A REVIEW OF CURRENT STANDARDISED ASSESSMENT TOOLS USED IN INDIVIDUALS WITH NEURODEVELOPMENTAL DISORDERS

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OVERVIEW

- Standardised assessment tools
- Common disorders – ASD & ADHD
- Evidence
- Discussion
ASSESSMENT TOOLS

- Aid with diagnosis
- Results must be reproducible
- SPECIFICITY & SENSITIVITY
- Treatment/ Complications/Prognosis
AUTISM

- **ADOS** - Autism Diagnostic Observation Schedule
- **ADI-R** – Autism Diagnostic Interview revised
- **DISCO** - The Diagnostic Interview for Social and Communication Disorders
- **3di** - Developmental, Dimensional and Diagnostic Interview
Guideline development group considered

- sensitivity and specificity of each sign or symptom,
- tools to identify an increased likelihood of ASD
- assessment tools in assessing diagnostic accuracy
Autism - studies examining ADI/ADI-R, ADOS and ADI/ADI-R plus ADOS met the pre-defined levels of accuracy.

ASD - 3di and the combination of ADI/ADI-R and ADOS met the pre-defined levels of diagnostic accuracy for all studies.
### Diagnostic tool

<table>
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<th>Diagnostic tool</th>
<th>Quality assessment</th>
<th>Summary of findings</th>
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<td>Studie s</td>
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<td>ADI/ADI-R</td>
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<td>3di</td>
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<td>ADOS</td>
<td>48; 73; 106-107; 109-113</td>
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<td>ADI/ADI-R + ADOS</td>
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The combination of ADI/ADI-R and ADOS was accurate in diagnosing autism - in preschool children - children with an intellectual disability.

 Recommendation 50
 - Do not rely on any autism-specific diagnostic tool alone to diagnose autism.
Diagnostic procedures in autism spectrum disorders: a systematic literature review
Falkmer et al (2013)

- Systematic review addressing the accuracy, reliability, validity and utility of reported diagnostic tools and assessments

- 68 articles were included. 17 tools were assessed
Diagnostic procedures in autism spectrum disorders: A systematic literature review
Falkmer et al (2013)

- Evidence base of high quality-independent studies lacking

- ADOS & ADI-R – 80.8% accuracy in dx of ASD
  i.e. ‘Gold Standard’

- Scope for future studies on the use of the ADI-R and ADOS in combination.
EVALUATION OF THE CRITERION AND CONVERGENT VALIDITY OF THE DIAGNOSTIC INTERVIEW FOR SOCIAL AND COMMUNICATION DISORDERS IN YOUNG AND LOW-FUNCTIONING CHILDREN. MALJAARS ET AL (2012)

- DISCO, ADOS & SCQ (Social Communication Questionnaire) administered to 115 Dutch children
  - 52 children with ASD (both with and without ID)
  - 26 children with intellectual disability (non-ASD)
  - 37 without ASD or ID
MALJAARS ET AL (2012)

- High sensitivity and specificity for DISCO in differentiating ASD from non-ASD
- Children with a moderate or severe ID,
  - sensitivity was equally high, but specificity was significantly lower

- DISCO over inclusive in diagnosing ASD compared to ADOS in children with moderate to severe levels of ID
ADHD

- **DIVA 2.0** - Diagnostic Interview for Adult ADHD

- **CAADID** - Conners Adult ADHD Diagnostic Interview for DSM-IV
An observational case-control study was conducted on 691 patients referred from Primary care/Paediatric care for ADHD.

Stage 1
- open interview with patient
- ADHD diagnosis given according to DSM-IV criteria
RAMOS-QUIROGA ET AL 2012

- Stage 2
  - CAADID administered to all subjects
  - Conner's ADHD Rating Scale (self/observer reported),
  - ADHD Rating Scale (ADHD-RS)
  - Wender Utah Rating Scale (WURS)

- Results from CAADID compared with results from open interview and other rating scales
RAMOS-QUIROGA ET AL 2012

- CAADID compared to DSM IV diagnosis achieved sensitivity 98.86% & specificity 67.68%

- Concurrent positive correlation between CAADID and the other rating scales

- CAADID – useful tool in diagnosis
108 patients in the sample - 60 were diagnosed with ADHD

DIVA 2.0 and Adult ADHD Self-Report Scale (ASRS) v.1.1 and 8 other neuropsychological tests assessed in sample
PETTERSSON ET AL (2015)

- DIVA demonstrated good ability to discriminate between ADHD & non-ADHD groups.
  - sensitivity = 90.0; specificity = 72.9

- Variables from CPT tests can contribute to increasing the specificity by 10% if used in combination with the DIVA
CONCLUSIONS

- Diagnostic tools being used in clinical settings
- More research needed in adults (with ID too) with neurodevelopmental disorders
- No tool can be used in a vacuum
  - CLINICAL EXPERIENCE IS KEY!
DISCUSSION

- Experiences of using diagnostic tools in ASD/ADHD?
- Any other tools useful?
- Questions?