Understanding Anxiety Disorders in Young Children

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Disclosures

- Our pilot study was funded by an Endowment Fund Grant, from the Hospital for Sick Children, Toronto;
- Our second multi-site study was funded by an Ontario Mental Health Foundation (OMHF) Grant (PI Suneeta Monga)
Learning Objectives

1. Recognize manifestations of anxiety disorders in young children;
2. Appreciate the impact of anxiety disorders in young children;
3. Understand treatment approaches in anxious, young children.
Anxiety is Normal and Beneficial!
Anxiety Disorders in Young Children

- Anxiety Disorders are highly prevalent disorders
- Especially in younger children, Anxiety Disorders are poorly recognized, not diagnosed or mis-diagnosed
- Anxiety Disorders cause interference in a child’s day to day functioning
  - Important to distinguish normative anxiety from an Anxiety Disorder
- Although some Anxiety Disorders can remit, many young children have significant anxiety that requires treatment
Big Fears in Young Kids

“Anyone who has never made a mistake has never tried anything new”

Albert Einstein

“If you never try anything new you can be perfect”

Michaela 6 year old girl
Recognizing the Anxious Child

- Shy, quiet
- Perfectionistic
- Difficulty with sleep
- Picky, fussy eaters
- Somatic Complaints
  - Stomachaches, headaches
- Difficulty trying new things
- Moody, irritable
- May require a lot of reassurance
- Restless, tense
- Sensitivity
  - Emotional & / or sensory
Types of Anxiety Disorders

- Specific Phobias - fear of specific objects
- Separation Anxiety Disorder - worry about separation
- Generalized Anxiety Disorder - “worry warts”
- Social Anxiety Disorder - worry about embarrassment or humiliation
- Selective Mutism - anxiety prevents child from speaking
- Panic Disorder - overwhelming anxiety ‘out of the blue’
- Obsessive Compulsive Disorder - repetitive worry and ritualistic behavior to prevent the worry
Treatment of Anxiety Disorders

- Full psychiatric assessment is required
- Psycho-education may be helpful for mild disorders
- Cognitive Behavioural Therapy (CBT) is the treatment of choice for Anxiety Disorders in children older than 8 years
  - Kendall et al., 1994 - Coping Cat
  - Mendlowitz et al., 1999 - Involvement of parents
  - Manassis et al., 2002 - Individual vs. Group CBT
- Although Child/Adolescent Anxiety Multimodal Study (CAMS, 2010) indicates use of medications can be helpful, parents are often reluctant to use them especially in young children
Cognitive Behavioural Therapy (CBT)

- A type of talk therapy that addresses the connection between our feelings, thoughts and behaviors
- Teaches children to recognize and identify their feeling states
- Teaches children simple relaxation strategies
- Teaches children some simple cognitive strategies
  - Identifying their worry thought and determining how realistic, or appropriate it is
  - Helping children utilize more adaptive thoughts
Development of “Taming Sneaky Fears Program”

- Program specifically developed for the young, anxious child aged 5 to 7 years
  - Stories, games and crafts to teach CBT strategies were developed with the young child in mind
- 1 parent only group session followed by 10 weekly one-hour group sessions for parents and children running separately but concurrently
- Parent group focuses on psycho-education and teaching relaxation and desensitization strategies to help their child confront rather than avoid fears
Engaging children was critical!
Child Program

- Structure to each child session
  - Circle Time
  - Story Time
  - Craft Time
  - Snack Time
- Initial focus on identifying and recognizing feeling states
- Teaching of relaxation strategies, and simple cognitive strategies – the weapons to tame “Sneaky Fears”
“Sneaky Fears”

- Externalization & labeling of anxiety
- Secret Weapons to Battle “Sneaky Fears” include:
  1. Balloon Breathing
  2. Spaghetti Arms & Toes
  3. Talking to an adult
  4. Ignoring “Sneaky Fears”
  5. Thinking Brave Thoughts
Outcome Measures

- Anxiety Disorders Interview Schedule for DSM-IV: Parent Version (ADIS-P; Silverman & Albano, 1996)
  - Semi-structured interview used to generate study diagnoses

- Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1997)
  - 41 item parent report (& child self-report) screens for anxiety symptoms (5 factors)

- Children’s Global Assessment Scale (CGAS; Shaffer et al., 1983)
  - Clinician rating of children’s adaptive functioning on 100 point scale

- Revised Connors Parent Rating Scale: Long Version (CPRS-RL; Connors et al., 1998)
  - 80 items screen for behavioural symptoms (total of 7 factors) – 3 of which were utilized: A = Oppositional Subscale; D= Anxious/Shy Subscale; & G= Psychosomatic Subscale
Pilot Study Demographics

