

Evidence-Based Guidelines for Diagnosis of Learning Disabilities: Response to Proposed DSM-5 Criteria for Learning Disabilities

**School Psychology Division (16) of American Psychological Association
National Association of School Psychologists¹**

Psychology has embraced evidence-based practice (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996) as a basis for serving children and adults (American Psychological Association Presidential Task Force on Evidence-Based Practice, 2006; American Psychological Association Task Force on Evidence-Based Practice for Children and Adolescents, 2008). The purpose of evidence-based practice has been to make available to clinicians the best evidence to guide their assessment practices and treatment recommendations. Recognition of empiricism as the best basis for diagnosis and treatment is consonant with one of the ideals of psychological practice; that is, that psychological services provided to clients should lead to appreciably positive changes in their everyday lives (Hayes, Nelson, & Jarrett, 1987; Messick, 1995).

In the area of learning disabilities (referred to hereafter as LD), IQ-achievement discrepancy criteria have been questioned on the basis of poor discriminant validity (few differences between students identified with LD and low-achieving students, for example); lack of consequential validity (outcomes are not enhanced by diagnosis and services in special education); and social inequity (disproportionality and growing incidence of LD). (See Fletcher, Lyon, Fuchs, & Barnes, 2007 and Spear-Swerling & Sternberg, 1996 for a review of these issues). LD diagnosis and treatment has been one of the most-researched problems in the fields of school psychology and special education. Research-informed diagnostic criteria for LD were adopted into public law in the revision of *Individuals with Disabilities in Education Act* (2004) and have been recognized by all major LD policy groups.²⁻⁸

The DSM definition is critical to practice because many diagnosticians working in non-school settings may not be aware of the substantially changed and rapidly growing evidence base for effective diagnosis and treatment of LD. The DSM-5 revision is an opportunity to succinctly highlight key features of LD diagnosis that do have evidence of discriminant validity, consequential validity, and social equity (Case, Speece, & Molloy, 2003; O'Connor, Fulmer, Harty, & Bell, 2005).

APA D16 School Psychology and National Association of School Psychologists Response to Proposed DSM-5 Criteria for LD

The School Psychology Division (Division 16) of the American Psychological Association and the National Association of School Psychologists (NASP) created a task force of researchers and practitioners to provide feedback to the DSM-5 Workgroup on the proposed LD criteria. Our group includes former and current editors of top scholarly journals in school psychology, and researchers with substantial expertise in psychological assessment, intervention planning, and evidence-based practice. Our group also includes individuals who have held leadership positions in our state-affiliated and national organizations. The executive boards for Division 16 of APA (School Psychology) and NASP have formally endorsed this feedback.

We applaud the DSM Workgroup for updating the diagnostic criteria for LD. An update is timely because the contemporary evidence base regarding how to diagnose and treat LD has substantially changed in the last 10 years. Further, LD is one of the most prevalent psychological diagnoses in childhood and adolescence and is the category under which most special education services are provided in schools. We respectfully offer feedback using LD research as our basis for these recommendations.

We are generally supportive of the revised LD definition in DSM-5. Specifically, we support the change from “Learning Disorders” to “Learning Disabilities.” This change in label will provide better concordance across literatures and with legislation governing the provision of special education services to students with LD (*Individuals with Disabilities Education Improvement Act, 2004*). Use of consistent terminology may prevent confusion for clients, parents, and other consumers. We are also supportive of the general categorical label of LD with subtypes, although we believe that some expansion of the subtypes is supported by current research. To further improve the definition of LD in the DSM-5, we suggest three areas of needed revision: (1) The use of intellectual disability as a rule-out criterion for diagnosis (as opposed to inclusion of average intelligence as a rule-in criterion); (2) The inclusion of more specific markers of LD as rule-in criteria for diagnosis, including lack of response to scientifically- based intervention, direct measurement of the effect of interventions on performance, and/or use of universal screening data to verify that the instructional environment is generally adequate; and (3) Expansion of the definition to include additional subtypes supported by research.

(1) Use Intellectual Disability as a Rule-Out Criterion

Technically adequate measurement of IQ has been well -established and is not an issue. The issue here is the decision heuristic. IQ is a continuous variable to which cut scores are applied to determine whether an individual’s IQ falls within the so-called “average range” or falls in the so-called “non-average range.” Reliable decisions about whether a child falls inside or outside of a specified range can be made. The problem with using IQ as a rule-in criterion is that to ensure diagnostic accuracy, any rule-in criterion must be a specific marker for the condition one wishes to diagnose (VanDerHeyden & Burns, 2010). It is highly likely that most children who would be considered to have average IQ scores would not have LD. Thus, the use of average intelligence causes a diagnostic accuracy threat that would likely lead to errors in clinical decision making.

