

The Interesting Relationship Between ADHD, Eating Disorders and Body Image

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Binge Eating Disorder

- Recurrent episodes of binge eating characterized by both of the following:
 - Eating, in a discrete period of time (e.g. within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances.
 - A sense of lack of control over eating during the episode (e.g. a feeling that one cannot stop eating or control what or how much one is eating).
- Episodes are associated with three or more of the following:
 - eating much more rapidly than normal
 - eating until feeling uncomfortably full
 - eating large amounts of food when not feeling physically hungry
 - eating alone because of feeling embarrassed by how much one is eating
 - feeling disgusted with oneself, depressed or very guilty afterward
 - Marked distress regarding binge eating is present
 - Binge eating occurs, on average, at least once a week for three months

Bulimia Nervosa

- Recurrent episodes of binge eating
- Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting, misuse of laxatives, diuretics, or other medications, fasting, or excessive exercise.
- The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for three months.
- Self-evaluation is unduly influenced by body shape and weight.

Anorexia Nervosa

- Persistent restriction of energy intake leading to significantly low body weight (in context of what is minimally expected for age, sex, developmental trajectory, and physical health)
- Either an intense fear of gaining weight or of becoming fat, or persistent behavior that interferes with weight gain (even though significantly low weight).
- Disturbance in the way one's body weight or shape is experienced, undue influence of body shape and weight on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.
- Restricting or Binge Eating/Purging Type

Avoidant/Restrictive Food Intake Disorder (ARFID)

- 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:
- Significant loss of weight (or failure to achieve expected weight gain or faltering growth in children).
- Significant nutritional deficiency
- Dependence on enteral feeding or oral nutritional supplements
- Marked interference with psychosocial functioning

Eating Disorders

- 30 million people suffer from eating disorders
- 20 million women, 10 million males
- 15%-20% mortality rate (suicide, medical complications)
- Various causes (Genetic, biological, social-cultural, personality, environment, trauma, comorbid disorders)
- Only 10-15% of women with eating disorders seek treatment
- Even smaller % of males with eating disorders seek treatment
- Recovery is possible

Eating Disorders: Medical Consequences

- Dental problems
- Hair loss
- Dysregulated metabolism
- Sleep Problems
- Temperature Dysregulation
- Problems with concentration
- Increases all ADHD symptoms

- Cardiovascular
- Gastrointestinal
- Neurological
- Endocrine
- Kidney Failure

ADHD and Eating

- Hartman et al (2012):
 - Lab Experiment to assess mood, impulsivity and loss of control eating in 10-14 year olds.
 - Mood was reported pre and post eating
 - Liking of food reported

Results:

 - ADHD group ate more.
 - NOT influenced by negative mood, level of hunger or liking of food
- Ptacek et al (2014):
 - ADHD had more disruptive eating habits
 - Ate less nutritious diet
 - Significantly higher sugar intake (especially with beverages)

ADHD and Obesity

Altfas (2002)

- Bariatric patients (N= 215)
- Found 27% had ADD (all inattentive type)
- For BMI ≥ 40 : 43% had ADD
- Mean weight loss:
ADD/OBESE patients = 2.6 BMI
NON-ADD/OBESE = 4.0 BMI (p<.002)
- Mean weight loss For BMI ≥ 40 :
ADD/OBESE= 2.9 BMI
NON-ADD/OBESE = 7.0 BMI (p<.004)
- ADD patients had more treatment visits with longer duration

ADHD and Obesity

Agrant-Meged et al. (2005)

- 13 boys and 13 girls in obesity clinic assessed for ADHD
- Mean age 13.04
- All were morbidly obese
- Did not meet criteria for any DSM-IV Disorder
- 58% were found to have ADHD, significantly higher ($p < .0001$) than what is found in general population (10%)
- Of children with ADHD, only 40% diagnosed before the study

ADHD and Obesity

Holtkamp et al. (2004)

- Hypothesis: Hyperactivity protects children from obesity
- Opposite was found:
BMI scores for 97 ADHD male patients were significantly higher than reference population ($p=0.004$).
- BMI \geq 90th percentile: ADD significantly more common than reference group ($p<.001$).

