Attention-Deficit/Hyperactivity disorder and Family Functioning: A 36-month longitudinal study of community-based primary school children

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Family Functioning in ADHD

- Presence of ADHD in children has been associated with difficulties in family functioning across a range of domains \(^1\)

- Family functioning variables examined individually, creating heterogeneity across sampling methods and measures \(^2,3\)

- Limited number of studies have comprehensively examined family functioning outcomes, with no known study in Australia \(^4,5\)
Subthreshold ADHD

• Subthreshold disorders:

“conditions with relevant psychiatric symptoms which do not meet the full criteria of a disorder according to the prevailing classification systems”

• Recent review concluded that subthreshold ADHD is associated with interpersonal, educational and functional impairment in children

• Less known about family functioning outcomes for this group
Aim

Compare a range of family functioning outcomes for children with ADHD, subthreshold ADHD, and non-ADHD controls from the community.
Participants & Procedure

Group Allocation

Children’s Attention Project:\textsuperscript{8}

- Participants: Children in 2\textsuperscript{nd} year of primary school, parents \& teachers recruited through 43 schools around Melbourne

Eligible screening sample (n = 5922)

Complete parent \& teacher screening data (n = 3734)

Positive Screens (n = 412)

- Consent to follow-up (n = 267)
  - ADHD criteria met (n = 179)
  - ADHD criteria not met (ST-ADHD (n = 86))

Negative Screens (n = 412)

- Consent to follow-up (n = 231)
  - ADHD criteria met (n = 179)

Diagnostic Interview Schedule for Children Version IV (DISC-IV)\textsuperscript{8} completed for case confirmation

Conner’s 3 ADHD index\textsuperscript{7} completed
Measures

• **Family quality of life**: impact of child emotional and behavioural difficulties on time for family activities, parent emotional functioning and parent time
  
  • Child Health Questionnaire (CHQ) \(^9\)

• **Psychological distress** experienced by parents
  
  • Kessler-6 (K-6) \(^{10}\)

• **Parent-partner relationship**: Conflict and Support
  
  • Longitudinal Study of Australian Children (LSAC) \(^{11}\)

• **Negative life events**
  
  • List of Threatening Experiences Questionnaire (LTE-Q) \(^{12}\)
## Results

<table>
<thead>
<tr>
<th></th>
<th>ADHD</th>
<th>ADHD-ST</th>
<th>Control</th>
<th>ADHD vs Control</th>
<th>ADHD-ST vs Control</th>
<th>ADHD vs ADHD-ST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>β</td>
<td>p</td>
<td>β</td>
</tr>
<tr>
<td><strong>Family quality of life</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aFamily activities</td>
<td>60.6 (24.7)</td>
<td>74.6 (24.3)</td>
<td>84.6 (18.3)</td>
<td>-.31</td>
<td>&lt;.001</td>
<td>-.12</td>
</tr>
<tr>
<td>aParent emotional functioning</td>
<td>48.6 (27.9)</td>
<td>59.3 (26.7)</td>
<td>76.3 (22.5)</td>
<td>-.35</td>
<td>&lt;.001</td>
<td>-.21</td>
</tr>
<tr>
<td>aParent’s time</td>
<td>68.4 (28.9)</td>
<td>73.5 (29.3)</td>
<td>88.3 (18.1)</td>
<td>-.27</td>
<td>&lt;.001</td>
<td>-.20</td>
</tr>
<tr>
<td>aParent distress</td>
<td>5.9 (4.9)</td>
<td>4.8 (4.5)</td>
<td>3.1 (2.9)</td>
<td>.21</td>
<td>&lt;.001</td>
<td>.13</td>
</tr>
<tr>
<td>aStressful life events</td>
<td>0.82 (1.2)</td>
<td>0.66 (1.0)</td>
<td>0.62 (1.2)</td>
<td>.05</td>
<td>.42</td>
<td>.01</td>
</tr>
<tr>
<td>bCouple Relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>12.9 (2.1)</td>
<td>13.1 (1.9)</td>
<td>13.6 (1.7)</td>
<td>-.10</td>
<td>.19</td>
<td>-.07</td>
</tr>
<tr>
<td>Conflict</td>
<td>9.1 (3.1)</td>
<td>8.6 (3.2)</td>
<td>7.9 (2.6)</td>
<td>.13</td>
<td>.08</td>
<td>.07</td>
</tr>
</tbody>
</table>

a N = 477 (imputed data). b N =268 (not imputed data).

Analyses adjusted for child age, child sex, parent education, externalising co-morbidities and single-parent family.
• Families of children with ADHD and ST-ADHD experience lower QoL and greater parent distress compared to families of children without ADHD

• More attention to parent mental health and focus on family quality of life as outcomes measures in intervention studies is needed and inclusion of children with ST-ADHD\textsuperscript{13}

• Longitudinal research is needed to identifying modifiable predictors of FQoL and parent distress overtime
  • We will be looking at this in our next Aim
Thank You!
References


References


References


## Sample Characteristics

### Baseline

<table>
<thead>
<tr>
<th></th>
<th>ADHD ((^a)n = 179)</th>
<th>ADHD-ST ((^b)n = 100)</th>
<th>Non-ADHD ((^c)n = 212)</th>
<th>(P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>10.5 (0.4)</td>
<td>10.5 (0.5)</td>
<td>10.5 (0.4)</td>
<td>.38</td>
</tr>
<tr>
<td>Boys, n (%)</td>
<td>48 (48)</td>
<td>124 (69.3)</td>
<td>135 (63.7)</td>
<td>.002</td>
</tr>
<tr>
<td>ADHD symptom severity, mean (SD)</td>
<td>13.7 (4.0)</td>
<td>8.8 (4.4)</td>
<td>1.3 (1.9)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Externalising co-morbidities, n (%)</td>
<td>97 (54.2)</td>
<td>24 (24)</td>
<td>17 (8.0)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Parent did not complete high school, n (%)</td>
<td>62 (37.1)</td>
<td>25 (27.5)</td>
<td>37 (18.3)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Single-parent family, n (%)</td>
<td>42 (25.2)</td>
<td>14 (15.4)</td>
<td>23 (11.4)</td>
<td>.002</td>
</tr>
</tbody>
</table>

\(^a\)n range = 167 to 179. \(^b\)n range = 91 to 100. \(^c\)n range = 202 to 212
Limitations

• Cannot infer causality
  – Reciprocal relationship between family functioning and ADHD

• Parent ADHD symptoms not taken into account
  – Potential confounding effects on parent distress and family quality of life

• Single-informant reports on family functioning
  – Parent ADHD symptoms not taken into account
Analyses

• T-tests and Chi-square

• Linear regression analyses

• Missing data
  • Multiple imputation

• Covariates: parent education, age, externalizing co-morbidities, single parent, gender
Outcomes

- Parent psychological distress
- Family QoL – subjective measure
  - Impact of child functioning on family activities
  - Impact of child behavior on parent time
  - Impact of child behavior on parent’s emotional time
- Couple relationship
  - Parent and partner relationship conflict
  - Parent and partner relationship support
- Stressful life events
- Age: 7.3 years
- Conners ADHD index
- Diagnostic Interview Schedule for Children Version IV (DISC-IV)
- Socio-demographic measures: Parent education, age, gender, single-parent status