Child Mind Institute

Specific Learning Disorder (SLD) and Language Disorder Diagnosis

SLD/Language Disorder diagnosis is made by a clinician, based on a combination (i.e., *consensus*) of the following factors:

Primary/Necessary Evidence:

- Academic and Language Testing: WIAT-4 (selected subtests), TOWRE-2, CTOPP-2 (selected subtests), CELF-5 Screener
  - *Reading:* Scores < 90 on measures of sight word recognition, decoding, fluency, comprehension, encoding, phonological, or orthographic processing can be indicative of a disorder.
  - *Math:* Scores < 90 on measures of calculation, math problem solving, or math fluency can be indicative of a disorder.
  - *Writing:* Scores < 90 on measures of spelling, sentence composition, or essay composition can be indicative of a disorder.
  - *Language:* Scores that do not meet the screening cutoff on a measure of foundational language skills or scores of < 90 on language comprehension can be indicative of a disorder.

Supporting Considerations:

- IQ Scores: (WISC-V/WAIS-IV/KBIT-II) The IQ score can also provide important context for the diagnosis both when it is low (below 80) and when it is high (above ~120)
  - When the IQ is low, it is important to consider if this is a specific reading issue or if the reading difficulty is better accounted for by broader developmental delays. A diagnosis of SLD may still be warranted, even in the context of low IQ, if it is determined that the reading difficulty is above and beyond what would be expected for someone with this level of cognitive delay.
  - When the IQ is high, reading scores in the average range may be considered as possible evidence of impairment in reading, with the thought process that this child may be using their strengths to compensate, but still have an underlying disorder. To establish a diagnosis in this case, evidence of distress or impairment resulting from their reading difficulty must be evident (e.g., anxiety because they have to work harder than peers, scores well below potential on testing, low self-esteem)
  - Some cognitive abilities are associated with academic skills and can help understand if the child's learning profile is consistent with SLD. (e.g., fluid reasoning and working memory are related to math, vocabulary knowledge can be related to reading).
- Behavioral Observations: All of the testing results are interpreted in the context of behavior observations and a determination of whether the testing was deemed a valid depiction of their functioning level. If a child obtains low reading scores, but the testing was determined invalid due to poor effort, behavior dysregulation or not understanding instructions, a confident diagnosis of SLD would be less likely. Additionally, qualitative observations during testing can provide information regarding language comprehension and academic skills which can be incorporated into the conceptualization of the case.
- Educational History and Referral Concerns: This is one of the most important factors in determining SLD. Based on a review of previous records and parent report of educational history, it is necessary to

determine if there is any evidence of impairment or struggling with academics at school. Even if the child's test scores are very low, if there are no concerns regarding their academic performance, and they are performing on grade level, then it is less likely a confident diagnosis of SLD will be warranted and the clinician may assign a 'rule out' or 'requires confirmation' diagnosis instead. It is also important to consider whether the child has received appropriate instruction. For example, for children who had Kindergarten or 1st grade remotely during the pandemic, the clinician may be more cautious in assigning SLD, because insufficient instruction cannot be ruled out as the primary cause of their academic difficulty.

