The New Kid on the Block: Understanding and Treating Avoidant/Restrictive Food Intake Disorder in Youth

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Overview

• Intro to Avoidant/Restrictive Food Intake Disorder (ARFID)
  – Diagnostic criteria & key features
  – Prevalence rates
  – Comorbidity
• Overlap between ARFID and OCD/anxiety features
• Description of exposure-based treatment for ARFID
• Treatment effectiveness
• Case examples

DSM-V Criteria for ARFID

A. An eating or feeding disturbance as manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one or more of the following:
   1. Significant weight loss (or failure to achieve expected weight gain or faltering growth in children)
   2. Significant nutritional deficiency
   3. Dependence on enteral feeding or oral nutritional supplements
   4. Marked interference with psychosocial functioning

B. The disturbance is not better explained by a lack of available food or by a culturally sanctioned practice

C. The disturbance does not occur exclusively during the course of anorexia nervosa or bulimia nervosa, and there is no evidence of a disturbance in the way in which one’s body weight or shape is experienced

D. The disturbance is not attributable to a concurrent medical condition and is not better explained by another mental disorder

Why Do ARFID Patients Avoid Eating?

• Concerns about aversive consequences
  – Choking
  – Vomiting
  – Illness
• Unpleasant sensory characteristics
  – Taste
  – Texture
  – Smell
• Apparent lack of interest in eating or food

Prevalence & Comorbidity Data

• 3.2% in Swiss community sample (n = 1,452) of 8-13 year olds (Kurz et al., 2015)
• 1.5% in retrospective chart review (n = 2,231) of 8-18 year olds in 19 Boston area hospitals/clinics (Liddy et al., 2015)
• Affects higher proportion of males (Nica et al., 2014)
• Across studies, average age of onset = 10-11 years
• Common comorbidities
  – OCD and anxiety disorders are most common
  – Neurodevelopmental disorders (e.g., autism, ADHD, learning)
Conceptual Overlap

Overestimating Likelihood of Catastrophes

- OCD/Anxiety
  - “I will contract fatal illness from sitting on a toilet seat.”

- ARFID
  - “I will choke on any solid foods and suffocate.”

Conceptual Overlap

Overestimating Severity of Mishaps

- OCD/Anxiety
  - “I couldn’t bear feeling embarrassed in front of others.”

- ARFID
  - “I would not be able to tolerate it if I vomited after eating.”

Conceptual Overlap

Attentional Bias Toward Threat Cues

- OCD/Anxiety
  - Attending to others’ negative facial expressions

- ARFID
  - Attending to mild sensations of fullness or nausea

Conceptual Overlap

Avoidance of Fear-Evoking Stimuli

- OCD/Anxiety
  - Avoidance of medical hospitals/clinics

- ARFID
  - Avoidance of any “mushy” foods

Conceptual Overlap

Safety Behaviors Aimed at Preventing Feared Outcomes

- OCD/Anxiety
  - Rereading emails multiple times to catch errors before sending

- ARFID
  - Excessively chewing up food before swallowing to prevent choking

Conceptualizing ARFID as an Anxiety Disorder

- Significant conceptual overlap between ARFID and anxiety disordered features (Fisher et al., 2013; Wildes et al., 2012)
  - Overestimations of likelihood/severity of threat
  - Attentional biases toward threat
  - Avoidance & safety behaviors to reduce fear

- Prominent role of anxiety and disgust as key emotional variables in ARFID (Kauer et al., 2015)

- Significant comorbidity between ARFID and anxiety disorders (American Psychiatric Association, 2013)
**What is Exposure Therapy?**

- Patients confront feared stimuli
- Gradually eliminate “safety behaviors”
- Aims:
  - Reduce fear/anxiety
  - Develop more helpful beliefs about feared stimuli
  - Increase tolerance of distress
- Highly effective strategy for treating fear-based problems
- Has clinical applications in other areas (e.g., eating disorders, personality disorders, trauma-related disorders)

