Cognitive Behavior Therapy for Autism Spectrum Disorder

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Common Aspects of BT/CBT Approaches

- Therapy is usually time-limited
- Emphasis on manualized, empirically-supported treatments
- Sessions are structured
- Therapist is active
- Therapist as “coach”, teacher
- Collaborative enterprise with patient
- Active practice of skills between sessions
CBT Model: Case Formulation

- Child Constitution
- Triggering Situation or Event
- Family Environment
- Child’s Learning History
- Extra-Familial Environment

- Affective Reactions
- Cognitions
- Physical Response

Behaviors
Consequences
Affective Education

• To recognize emotions (fear, anxiety)
• Recognize, label, and self-monitor physiologic/affective cues
  • What are situational triggers?
  • What are affective reactions?
  • What are physiological “warning signs”?
Cognitive Restructuring

Goals:

• Identify negative/anxious/distorted cognitions
• Develop alternate, more realistic/helpful ways of viewing the situations (coping thoughts)
• Or, substitute more helpful thought (younger children or more cognitively rigid youth)
Cognitive Strategies

He’s mean. He pushed me on purpose!

It was probably an accident. He said sorry.
### Cognitive Restructuring Worksheet

<table>
<thead>
<tr>
<th>Situation</th>
<th>Thoughts</th>
<th>Emotion (0-10)</th>
<th>Challenge</th>
<th>Emotion (0-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking a test</td>
<td>I am going to fail!</td>
<td>Anxious (7)</td>
<td>I have to try my best. I studied hard for this test and I did well on the last 2 tests.</td>
<td>Anxious (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hopeless (6)</td>
<td></td>
<td>Hopeful (3)</td>
</tr>
</tbody>
</table>
Generating a FEAR plan (a.k.a., coping plan)

Acronym Used to Remind Child of Skills:

- **F**eeling Frightened?
- **E**xpecting Bad Things to Happen?
- **A**ctions and Attitudes that Can Help
- **R**esults and Rewards

From Kendall (1992) *Coping Cat Therapist Manual*
Skills Training

• Feeling frightened?
  – What clues is my body giving me that I am anxious?
  – How can I use relaxation to address physical symptoms?

From Kendall (1992) *Coping Cat Therapist Manual*
Skills Training

• Expecting Bad Things to Happen?
  – What are my anxious thoughts?
  – What is in my thought bubble?
  – What’s another way to look at the situation? What’s my coping thought?

Skills Training

• Actions and Attitudes that can help
  – What is my coping plan?
    • Cognitive Restructuring
    • Problem-solving

Skills Training

• Results and Rewards:
  – How did I do? Did I attempt to cope?
  – How can I reward myself for trying?

From Kendall (1992) *Coping Cat Therapist Manual*
Exposure

• Based on principles of classical conditioning
• Gradual exposure to feared stimulus
• Central to treating anxiety disorders
Model for Exposure

Anxiety Level

Avoidance Response

Exposure Exercises
Possible Mechanisms

- Habituation
- Learning to stop associating stimulus with anxiety response
- Experientially learning that catastrophic predictions are incorrect
- Building skills for coping with the stimulus
How to conduct exposure

- Focus is on behavioral exposure and behavioral experiments
- Develop a fear hierarchy
- Conduct progressive imaginal and in vivo exposure
- Exposure assigned between session
- Attempts are rewarded
- Parents involved as “coaches” if appropriate
# Fear Hierarchy

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alone in room during day</td>
<td>4</td>
</tr>
<tr>
<td>Alone in room in the evening</td>
<td>5</td>
</tr>
<tr>
<td>Falling asleep with parents outside the door</td>
<td>6</td>
</tr>
<tr>
<td>Sleeping with parents awake in separate room on the same floor</td>
<td>7</td>
</tr>
<tr>
<td>Sleeping with parents on separate floor</td>
<td>8</td>
</tr>
<tr>
<td>Falling asleep with parents sleeping in their own room</td>
<td>9</td>
</tr>
</tbody>
</table>
Graded exposure as a way of teaching a child to face a feared situation

- Starting point
- Slightly feared situation
- Mildly feared situation
- Moderately feared situation
- Much feared situation
- Most-feared situation
- End goal

• Practice each step until anxiety decreases
• Use contingent reinforcement
Exposure for Social Anxiety: “John”

- Fears of embarrassment; initiating social interactions
- Practiced saying hello to research assistants/other docs
- Had longer conversations (3 questions) with RAs
- Buying food/items from stores and asking questions
- Asking friends to get together (first by text then in person)
- Joining a group of 2 friends in a conversation
Adaptations for Youth with ASD

- Longer session length
- Social skills training/on-site social coaching
- Setting up a school “buddy” program
- Building independence and self-help skills
- Children’s interests used as examples and rewards
- Suppression approach for circumscribed interests/stereotypies
- Contingency management for problematic behaviors
Rationale for Involving Parents

- Parents influence the triggers and contingency and may need to assist with engineering exposure opportunities.

