ASD and ID in DSM-5: Implications For Assessment Practices

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4 Principles Guided the Revisions:

1) DSM-5 is primarily intended to be a manual to be used by clinicians, and revisions must be feasible for routine clinical practice;

2) Recommendations for revisions should be guided by research evidence;

3) Where possible, continuity should be maintained with previous editions of the DSM; and

4) No a priori constraints should be placed on the degree of change between the DSM-IV and DSM-5.

(Source: DSM-5, page 7)
DSM-5 CLASSIFICATION

Section II (description of mental disorders)
22 mental disorder categories:

• Neurodevelopmental Disorders
• Schizophrenia Spectrum and Other Psychotic Disorders
• Bipolar and Related Disorders
• Depressive Disorders…
DSM-5 Neurodevelopmental Disorders

- Intellectual Disabilities
- Communication Disorders
- Autism Spectrum Disorder
- Attention-Deficit/Hyperactivity Disorder
- Specific Learning Disorder
- Motor Disorders
- Other Neurodevelopmental Disorders
Pervasive Developmental Disorders

299.00 Autistic Disorder
299.80 Asperger’s Disorder
299.80 Pervasive Developmental Disorder Not Otherwise Specified (including Atypical Autism)

Other PDDs
299.80 Rett’s Disorder
299.10 Childhood Disintegrative Disorder
AUTISM SPECTRUM DISORDERS

Autistic Disorder

Asperger’s Disorder

Pervasive Developmental Disorder - Not Otherwise Specified (PDD-NOS) “Atypical Autism”

Areas of Impairment Associated with the Autism Spectrum Disorders

Reciprocal Social Interaction

Communication

Restricted, Repetitive, and Stereotyped Behaviours, Interests and Activities
Diagnosis from DSM-IV-TR

Decision Making Process outlined in DSM IV

1. Are diagnostic criteria for **Autistic Disorder** met?

   i.e. 6 of the 12 criteria
   (2 social and 1 each communication and behaviour) +
   delay or abnormality prior to age 3 in social interaction,
   language as used in social communication or
   symbolic/imaginary play.

• If yes - Autistic Disorder, if no consider:
2. Are diagnostic criteria for Asperger’s Disorder met?

i.e. 2 social and 1 behaviour + clinically significant impairment + no delay in language acquisition + no significant cognitive or adaptive delays.

• If yes – Asperger’s Disorder, if no consider:

3. Severe and pervasive social impairment with communication impairment or restricted/repetitive behaviours PDD-NOS (Atypical Autism)
Why the changes in DSM-5?

Distinctions among ASDs have been found to be inconsistent over time, vary across sites and often associated with severity, language level or intelligence rather than the features of the disorder.

The vast majority of research indicates that there is no meaningful difference between individuals with a diagnosis of Autistic Disorder and those with Asperger’s Disorder, once you control for level of cognitive functioning.

Therefore no evidence to support the continuation of a classification system with three distinct categories.
The DSM-5 Approach

The notion of a spectrum of impairment in terms of social communication and restricted, repetitive behaviours, along with additional qualifiers relating to severity of presentation, cognitive ability, and other comorbidities (e.g., ADHD, Anxiety Disorder) is more in keeping with current research.
**DSM-IV**

AUTISM SPECTRUM DISORDERS

- Autistic Disorder
- Asperger’s Disorder
- PDD-NOS/Atypical Autism

**DSM-5**

AUTISM SPECTRUM DISORDER

Most Severe to Least Severe
Autism Spectrum Disorder 299.00

A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history:

1. Deficits in social emotional reciprocity; ranging, for example, from abnormal social approach and failure of normal back and forth conversation to reduced sharing of interests, emotions or affect; to failure to initiate or respond to social interactions.
Autism Spectrum Disorder 299.00

2. Deficits in non-verbal communicative behaviours used for social interaction; ranging, for example, from poorly integrated verbal and nonverbal communication, to abnormalities in eye contact and body language, or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.

3. Deficits in developing and maintaining and understanding relationships; ranging for example, from difficulties adjusting behaviour to suit different social contexts; to difficulties in sharing imaginative play or in making friends; to an absence of interest in peers.
B. Restricted, repetitive patterns of behaviour, interests, or activities as manifested by at least two of the following, currently or by history:

1. Stereotypied or repetitive motor movements, use of objects or speech
   e.g. simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases.
Autism Spectrum Disorder 299.00

2. Insistence on sameness, inflexible adherence to routines, or ritualised patterns of verbal or nonverbal behaviour

e.g. extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food each day.