**Why Does Exposure Work?**

- **Habituation** → diminished fear responding with increased exposure
- **Violation of Expectancies** → beliefs about likelihood and/or severity of negative outcomes are disconfirmed
- **Self-Efficacy** → increased confidence in tolerating/enduring distress

**Applying Exposure Therapy to ARFID**

- Exposure entails:
  - Confronting feared eating-related stimuli
  - Feared/avoided foods & eating-related scenarios (e.g., restaurants)
  - Feared physiological sensations (e.g., nausea, fullness)
  - Aversive sensory characteristics of foods
  - Prevention of safety behaviors
  - Excessive chewing/spitting food, familial accommodation/reassurance
- **Key principles**
  - Parental involvement is crucial
  - Need to use age-appropriate language & examples

**Treatment Steps**

1. Functional Assessment of Eating Difficulties
2. Developing Exposure Hierarchy
3. “Fading” and Eliminating Safety Behaviors
4. Conducting & Coaching Exposure
5. Progressing Throughout Hierarchy
**Functional Assessment**

- **Goal:** identify specific cognitive and behavioral features of child’s eating difficulties
- **Areas to assess**
  - Fear cues → What stimuli evoke fear for the child?
  - Anticipated consequences of exposure to feared cues
  - Safety behaviors

  “I’ll be so disgusted that I’ll puke!”

**Developing the Exposure Hierarchy**

- **Goal:** create rank-ordered list of exposure activities child will complete → “roadmap” for treatment
- **Child rates each exposure for anticipated anxiety (0-7)**
- **Exposures target cues identified in functional assessment**
  - Feared foods → gradually introduce fear-evoking foods into diet
  - Physiological arousal → body sensation induction exercises (i.e., interoceptive exposure)
  - Eating scenarios → go to restaurants, eat at friends’ houses, etc.

**Hierarchy Example – Fear of “Gooey” Foods**

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Fear Rating (0-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat several spoonfuls of peanut butter</td>
<td>7</td>
</tr>
<tr>
<td>Eat one full serving of cottage cheese</td>
<td>6</td>
</tr>
<tr>
<td>Eat one full serving of yogurt</td>
<td>5</td>
</tr>
<tr>
<td>Eat one finger full of peanut butter</td>
<td>4</td>
</tr>
<tr>
<td>Eat one spoonful of cottage cheese</td>
<td>3</td>
</tr>
<tr>
<td>Eat one spoonful of yogurt</td>
<td>2</td>
</tr>
<tr>
<td>Eat one finger full of yogurt</td>
<td>1</td>
</tr>
</tbody>
</table>

**Hierarchy Example – Fear of Nausea**

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Fear Rating (0-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat dense meal before riding merry-go-round</td>
<td>7</td>
</tr>
<tr>
<td>Eat snack and quickly spin in circles</td>
<td>6</td>
</tr>
<tr>
<td>Drink a large glass of milk quickly</td>
<td>5</td>
</tr>
<tr>
<td>Eat snack and slowly spin in circles</td>
<td>4</td>
</tr>
<tr>
<td>Imagine yourself vomiting after eating</td>
<td>3</td>
</tr>
<tr>
<td>Stand and slowly spin in circles</td>
<td>2</td>
</tr>
<tr>
<td>Watch videos of people vomiting</td>
<td>1</td>
</tr>
</tbody>
</table>

**“Fading” & Eliminating Safety Behaviors**

- Child is encouraged to prevent use of safety behaviors
  - Consider using self-monitoring system to track progress
  - May need to provide rewards for successful prevention
- Addressing familial accommodation
  - Well-intentioned actions that nonetheless maintain/strengthen fear
  - Consistently linked to poorer treatment outcomes
  - Parents encouraged to:
    - remove accommodation slowly
    - validate child’s anxiety while emphasizing importance of stopping
  - Can be thought of as “exposure” for the parents

