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Behavioral Health

# Moving beyond facing fears: Optimizing exposure therapy for eating disorders

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June 2, 2026

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## Disclosures

Nicole Stettler, PhD, and Hana Zickgraf, PhD, have declared that they do not, nor do their family have, any financial relationship in any amount occurring in the last 12 months with a commercial interest whose products or services are discussed in the presentation.

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## Learning objectives

Upon completion of the instructional program, participants should be able to:

1. Identify at least one way that evidence-based exposure therapy interventions target core maintaining mechanisms of eating disorders.
2. Design individualized, evidence-based exposure interventions to target core maintaining mechanisms of eating disorders based on an inhibitory learning approach.
3. Apply justice-based principles to exposure therapy to ensure interventions are ethically sound, culturally responsive, and do not perpetuate stigma or bias.

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## What will be covered in this webinar

- Foundations of exposure therapy for eating disorders
- The case for the inhibitory learning approach
- Justice-based approach to exposure therapy for eating disorders

***Please note:***

***Our focus for the content of this program is on the healthcare professional who is practicing in a clinical setting.***

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## Presenter subjectivities

**Nicole Stettler, PhD**

**Professional identities**

- Executive Director of Eating Disorder Recovery Services
- PhD in Clinical Psychology

**Personal identities**

- She/her/hers
- White, cisgender, able-bodied, thin privilege, upper-middle class, Millennial

**Hana Zickgraf, PhD**

**Professional identities**

- Research Psychologist
- PhD in Clinical Psychology

**Personal identities**

- She/her/hers
- White, cisgender, able-bodied, thin privilege, upper-middle class, Millennial

*We acknowledge that our experience, intersectionality, privilege – and lack thereof – informs what we each bring to our research, clinical practice, and teaching*

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## Foundations of exposure therapy for eating disorders

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## Conceptualization of eating disorders

Fear learning and avoidance are core to cognitive-behavioral theories of how anxiety disorders, OCD, and PTSD are developed and maintained

Fear learning and avoidance may also play a role in the development and maintenance of eating disorders

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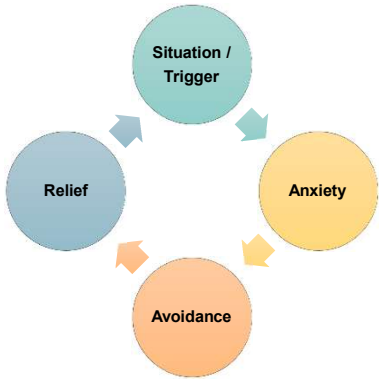
## Fear and avoidance learning

*Anxiety Cycle*

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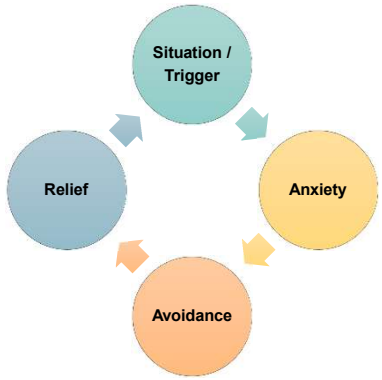
## Fear and avoidance learning

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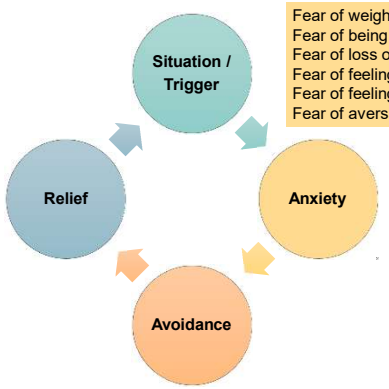
## Fear and avoidance learning




Fear of weight gain
Fear of being "fat"/violating thin ideals
Fear of loss of control
Fear of feeling or appearing disgusting
Fear of feeling full or bloated or nauseous
Fear of aversive consequences of eating

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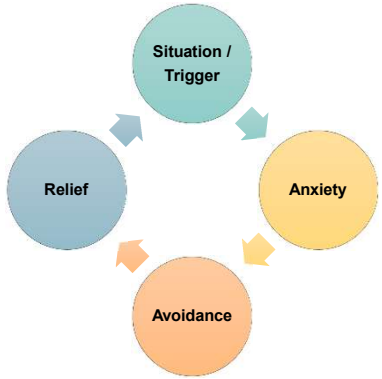
## Fear and avoidance learning

