Evaluating Disability Documentation from Professionals: Current Best Practices, Accommodation Issues, and Challenges to Accurate Understanding of Functional Impairment

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Information on data key

- Handout on terminology
- Handout re: appropriate tests
- Checklist for criteria for diagnosis of LD and ADHD
- Case examples
- PPT slides

Typical problems faced by DSO staff
Clinicians see selves as advocates for client

- Psychologists/Physicians want to help clients
- Want to ensure that client/parent gets what paid for
- Leads to confirmatory bias “a tendency to search for or interpret information in a way that confirms one’s preconceptions, leading to statistical errors”
- Loss of objectivity
- May not be aware of this bias

Our studies: 110 Psychological assessors

1. Majority do not understand that 1 or 2 low subtest scores/test scores is not proof of a disability
2. Many do not know that problems only with multiple choice tests is not proof of impairment
3. Most do not realize that ADHD is a lifelong disability and so impairment cannot first occur in grad school
4. 45% think the purpose of a clinical evaluation is to secure accommodations for their client

Our studies: 110 Psychological Assessors

5. 71% don’t understand that you cannot use grade-based norms to determine a disability
6. 71% don’t know that students can convincingly feign/exaggerate LD & ADHD
7. 88% thought that the purpose of accommodation in PSE is to allow the disabled individual to perform at his/her best.
8. A whopping 14% actually admitted they would lie in order to get their client accommodations
Our studies: Medical training

• Nowhere in Ontario do medical students/residents in Psychiatry, family medicine or pediatrics learn anything about how to determine functional impairment in post-secondary academic environments!
• They say they just ask the patient what they think they need. No objective, formal evaluation conducted!

Perception of Accommodations: What Students Think Will Help Them

<table>
<thead>
<tr>
<th>Accommodation</th>
<th>% Students with Disabilities</th>
<th>% Nondisabled Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% Extended Time</td>
<td>88.3</td>
<td>87.1</td>
</tr>
<tr>
<td>Separate Room***</td>
<td>64.2</td>
<td>59.6</td>
</tr>
<tr>
<td>Additional Breaks</td>
<td>59.9</td>
<td>63.4</td>
</tr>
<tr>
<td>Reader***</td>
<td>28.5</td>
<td>13.7</td>
</tr>
<tr>
<td>Scribe**</td>
<td>27.0</td>
<td>17.1</td>
</tr>
<tr>
<td>Word Processor**</td>
<td>47.4</td>
<td>33.7</td>
</tr>
<tr>
<td>Large Print</td>
<td>21.9</td>
<td>18.5</td>
</tr>
</tbody>
</table>

*p < .05   **p < .01   ***p < .001

Clinical Training

• How much training are Psychologists required to have in assessing & diagnosing LD in order to be licensed (in any state or province) to make this diagnosis?
  – 1 half-year graduate level course
  – 1 full year graduate level course
  – More than 1 course
  – none
Clinical Training

- How much formal training in diagnosing ADHD is required in order to be able to give this diagnosis to clients (in any state or province)?
  - 1 half-year graduate level course
  - 1 full year graduate level course
  - More than 1 course
  - none

Clinical Training

- How much clinical training is required of professionals in order to make a diagnosis of a concussion?
  - 1 half-year graduate level course
  - 1 full year graduate level course
  - More than 1 course
  - none

Conclusions

- Clinicians see role as advocate.
- Unaware of legislation regarding accommodation at postsecondary
- No training in determining functional impairment
- No training in determining if assistive technology appropriate
- No training in determining amount of extra time
- May not even have any formal training in dx of LD and/or ADHD
A rose by any other name

- No such thing as LD in processing speed or LD in working memory.
- LD is a disorder in academic functioning.

Is a DISORDER a DISABILITY?

- According to DSM, a DISORDER is NOT necessarily a Disability.
- DSM-5, pg. 25. "In most situations, the clinical diagnosis of a DSM-5 disorder does not imply than an individual with such a condition meets legal criteria for the presence of a disability...Additional information is usually required beyond that contained in the DSM-5 diagnosis, which might include information about the individual's functional impairments and how these impairments affect the particular abilities in question...assignment of a particular diagnosis does not imply a specific level of impairment or disability."

What does the documentation need to show for LD?

