teacher or other educational provider, to document their insight about a child's development in an educational setting; and (b) the Clinician Rating form, to provide clinicians with a means of documenting their own evaluation of a child's developmental skills.
4. Updated item content, including removal of outdated items and addition of items related to technology and social media. Furthermore, item placement was improved through statistical item analysis (e.g., some items were moved from the Cognitive Scale to the Communication Scale, and vice versa, to increase the consistency of each of those scales). See Chapter 4 for more details about these updates.
5. Growth scores are now available on all forms and are useful for tracking progress over time without reference to the child's age. Growth scores are based on raw scores and therefore are particularly helpful for children who function at a very low level of ability, and for whom standard scores do not provide enough information (see Chapter 3 for further discussion). Growth scores can also be used to compare scores across scales and respondents.
6. A Rater Comparison Scoring Sheet is available to determine similarities and differences between respondents (e.g., parent and teacher). This form is available for download from the WPS Online Evaluation System (OES) at platform.wpspublish.com.

Uses of the DP-4

The DP-4 is a valuable instrument for any setting in which an efficient measure of any one or all five areas of functional development is needed. It can be used in schools, clinics, hospitals, or any other setting where an evaluation of a child's developmental abilities, strengths, and weaknesses is useful.

The instrument allows the clinician to determine how the child compares with their peers in five essential areas of development. These norm-based comparisons can be used to accomplish a variety of assessment and educational objectives, such as:

- Determining eligibility for special education and/or related services
- Helping to plan an individualized educational program (IEP) or individual family service plan (IFSP) consistent with the child's strengths and deficits

- Identifying skill deficits and providing intervention guidelines
- Measuring progress by comparing growth scores from repeated administrations
- Comparing assessments from multiple respondents

Also, since the DP-4 provides a rapid and accurate measure of development in five essential areas, it can be used as a component in periodic developmental programs conducted by health practitioners.

Finally, the DP-4 can effectively be used in research when it is necessary to distinguish between typically developing and delayed children, or when a measure of program evaluation is required.

Summary of Standardization and Technical Properties

The DP-4 is based on data gathered from a survey of DP-3 users, a pilot study, a comprehensive standardization study, and several reliability and validity studies, all of which are described in detail in Chapters 4 and 5.

The DP-4 Parent/Caregiver Interview form was standardized on a nationally representative sample of 2,259 children and young adults aged from birth to 21 years, 11 months. The sample includes typically developing and selected clinical cases, and was recruited so that its demographic composition would match the U.S. Census in terms of gender, ethnicity, geographic region, and socioeconomic status (SES, as indexed by parents' educational level). The standardization sample was used to derive the age-stratified standard scores that form the basis of interpretation of the DP-4 results. The Parent/Caregiver Checklist and Teacher Checklist forms were each standardized on separate subsamples of the Parent/Caregiver Interview standardization sample. These samples and standardization processes are detailed further in Chapter 4.

In addition to the standardization samples, a clinical validation sample was collected. This sample consisted of 348 children with a clinical diagnosis of autism, intellectual disability, developmental disorder, attention-deficit/hyperactivity disorder (ADHD), hearing impairment, learning disability, mood disorder, speech/language impairment, visual impairment, physical disability, or other disability. All children in the clinical validation sample were receiving special education services at the time of assessment.

The DP-4 provides age-based standard scores in the increments displayed in Table 1.1. The smaller increments in the younger age groups reflect the rapid development of children in those age ranges, while the larger increments in the older age groups reflect the decrease in rate of growth as children get older. Consideration of the age groups in the DP-3, statistical analyses of the standardization datasets, and reference to the literature on child development informed the creation of these age groups for the DP-4.

Table 1.1. Age-Based Standard Score Increments of the DP-4 Scales

Age range	Standard score increments	Number of age groups in range (Total groups = 30)
Birth–1:11	2 months	12
2:0–2:11	3 months	3
3:0–6:11	6 months	8
7:0–10:11	12 months	4
11:0–12:11	24 months	1
13:0–21:11	48 months	2

The DP-4 has strong internal consistency, test–retest reliability, interrater reliability, alternate-form reliability, and cross-form consistency. The DP-4 internal consistency reliability coefficients for the Parent/Caregiver Interview standardization sample were $\geq .70$, and many were greater than $.90$. Test–retest correlations (at two-week intervals) ranged from $.65$ to $.84$, with small effect sizes (none larger

than 0.07). Interrater reliability estimates ranged from $.60$ to $.92$, with small effect sizes (none larger than 0.15). When reliability was estimated for the other forms, strong estimates were also found. Taken together, these estimates support the stability of DP-4 results within scales, within forms, over time, and across raters. See Chapter 5 for further discussion of the reliability of the DP-4.

Many studies conducted during development provide validity evidence for the DP-4. Descriptive analyses confirm that across age groups, the DP-4 raw scores showed an expected developmental increase similar to that observed with the DP-3. Interscale correlations, factor analysis, and Rasch analyses confirm the construct validity of the DP-4. The standard scores correlate in expected ways with other measures of development. Finally, the DP-4 standard scores distinguish children in the clinical validation sample from matched samples of typically developing youth. See Chapter 5 for further discussion of these validity studies.

Principles of Use

The DP-4 can be administered and scored by a professional who is familiar with and competent in psychological or educational testing, or by a paraprofessional. Interpretation and application of the results require a professional or the supervision of a professional with training and experience in child development, psychology, and/or education. Standards of practice for which professionals may engage in assessment vary greatly within different countries, states, and localities. WPS authorizes individuals or institutions to purchase the DP-4 based on the user’s stated education and experience, or the stated education and experience of the purchaser’s direct supervisor. In the case of institutions (e.g., a school district purchasing on behalf of its professional employees), the employment of professionals with relevant education and experience is considered.

In addition to the authorization required to purchase the DP-4, each potential user must also ensure that

they are working within the scope of their practice in a competent, legal, and ethical manner. It is the responsibility of each user to determine their own competence for using the DP-4 by evaluating its principles of use in light of their training and experience, the intended scope of use (e.g., in a research setting, for diagnostic purposes), and the guidelines set forth by relevant professional organizations and licensing boards (including the American Psychological Association Standards for Educational and Psychological Testing, 2014).

As with any instrument, the DP-4 should not be used in isolation to diagnose or plan treatment for a child. Instead, it should be used in concert with other data, such as information derived from concurrent or former assessments, other detailed interviews and history-taking, and observations.