ADHD and Eating Disorders

- Biederman et al (2007)
 - ADHD girls are 3.6 times more likely to have an eating disorder (Bulimia Nervosa and BED)
- University of Virginia and Univ. Of California (2008)
 - Bulimia more common in ADHD adolescent girls than non-ADHD
- Surman et al (2006)
 - 11% of ADHD women vs 1% of non-ADHD reported bulimia.
- Seitz et al (2013)
 - 21% treated for Bulimia had ADHD

Studies of ADHD and Eating Disorders

- Svedlund et al (2017)
 - 31% of 1165 E.D. patients above ADHD screening cut-off
- Nazar et al (2016) Meta-analysis
 - ADHD three-fold risk of eating disorders
 - Eating Disorder more severe when ADHD present
- Curtin et al (2013)
 - ADHD: 3-6 times greater risk for developing Eating Disorders
- No current studies that focus on Anorexia Nervosa and ADHD

How can having ADHD predispose someone to develop an eating disorder?

Biological/Genetic Factors

- Reward deficiency syndrome : Insufficient dopamine-mediated “natural” reward produce need for unnatural rewards (food, drugs)
- ADHD brain craving dopamine and lacks proper brakes
- ADHD brains less GABA (uninhibited)
- Binge eating/purging also common after other dopamine-related activity (sex, fun event etc) as way of medicating dopamine drop and keeping the dopamine flowing
- Dopamine receptors could overlap with both obesity/binge eating (DRD2, DRD4) and ADD (DRD4)
- DRD4: novelty seeking

Biological/Genetic Factors

- Zametkin et al (1993)
 - ADHD brain slower to absorb glucose than non-ADHD
 - Lowest in prefrontal brain
 - Executive controls are demanding energy by any means necessary
 - Leads to higher sugar and simple carb consumption
(Kale doesn't cut it!)
- Serotonin in carbs, sugars, boost well-being.
 - ADHD avoidant of negative affect

Cognitive Factors

- Lack of mindfulness and attention (interoceptive awareness)
- Executive Function Deficits
- Decision-making can be difficult, or impulsive.
- “Procrastin-eating”
- Cognitively overwhelmed by all the contradictory information about food and diet. Impairs ability to make good decisions.
- Food can be means of gaining “executive fuel”
- ADHD individuals can be obsessive-compulsive and all or nothing in thinking

Behavioral Factors

- Impulsivity
- Poor self regulators
 - * Underestimate the amount of calories eaten
- Poor sleep habits
- Skipped meals leading to overeat on carbs, fats, sugars

Behavioral Factors

- In hyperfocus can go hours without eating, then hit with wall of hunger
- More likely to eat while doing other things leading to poor regulation of food intake (snacking and grazing throughout the day)
- Restriction can be overcompensation for normative impulsivity

Emotional Factors

- Boredom leads to eating as a form of self-stimulation. (Can mimic depression)
“It’s either a cigarette, my nails, or food”.
- Anger, sadness, stress relief
- Coping with Depression or Anxiety
- Food as reward, pleasure (not necessarily as a result of dysphoria)
- Relief from racing thoughts and distraction

Emotional Factors

- Sensory aspects of food can be soothing or offensive
- ADD very outcome driven, instant gratification, impatient, needs results quick, impulsive
- Food preoccupation incredibly reinforcing as a grounding mechanism
- Purging: Euphoric and additive stimulation

Self Esteem, Control and Shame

- Individuals with ADHD often struggle with self esteem issues due to failures, impulsive acts, and unrealized intentions
- Negative Body Image can result as means of coping or result of weight loss or gain
- Food becomes a way to cope. Easily accessible, comforting
- Purging: Control, Act of Undoing
- “I can eat because I’ve been good today.”

Self Esteem, Control and Shame

- Food deprivation is an ultimate form of self-punishment
- Focus on weight is concrete for self esteem
- Eating disorders are often about control, which many with ADHD feel they lack.
 - “If I control my weight, I control my life.”
 - “Controlling weight is one thing I can succeed at.”
- ADHD need constant feedback from their environment. A number on a scale and body checking provides that.
- Compensation for poor sense of self

Treatment

- Only 1 in 10 people with eating disorders receives treatment
- Address ADHD and Eating Disorder together
- Understand how ADHD impacts and is impacted by the ED

- Destigmatize ADHD (especially for women)
- Destigmatize Eating Disorders (especially for men)

- Cognitive-Behavioral Therapy (therapist as “creative coach”)
- Dialectical Behavior Therapy
- Psychotherapy
- Nutritional Therapy

- Psychopharmacological Treatment

Psychopharmacological Treatment

- Lisdexamfetamine (Vyvanse) first FDA approved medication for Binge Eating Disorder (and only second medication approved for an eating disorder)
- Research studies show stimulant medication can help (sometimes dramatically) in those with ADHD/Bulimia
- In addition, their weight remained in a healthy weight range, despite appetite suppression
- Many psychiatrists reluctant to prescribe stimulants to eating disorder patients
- No medication specifically for Anorexia Nervosa

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