1. First and foremost, must have impaired ACADEMIC achievement on standardized tests.
2. Must compare student to MOST other people the same age.
   - Doesn't matter if scores improve with extra time!
3. Next, must show deficit is UNEXPECTED.
4. Then, that underlying processing skills impaired
5. Finally, must RULE OUT other possible causes.
   - This includes low effort, psychological problems, ESL.
What constitutes an academic impairment?

• According to DSM-5, academic functioning below the 5th Percentile
• Clinicians can use clinical judgment to use a cut score at the 16th - 25th percentile IN CASES OF WELL REMEDIATED LD
• Means that the person had to have previous diagnosis, greater impairment in past, and hx of remediation/tx
• Consensus in literature is that academic functioning must be (at minimum) below 16th percentile (Harrison & Holmes, 2012).

Terminology

• Percentile score=percent of people in the norming sample who scored the same or lower than the person.
  NOTE: These scores are not equally distributed. As such, cannot compare them or assume that the same difference means the same thing.
• Standard Scores = a standardized way to represent the score relative to the mean (average). Scale has equal x values
  – Usually have a mean of 100 and a standard deviation of 15
• T-Scores =mean of 50 SD of 10. Scale has equal x values
• Scaled Scores= standardized way of measuring SUBTEST
  – Mean of 10, SD of 3. Scale has equal x values
**Case Eg: Suzie Q**

- First tested age 16.
- French immersion since Kdgn- exemplary student
- A to A+ and multiple scholastic awards
- Speaks & writes 3 languages fluently
- Referred because not finishing exams – average 80%
- All achievement test scores above 70th percentile and above her IQ.
- Only low score is on IVA-auditory attention
- DX with “a LD that is undermining her achievement”
- 3 pages of recommended accommodations/supports

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**Age vs Grade based norms**

- Tests such as the Nelson Denny and WIAT allow you to compare scores vs grade or vs age.
- Grade based norms should NEVER be used to determine if someone is LD, but yet they often are used.
- Only 7% of PSE students qualify for LD dx if use age-based norms, but 38% if grade based! (Cressman & Liljequist, 2014)
- Pearson website warns clinicians not to use grade-based norms when assessing for LD
- Leads to overpathologizing

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**How about ADHD**

- High score on ADHD checklist alone is not diagnostic
- Score on computer vigilance test is not diagnostic
- See checklist in resources
ADHD dx criteria

- DSM-IV lists 5 things that must be demonstrated in order to diagnose ADHD
- Symptom report is only ONE of the 5.
- Must also show:
  - Early onset of symptoms (before age 12)
  - Symptoms cause(d) substantial impairment in 2 or more major life areas
  - Symptoms and impairment have been chronic
  - Other possible causes for symptoms ruled out

Symptom Reports are Common

<table>
<thead>
<tr>
<th>Item</th>
<th>ADHD %</th>
<th>Nondisabled %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read material over and over to understand it</td>
<td>80.6</td>
<td>52.5</td>
</tr>
<tr>
<td>Do not perform well on timed standardized tests</td>
<td>67.7</td>
<td>45.4</td>
</tr>
<tr>
<td>Work harder than other people to get good grades</td>
<td>56.8</td>
<td>47.5</td>
</tr>
<tr>
<td>Have trouble finishing timed tests</td>
<td>64.9</td>
<td>28.6</td>
</tr>
<tr>
<td>Takes me longer to complete assignments than others</td>
<td>78.4</td>
<td>50.0</td>
</tr>
<tr>
<td>Rarely read in my spare time</td>
<td>73.0</td>
<td>58.9</td>
</tr>
<tr>
<td>Easily distracted</td>
<td>91.9</td>
<td>54.1</td>
</tr>
<tr>
<td>Fidget with hands or feet</td>
<td>89.2</td>
<td>54.8</td>
</tr>
<tr>
<td>Feel on the go or driven by a motor</td>
<td>59.5</td>
<td>38.0</td>
</tr>
</tbody>
</table>

So symptom complaints may be sensitive, but they are not specific to ADHD. Be careful with self-reported symptoms!!

