The Benefits of a Neuropsychological Evaluation

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Overview

- What is Neuropsychology (NP)?
- How NP Evaluations Differ from School Evaluations
- Who Can Benefit from an NP Evaluation?
- The Evaluation Process
- Benefits of NP Evaluations
- Resources

Alphabet Soup

- ABA = Applied Behavior Analysis
- CBT = Cognitive Behavioral Therapy
- CST = Child Study Team
- DBT = Dialectical Behavioral Therapy
- DSM-5 = Diagnostic and Statistical Manual, 5th Edition
- IEP = Individualized Education Program
- PCIT = Parent-Child Interaction Therapy
- PMT = Parent Management Training
What is Neuropsychology (NP)?

Neuropsychology

A science concerned with analyzing brain-behavior relationships through utilization of standardized test measures

Uses of Neuropsychology

Evaluate
- Neurocognitive capacity
- Strengths and weaknesses

Diagnostic
- Identify disorder/disease
- Increase validity of diagnostic impressions

Treatment
- Monitor outcomes
- Decision for surgery
Terms Used in Neuropsychology

TESTING
- Administration of specially designed and standardized tools to measure specific functions or behaviors

ASSESSMENT
- Broader process that includes data acquisition from a wide range of sources (e.g., history taking) to supplement direct testing and support case formulation

EVALUATION
- Principal summary process that incorporates all preliminary steps, leading to well-formed conclusions and recommendations for management or treatment

How Neuropsychological Evaluations Differ from School Evaluations

Referral Question

Psycho-Educational
- To determine appropriateness of services
- Is the student eligible for services and/or special education?

Neuropsychological
- Diagnostic-focused
  - Does my child have…?
- To obtain a comprehensive understanding of neurocognitive functioning
  - Why is my child struggling with…?
Domains Assessed

Psycho-Educational
- Overall intelligence
- Academic skills
- Behavioral or emotional functioning (as needed)

Neuropsychological
- Overall intelligence
- Academic skills
- Language
- Motor skills
- Attention and executive function
- Learning and memory
- Behavioral or emotional functioning
- Social functioning

Outcomes

Psycho-Educational
- No diagnosis given
- Determine eligibility for related services, supports, or special education based on state and/or federal criteria
- Looking for educational impact/adversity

Neuropsychological
- Diagnosis given, if warranted based on clinical DSM-5 criteria
- Recommend interventions
  - In-school: Related services, supports, or special education
  - Out-of-school: Private tutor or therapist
- Looking for clinical impact/distress

Who Can Benefit from a NP Evaluation?
ANYONE!

- Pediatrics
  - Toddlers
  - School-age children
  - Adolescents
  - College/Young Adults
- Adults
- Geriatric population

Common Pediatric Referrals

- To explain low academic achievement
  - Does my child have a learning disability?

- To differentiate among coexisting disorders (i.e., inattention vs. anxiety vs. a specific learning disorder?)
  - Why can’t my teen focus?

Common Pediatric Referrals

- Suspicion of low cognitive abilities
  - Is there an intellectual disability?

- Determine if emotional factors explain or exacerbate underachievement
  - My child was a straight A student before COVID. Why is he/she struggling now?
  - I’ve noticed my teen’s anxiety and tics have increased around school. Do they need accommodations?
Common Pediatric Referrals

- To identify social or communication difficulties
  - My teen has trouble making friends. Why?
  - Why can’t my child keep up in conversations?

- To understand behaviors
  - Why does my teen have trouble adjusting to changes?
  - My child has so many tantrums each day. Why?

Common Pediatric Referrals

- In the context of medical conditions
  - What is my teen’s neurocognitive functioning like given his/her epilepsy? Genetic condition?
  - What is my child’s neurocognitive functioning like after cancer treatment? Concussions or Traumatic Brain Injuries (TBIs)?

- To describe an individual’s strengths and weaknesses to tailor recommendations
  - Does my teen need extra time on tests?
  - How can we prepare for my child’s future? For my teen in college?

Common Pediatric Outcomes

- Attention-Deficit Hyperactivity Disorder (ADHD)
- Specific Learning Disorder (SLD)
- Autism Spectrum Disorder (ASD)
- Nonverbal Learning Disability (NVLD)
- Global Developmental Delays
- Language Disorder
- Developmental Coordination Disorder (DCD)
- Social Communication (Pragmatic) Disorder
- Mood-Related Disorder (anxiety, depression)
- Behavior-Related Disorder (oppositional, defiant, impulsive, compulsions)
- Adjustment Disorder

Morin (2019)

Baron, 2004
The Evaluation Process

General Overview

Concerns arise
- At home or in school

Referral from doctor
- Pediatrician or neurologist

NP Intake
- Interview with parent (and child/teen)

NP Paperwork
- History and consents

NP Testing
- ~2 to 9 hours, total
- Across ~1 to 4 days

NP Scores/Writes
- Tests are scored
- Report is written

Interventions
- At home or in school

NP Feedback
- Report and findings provided

Information Gathering

- Understand the referral question.
  - Chart review
  - Record requests
  - Clinical intake/interview
  - Collateral reports
- Define the problem.
  - What are some examples?
- Develop a timeline.
  - When did the problem start? When was it at its worst? Have the problems changed over time? What made it better?
- Understand the impairment, if any.
  - How distressing is the problem? How does it affect day to day functioning?