3. Highly restricted, fixated interests that are abnormal in intensity or focus

e.g. strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
4. Hyper or hypo reactivity to sensory input or unusual interest in sensory aspects of the environment:

  e.g. apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement.
C. Symptoms must be present in the *early developmental period* (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies later in life).

D. Symptoms cause clinically significant impairment in social, occupational or other important areas of functioning.
E. These disturbances are not better explained by intellectual disability or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.
<table>
<thead>
<tr>
<th>Severity Level</th>
<th>Social Communication</th>
<th>Restricted Interests and Repetitive Behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3 ‘Requiring Very Substantial Support’</td>
<td>Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others.</td>
<td>Inflexibility of behaviour, extreme difficulty coping with change, or other restricted/ repetitive behaviours markedly interfere with functioning in all spheres. Great distress/difficulty changing focus or action</td>
</tr>
<tr>
<td>Level 2 ‘Requiring Substantial Support’</td>
<td>Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal response to social overtures from others.</td>
<td>Inflexibility of behaviour, difficulty coping with change or other restricted/repetitive behaviours appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress/difficulty changing focus or action</td>
</tr>
<tr>
<td>Level 1 ‘Requiring Support’</td>
<td>Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples or atypical or unsuccessful responses to social overtures from others. May appear to have decreased interest in social interactions.</td>
<td>Inflexibility of behaviour causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organisation and planning hamper independence</td>
</tr>
</tbody>
</table>
Autism Spectrum Disorder 299.00
Severity Levels

Examples:

• **Level 3** – A person with few words of intelligible speech who rarely initiates interaction and when he or she does, makes unusual approaches to meet demands only and responds to only very direct social approaches.

• **Level 2** – A person who speaks in simple sentences, whose interaction is limited to narrow special interests, and who has markedly odd nonverbal communication.

• **Level 1** – A person who is able to speak in full sentences and engages in communication but whose to and fro conversation with others fails, and whose attempts to make friends are odd and typically unsuccessful..
Format of Diagnosis using DSM-5

A Check list

• Autism Spectrum Disorder (299.00 DSM-5)
• Severity level (use wording e.g. “requiring support”)
• With or without accompanying intellectual impairment
• With or without accompanying language impairment (provide examples)
• Associated with a known medical (e.g. epilepsy) or genetic disorder (e.g. Fragile X) or a history of environmental exposure (e.g. foetal alcohol syndrome)
• Associated with another mental or behaviour disorder (e.g. Anxiety Disorder)
How does this fit with DSM-IV and previous diagnosis?

Individuals with a *well established* DSM-IV diagnosis of autistic disorder, Asperger’s disorder, or PDD-NOS should be given the diagnosis of autism spectrum disorder.

Individuals who have marked deficits in social communication, but whose symptoms do not otherwise meet criteria for autism spectrum disorder, should be evaluated for social (pragmatic) communication disorder.
Major Differences?

• 12 Symptoms Become 7

• Improved Specificity, Higher Proportion of Criteria Required

• Symptom severity

• Development of a new communication disorder category – “Social Communication Disorder”
Major Differences?

Range of examples allows for inclusion of subtle differences in social communication:

• e.g. Social-emotional reciprocity includes abnormal social approach
• Nonverbal communicative behaviours includes deficits in understanding nonverbal communication
• Developing, maintaining, and understanding relationships includes difficulties adjusting behaviour to suit various social contexts
• Inflexible adherence to non-functional routines and rituals broadened to include insistence on sameness, rigid thinking patterns, difficulties with transition
• Sensory criteria that includes hyper and hypo reactivity to sensory input and apparent indifference to pain/temperature
• “Currently or by history” (retrospective)
Possible Implications?

1. No significant change i.e. most individuals who currently meet criteria for an autism spectrum disorder will continue to do so....?

2. Due to the need in DSM-5 for all three of the social criteria to be met and at least of two of the RRBs criteria to be met some individuals who currently meet criteria will no longer do so....?

3. Due to the concept of autism as a “spectrum condition” and examples provided that include “mild” expressions of each criteria, some individuals who do not currently meet criteria under DSM-IV-TR will meet criteria under DSM-5....?
Possible Implications?

Preliminary research conducted by Diagnostic Assessment Service, Aspect, 2011

Research questions
1. Any change in diagnostic decision making using DSM-IV-TR compared to DSM-5 i.e. would the same clinician with the same information be able to reach the same decision for both sets of criteria?
2. Are there particular sub-groups of children e.g. females, toddlers, diagnostic group (Asperger’s) that are most vulnerable to “missing out” on a DSM-5 diagnosis?
Possible Implications?