Lewandowski, Lavelle, Codding & Gordon, 2008

ADHD dx criteria

- Research shows weak relationship between number of ADHD symptoms reported and actual functional impairment.
- Hence, symptom report alone not sufficient to determine level of impairment or to diagnose.
**Symptom checklists**

- **Must** have self and observer/collateral reports of symptoms
- Brown Attention Activation Disorders Scale (BAADS) has been shown to be non-specific. Up to 68% of non-ADHD undergrads score above threshold (Harrison, 2004)
- High score on CAARS has only a 14% chance of accurately diagnosing ADHD (Harrison & Armstrong, 2014)
- Vulnerable to manipulation

**Computerized tests**

- IVA, TOVA, GDS, CPT are NOT diagnostic measures.
- Research shows not specific to ADHD.
- High (66%) false positive rate
- Many reasons why someone may do poorly on one or more aspect.
- Only identify some current problems with attention
- Vulnerable to manipulation

**Impairment**

- Impairment is supposed to be demonstrated before making any DSM dx
- Review of elementary & HS records
- Objective evidence of functional impairments in other relevant life areas (e.g. multiple traffic violations/accidents, failure to pay bills leading to eviction/services cut, reprimands at work, etc).
- Not living up to “potential” is not enough
Rule out

- True for both LD and ADHD assessments.
- Many non-neurological reasons why someone may do poorly.
- Anxiety, depression, sleep disorder, eating disorder, low motivation/low effort, outright malingering, drug or alcohol abuse, PTSD
- All interfere with accurate interpretation regarding cause of low scores.
- May still require accommodations

Rule out for ADHD

- Harrison, Alexander & Armstrong (2013)
- 35% of non-ADHD college students coming to student health service “probable” or “highly probable” on BAADS.
- 16% significant on CAARS “ADHD Inattentive”
- 30% significant on one CAARS subtest
- Depression, Stress and Anxiety account for 45% of variance in BAADS scores and 32% of CAARS “ADHD Index” scores.
- All high CAARS ADHD Index highest on DASS
- Think horses not zebras

How is ADHD assessed and documented?

- Examined 100 evaluation reports submitted by college students.
- All had been dx with ADHD
- Only 1 of 100 reports documented all of the DSM 5 criteria required for diagnosis
- Only about half of reports documented any academic impairment, yet all recommended academic accommodations
Recent ADHD assessment report

<table>
<thead>
<tr>
<th>Test description in report</th>
<th>Actual Test Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive functioning skills were all impaired</td>
<td>All better than 50th percentile</td>
</tr>
<tr>
<td>As requirements for speed, control, organization or fluidity increased, his performance weakened</td>
<td>Went from the 95th percentile to the 85th.</td>
</tr>
<tr>
<td>Behavioral ratings provided by [name] based on his self-report fall in the clinically significant range</td>
<td>Conners-3 rating scale (scores: mean 50, std 10)</td>
</tr>
<tr>
<td></td>
<td>Inattention = 60</td>
</tr>
<tr>
<td></td>
<td>Hyperactivity = 59</td>
</tr>
<tr>
<td></td>
<td>Executive functioning = 50</td>
</tr>
<tr>
<td></td>
<td>Learning problems = 50</td>
</tr>
<tr>
<td></td>
<td>Probability of ADHD = 53%</td>
</tr>
<tr>
<td>IVA scores indicate problems with auditory attention and speed</td>
<td>IVA: all scores but one above 100 (mean 100, std 10), except speed quotient = 95</td>
</tr>
</tbody>
</table>

Human Rights Tribunal decision

- Recent appeal decision notes:
  - [http://www.canlii.org/en/on/onhrt/doc/2015/2015hrto222/2015hrto222.html?searchUrlHash=AAAAAQALZGF2aWQgY29oZW4AAAQ&resultIndex=7](http://www.canlii.org/en/on/onhrt/doc/2015/2015hrto222/2015hrto222.html?searchUrlHash=AAAAAQALZGF2aWQgY29oZW4AAAQ&resultIndex=7)
  - “Dr. Jain’s evidence was that there is no diagnostic test that will measure the degree of distractibility experienced by a person with ADHD”

Reasonable accommodation?

- Accommodation must not give an unfair advantage to the recipient.
Specificity of Benefits: Theory

![Graph showing test score comparison between students with disabilities and nondisabled students under standard test administration and test with accommodation.]

Specificity of Benefits: Practice

![Graph showing items attempted by typical students and students with LD under standard time, time + half, and double time.]

Reasonable accommodation?

- Lewandowski studies - more than 25% extra time gives unfair advantage
- Double time very unfair except in highly unusual circumstances.
- Pritchard et al, 2016- ADHD kids do not benefit from extra time
- May benefit from separate room, extra breaks between sections.
- EVERYONE benefits from using computer for essay-type exams.
Reasonable accommodation?

