Autism, Behavioural Flexibility, and Play-Based Functional Assessment

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Behavioural Flexibility and autism

• Restricted and repetitive behaviours and interests
• Insistence on sameness and resistance to change

Cartoon by Nick Duharte
Manifestations of the behaviour

• Often results in challenging behaviour
  ▫ ranging from mild, e.g. fussing or complaining; to moderate, e.g. mild tantrums; or severe, e.g. major tantrums, aggression and screaming

• Usually occurs when the environmental context does not meet up with the child’s expectations

• Impacts on general wellbeing
Function of problem behaviour

- Often motivated by
  - A desire for attention
  - A desire for access to tangibles
  - A desire to escape
  - sensory
Investigating the function of sameness behaviour in children with autism

• Ongoing study (since August 2009):
  ▫ Aims
    • Identify the functional characteristics of a lack of flexibility
    • Extend a play based assessment
  ▫ 43 participants

• Pilot study: Play-based functional assessment
  ▫ Single subject
Function of the behaviour

• Functional analysis
  ▫ aims to identify variables that motivate problem behaviour

• Different motivating factors for different situations

• Multi-element functional analysis
Methodological Considerations

- Ecological validity
  - Natural environment and context
Pilot study: A multi-element play-based functional assessment

- Three situations arousing problem behaviour presented
  - Item missing
  - Mistake
  - Activity interrupted
- Counterbalanced with four motivating variables
  - Attention
  - Escape
  - Tangible
  - Sensory
- A preference assessment was conducted prior to play sessions to establish preferred tangible items

Inter-rater reliability was obtained on 50% of item presentations with 100% agreement
Play-based assessment

<table>
<thead>
<tr>
<th>Play data</th>
<th>Behavioural data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play</td>
<td>Behaviour</td>
</tr>
<tr>
<td>▫ Experimenters toys (choice of 5 games)</td>
<td>▫ No problem — not a problem at all</td>
</tr>
<tr>
<td>▫ Natural play: outside/inside play of own choice; i.e. using child’s own toys or spontaneous play</td>
<td>▫ mild problem — short lived fussing or complaining</td>
</tr>
<tr>
<td>▫ Other’s included in play: e.g. parent/carer, sibling</td>
<td>▫ moderate problem — mild tantrum</td>
</tr>
<tr>
<td></td>
<td>▫ severe problem — major tantrum</td>
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• Tactic
  ▫ Tolerance/problem solving
Results: Indirect assessments (single subject)

- **Vineland Adaptive Behavior Scale (2nd Ed)**  
  adaptive behaviour composite: 95  
  Strengths = written language, coping skills  
  Weaknesses = receptive language, socialisation

- **Sensory Profile**  
  Mainly typical performance  
  Probable difference – auditory filtering

- **Aberrant Behavior Checklist subscale scores**

- **Irritability (4); lethargy (5); stereotypy (0); hyperactivity (15); inappropriate speech (0)**

- **Childhood Autism Rating Scale:** 24.5

- **Behavioural Flexibility Rating Scale:** severity of problem  
  - Mild = 5 items  
  - Moderate = 6 items

- **Sameness Questionnaire:** extent of behaviour  
  - To some degree = 3 items  
  - To a considerable degree = 1 item

- **Motivation Assessment Scale:**  
  - insistence on sameness, resistance to change  
    Self stimulatory/sensory (15); escape/avoidance (15); attention (8); tangible (15)

- **Gilliam Autism Rating Scale (2nd Ed)**  
  autism index: 70
Results: Play-based assessment

- ¾ manipulations tolerated
- No problem solving observed
- Inter-rater reliability obtained on 25% of situations with 100% agreement
Limitations

• Procedural integrity possibly compromised by inclusion of others in play
  (Hanley et al., 2003)
  • Reduced control over manipulation
  • Places questions on accuracy of identification of motivating variables

• Duration of assessment
  • Duration of natural play
  • Individual gains control via added choice-making
  • longer assessment protocols required in future
Conclusions

• Play-based assessment
  ▫ Ease of use
  ▫ Ecological validity

• Potential as a useful tool to identify the function of a lack of behavioural flexibility

• More cases required
  • Greater problems with inflexible behaviour
  • High and low functioning
  • Typical development
Thank you