- Sample Demographics:
  - N=32 (13 males); mean age = 6.51 yrs;
  - 84% Caucasian; 13% Asian; 3% African

- Primary Diagnoses:
  - Social Anxiety 38%; Separation Anxiety 22%; Generalized Anxiety 22%; Selective Mutism 18%

- 62.5% had two or more anxiety disorders

- Data Analyses:
  - Paired two-tailed t-tests on pre & post group parent ratings on various scales using time as dependent variable
  - Effect size calculated using Cohen’s d
  - Repeated ANOVA’s to test for possible interactions and main effects on variables gender, age and temperament with no significant effects found
# Pre-Group vs. Post-Group SCARED Outcome Measure

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre/Post Group</th>
<th>Mean</th>
<th>SD</th>
<th>T</th>
<th>Df</th>
<th>P value</th>
<th>Effect Size (Cohen’s d)</th>
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<tbody>
<tr>
<td>Factor 1 (Panic/Somatic)</td>
<td>Pre</td>
<td>3.7</td>
<td>3.8</td>
<td>0.75</td>
<td>28</td>
<td>0.46</td>
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<tr>
<td></td>
<td>Post</td>
<td>3.1</td>
<td>3.4</td>
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<td>Factor 2 (Gen. Anx.)</td>
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<td>3.87</td>
<td>28</td>
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<td>0.51</td>
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<td></td>
<td>Post</td>
<td>7.5</td>
<td>3.9</td>
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<tr>
<td>Factor 3 (Sep. Anx.)</td>
<td>Pre</td>
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<td>4.1</td>
<td>3.09</td>
<td>28</td>
<td>0.005*</td>
<td>0.46</td>
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<td></td>
<td>Post</td>
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<td>3.9</td>
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<td>Factor 4 (Soc. Anx.)</td>
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<td>Post</td>
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<td>Factor 5 (School Refusal)</td>
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<td>2.9</td>
<td>2.4</td>
<td>4.35</td>
<td>28</td>
<td>0.01*</td>
<td>0.63</td>
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<tr>
<td></td>
<td>Post</td>
<td>1.7</td>
<td>1.9</td>
<td></td>
<td></td>
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<tr>
<td>Total Score</td>
<td>Pre</td>
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<td>13.3</td>
<td>3.76</td>
<td>28</td>
<td>0.001*</td>
<td>0.64</td>
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<tr>
<td></td>
<td>Post</td>
<td>25.2</td>
<td>12.5</td>
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</tbody>
</table>

* significant at $p = 0.01$

SCARED - Screen for Child Anxiety Related Emotional Disorders
## Pilot Study Results

<table>
<thead>
<tr>
<th>Measures</th>
<th>Pre/Post</th>
<th>Mean Group</th>
<th>SD</th>
<th>T</th>
<th>DF</th>
<th>p-value</th>
<th>Effect Size (Cohen’s d)</th>
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<tbody>
<tr>
<td><strong>t-score (n=30)</strong></td>
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<tr>
<td>Subscale A (Oppositional)</td>
<td>Pre</td>
<td>56.3</td>
<td>12.4</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>Post</td>
<td>53.9</td>
<td>11.9</td>
<td>1.42</td>
<td>29</td>
<td>0.17</td>
<td>0.19</td>
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<td>Subscale D (Anxious/Shy)</td>
<td>Pre</td>
<td>71.3</td>
<td>13.5</td>
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<td></td>
<td>Post</td>
<td>60.2</td>
<td>11.9</td>
<td>5.83</td>
<td>29</td>
<td>&lt; 0.001*</td>
<td>0.82</td>
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<td>Subscale G (Psychosomatic)</td>
<td>Pre</td>
<td>62.6</td>
<td>15.7</td>
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<tr>
<td></td>
<td>Post</td>
<td>55.9</td>
<td>11.8</td>
<td>2.73</td>
<td>29</td>
<td>0.011</td>
<td>0.42</td>
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</tbody>
</table>

* significant at p = 0.01

CPRS-R:L - Revised Connor’s Parenting Rating Scale: Long Version
Mean CGAS Change

- **Sub-Sample with 3 Time Points (N=11):**
  - Initial Assessment (IA): 49.1
  - Wait Time (Mean = 3.5 Months): 46.2
  - Post-GRP: 61.2