- CHEAT SHEETS!
  - Only when demonstrate that the person: 
    A) DID learn the information initially, and 
    B) cannot spontaneously recall it but improves more than 
    most other people with prompts or cues.
- PROBLEM- most memory tests do not evaluate both of 
  these!
- Confound issues of inattention, motor problems, weak 
  rate of learning with long-term memory.

Opinion from Human Rights Specialist

- Roberts (2012) concludes that:
  - “…accommodations are required at postsecondary 
    institutions to allow for equal but not enhanced participation 
    and to ensure equal opportunity but not unfair advantage 
    in demonstrating knowledge and skills. They are not 
    implemented solely to allow for improved performance 
    and may not always be appropriate if specific task 
    demands cannot be altered due to essential or bona fide 
    requirements or where there is no interaction between 
    impairment and task demands”. (p. 79).

Human Rights Tribunal Agrees!

- Purpose of granting accommodations to test takers at PSE “is 
  most certainly not to help them do the best they can do; they 
  are designed to equalize the competition.”
- “[a]ccommodation does not alter the academic standards by 
  which success in a course is determined” [at para 45].

[http://www.canlii.org/en/on/onhrt/doc/2012/2012hrto1195/2012hrto1195.html?searchUrlHash=AAAAAQASKdW5pdnVyc2hveQAAAAAB&resultIndex=16]
Accommodations are not meant to ensure success

- Human Rights Tribunal has made clear that there is no requirement that academic standards be reduced or ignored in order to provide accommodation.
- Aim of accommodation is to provide otherwise qualified students with an equal opportunity to meet legitimate academic standards.
- [http://www.canlii.org/en/on/onhrt/doc/2012/2012hrt0715/2012hrt0715.html](http://www.canlii.org/en/on/onhrt/doc/2012/2012hrt0715/2012hrt0715.html)
- Accommodations ensure ACCESS not SUCCESS

Diagnosis alone does not compel accommodation

- Bibber vs. NBOME
- Must show that symptoms cause functional limitation
- Determined relative to most other people in general population
- Limitations must exist even after medication/compensatory strategies used.

Common problems with documentation

- Overinterpret normal variation in scores
  - One or two low scores blown out of proportion
  - Misinterpret normal scores as impaired
- Don’t employ appropriate norms
- Make scoring errors
- Use significance as a diagnosis
One or two low scores are blown out of proportion

- Reports that make a big deal of one or two low subtest scores or one low test score

Misinterpretation of normal variability in performance

- All people have variability in cognitive functioning.
- Higher you go in IQ, greater that variability is.

### Table 3: Percentages of normative participants with 15 or more, 16 or more, and 17 or more point discrepancies between WASI II Index scores

<table>
<thead>
<tr>
<th>Subtest</th>
<th>15 points</th>
<th>16 points</th>
<th>17 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceptual Speed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing Speed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal Comprehension</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptual Reasoning</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Processing Speed</td>
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<td>Processing Speed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Prevalence of low subtest scores on the WAIS-III/WMS-III across different cutoffs.

<table>
<thead>
<tr>
<th>1 sd</th>
<th>10th percentile</th>
<th>5th percentile</th>
<th>2 sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>63.3</td>
<td>46</td>
<td>28</td>
<td>14</td>
</tr>
</tbody>
</table>

Iverson & Brooks, 2008

Misinterpretation of normal variability in performance

- Zakzanis & Jeffay (2011) showed that, depending on tests given, up to half of university professors have at least two cognitive test scores below average.
- Conclude that cognitive variability (and even a few impaired scores) alone cannot be used to determine disability or impairment.

Increased number of tests increases chances of low test scores

- More tests you give, greater chance of a few low scores just by chance alone.

• Misinterpretation of normal variability in performance
• All people have variability in cognitive functioning.
• Higher the IQ, greater the variability.
How do you define impairment?

- Scores below 16th percentile?
- Scores below 10th percentile?
- 5th percentile?
- 2nd percentile (2 SD below normal)?