An average IQ score as a specific marker for the presence of LD is not supported by the research, given the unimpressive performance of these tests in discriminating between low-achieving students and those with enduring and functionally devastating LD in reading and other academic areas. In fact, there are no readily available measures (including intellectual assessment and achievement measures) that have adequate sensitivity and specificity to permit stable and consistent diagnosis of LD (Macmann, Barnett, Lombard, Belton-Kocher, & Sharpe, 1989; Stuebing, Fletcher, LeDoux, Lyon, Shaywitz, & Shaywitz, 2002; Vellutino, Scanlon, Sipay, Small, Pratt, Chen, & Denckla, 1996). In light of this fact, accurate LD diagnosis can only be made through a series of rule-out judgments using measurement procedures of adequate diagnostic accuracy and concluding with an individual comprehensive psychological evaluation

that includes measurement of IQ to rule out intellectual disability where it is suspected. We recommend that *intellectual disability be treated as a rule-out criterion, rather than using average intellectual ability as a rule-in criterion.*

(2) Use Contextualized Assessment to Provide more Specific Markers of LD for Diagnosis

The essence of LD is a learning rate that is significantly below expected levels, causing sustained functional impairment in the client's daily life. The context in which LD has an early, obvious, and significant impairment on functioning is in the instructional environment where the student's learning is discordant with grade-level expectations. Low academic performance, however, can be caused by factors other than LD. Hence, the diagnostic conundrum in diagnosing LD is that the core criterion is not specific to the disorder. Diagnostic accuracy studies suggest the use of a series of sensitive and contextualized assessment procedures to rule out alternative causes of low academic performance using a gated decision-making process (also referred to as successive hurdles).

Contextualized assessment, as we use the term here, refers to a series of assessment activities and measures obtained from multiple sources and settings that provide decision makers with data needed to rule out alternative causes of poor performance. Use of contextualized assessment allows diagnosticians to evaluate whether the child's learning is inadequate because, for example, the child is enrolled in a failing school or in a classroom taught by a teacher who does not have the adequate skills to deliver instruction effectively. Contextualized assessment is necessary to permit accurate diagnosis of LD.

Universal screening measures should be used to rule out students who are not at risk for LD (Glover & Albers, 2007). Universal screening assessments should measure foundation skills upon which future learning depends, and on which poor performance predicts sustained functional impairments (e.g., illiteracy). Research has not supported teacher nomination as a reliable and valid source for the initial decision that a student is at risk for LD (Bahr & Fuchs, 1991; Marston, Mirkin, & Deno, 1984; Shinn, Tindall, & Spira, 1987). Diagnosticians can likely obtain universal screening data from the school and/or can make use of assessments (e.g., norm- and criterion-referenced assessments of foundation skills) to evaluate student risk for LD. Following universal screening, the subset of at-risk students (those who were not ruled out at screening) should be exposed to a series of sensitive assessment procedures to rule out lack of motivation, inadequate instruction, and sensory impairments as causes of poor academic performance.

Research also suggests that serial assessments are needed to permit an evaluation of the effects of evidence-based intervention on child performance. If a child's performance approximates that of classmates or other normative samples of typically developing peers when the child is provided with focused interventions in their regular class, small group, and/or individual setting, then LD as a cause of poor performance may be ruled out. When poor performance persists after initial rule-out decisions have been made, further assessment is needed. At this stage of assessment, an individually administered, culturally appropriate, psychometrically sound, norm-referenced measure of academic achievement should be used. IQ measures also may be used, as part of an individual comprehensive evaluation, to rule out the

presence of intellectual disability. Diagnosticians can evaluate other factors that may be contributing to or causing poor performance during the comprehensive evaluation, such as emotional disability, speech and language impairments, etc.

The criteria described above provide a basis for accurate diagnosis of LD, and it makes no difference whether the diagnostician operates in a clinic, office, or school setting. Diagnosis of LD requires a series of rule-out decisions based on data that must be collected as part of a comprehensive evaluation to permit accurate diagnosis of LD according to research.