- Previous Diagnosis: There are limitations in the HBN evaluation (fixed battery, no supplemental testing) which may make it difficult to detect SLD in more subtle cases. Therefore, if a child comes in with a previous diagnosis, but the HBN evaluation indicates that their scores are average or above, the prior diagnosis will typically still be listed 'by history' to indicate that this diagnosis cannot be ruled out for the child, but we do not have sufficient evidence to support/confirm the diagnosis. There are cases where a child comes in with a diagnosis of SLD and it will not be assigned by HBN, if there is strong evidence that this child does not struggle with reading based on all other listed factors.
- History of Intervention: Whether the child has received previous academic intervention is considered, taking into account that it is best practice to apply an intervention and see how the child responds before making a diagnosis. In cases in which the child is very young (5 or 6 years old) and they may not have received any academic support, it may be advised to provide evidence-based intervention and reassess. In older children, this factor is considered to be less important.
- Age: In general, more caution is taken to diagnose SLD in children when they are younger (5-7 years) due to normal variation in when academic skills develop. To make a diagnosis at this age, there would need to be stronger evidence (e.g., lower scores, history of intervention).
- Teacher Questionnaire: TRF The qualitative portion of the Teacher Report Form asks the teacher to rate the child's skills compared to their peers. This can be important information to understand how they are performing in the context of their curriculum and learning environment.
- Vineland-II Parent Interview Form: Parents of participants suspected of intellectual delays are administered this supplemental interview.
- Mental Health Diagnosis: It is important to consider if the child is struggling with social and emotional functioning in order to fully understand their academic and learning performance. For example, a diagnosis of anxiety or depression coinciding with poor academic performance may suggest that low scores are better accounted for by poor motivation/concentration than a core learning difficulty.

Mental Health Diagnosis

Mental Health Diagnosis is made by a clinician, based on a combination (i.e., consensus) of the following factors:

Primary/Necessary Evidence:

- K-SADS Parent Interview and Child Interview (age 11+): In order to be diagnosed with a mental health disorder, the criteria for the disorder must be endorsed on the KSADS semi-structured diagnostic interview or through follow up questions and assessments. However, it is important to note that not every disorder that meets criteria on the KSADS will be assigned, due to consideration of the other supporting factors as listed below.
- ChaPas interview: A limited subset of participants with suspected intellectual delays completed the ChaPas interview in place of the K-SADS.

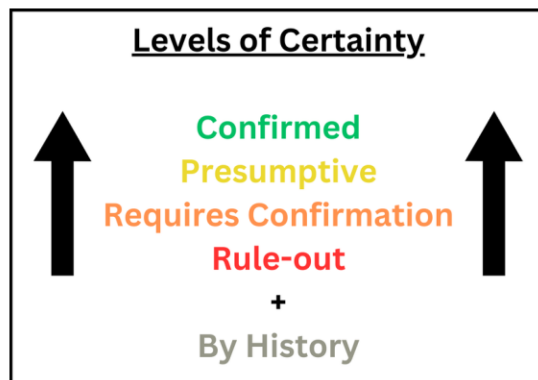
Supporting Considerations:

- Behavioral Observations: Throughout testing and interviews, behavior observations are recorded regarding attention, social skill, effort, language and activity level. These observations can be incorporated into the diagnostic conceptualization
- Family History: Family history of mental health diagnosis is reviewed and considered in determining risk level for diagnosis.
- Previous Diagnosis: There can be limitations in the HBN evaluation (e.g., inconsistent reporting between parent and child, changes which take place over the course of the evaluation period) which may make it difficult to confidently diagnose mental health disorders in complex cases. Therefore, if a child comes in with a previous diagnosis, but the HBN evaluation is inconclusive, the prior diagnosis will typically still be listed 'by history' to indicate that this diagnosis cannot be ruled out for the child, but we do not have sufficient evidence to support/confirm the diagnosis. However, if the HBN evaluation has sufficient evidence that the diagnostic criteria are not met for a disorder, the diagnosis will not be assigned regardless of previous diagnosis.
- History of Therapeutic Intervention: Whether the child has sought treatment or received mental health support is considered in the conceptualization of the case, as it relates to onset of concerns and evidence of past impairment in functioning.
- Questionnaires: Scores from the following clinically relevant questionnaires are considered as supporting evidence of symptomology and impairment;
  - Parent Questionnaires: CBCL, ESWAN, SRS, SCQ, GARS, MFQ, SCARED
  - Child Questionnaires: YSR/ASR, Conners, MFQ, SCARED
  - Teacher Questionnaires: TRF
- ADOS: a limited subset of participants with autism related symptoms were administered this assessment.
- IQ/Learning and Language Diagnosis: It is important to consider if the child has a very high/low IQ, developmental delays, or learning/language disorders in order to fully understand their mental health functioning. For example, a diagnosis of SLD-R and Language Disorder coinciding with attention difficulties, may suggest that attention weaknesses are partially accounted for by difficulty understanding presented concepts or inappropriate class placement, rather than a core attention disorder.