DSM-5

- Mild Cognitive Impairment (MCI)
  - “Impairment must be present in 1 or more cognitive domain”
  - performance typically lies in the 1-2 standard deviation range (between 3-16th percentile)
- Major Neurocognitive Disorder (Dementia)
  - performance is typically two or more standard deviations below appropriate norms (e.g. 3rd percentile or below)
- For both, no indication as to how many scores, in which domain

Neuropsychological Assessment Battery (NAB)

- Takes approximately 3.5 hours to administer
- 24 tests
- 36 primary test scores
- Many additional test scores
5 NAB Domain Scores (M=100;SD=15)

- Attention (and processing speed, av of 11 scores)
- Language (av of 5 scores)
- Learning and Memory (av of 10 scores)
- Spatial Skills (av of 6 scores)
- Executive Functioning (av of 4 scores)

Wait, it gets worse

- What if a clinician defined impairment based on a SINGLE "abnormal" test score?

NAB-main subtests

- Take main battery
- Norms=age, education and sex adjusted
- Total of 18 tests and 23 scores
Conclusion?

- Having a few subtest scores on any flexible test battery that fall within the impaired range is neither unusual nor unexpected, and certainly not diagnostic of any type of disability or functional impairment.

Binder et al., 2009; Iverson & Brooks, 2008; Brooks & Iverson, 2010

Common problems with documentation

- Don’t use appropriate tests
- Don’t employ appropriate norms
- Scoring errors
- Use significance as a diagnosis
- Fail to take good history
- Forget to use all of DSM criteria
- Fail to show how person is impaired
- Fail to use common sense
- Recommend +accommodations, many of which unrelated to persons strengths & weaknesses

Forget about dx: How does the impairment disable the person?

- Issue is: where is inequitable opportunity to participate due to impact of disability?
- Do documented impairments match with real world behaviors?
- One test result on one day is not the same as a lifetime of performance
- Test scores and real world impairment
- Are the test scores trustworthy/accurate?
Clinical vs statistical significance

• Lots of reports note that two scores are “significantly different”
• That does not mean it is clinically meaningful.
• Statement only means that the difference between the two scores did not occur by accident- i.e. it is a real difference.
• Does not mean it is diagnostic

Clinical vs statistical significance

• Because of large sample size for many tests, small group differences are found to be “statistically significant”.
• Eg. 15 point difference between VCI and PRI on the WAIS is “statistically significant” for someone with IQ of 120, but clinically meaningless- 36% of normal, unimpaired people have this difference.
Regression to mean

• Difference between IQ and achievement increases as IQ increases due to regression to mean. (Reynolds & Wilson, 1984; Sternberg & Grigorenko, 2002)
• Normally find much lower achievement than IQ when IQ above average.
• Correlation between IQ and achievement test influences effect
• Why cannot use IQ-Achievement discrepancy to diagnose LD

Effects of Correlation Regression to the Mean

The Advocacy Mentality

• What accommodations might “help” the client?
• What might raise the client's test scores?
• What might make the client more comfortable during an exam?
• What might aid in the client's therapeutic progress?
• What might alleviate the client's anxiety about exams?

NOT RELEVANT REASONS FOR PROVIDING ACCOMMODATIONS UNDER HUMAN RIGHTS
Anxiety (Test)

- Is there a disorder? What is it?
- What is the functional limitation in a major life activity?
- What is an appropriate accommodation if there is no skill deficit?
- Separate room? Breaks to compose oneself?
- Extra time is always requested, but why? To reduce anxiety? Who doesn’t get nervous for big tests?

What accommodations must be provided?

- Dx alone does not mean person requires accommodation.
- Nexus of impairment and task demands
- Should be reasonable and not give unfair advantage
- Purpose is to provide someone who is otherwise qualified with an equal opportunity to participate.

Is it fair?

- Some colleges provide double time to ALL students with disabilities for ALL classes
- Ontario High School’s motto is student success-so anyone who is not succeeding can get an IEP
- HS curriculum can be modified to ensure success & Principal can authorize regular credit.
- Some boards have 1/3 students on IEPs
- Clinicians give diagnosis that is wanted rather than diagnosis that is warranted
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Is it fair?

• Evaluations of those getting extra time on SAT show majority come from upper class neighbourhoods and attended private schools, while those in low SES neighbourhoods comprised very small % of disabled test takers (e.g. Abrams, 2005; California State Auditor Board, 2008; Mitchell, 2012; Rado, 2012).
• Unlike physical or medical disabilities, studies show proportion of those labeled LD correlates with parental income and education (e.g. Lester & Kellman, 1997)

Where to turn if you have issues?

• Free consultation with RARC staff
• Lobby MAESD to start up PACT again
• Complain to college of Psychologists/ CPSO