- **Sample with 2 Time Points (N=21):**
  - Pre-GRP: 45.6
  - Post-GRP: 55.7

**IA = Initial Assessment**

OMHF Study

- Compared Parent & Child CBT group program vs. Parent Only CBT group program at two sites (Toronto & Vancouver)
  - Total Sample n = 77 (29 males); mean age = 6.8 ± 0.8 yrs.
  - 92% Caucasian; 6% Asian; 1% Hispanic
- Parent & Child CBT n = 45 (16 males); mean age = 6.6 ± 0.7 yrs.
- Parent Only CBT n = 32 (13 males); mean age = 7.0 ± 0.8 yrs.
- 5 Research assessments:
  - Initial followed by 3 month wait time (No Treatment)
  - Pre-group followed by Post-group; 6 month & 12 month F/U
- Data Analyses: linear model adjusting for covariance structure arising from repeated measurements within subjects and adjusting for fixed effects of time, treatment group and random site effect
## OMHF Study Demographics

<table>
<thead>
<tr>
<th></th>
<th>Parent and Child CBT n = 45</th>
<th>Parent Only CBT n = 32</th>
<th>Full Sample n = 77</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Sex [n (%)]</td>
<td>16 (35.6)</td>
<td>13 (40.6)</td>
<td>29 (37.7)</td>
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<tr>
<td>Age [mean (SD)]</td>
<td>6.6 (0.7)</td>
<td>7.0 (0.8)</td>
<td>6.8 (0.8)</td>
</tr>
<tr>
<td>SES [mean (SD)]</td>
<td>56.2 (8.7)</td>
<td>49.4 (10.6)</td>
<td></td>
</tr>
<tr>
<td>Ethnicity (% Caucasian)</td>
<td>41(91.1)</td>
<td>29 (90.6)</td>
<td></td>
</tr>
<tr>
<td>Primary Anxiety Diagnosis [n (%)]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SocA</td>
<td>20 (44.4)</td>
<td>11 (34.4)</td>
<td>31 (40.3)</td>
</tr>
<tr>
<td>SAD</td>
<td>12 (26.7)</td>
<td>7 (21.9)</td>
<td>19 (24.7)</td>
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<tr>
<td>GAD</td>
<td>8 (17.8)</td>
<td>14 (43.8)</td>
<td>22 (28.6)</td>
</tr>
<tr>
<td>SM</td>
<td>4 (8.9)</td>
<td>-</td>
<td>4 (5.2)</td>
</tr>
<tr>
<td>OCD</td>
<td>1 (2.2)</td>
<td>-</td>
<td>1 (1.3)</td>
</tr>
<tr>
<td>2 or more Anxiety Disorders</td>
<td>40(88.9)</td>
<td>32(87.5)</td>
<td><strong>68(88.3)</strong></td>
</tr>
</tbody>
</table>
Change From Initial Assessment To Pre-group Assessment (Three-month Waitlist Control Period)

<table>
<thead>
<tr>
<th></th>
<th>Mean at Initial Assessment</th>
<th>Mean at Pre-Group Assessment</th>
<th>t</th>
<th>df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGAS</td>
<td>45.4</td>
<td>45.2</td>
<td>0.6</td>
<td>63</td>
<td>0.6</td>
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<tr>
<td>CSR for primary anxiety diagnosis</td>
<td>5.6</td>
<td>5.5</td>
<td>1.1</td>
<td>62</td>
<td>0.3</td>
</tr>
<tr>
<td>CPRS-R:L (Oppositional)</td>
<td>57.6</td>
<td>56.9</td>
<td>0.3</td>
<td>45</td>
<td>0.8</td>
</tr>
<tr>
<td>CPRS-R:L (Anxiety/Shy)</td>
<td>67.3</td>
<td>67.0</td>
<td>1.5</td>
<td>45</td>
<td>0.2</td>
</tr>
<tr>
<td>CPRS-R:L (Psychosomatic)</td>
<td>61.3</td>
<td>56.4</td>
<td>1.4</td>
<td>45</td>
<td>0.2</td>
</tr>
<tr>
<td>SCARED (Total)</td>
<td>31.3</td>
<td>29.2</td>
<td>1.3</td>
<td>55</td>
<td>0.2</td>
</tr>
<tr>
<td>Parent’s BAI Score</td>
<td>7.2</td>
<td>6.5</td>
<td>0.7</td>
<td>45</td>
<td>0.5</td>
</tr>
</tbody>
</table>

• Significance level: .05 CGAS = Children’s Global Assessment Scale; CSR = Clinical Severity Rating; CPRS-R:L = Revised Connor’s Parent Rating Scale: Long Version; SCARED = Screen for Child Anxiety Related Emotional Disorders; BAI = Beck Anxiety Inventory
### Change From Initial Assessment To Post-group