Child Mind Institute

HBN Diagnostic Terms

Instrument on LORIS: *Diagnosis_ClinicianConsensus*



- ***Confirmed****:* Full criteria for a diagnosis are met and HBN is assigning the diagnosis to the participant. HBN's evaluation protocols are sufficient in making the diagnosis. No extra specifier is needed.
- ***Presumptive****:* Full criteria are likely met based on our evaluation and history of impairment, though HBN is unable to confirm the diagnosis due to a limitation in our evaluation protocol. The recommendations could be implemented without the need for additional testing.
- ***Requires Confirmation****:* Full criteria are likely met based on our evaluation and history of impairment, though HBN is unable to confirm the diagnosis due to a limitation in our evaluation protocol. Additionally, there is less evidence from our evaluation AND historic impairment and so less certainty than Presumptive. The disorder would require further testing in order to confirm the diagnosis. The recommendations could be implemented without the need for additional testing.
- ***Rule-out****:* Symptoms of a disorder are not clearly defined within one diagnostic criteria and/or are similar or overlap with other presenting disorders. **OR** Insufficient information in the HBN evaluation to make a diagnosis (or to say that the child definitively does not have a diagnosis),but concerns or vulnerabilities were evident that should be further evaluated /monitored.
- ***By History****:* A diagnosis of a disorder was reported during the HBN evaluation, though HBN is unable to confirm this diagnosis, either because the diagnosis is not fully assessed by HBN OR there was insufficient evidence on the HBN evaluation to confirm the previous diagnosis.

- ***Past****:* Full criteria for a disorder were reported during Mental Health Interview, though symptoms are reported to be no longer present for the past 2 months.

- ***No Diagnosis Given***: The evaluation was completed and symptoms reported do not meet diagnostic criteria for any disorder.
- ***No Diagnosis Given: Incomplete Eval***: The participant dropped out of the study before a diagnosis was given.

ASD considerations

When communicating with prospective participants, we are careful to emphasize that **our evaluation is not specific to Autism Spectrum Disorder (ASD)**. The HBN evaluation assesses a broad range of mental health disorders. The primary evaluation component for autism spectrum disorder within the HBN protocol is the **KSADS autism module** that, albeit valid, **is not as comprehensive as gold standard autism diagnostic instruments**. The KSADS is complemented by parent-based questionnaires (SRS-2, SCQ, GARS-2). Notably, **a limited subset of HBN participants receives the ADOS and/or ADI as part of a supplemental evaluation**. Due to the limited nature of the HBN assessment, **we are not always able to confirm a diagnosis of autism.**

Here is a description of the ways that HBN diagnoses ASD:

- Previous diagnosis of ASD, diagnosis confirmed at HBN: If participants come in with an ASD diagnosis, and our data supports the diagnosis, then the HBN clinicians assign a **confirmed diagnosis**
- Previous diagnosis of ASD, diagnosis **not** confirmed by HBN: If the participant has a previous diagnosis of ASD but the HBN evaluation did not have sufficient evidence to confirm or support this diagnosis, the diagnosis is listed **"by history,"** to indicate a previous diagnosis not confirmed nor ruled out by HBN
- Confirmed ASD diagnosis given by HBN: In rare cases, there is overwhelming and very clear evidence that the child has ASD and the HBN clinicians make an initial **confirmed diagnosis**
- ASD, requires confirmation: Commonly, the HBN evaluation indicates strong evidence for ASD, but not enough to assign a confirmed diagnosis. In these cases, we give the diagnosis with the qualifier "**requires confirmation**" and recommend a more specialized autism evaluation
- Rule out diagnosis of ASD: If there is some evidence of ASD but clinicians are not confident that the diagnosis is warranted, they recommend further specialized evaluation to "**rule-out"** the diagnosis