Definition

Psychological disorder characterized by abnormal or disturbed eating habits.

(American Psychiatric Association, 2017)
# Types of eating disorders

<table>
<thead>
<tr>
<th>Eating Habits?</th>
<th>Anorexia Nervosa</th>
<th>Bulimia Nervosa</th>
<th>Binge eating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat so little</td>
<td>Eat a lot</td>
<td>Eat a lot</td>
<td></td>
</tr>
<tr>
<td>restricted</td>
<td>uncontrollably</td>
<td>in a short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Then purge</td>
<td>period of time</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>uncontrollably</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not purge</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weight?</th>
<th>Significantly</th>
<th>Varies</th>
<th>Usually</th>
</tr>
</thead>
<tbody>
<tr>
<td>underweight</td>
<td>Usually normal</td>
<td></td>
<td>overweight</td>
</tr>
</tbody>
</table>

| Physical symptoms?  | LOW BP, HR,      | Changes in      | Excessive     |
|----------------------| Lanugo, kidney   | weight          | weight gain   |
|                      | problems         | Dental problems,| HIGH BP       |
|                      | Weight loss,     | Sore throat and | Diabetes      |
|                      | fatigue          | mouth           | Joint pain    |
|                      | Irregular        | fatigue         | fatigue       |
|                      | menstruation     |                 |              |
Significance/Demographic

- Affects all races and ethnic groups but groups at higher risk
  - 18–25 years old
  - Female
  - Transgenders, gays
  - Athletes
- At least 30 million people suffer from an eating disorder each year in U.S.
- Every 60 minutes at least one person dies as a direct result from an eating disorder.

(Farrar, 2014)
Background

- 12th century--religious practice
- 1888, doctors noted eating disorders happened in both men and women.
- Early 1900s, Parentectomy (separating from parents) was the treatment.
- 1903, Bulimia was discovered. Doctors linked eating disorders to possible sex origins.
- 1978, the book “The Golden Cage”, was the first books to suggest that eating disorders were becoming a serious problem. and have recorded the symptoms and health risks of bulimia and anorexia
- 1980s, refeeding and talk therapy were used in treatments.
- 2013, binge eating was first recognized as its own disorder. People were able to get treatments and covered by insurance.

(Engel, Reiss, & Dombeck)
Treatment

- Psychotherapy treatments
  - Cognitive behavioral therapy
  - Family-based therapy
- Nutritional therapy
- Medications for eating disorders
- Inpatient/Outpatient

(Mayo Clinic, 2017)
Exposure therapy

- Used to treat anxiety, phobia, panic disorder.
- Help overcome anxiety and fear by exposing individuals to the things they fear and avoid.
- Several variations
  - Virtual Reality exposure
  - Imaginal exposure
  - In Vivo exposure

(American Psychological Association, 2017)

A Randomized Trial of Virtual Reality-Based Cue Exposure Second-Level Therapy and Cognitive Behavior Second-Level Therapy for Bulimia Nervosa and Binge-Eating Disorder: Outcome at Six-Month Followup.


Abstract

This article reviews the 6-month follow-up data of a randomized, multi-center, parallel, open-trial conducted with 104 clinical sites...
Summary of Article #1:

- Current evidence supports Cognitive Behavioral Therapy (CBT) as first-choice treatment.
  - Yet, a high percentage of Bulimia Nervosa (BN) and Binge-Eating Disorder (BED) patients do not improve. 37–69% remission rate.
    - 2 Options: Extend CBT or start second-level treatment.
- In this article, Cue Exposure Therapy + Virtual Reality technology was explored.
  - CET: aims to extinguish craving and anxiety responses to food-related cues and thus reduce the associated risk of overeating.
  - VRT: allows us to develop virtual simulations of everyday life scenarios, where exposure to food-related stimuli is conducted in more controlled conditions.

(Ferrer-García, et.al, 2019)
Summary of Article #1

- This study included 35 patients with Bulimia Nervosa and 29 with Binge-Eating Disorder. Patients were randomly assigned to either extended CBT group or VR-CET group.

- BEFORE: Eating Disorder examination-interview, Anxiety-level test, and food-craving questionnaire

- This experiment involved 6 twice per week sessions held over 3 weeks.

(Ferrer-García, et.al, 2019)
Evaluation of Article #1:

- **Strengths:** Randomized controlled study, large pool of participants (N = 64), long follow-up (6 months), exposure therapy was adaptable to each individual patient.
- **Weaknesses:** Lack of supervision of the CBT first level intervention at different sites, no control for possible placebo effect, only 58/64 patients completed 6 month follow-up (9% left).

Ferrer-García, et.al, (2019)
**Article #1 Findings:**

- Overall improvement was greater in the VR-CET group than in the Extended CBT group after 6-month follow-up.
  - Abstinence rate increased from 53 to 70% for the VR-CET group, while in the CBT group it was maintained (25.9%).
  - Among BN patients, higher abstinence from purging episodes (73%) in VR-CET group than in CBT group (31.3%).
- VR-CET group also showed lower self-reported tendency to engage in episodes of uncontrollable eating and reduced food cravings & anxiety.
Exploring Mechanisms of Action in Exposure-Based Cognitive Behavioral Therapy for Eating Disorders: The Role of Eating-Related Fears and Body-Related Safety Behaviors

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Summary of Article #2:

Hypotheses:

- The patients will experience significant reductions in ED symptom severity from admission to discharge.

- Additionally, the magnitude of reductions in eating-related anxiety, food avoidance behaviors, and feared concerns about eating would be associated with the extent of overall ED symptom relief.