Preliminary research
Method
132 individuals, 25 females (19%), 107 males (81%)
Age range: 2 years to 16 years (Mean age: 6.06 years)
Assessments included:
• Review of past assessment reports – cognitive, speech and language, results of autism screening tools, background questionnaires completed by parents and preschool teachers or school staff
• Administration of ADOS and ADI-R
• Naturalistic observations or phone interviews with preschool or school staff
Possible Implications?

Results

• Number of non-ASD under DSM-IV-TR who would meet criteria under DSM-5 = 0 (i.e. No evidence for broadening of the diagnostic construct)

• Number of ASD under DSM-IV-TR who would not meet criteria under DSM-5 = 26 (23.4%) (i.e. some evidence for possible reduction in numbers of children eligible for a diagnosis under DSM-5)

• Follow up study in 2012 supported the trend
Possible Implications?

Question:
Is it that individuals with ASD are “missed” when using the DSM-5 criteria or is it that DSM-IV-TR permitted over-identification of children and that diagnoses guided by DSM-5 are more precise?
Implications for Assessment

• Seek historical information wherever possible, and seek information from multiple sources/contexts.
• Additional questions are required regarding:
  - Abnormal social approach
  - Understanding nonverbal communication
  - Adjusting behaviour to suit social context
  - Insistence on sameness, rigid thinking patterns, difficulties with transition
  - Hyper reactivity to sensory input (sensory sensitivity)
  - Apparent indifference to pain/temperature
• Consider Social (Pragmatic) Communication Disorder
Social Communication Disorder (SCD)

• Previously the DSM did not provide an appropriate diagnosis for people with such symptoms [significant problems using verbal and nonverbal communication for social purposes].

• For these individuals, SCD brings their social and communication deficits out of the “not otherwise specified” label to help them get the services and treatment that they need.

• SCD comes under the category of Communication Disorders.
• While ASD does encompass communication problems, it also includes restricted, repetitive, patterns of behaviour, interests or activities and gives equal weight to both communication issues and repetitive behaviours.

• ASD must be ruled out for SCD to be diagnosed.
SCD Criteria

A. Persistent difficulties in the social use of verbal and nonverbal communication as manifested by all of the following:

1. Deficits in using communication for social purposes, such as greeting and sharing information, in a manner that is appropriate for the social context.

2. Impairment of the ability to change communication to match context or the needs of the listener, such as speaking differently in a classroom than a playground, talking differently to a child than to an adult, and avoiding use of overly formal language.
SCD Criteria

3. Difficulties following rules for conversation and storytelling, such as taking turns in conversations, rephrasing when misunderstood, and knowing how to use verbal and nonverbal signals to regulate social interaction.

4. Difficulties understanding what is not explicitly stated (e.g. making inferences) and nonliteral or ambiguous meanings of language (e.g. idioms, humour, metaphors, multiple meanings that depend on the context for interpretation).
• **B.** The deficits result in functional limitations in effective communication, social participation, social relationships, academic achievement, or occupational performance, individually or in combination.

• **C.** Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities).

• **D.** The symptoms are not attributable to another medical or neurological condition or to low abilities in the domains of word structure or grammar, and are not better explained by ASD, ID, GDD or another mental disorder.
**Intellectual Disability/Mental Retardation**

Most English speaking countries refer to “Intellectual Disability”

In DSM-IV-TR 3 criteria must be met for a diagnosis of ID/Mental Retardation (317.00; 318.00; 319.00):

1. An **IQ** below 70
2. Significant limitations in two or more areas of **adaptive behaviour** (as measured by an adaptive behaviour rating scale, i.e. communication, self-help skills, **interpersonal skills**)
3. Evidence that the limitations became apparent before the age of 18.
319. Intellectual Disability (Intellectual Developmental Disorder)

A disorder with onset during the developmental period that includes both intellectual and adaptive functioning deficits in conceptual, social, and practical domains.
319. Intellectual Disability (Intellectual Developmental Disorder)

“Note: The diagnostic term Intellectual Disability is the equivalent term for the ICD-11 diagnosis of Intellectual Developmental Disorders. Although the term Intellectual Disability is used throughout this manual, both terms are used in the title to clarify relationships with other classification systems… Thus, Intellectual Disability is the term in common use by medical, educational, and other professions, and by the lay public and advocacy groups.”
- DSM-5, p. 33
The following three criteria must be met:

A. **Deficits in intellectual functions**, such as reasoning, problem-solving, planning, abstract thinking, judgment, academic learning and learning from experience, and practical understanding confirmed by both clinical assessment and individualized, standardized intelligence testing.
319. Intellectual Disability (Intellectual Developmental Disorder)

Diagnosis Features (p. 37)

**Criterion A refers to intellectual functions** ... intellectual functioning is typically measured with individually administered and psychometrically valid, comprehensive, culturally appropriate, psychometrically sound tests of intelligence.

