Neuropsychological Assessment Report

The NP Assessment Report

- Identifying Information & Presenting Problem
- Background
- Symptoms & History
- Clinical Interview & Mental Status Exam
- Neuropsychological Test Results
- Interpretation & Diagnosis
- Recommendations

Identifying Information & Presentation

- Who is this person
  - identifying information

- Why are they receiving a NP assessment?
  - chief complaint
  - reason for referral
  - desired outcomes

Background : Symptoms & History : Family

- Family background - Parents, relatives and children
  - history of similar illnesses, other illnesses
    - development of symptoms
    - response to treatment
  - educational & occupational achievement
  - genetic issues

Background : Developmental

- Developmental
  - birth
  - early childhood milestones
  - education
    - primary
    - secondary
    - post-secondary
    - learning disabilities
  - psychosocial milestones
    - relationships, offspring...

Background : Symptoms & History

- Sx and Hx
- Course of symptoms
  - insidious vs. acute
  - episodic vs. chronic
  - subjective
  - objective
  - treatment
  - compensation
  - consequence

Behavioral Observation

- Observation
  - direct
  - third-party
  - behavioral assessment
- Clinical Interview
  - Mental Status Exam...

MSE : Mental Status Exam

- Structured, systematic observation of a person's behavior during the interview
- Major Areas
  - Appearance & Behavior
  - Thought Processes (and Speech)
  - Mood & Affect
  - Intellectual functioning
  - Sensorium & Orientation

Neuropsychological Test Results

- Issues
  - Qualitative vs. Quantitative...
  - Norms & premorbid functioning...

Quantitative Data

- Pros
  - standardized
  - replicable
  - precision, accuracy, reliability & validity
    - can be estimated
  - bias : reduced
  - science
- Cons
  - impersonal
  - penalizes individual differences / creativity
  - may miss important clues
  - sensitive but perhaps not specific
    - Example: poor performance on Trails B - why?

Qualitative Data

- Pros
  - personal
  - individualized
  - detailed
  - pathognomonic - *latin, pathos: disease, gnomon: judge*
  - explains Why or How
    - may suggest compensation strategy
  - art
- Cons
  - biased, arbitrary
  - cultural issues
  - subject to over-interpretation
  - limited reliability, validity, precision and accuracy

Interpretation

- Establish premorbid functioning
- Compare current functioning to premorbid
- Explain in context of symptoms & history
- Diagnosis

Recommendations

- Based on diagnosis and interpretation
  - describe Prognosis
    - immediate
    - recovery
    - long-term
    - social
    - vocational
  - recommend clinical interventions
    - medical
    - psychological
  - recommend compensations
    - operational
    - vocational
    - psychosocial

Recommendations 2

- Rehabilitation
- Further NP Assessment
- Referrals to other specialists

Common Issues

- Estimating Premorbid Functioning
- Ecological Validity & Overgeneralization
- Confirmatory Bias
- Base Rates, Hit Rates, False Positives & False Negatives
- Effects of Effort & Motivation

Premorbid Functioning

- Rarely have pre-morbid test data, so must estimate it
- Demographic variables affect performance
- Use statistical normative data and adjust for
  - age, education, sex, race…
- Problems:
  - normative data : rarely detailed enough
  - definitions of "education", "race"…
  - cohort changes

Ecological Validity & Overgeneralization

- NP Testing is artificial
  - at one place
  - at one time
  - uncomfortable
  - doesn't measure ability to learn, improve, adapt

- Problems
  - "having a bad day"
  - strategy: accuracy vs. speed tradeoffs

- Conclusion:
  - predictions should be humble
    - "will never be able to work again" -- are we sure of this?

Confirmatory Bias

- Motivations of related parties
  - lawsuit? medical care? release from responsibility?
  - individual variations
    - most people have odd behavior if you look closely enough
    - over-pathologizing

Base rates & Hit Rates

- When the Base Rate of a disorder is very low, even using tests with very high sensitivity & specificity
  - Likely to have more False positives & False negatives than Hits

- Example:
  - if a disease is in 1/1000 patients, and your tests have 99% specificity and 99% sensitivity…
  - You will diagnose 10 of 1000 as having the disease
    - but 9 of them will not (a 90% false positive error rate!)

Effort & Motivation

- Low effort impacts performance
- What affects effort?
  - motivation
  - ability
  - fatigue
  - frustration

- Problem:
  - risk of confusing "Can't do it" with "Won't do it"
- Strategies:
  - ensure motivation, rest breaks, maintain rapport
  - symptom validity tests
    - detect malingering