**Conducting & Coaching Exposure**

- **Begin with exposures rated lower in the hierarchy**
- **Child stays in exposure until fear reduces by at least 50% (4 → 2)**
- **When possible, repeat exposure tasks frequently in different contexts**
- **Therapist coaching techniques**
  - Offer praise/encouragement often during exposure
  - Hold child’s attention in the situation (e.g., ask about their experience)
  - Discourage use of safety behaviors or subtle avoidance
  - Review outcome post-exposure to assess for progress (“How disgusting was it? How well did you tolerate it?”)
During each exposure trial, child remains engaged until at least 50% reduction in peak anxiety (within-trial habituation).

With repeated exposure, child’s peak anxiety levels will begin to gradually decrease (between-trial habituation).

When current exposure only evokes mild anxiety, exposures at higher levels in hierarchy are initiated until hierarchy completed.

Treatment Outcomes for Youths

- $N = 17$ patients completing residential or partial hospitalization program (64.7% female, 88.2% Caucasian)
- $M$ age = 14.2 years, $M$ length of stay = 46.3 days
- Symptom severity instruments completed at admission & discharge (January 2016 – October 2017)
  - Fear of Food Measure (FOFM) → assesses (1) anxiety about eating, (2) food avoidance, & (3) feared concerns about eating
  - Yale Brown Cornell-Eating Disorders Scale (YBC-EDS) → assesses (1) preoccupation with eating-related concerns, & (2) engagement in compulsive rituals (i.e., safety behaviors)
  - Body Mass Index (BMI)

Fear of Food Measure (FOFM)

* = $p < .05$
**Case Example 1: Jessica**

- 13 year old girl referred to treatment by pediatrician
- No history of eating difficulties until witnessing choking incident at birthday party
- Began refusing all solid foods, dietary intake entirely through oral supplements and enteral feeding
- Significant weight loss and malnutrition effects
- Bothered by any choking-related sensations, sought frequent reassurance from parents
- Disruptions to education and social life

**Case Example 2: Connor**

- 11 year old boy referred after thee inpatient hospitalizations
- History of picky eating since infancy
- Several significant taste and texture-related aversions
- Diet consisted of: plain noodles, chicken nuggets, peanut butter or grilled cheese sandwiches, granola bars, candy
- Would often spit out other foods or rip into tiny pieces before consuming
- Unable to eat anywhere but at home
Case Example 2: Connor

- Treatment overview
  - Safety behaviors to prevent
    - Food avoidance
    - Spitting out foods
    - Ripping up foods
  - Exposure-related activities
    - Gradual inclusion of foods he avoided
    - Prolonged exposure to aversive textures and tastes
    - Eating outside of the home (e.g., school cafeteria, friends’ houses)

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Fear Rating (0-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat “disgusting” jelly beans</td>
<td>7</td>
</tr>
<tr>
<td>Eat full serving of cooked vegetables</td>
<td>6</td>
</tr>
<tr>
<td>Keep small mouthful of mashed potatoes/oatmeal in mouth</td>
<td>5</td>
</tr>
<tr>
<td>Eat hot breakfast in school cafeteria</td>
<td>4</td>
</tr>
<tr>
<td>Eat full serving of “mushy” fruits (e.g., banana)</td>
<td>3</td>
</tr>
<tr>
<td>Eat a snack at a friend’s house</td>
<td>2</td>
</tr>
<tr>
<td>Eat small amounts of dry cereal</td>
<td>1</td>
</tr>
</tbody>
</table>

Summary

- Significant comorbidity and conceptual overlap between ARFID and OCD/anxiety disorders
  - Elevated anxiety
  - Safety behaviors and avoidance
- Exposure-based treatment approach to address ARFID
  - Creating hierarchy of exposure tasks
  - Gradual progression through exposure hierarchy
  - “Fading” and elimination of safety behaviors

Collaborator Acknowledgement

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