... two standard deviations or more below the population mean, including a margin of measurement error (generally + 5 points) ... a score of 65 –75 (70 ± 5).

Factors that may affect test scores include practice effects and the “Flynn effect” (i.e., overly high scores due to out-of-date test norms).
319. Intellectual Disability (Intellectual Developmental Disorder)

Criterion B. Deficits in adaptive functioning that result in failure to meet developmental and sociocultural standards for personal independence and social responsibility. Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, and across multiple environments, such as home, school, work, and recreation.
319. Intellectual Disability (Intellectual Developmental Disorder)

Criterion B – adaptive functioning involves adaptive reasoning, in three domains: conceptual, social, and practical. ... criterion B is met when at least ONE domain of adaptive functioning, conceptual, social or practical is sufficiently impaired that ongoing support is needed....

Note: These domains determine how well an individual copes with everyday tasks:

- The **conceptual domain** includes skills in language, reading, writing, math, reasoning, knowledge, and memory.
- The **social domain** refers to empathy, social judgment, interpersonal communication skills, the ability to make and retain friendships, and similar capacities.
- The **practical domain** centres on self-management in areas such as personal care, job responsibilities, money management, recreation, and organizing school and work tasks.
DSM-5 319. Intellectual Disability (Intellectual Developmental Disorder)

Adaptive functioning is assessed using both clinical evaluation and individualized, culturally appropriate, psychometrically sound measures.

Standardized measures are used with knowledgeable informants (e.g., parent or other family member, teacher, counselor, care provider) and the individual to the extent possible.

Adaptive functioning may be difficult to assess in a controlled setting (e.g., prison); if possible, supporting information reflecting functioning outside those settings should be obtained.
319. Intellectual Disability (Intellectual Developmental Disorder)

Criterion C. Onset of intellectual and adaptive deficits during the developmental period.
319. Intellectual Disability (Intellectual Developmental Disorder)

**SPECIFIERS** The various levels of severity are defined on the basis of adaptive functioning, and not IQ scores, because it is adaptive functioning that determines the level of supports required. Moreover, IQ measures are less valid in the lower end of the IQ range.

- DSM-5, p. 33
319. Intellectual Disability (Intellectual Developmental Disorder)

<table>
<thead>
<tr>
<th>Severity of Adaptive Functioning</th>
<th>Conceptual</th>
<th>Social</th>
<th>Practical</th>
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<tbody>
<tr>
<td>Mild</td>
<td></td>
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<tr>
<td>Moderate</td>
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<td>Severe</td>
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<tr>
<td>Profound</td>
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</table>
Intellectual Disability - Characteristics

- The disorder is considered chronic and often co-occurs with other mental conditions like depression, attention-deficit/hyperactivity disorder, and autism spectrum disorder.
Intellectual Disability- Implications for Comprehensive Assessment

• DSM-5 emphasizes the need to use both clinical assessment and standardized testing of intelligence when diagnosing intellectual disability, with the severity of impairment (mild, moderate, severe..) based on adaptive functioning rather than IQ test scores alone.

• This is in contrast to DSM-IV where IQ denoted the severity; e.g. IQ score of 50-55 to 70 = Mild retardation, 35-40 to 50-55 = Moderate retardation, 20-25 to 35-40 = Severe retardation

• DSM-5 provides examples of severity levels for conceptual, social and practical domains for different age groups
Intellectual Disability- Implications for Comprehensive Assessment

• IQ or similar standardized test scores should still be included in an individual’s assessment.

• In DSM-5, intellectual disability is considered to be approximately two standard deviations or more below the population, which equals an IQ score of about 70 or below.

• The assessment of intelligence across three domains (conceptual, social, and practical) will ensure that clinicians base their diagnosis on the impact of the deficit in general mental abilities on functioning needed for everyday life. This is especially important in the development of a treatment plan.
Concluding remarks …

• Confusing to have “Intellectual Disability (Intellectual Developmental Disorder)” => ICD-11 may not even retain “Intellectual Developmental Disorder.”

• “To meet diagnostic criteria for intellectual disability, the deficits in adaptive functioning must be directly related to the intellectual impairments described in Criterion A.” (DSM-5, p. 38)

• Severity levels:
  – Mild = IQ 55-70; Moderate = IQ 40-55; Severe IQ 25-40; Profound IQ < 25
  – validity of severe-profound distinction? Adaptive Behaviour scales are not any more reliable 5 SD below the mean. What is the reliability of the AB-based levels of severity?

• No Specific age, cut off for developmental period?
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