<table>
<thead>
<tr>
<th>Metric</th>
<th>Parent &amp; Child CBT Group</th>
<th>p-value</th>
<th>Parent Only CBT Change from Initial Assessment</th>
<th>p-value</th>
<th>Difference in Change Between Groups</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGAS</td>
<td>10.1 (8.5, 11.7)</td>
<td>&lt;.0001*</td>
<td>2.5 (0.6, 4.4)</td>
<td>0.01</td>
<td>7.6 (5.1, 10.1)</td>
<td>&lt;.0001*</td>
</tr>
<tr>
<td>CSR for primary anxiety diagnosis</td>
<td>-2.3 (-2.7, -1.8)</td>
<td>&lt;.0001*</td>
<td>-0.9 (-1.4, -0.4)</td>
<td>0.0004*</td>
<td>-1.3 (-2.0, -0.7)</td>
<td>&lt;.0001*</td>
</tr>
<tr>
<td>CPRS-R:L (Oppositional)</td>
<td>-2.8 (-5.9, 0.4)</td>
<td>0.09</td>
<td>1.5 (-2.3, 5.3)</td>
<td>0.4</td>
<td>-4.3 (-9.2, 0.6)</td>
<td>0.1</td>
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<tr>
<td>CPRS-R:L (Anxiety/Shy)</td>
<td>-7.0 (-10.5, -3.5)</td>
<td>0.0002*</td>
<td>-6.2 (-10.4, -2.0)</td>
<td>0.005</td>
<td>-0.8 (-6.3, 4.7)</td>
<td>0.8</td>
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<tr>
<td>CPRS-R:L (Psychosomatic)</td>
<td>-2.8 (-6.8, 1.3)</td>
<td>0.2</td>
<td>-2.4 (-7.3, 2.4)</td>
<td>0.3</td>
<td>-0.4 (-6.7, 6.0)</td>
<td>0.9</td>
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<tr>
<td>SCARED (Total)</td>
<td>-6.1 (-9.6, -2.6)</td>
<td>0.001*</td>
<td>-4.6 (-8.6, -0.6)</td>
<td>0.03</td>
<td>-1.5 (-6.8, 3.9)</td>
<td>0.6</td>
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<td>Factor 1 (Panic)</td>
<td>-0.5 (-1.5, 0.4)</td>
<td>0.3</td>
<td>-1.0 (-2.1, 0.02)</td>
<td>0.1</td>
<td>0.5 (-0.9, 1.9)</td>
<td>0.5</td>
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<tr>
<td>Factor 2 (GA)</td>
<td>-2.0 (-3.3, -0.7)</td>
<td>0.003</td>
<td>-0.5 (-1.9, 1.0)</td>
<td>0.5</td>
<td>-1.5 (-3.5, 0.4)</td>
<td>0.1</td>
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<td>Factor 3 (SA)</td>
<td>-1.1 (-2.0, -0.3)</td>
<td>0.01</td>
<td>-1.6 (-2.6, -0.6)</td>
<td>0.002</td>
<td>0.5 (-0.8, 1.8)</td>
<td>0.5</td>
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<td>Factor 4 (SocA)</td>
<td>-1.6 (-2.6, -0.6)</td>
<td>0.002</td>
<td>-0.6 (-1.8, 0.5)</td>
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<td>-1.0 (-2.5, 0.6)</td>
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<td>Factor 5 (SR)</td>
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<td>0.01</td>
<td>-0.9 (-1.6, -0.1)</td>
<td>0.02</td>
<td>-0.01 (-1.0, 1.0)</td>
<td>0.9</td>
</tr>
</tbody>
</table>

*.002 adjusted p-value; CGAS = Children’s Global Assessment Scale; CSR = Clinical Severity Rating; CPRS-R:L = Revised Connor’s Parent Rating Scale: Long Version; SCARED = Screen for Child Anxiety Related Emotional Disorders; Panic = Panic subscale; GA = General Anxiety Disorder subscale; SA = Separation Anxiety Disorder subscale; SocA = Social Anxiety Disorder subscale; SR = School Refusal subscale
Least Square Means of CGAS

Parent & Child CBT

Parent Only CBT

<0.001

<0.001

Pre
Post
6 Months
Conclusions

- Preliminary studies suggest that CBT may be an effective treatment for even young anxious children.
- Preliminary results suggest that teaching young children CBT may be more effective than just teaching parents CBT.
- Further analyses will help us determine the most effective treatment at longer term follow-up.
- Further replication of studies of CBT in young anxious children are clearly warranted.
QUESTIONS??