

Neurodevelopmental Disorders

The term mental retardation was used in *DSM-IV*. That term is no longer used internationally or in U.S. federal legislation. *DSM-5* uses the diagnostic term of intellectual disability (intellectual developmental disorder) to reflect deficits in cognitive capacity beginning in the developmental period. These disorders include language disorder (which combines *DSM-IV* expressive and mixed receptive-expressive language disorders), speech-sound disorder, and childhood-onset fluency disorder, which are newly named from *DSM-IV* phonological disorder and stuttering, respectively. Also included is social communications, a new disorder that describes persistent difficulties in pragmatics or the social uses of verbal and nonverbal communication. *DSM-5* includes a new name for the category that now encompasses autism spectrum disorder, which includes autistic disorder (autism), Asperger's disorder, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified. Attention-deficit/hyperactivity disorder (ADHD) diagnostic criteria in *DSM-5* are similar to the *DSM-IV* criteria. The same 18 symptoms are used as in *DSM-IV* and continue to be divided into two symptom dimensions (inattention and hyperactivity/impulsivity), of which at least six symptoms of one dimension are required for diagnosis.

The questions below are from *DSM-5 Self-Exam Questions: Test Questions for the Diagnostic Criteria*, which may be preordered from American Psychiatric Publishing by clicking [here](#). The book, available in January 2014, contains 500 questions for all the categories of psychiatric disorders and includes Section III. The questions were developed under the leadership of Philip Muskin, M.D., a professor of clinical psychiatry at Columbia University College of Physicians and

Surgeons.

1. A 7-year-old boy in second grade displays significant delays in his ability to reason, problem-solve, and learn from his experiences. He has been slow to develop reading, writing, and mathematics skills in school. All through development, these skills lagged behind peers', though he is making slow progress. These deficits significantly impair his ability to play in an age-appropriate manner with peers and to begin to acquire independent skills at home. He requires ongoing assistance with basic skills (dressing, feeding, and bathing himself, doing any type of schoolwork) on a daily basis. Which *DSM-5* diagnosis best fits this boy?

- a) child onset major neurocognitive disorder
- b) specific learning disorder
- c) intellectual development disorder, moderate
- d) communication disorder
- e) autistic spectrum disorder

Correct Answer: C. intellectual development disorder, moderate

Rationale: Although IQ testing would be informative (in previous *DSM* classifications, subtypes of mild, moderate, severe, and profound were categories based on IQ scores), *DSM-5* specifies, "Severity is based on adaptive functioning, not on IQ scores, and reflects limitations in adaptive functioning that originate from the intellectual disability." Thus, the specifiers of "mild," "moderate," "severe," and "profound" relate to adaptive functioning, not IQ. Adaptive functioning involves adaptive reasoning in three domains: conceptual, social, and practical. The conceptual (academic) domain involves competence in memory, language, reading, writing, math reason-

ing, acquisition of practical knowledge, problem solving, and judgment in novel situations, among others. The social domain involves awareness of others' thoughts, feelings, and experiences, empathy, interpersonal communication skills, friendship abilities, and social judgment, among others. The practical domain involves learning and self management across life settings, including personal care, job responsibilities, money management, recreation, managing one's behavior, and organizing school and work tasks, among others. Assessment is based on both clinical assessment and standardized testing. With respect to severity, the "moderate" qualifier reflects skills that have chronically lagged behind peers and the need for assistance in most activities of daily living, but the fact that the child is slowly developing these skills (which would peak at roughly the elementary school level according to *DSM-5*). In specific learning disorders and communication disorders, there is no general intellectual impairment. Autism spectrum disorder (ASD) must include history suggesting "persistent deficits in social communication and social interaction across contexts, not accounted for by general developmental delays," or restricted and repetitive patterns of behavior, which are criteria A and B for ASD. Childhood onset major neurocognitive disorder (dementia) "requires memory impairment and associated cognitive deficits with decline from higher levels of functioning." There is no evidence for it in this case, though it can co-occur with intellectual developmental disorder, but typically is a progressive (as opposed to static) condition often associated with underlying neurologic or metabolic disease.

2. A 7-year-old girl presents with a history of normal language skills (vocabulary and grammar intact) but is unable to use language in a socially pragmatic manner to share ideas and feelings. She has never made good eye contact and has difficulty reading social cues. Consequently, she has had difficulty making friends, which is further complicated by her being somewhat obsessed with cartoon characters, which she repetitively scripts. She tends to excessively smell objects and it is difficult for her to get dressed, as she insists on wearing the same shirt and shorts every day, regardless of the season. These symptoms have dated from early childhood and cause significant impairment in her functioning. According to *DSM-5*, what diagnosis would she receive?

- a) Asperger's disorder
- b) autism spectrum disorder
- c) pervasive developmental disorder NOS
- d) social communication disorder
- e) Rett syndrome

Correct Answer: B. autism spectrum disorder

Rationale: This child might have met criteria for Asperger's or PDD NOS in *DSM-IV*. Autism spectrum disorder in *DSM-5* subsumed Asperger's disorder and PDD NOS. Although she has intact formal language skills, "it is the use of language for social communication that is particularly affected in autistic spectrum disorder." A specific language delay is not required. She meets all three components of Criteria A (deficits in social-emotional reciprocity, deficits in nonverbal communication behaviors used for social interaction, and deficits in developing and maintaining friendships) and two components of Criteria B (highly restricted, fixated interests that are abnormal

in intensity or focus; and hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment.

3. The parents of a 15-year-old female 10th grader believe that she should be doing better in high school, given how bright she seems, and the fact that she received mostly 's through eighth grade. Her papers are handed in late, and she makes careless mistakes on examinations. They have her tested, and the results are as follows: Verbal IQ 125, Perceptual Reasoning Index of 122, Full Scale IQ 123, Working Memory Index in the 55%; Processing Speed Index in the 50%; weaknesses in executive function is noted. She has a psychiatric evaluation during which she reports a long history of failing to give close attention to details, difficulty sustaining attention while in class or doing homework, failing to finish chores and tasks, and significant difficulties with time management, planning, and organization. She is forgetful, often loses things, and is easily distracted. She has no history of restlessness or impulsivity and is well liked by her peers. What is her most likely *DSM-5* diagnosis?

- a) adjustment disorder with anxiety
- b) specific learning disorder
- c) attention-deficit/hyperactivity disorder, predominantly inattentive
- d) developmental coordination disorder
- e) major depressive disorder

Correct Answer: C. attention deficit/hyperactivity disorder, predominantly inattentive

Rationale: The patient has six symptoms in the inattention cluster of ADHD and meets criteria for this disorder. She has common associated features of ADHD, including weak-

nesses in working memory and processing speed, and problems handing in her work (especially writing) on time. There is no evidence from the testing or history that her writing difficulty is secondary to a primary disorder involving writing, nor that she has any other specific learning disorder.

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