(Farrell, Vanzhula, Christian, Brosof, Bowie & Levison, 2019)
Summary of Article #2:

Methods:

● Sample size of 71 patients diagnosed with EDs received treatment in hospital-based day treatment that predominantly emphasized exposure therapy

● Global ED was assessed upon admission and at discharge

● Variables (Shown below) were assessed at admission, 2 weeks time after admission and discharge
  ○ Eating Disorder Examination Questionnaire Version 6 (EDE-Q)
  ○ Body Checking Questionnaire (BCQ)
  ○ The Body Image Avoidance Questionnaire (BIAQ)
  ○ The Fear of Food Measure (FOFM)

(Farrell et al., 2019)
Evaluation of Article #2

Strengths:

- Patient sample N = 71 (sample size is large enough to create significant results)
- The examination of a number of variables as theoretically derived mechanisms of action (considered a number of factors)

Weaknesses:

- Short follow up period (last evaluation was at discharge)
- 4 week treatment program (very short)

(Farrell et al., 2019)
**Article #2 Findings:**

- After 2 weeks of treatment, lowered eating-related anxiety, feared concerns about eating, body checking, and body image avoidance all contributed to decreased global ED severity at discharge.
- There was a decrease in the global ED severity at discharge, however the results were not statistically significant from indirect mechanisms of action on change, but the lowering of ED was significant.

(Farrell et al., 2019)
The fear of food measure: A novel measure for use in exposure therapy for eating disorders

Cheri A. Levinson M.A., Meghan Byrne B.A.


Check for Full Text  SFSU: Check for Full Text

This article was published online on 04 August 2014. An error was subsequently identified. This notice is included in the online and print versions to indicate that both have been corrected 27 October 2014.
What are we looking at in this study

What is in vivo exposure therapy?

- Directly facing a feared object, situation, or activity in real life

Example of how this works

“One individual with bulimia nervosa may be asked to bring in a lunch that they’d normally binge and purge on and eat it without using any rituals and to avoid purging after they finished it” - Anne Lee, a certified eating disorder specialist

Levinson & Bryne, 2014
Summary of Article #3

This article developed and tested the psychometric properties of Fear of Food Measure (FOFM) that explicitly assesses all three cognitive-behavioral components of anxiety including:

(a) trait level fear of food or anxiety surrounding eating
(b) anxiety-related avoidance behaviors inherent in AN (Anorexia nervosa)
(c) feared concerns, beliefs, or maladaptive thoughts that may drive the underlying anxiety

The FOFM is a 23-item measure that assesses eating-related fear and avoidance

Levinson & Bryne, 2014
Evaluation of article 3

Strengths:

● The study had 4 separate sample groups, with strong validity
● The FOFM is the first measure that has been designed specifically to test outcomes during exposure therapy for eating disorders

Weaknesses:

● Small sample size used in part of the study (study number 4)
  ○ Would be ideal to have a larger sample of AN and BN participants to see how they differ in diagnostic categories
● It would have been ideal to design a study in which food intake was measured at a test meal before undergoing exposure therapy to measure food intake in a more controlled manner across exposure therapy.
Article #3 Findings:

The Article showed that the anxiety about eating scale was associated with *in-vivo* food intake in both undergraduate females and a clinical sample of patients with eating disorders.

Accurately used means and standard deviations to confirm that participants diagnosed with an eating disorder had significantly higher levels of anxiety about eating $t(62) = 15.79, p < .001$, food avoidance behaviors $t(62) = 6.88, p < .001$, and feared concerns $t(62) = 19.54, p < .001$ than did matched healthy controls.

The most important finding from this study was that over the course of exposure therapy *in vivo*, scores of all three subsections were decreased.
Recommendations Based on Evaluations and Findings:

● More research on the effects of Exposure Therapy need to be done to establish its effectiveness and how it contributes to the treatment of EDs.

● Clinicians can use the FOFM (Fear of Food Measure) as a tool when implementing exposure therapy to assess trait anxiety about eating and problematic avoidance behaviors and to test if fears are decreasing with exposure therapy.

● They can also use the FOFM to assess underlying constructs and how they may lead to restriction and avoidance of food.
Recommendations Based on Evaluations and Findings:

- VR-CET is showing to be more successful than the current CBT. They are adaptable to meet the patient’s need. This increases the patient’s motivation and decreases their resistance for treatment.

[Example of a virtual bar used in Virtual Reality Cue Exposure Therapy](2014). Retrieved from https://www.youtube.com/watch?v=Iq-pRcLnyBQ

[Excerpt of a session from Virtual Reality Cue Exposure therapy](2014). Retrieved from https://www.youtube.com/watch?v=pnCpl_ WgbA
Rn’s role

- Manage medications
- Answer any pertinent medical questions
- Help coordinate care with outpatient medical providers
- Communicate with entire treatment team
- Lend an ear/ therapeutic communication
Conclusion

There are 3 types of exposure therapy that we looked at in our studies including:

- Vivo exposure: Directly facing a feared object
- Imaginal exposure: Vividly imagining the feared object, situation, or activity
- Virtual reality exposure: usually involves technology to mimic the scenario. can be used when in vivo exposure is not practical.

All types of exposure therapy need further research and should only be done under the direct supervision of a licensed clinician.

Although exposure therapy has been proven to be effective; it is extremely challenging for the patient, but does have promising results according to the articles we've reviewed

(American Psychological Association, 2017)
That's all Folks!