LD diagnosis exploded in the 1980s, and many diagnostic researchers allege that this dramatic increase in diagnosis was associated with false positive diagnostic errors arising from a failure to systematically rule out alternative causes of poor learning (Fletcher et al., 2007). The changes recommended above will lead to a more homogeneous group of individuals diagnosed with LD, which should allow service providers to bring greater consistency and power to intervention plans. More homogeneous grouping of individuals with LD will also aid researchers in identifying treatments that return the greatest gains. We recommend that diagnosticians *use contextualized assessment to provide more specific markers of LD for diagnosis and reduce false positive and false negative diagnostic errors.*

(3) Expand the definition to include additional subtypes of LD supported by research. Permit Subtyping and Assignment of Multiple Subtypes for Academic Skills Including Word Reading, Reading Fluency, Reading Comprehension, Written Expression, Mathematics Calculations, and Mathematics Problem Solving.

Most of the research in LD diagnosis has occurred in the area of reading, because reading has been the most common area of struggle for those diagnosed with LD (International Dyslexia Association, 2002). Nonetheless, evidence has accumulated that learning deficits can occur and produce lifelong effects in the areas of mathematics and writing as well (Lyon, 1996). The current definition seems unnecessarily restrictive in specifying that a deficit in basic skills is a necessary criterion for the diagnosis of LD. Whereas it is true that many children who are diagnosed with LD are diagnosed in the primary grades on the basis of poor basic skills, this perspective reflects a habit of practice rather than one informed by research. Expectations for learning in the early grades primarily involve mastering basic skills or skills that will undergird future learning as children develop and continue to higher grades. Accordingly, most children are brought to the attention of diagnosticians after experiencing sustained failure in grades 1-3 (Lyon, 1996). However, research supports an expansion of the criteria to include LD in academic skills that emerge in higher grades, such as written expression, reading comprehension, and mathematics problem solving, in addition to the subtypes mentioned in the proposed wording. (Berninger, Abbott, Vermeulen, & Fulton, 2006; Berninger, Nielsen, Abbott, Wijsman, & Raskind, 2008; Fuchs, Fuchs, Stuebing, Fletcher, Hamlett, & Lambert, 2008). Because individuals may experience multiple subtypes of LD, the criteria should also permit assignment of multiple subtypes. We recommend that the *criteria be expanded to include word reading, reading fluency, reading comprehension, written expression, mathematics calculations, and mathematics problem solving.*

Summary Statement of Recommendations

Thank you for this opportunity to share feedback on the proposed criteria for LD in the DSM-5. In line with our comments above, we suggest the following language for the Workgroup's consideration.

Suggested Criteria for Learning Disability Diagnosis in DSM-5

Learning Disabilities are a group of disorders characterized by sustained difficulties learning academic skills (currently or by history), that are not consistent with the person's chronological age and educational opportunities, and that cannot be explained by an intellectual disability, sensory impairment, emotional disorder, or lack of adequate instruction. Academic skills refer to reading accuracy, reading fluency, reading comprehension, written expression, mathematics calculations, and mathematics problem solving. Multiple sources of information are to be used to assess academic skills, one of which must be an individually administered, culturally appropriate, psychometrically sound, norm-referenced measure of academic achievement. The use of intelligence tests, tests of cognitive ability, and/or neuropsychological tests may also be indicated in order to provide more information regarding an individual's learning disability or disabilities and to inform interventions. The adequacy of instruction and the client's response to evidence-based interventions are to be considered in making the diagnosis. Accurate LD diagnosis can only be made through a series of rule-out judgments using measurement procedures of adequate diagnostic accuracy and concluding with an individual comprehensive psychological evaluation that includes measurement of IQ to rule out intellectual disability where it is suspected.

Footnotes

¹VanDerHeyden, A. (Chair), Burns, M., Cash, G., Dawson, P., Gettinger, M., Jimerson, S., Kratochwill, T., McCabe, P., Oganer Murray, M., & Power, T.

²American Speech Language Hearing Association, <http://www.asha.org/slp/schools/prof-consult/RtoI.htm>

³Council for Exceptional Children, <http://www.cec.sped.org>

⁴International Dyslexia Association, <http://www.interdys.org/index.htm>

⁵Learning Disabilities Association of America, <http://www.lidaamerica.org/about/position/rti.asp>

⁶National Association of School Psychologists, http://www.nasponline.org/about_nasp/positionpapers/StudentsLearningDisabilities.pdf

⁷National Center for Learning Disabilities, <http://www.rtinetwork.org/>

⁸National Joint Committee on Learning Disabilities, <http://www.ldonline.org/about/partners/njclld#reports>

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