The Turtle Project:

Helping Shy Preschoolers Come Out of their Shells

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An NIMH-funded collaboration between the Departments of Psychology & Human Development at the University of Maryland* (PIs: Drs. Chronis-Tuscano & Rubin)
Outline for talk

1. Description of treatment development in the university setting (NIMH R34)

2. Preliminary results of RCT

3. Considerations for effectiveness, transportability, and dissemination

Funding Source: NIMH R34 MH083832-01A2 (to Drs. Chronis-Tuscano & Rubin)
Behavioral Inhibition (BI)

- A biologically-based temperamental style in which young children consistently respond to novel stimuli, including unfamiliar situations, objects, and people, with negative emotion and withdrawal
  (Fox, Henderson, Marshall, Nichols, & Ghera, 2005; Hirshfeld-Becker et al., 2008; Kagan, 1997)

- Stable BI is risk factor for later anxiety disorders, and particularly social anxiety disorder
  (Hudson, Dodd, & Bovopoulous, 2011; Hirshfeld-Becker et al., 2007; Muris, van Brakel, Arntz, & Schouten, 2011)
Need for Developmentally-Grounded Treatment

- Few treatment studies for very young children, despite early presence and stability of BI

- Downward extensions of CBT for children ages 4 – 7 with anxiety
  - Parent only and parent-child CBT sessions for children ages 4 - 7 (17.1 mean sessions; Hirshfeld-Becker, 2010)
  - Parent and child CBT (parallel groups) for children ages 5 - 7 (12 sessions; Monga et al, 2009)
Parent Child Interaction Therapy (PCIT)

- PCIT is an empirically supported treatment for children ages 2 to 7 with Disruptive Behavior Disorders
  - Two phases: Relationship enhancement and behavior management
  - Uses in-vivo coaching to assist parents in skill mastery

- PCIT previously adapted for children with Separation Anxiety Disorder
  - Addition of Bravery Directed Interaction (BDI) phase for exposure in anxious situations

(Choate, Pincus, Eyberg, and Barlow, 2005; Eyberg, 1999; Pincus, Eyberg & Choate, 2005; Pincus, Santucci, Ehrenreich, & Eyberg, 2008)
Program Development: The Turtle Project

- Developmentally-grounded: Parallel extension of PCIT with BDI phase

- Concurrent parent and child groups allow for in-vivo coaching and exposure practice with unfamiliar peers and adults
Intervention Format

- 8 sessions, 1.5 hours weekly
- 5-6 families per group
- Concurrent parent and child groups
  - 2 parent group leaders &
    - 2 child group leaders
- Three Phases
  - Child Directed Interaction
  - Bravery Directed Interaction
  - Parent Directed Interaction
PARENT GROUP
First phase: Child Direction Interaction

- Positive attention skills and differential attention to encourage and increase independence, flexibility, and social skills

- Parent-child relationship enhancement
Second Phase: Bravery Directed Interaction

- Application of CDI skills in anxious situations
  - Attend to approach behaviors
  - Ignore avoidant behaviors
- Gradual exposure with bravery ladders and rewards
- In-session exposure practice examples: Invite child to play, ask child or adult survey question, ask adult permission to press elevator button, answer questions from adult
Third Phase: Parent Directed Interaction

- Differentiate anxious/avoidant behaviors from oppositional behaviors
- Effective Commands and time-out
CHILD GROUP
- Coaching and positive reinforcement of social initiations and skills
- Didactics
  - Introducing yourself, eye contact, sharing your interests, relaxation, etc.
- Exposures
  - Show and Tell
  - Scavenger hunt
  - “Party” games
Study Assessments (Pre, Post, 2 Mo FU)

- Diagnostic Interview (Preschool Age Psychiatric Assessment; Egger, 1999)
- Parent Reported:
  - Child behavior (e.g., BIQ, CBCL)
  - Parent mental health (e.g., BSI, STAI)
  - Parenting (e.g., PSOCS)
  - Family/Marital functioning (e.g., DAS)
- Teacher Reported:
  - Social Anxiety and Generalized Anxiety symptoms (Spence School Anxiety Scale)
  - Social skills (Classroom Behavior Rating Scale)
- Behavioral Observations:
  - Parent-child interactions during free play, clean-up, and lego tasks in the laboratory
  - Preschool Play Observation Scale (POS): solitary play, parallel play, initiations to teacher and students (Rubin)
Preliminary Results
## Participants (N=19)

<table>
<thead>
<tr>
<th>Child Mean Age</th>
<th>51.5 months</th>
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<tbody>
<tr>
<td><strong>Child Sex</strong></td>
<td></td>
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<tr>
<td>Male</td>
<td>47.4%</td>
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<tr>
<td>Female</td>
<td>52.6%</td>
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<tr>
<td><strong>Child Ethnicity</strong></td>
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<tr>
<td>Non-Hispanic White</td>
<td>57.9%</td>
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<tr>
<td>African American</td>
<td>10.5%</td>
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<tr>
<td>Asian</td>
<td>15.8%</td>
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<tr>
<td>Biracial/Multiracial</td>
<td>15.8%</td>
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<tr>
<td><strong>Maternal Mean Age (years)</strong></td>
<td>36.8 years</td>
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Maternal Reported Behavioral Inhibition Questionnaire (RCT Cohorts 1 and 2)

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>2 Mo FU</th>
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<tbody>
<tr>
<td><strong>Tx Group</strong></td>
<td>168.51</td>
<td>148.4</td>
<td>143</td>
</tr>
<tr>
<td><strong>Control Group</strong></td>
<td>167.5</td>
<td>157.8</td>
<td>168.67</td>
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Effect size (d) reported is between group at post and FU

Tx Group: $N=11$ at pre and post, $N=4$ at FU
Control Group: $N=8$ at pre and post, $N=3$ at FU
Social Anxiety Disorder Diagnosis (%)

Control pre $N$: 11
Control post $N$: 6

Treatment pre $N$: 12
Treatment post $N$: 12
Discussion:

- Preliminary evidence for efficacy of intervention
- Barriers to transportability and dissemination of intervention
  - Advantages of considering practice variables and dissemination goals in the initial construction of intervention
Where do we go from here?

- Considerations for different practice settings, practitioners, and populations

What are the active ingredients of the intervention? What are other mechanisms of change?

How do changes in program format, practice setting, practitioners, and supervision impact efficacy?
Research Team

- **Principal Investigators:**
  - Andrea Chronis-Tuscano, PhD
  - Kenneth Rubin, PhD

- **Co-Investigators:**
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  - Lea Dougherty, PhD
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- **Undergraduate RAs:**
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  - Wesley Vaughan
  - Meir Hauser
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  - Martina Cade
  - Shiv Choudhury
  - Emily Utz
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  - Lindsey Vernon
  - Meghan Riordan
  - Julia Finlayson
  - Fallon Goodman
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