Information Gathering

- Select and administer battery of tests.
  - Consider the referral question, patient’s age, test norms, etc.
  - ~2 to 9 hours testing, across ~1 to 4 days
  - Note behavior observations.
- Score tests.
- Collect all sources of information.
  - Caregiver or therapist interviews, Teacher rating scales, etc.

Assessment Process

<table>
<thead>
<tr>
<th>Domain</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual</td>
<td>Cognitive ability to problem-solve</td>
</tr>
<tr>
<td>Language</td>
<td>Receptive, Expressive, Fluency, Pragmatics</td>
</tr>
<tr>
<td>Visual-Spatial and Motor Skills</td>
<td>Perceptual reasoning, Spatial knowledge, Fine and gross motor, Graphomotor skills</td>
</tr>
<tr>
<td>Attention and Executive Functions</td>
<td>Attentional control, Planning, Mental flexibility, Time management, Inhibition, Working memory, Self-monitoring, Impulsivity</td>
</tr>
<tr>
<td>Memory and Learning</td>
<td>Verbal and visual, Rote and semantic</td>
</tr>
<tr>
<td>Academic Skills</td>
<td>Phonological processing, Reading, Writing, Math</td>
</tr>
<tr>
<td>Emotional and Behavioral Skills</td>
<td>Emotional regulation, Anxiety, Depression, Anger, Aggression, Defiance, Repetitive behaviors, Rigidity</td>
</tr>
<tr>
<td>Social</td>
<td>Interpersonal relationships, Social skills, Adaptive skills, Social awareness and reciprocity, Interests</td>
</tr>
</tbody>
</table>

Gallagher & Vekaria (2013)
Report Writing

- Integrate data.
- Consult as needed.
- Conceptualize case as a whole.
  - Find the "red thread" through data.
- Develop recommendations across settings as needed.
  - Practical and should align with data.
  - Identify ways to support patient in real life.

Deliver the Results

- Provide feedback.
- Offer resources (e.g., books, websites).
- Send report to family.
  - Encourage them to share with school or providers as needed.

Benefits of NP Evaluations
Benefits

- Determine current functioning.
  
  How is my child performing now compared to same-aged peers?
  
  - Provides a “snapshot” in time of current abilities or functional capacity
  - Can use as a baseline to monitor future changes in neurocognitive functioning
  - Gain insight into how person learns and processes information

Benefits

- Identify strengths and areas of difficulty.
  
  Why is my child struggling to keep up with their peers?
  
  - Looks at a wide range of skills to see where underlying difficulties may be
    - Trouble finishing tasks on time?
      - Anxiety?
      - Slow processing speed?
      - Distractibility?
      - Weak executive functions?
    - Trouble reading fluently?
      - Anxiety?
      - Slow processing speed?
      - Dyslexia?

Benefits

- Obtain diagnostic clarity.
  
  Does my child have…?
  
  - Provides answers about ruling in or ruling out certain diagnoses
    - Validation or confirmation
    - Helps guide treatment
Benefits

- Provide direction to families.

  What do we do next?

  - Offers guidance about what services or supports may be needed in school or at home
  - Connects families to resources
  - Informs treatment planning

Common School Recommendations

- Section 504 Plan or IEP
  - Class placement
  - Reading, writing, or math intervention
  - Functional Behavior Analysis (FBA)
  - Behavior Intervention Plan (BIP)
  - Behavior paraprofessional/aide
  - Speech, occupational, or physical therapies
  - Individual and/or group counseling
  - Social skills groups
  - Extended School Year (ESY)

Common School Recommendations

- Accommodations
  - Extra time
  - Tests read aloud
  - Testing across multiple days
  - Use of assistive technology
  - Foreign language waiver
  - Reduced workload
  - Use of a calculator
  - Typing or dictating instead of writing
**Common Treatment Recommendations**

- **Interventions**
  - Mental health therapy (CBT, DBT, intensive programs)
  - Behavior therapy (ABA, PCIT, PMT)
  - Medication consultation
  - Private tutoring
  - Private speech, occupational, or physical therapies
  - Executive function (EF) coaching
  - Vocational or life coaching
  - Social skills groups
  - Support groups for patient and/or parents

**Common Home Recommendations**

- **At-Home Strategies**
  - Ways to stay organized
  - How to break down and prioritize tasks
  - Reading, writing, or math activities
  - Visual-spatial exercises
  - Behavior management tips
  - Coping skills
  - State-funded or other eligible programs
  - Relevant books and websites

**Resources**

- [NeurAbilities Healthcare](#)
Referrals


- Find a NY-Based NP: https://the-nysan.org/find-neuropsychologist

- Find a Pediatric NP (Nationwide): https://theaapdn.org/provider.html

- Find an Adult or Pediatric NP (Nationwide): https://theaacn.org/directory

Resources

- NeurAbilities Neuropsychology: https://neurabilities.com/neuropsychology/

- How to Talk to Your Child about Testing: https://drlizangoff.com/assessments/talking-to-your-child-about-testing/

- CMI Family Resources: https://childmind.org/education/#family-resource-center

- Kids Health: https://kidshealth.org/

- Understood: https://www.understood.org/

Q & A

Thank you for your time!
References