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LEITER INTERNATIONAL PERFORMANCE SCALE-REVISED (LEITER-R), 1997

Authors:

Gale H. Roid and Lucy J. Miller

Publisher:

Stoelting Co.
(630) 860-9700
www.stoeltingco.com

Initial Material Cost:

Complete Leiter-R Kit: \$850
(includes manual, 3 easel books, response cards, manipulatives, record forms, booklets, and carrying case)

Representativeness of Norming Sample:

The Leiter-R was standardized on 1,719 typical children and adolescents and 692 atypical children ages 2 years to 20 years, 11 months using a national stratification plan based on 1993 U.S. Census statistics for age, gender, and socioeconomic status. Nationally representative proportions of children who are Caucasian, Hispanic-American, African-American, Asian-American, and Native American were included.

Languages:

English

Type of Assessment:

Direct child assessment

Age Range and Administration Interval:

2 years to 20 years, 11 months

Personnel, Training, Administration, and Scoring Requirements:

The Leiter-R should be administered by a trained individual who has received supervised training and practice. It should be interpreted by someone with graduate training in psychological assessment. Administration times for the Leiter-R range from 25 to 40 minutes.

Summary

Initial Material Cost: 3 (\$200 or higher)
Reliability: 3 (.65 or higher)
Validity: 3 (concurrent .5 or higher, no information or predictive)
Norming Sample Characteristics: 3 (normed within past 15 years, nationally representative)
Ease of Administration and Scoring: 3 (administered and scored by a trained individual)





Description: The Leiter-R is an individually administered nonverbal test designed to assess cognitive functions in children and adolescents. It was developed to provide a reliable and valid nonverbal measure of intellectual ability, memory, and attention that could be used to assess children, adolescents, and young adults who could not be reliably and validly tested using traditional intelligence tests. The Leiter-R consists of two groupings of subtests: (1) the Visualization and Reasoning (VR) Battery (10 subtests), and (2) the Attention and Memory (AM) Battery (10 sub-tests). It also includes four social-emotional rating scales (Examiner, Parent, Self, and Teacher) that provide behavioral observation information about the examinee. The majority of Leiter-R items require the child to move response cards into slots on the easel tray. Other items require arranging manipulatives (foam rubber shapes) and pointing to responses on the easel pictures. Starting points in the sub-tests are determined by the child's age (there are three age groups for administration of the Leiter-R: 2-5, 6-10, and 11-20).

Uses of Information: The Leiter-R can be used to help identify children with cognitive disabilities, to monitor small increments of improvements in cognitive abilities, and to develop intervention strategies that address the identified disabilities. For initial screening purposes, four sub-tests in the VR Battery can be used to measure the child's global intellectual level as part of a battery of other tests and assessments. The full VR Battery (six subtests for children ages 2 to 5) can be used for identification, classification, and placement decisions. The AM Battery can be used for a comprehensive diagnostic assessment of attention and memory difficulties, neuropsychological evaluations, and evaluation of cognitive process deficits in learning disabilities or attention deficit disorders. Examiners have the option of using the VR and AM Batteries separately; however, the Batteries should be used together for a thorough cognitive assessment, particularly when it is expected that cognitive-process deficits in memory or attention are interfering with the accurate evaluation of global intellectual level.

Reliability: (1) Internal consistency reliability (Cronbach's alpha): for children age 2, alphas ranged from .71 to .94 across the VR Battery sub-tests and, for children ages 2 to 3, the alphas ranged from .77 to .89 for the AM Battery sub-tests. For children ages 2 to 5, the alphas ranged from .71 to .90 for the AM Battery special diagnostic scale, and the reliability coefficients from .94 to .99 for the composite rating scale, and .87 to .93 for IQ and composite scores. (2) Test-retest reliability (with interval not reported): test-retest correlations ranged from .61 to .95 across the VR Battery subtest and composite scores and .86 to .94 across the examiner rating scales and composite for children ages 2 to 5. ¹ (3) Inter-rater reliability: no information reported in the manual.

Validity: (1) Concurrent validity: concurrent validity tests between the Leiter-R (Brief and Full Scale IQ) and the Wechsler Intelligence Scale for Children (WISC-III) (Performance and Full Scale IQ) on children ages 6 to 16 resulted in correlations of .85 and .86. The reported tests between Leiter-R Full Scale IQ scores with other cognitive tests showed correlations that ranged from .38 to .66. Tests for accuracy on children ages 2 to 20 showed that a cut-point of 70 on the Leiter-R Full Scale IQ score correctly classified more than 80 percent of children with cognitive delays. The classification accuracy of the Leiter-R for identifying giftedness was not as good, and the manual recommends that the Leiter-

giftedness was not as good, and the manual recommends that the Leiter-R never be used in isolation to identify giftedness. (2) Predictive validity: no information available.

Method of Scoring: The manual contains detailed scoring instructions. For most subtests, responses are scored as (0) Fail or incorrect, or (1) Pass or correct. Scoring criteria for each item are noted on the instruction page for each subtest. For some subtests, scoring requires counting the number of correct responses and the number of errors. Raw scores are typically obtained by summing correct responses. The raw scores on the subtests and rating scales are converted to scaled scores (with a mean of 10 and a standard deviation of 3) using a table provided in the manual. IQ scores are calculated from sums of subtest scaled scores and converted to IQ standard scores (with a mean of 100 and standard deviation of 15) using a table in the manual. Composite scores can also be obtained for Fluid Reasoning, Fundamental Visualization, Spatial Visualization, Attention, and Memory. In addition, the raw scores for each subtest and IQ can be converted to growth-scale scores that define a child's domain of abilities in a metric that can reflect growth and be useful for treatment planning and measuring change over time.

Interpretability: Only persons with graduate training in psychological testing and statistics should interpret the results of the Leiter-R. The manual also cautions that IQ scores from the Leiter-R should never be used in isolation and should be evaluated in the context of a wide variety of information about the child. The manual includes an extensive discussion of the interpretation of Leiter-R results and provides case studies to demonstrate the interpretation of scores.

Training Support: None described.

Adaptations/Special Instructions for Individuals with Disabilities:

The Leiter-R was specially developed to be used with children who could not be reliably and validly tested using traditional intelligence tests, including children with significant communication disorders, cognitive delays, English as a second language, hearing impairments, motor impairments, traumatic brain injury, attention-deficit disorder, and certain types of learning disabilities. The manual discusses adaptations to administration methods that may be needed for some children to establish that the child understands the nature of the task or to enable the child to communicate answers to test items within the capabilities they have. When such adaptations are made, growth-scale scores that do not rely on normative comparisons should be used.

Report Preparation Support: None described.

References:

Roid, Gale H., and Lucy J. Miller. Leiter International Performance Scale-Revised. Wood Dale, IL: Stoelting Co., 1995, 1997.

¹ No AM Battery retests were performed on children under the age of 6. ([back](#))

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