- Parental behaviors may inadvertently reinforce child’s anxious behavior, and guidance in anxiety management can be helpful.

- Parents of children presenting clinically with anxiety disorders have a 50% rate of anxiety disorders themselves (Last, 1987, 1991).
RESPONSES TO ANXIETY

Unhelpful Response:
“OHH NO!” reaction
Amplifies anxiety

Helpful Responses:
1) “Ho-hum” reaction
   -Low-key, calm
   -Reduces anxiety
2) Model using anxiety as a “cue-to-cope”
TWO UNHELPFUL RESPONSES TO FEARS

Unhelpful Response:
Allow or encourage avoidance
- Child keeps pairing situation with anxiety
- Child misses chance to prove catastrophic beliefs untrue
- Child misses chance to build coping skills

Unhelpful Response:
Force or pressure child to face fear before ready
- Can sensitize child to be more fearful
RESPONSES TO ANXIETY

Unhelpful Response:
Repeated reassurances
- Only reduces anxiety in short-term
- Reinforces expressions of worry in long-term

Helpful Responses:
1) Acknowledge anxiety and reassure once
2) Encourage child to use coping tools or plan
**RESPONSES TO ANXIETY**

**Unhelpful Response:**
Perfectionistic expectations about child’s performance

**Helpful Response:**
Reward approximations to desired outcome
Outcome Studies
Meta-analysis of CBT for anxiety in youth with ASD

CBT for Anxiety Disorders in Children with and without ASD

• Compared CBT among 95 children with anxiety disorder (age=12.9 yrs) and 79 children with ASD and comorbid anxiety (age=11.8)
• A subset of kids with ASD+anxiety (N=17) had a waitlist condition
• Compared outcomes at waitlist, pretest, posttest, and 3-, 12- and 24-month follow up

Van Steensel & Bogels, J Consult Clin Psychol 2015 {Epub ahead of print}
Outcomes of Treatment in youth with ASD: CBT vs. Waitlist

Anxiety Symptoms: Effect size (Cohen’s d) = 0.48

Anxiety Disorders: Effect size (Cohen’s d) = 1.45
2-Year Outcomes in Youth with Anxiety Disorders (with or without ASD)

% free of Anxiety Disorder

Without ASD: 64%
With ASD: 61%
Differences in Outcomes Among Youth with and without ASD

• No differences between these two groups in:
  – Remission from primary anxiety disorder
  – Decrease in severity of anxiety disorders

• Less improvement seen in:
  – Anxiety symptoms
  – Quality of life

46 adolescents and adults (mean age 27 yrs; 76% male)
Diagnosed with ASD and OCD
Randomized to CBT (mean=17.4 sessions) or control trmt (anxiety management; mean=14.4 sessions)
Assessed changes in the frequency, severity, and interference of OCD sx (Y-BOCS scale)

Russell et al., *Depress Anxiety* 2013; 30(8): 697-708
Results: CBT for OCD

% Trmt Responders

AM

CBT

0 10 20 30 40 50

20

45
Pilot Study: CBT for Young Children with ASD and Anxiety (Hirshfeld-Becker et al.)

- 18/19 children completed at least six treatment sessions
- Sessions completed ranged from 6-20 (mean 14.89 sessions, SD 4.01)
- 81% of parents were “very satisfied” or “extremely satisfied” with the intervention.
- 87.5% of parents would “definitely” or “very likely” recommend the intervention to a friend.
- 56% rated the parent only sessions “very helpful” and 69% rated the parent-child sessions very helpful.
RATES OF ANXIETY DISORDERS
Pre- and Post-Intervention

Separation
Social
Specific
GAD
Multiple
Any Anx

Pre-Tx: 22%, 67%, 89%, 83%, 100%
Post-Tx: 6%, 0%, 22%, 11%, 61%
Response to Treatment:
CGI-Improvement 1 (very much-) or 2 (much-improved)

Conclusions

• CBT approaches are efficacious in treating anxiety in children, adolescents, and young adults with ASD
Limitations

• CBT studies are limited by:
  – Small sample sizes
  – Lack of controlled trials (this is improving)
  – Little attention to older age groups
• CBT may be more useful for higher-functioning youth
• Some outcomes in youth with ASD may not be as good as youth without ASD
• Variability among studies that needs to be further examined
  – Are there some tools that are more helpful than others?
  – Are there predictors of response?
Are you an 18 - 40 year old male with an Autism Spectrum Disorder?

Do you experience difficulty with social interactions?
Trouble with day to day functioning? Social anxiety?

Participate in our research study at Massachusetts General Hospital and receive:

- Cognitive behavioral therapy to address social skills
  or learn relaxation to manage stress
- Compensation up to $220 and reimbursement for parking costs

Please call 617-726-6324 or email ASDCBT@partners.org for more information