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## Fear and avoidance learning

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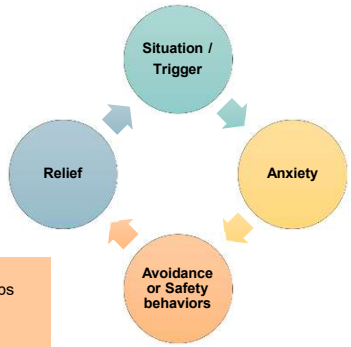
## Fear and avoidance learning




Restricting overall intake
Avoiding certain foods/groups
Label reading
Purging
Body/weight avoidance
Body/weight checking

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## Fear and avoidance learning

Short-term relief, but anxiety stays high long-term


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## Exposure therapy

***An individual approaches a feared stimulus without avoidance or escape behaviors (including compulsions or safety behaviors)***

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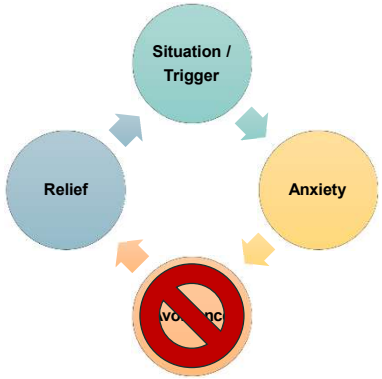
## Exposure therapy

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## Empirical support for exposure therapy

- Exposure is present to a degree in all evidence-based eating disorder treatments
  - e.g., open weighing, eating fear foods, reducing compensatory behaviors, and reducing body checking
- Treatment manual published in 2019 (Becker, Farrell, & Waller)
- Emerging research area as a standalone intervention

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## Empirical support for exposure therapy

### Outcomes:

- Decreases in ED symptoms, fears, and avoidance behaviors
- Increases in BMI
- Good acceptability by participants
- Evidence effects are sustained over time (e.g., 6-month follow-up)

### Limitations:

- Mostly open trials
- Mostly with adults

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## Exposure therapy works – but how? The case for the inhibitory learning approach

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## Habituation model

- Based on Emotional Processing Theory
  - Exposure to a feared stimulus activates the brain-based fear structure
  - The body's natural response to realizing a novel stimulus that is likely not dangerous is to *habituate*
  - Patient "gets used to" stimulus, no longer elicits a fear response
- ***Fear extinction:*** Link between stimulus and fear response weakens with each trial

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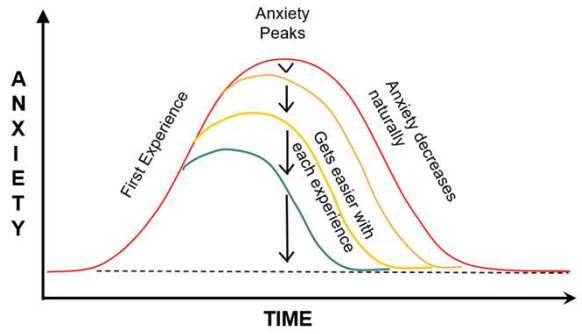
## Habituation model of exposure

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## Habituation model

Treatment progress measured by:

- Within-session decreases in subjective anxiety ("SUDS")
- Between-session decreases in subjective anxiety
- Completion of exposure hierarchy
- Decreases in functional impairment

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## Limitations of habituation model

Within-session habituation does *not* consistently predict outcomes among patients with eating disorders

Some feared outcomes are unlikely to be disconfirmed within an exposure session

… And some outcomes may be quite likely to happen (e.g., weight gain) – yet symptoms can improve anyway

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## Inhibitory Learning (IL) model

- Fear learning cannot be weakened or erased
- Rather, new learning that the stimulus is associated with safety or lack of danger competes with the old fear association
- Focus on maximizing *expectancy violation* within exposure trials to encourage and strengthen the new learning
- Exposure used not to eliminate or "fix" anxiety but to promote *fear tolerance*

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## Inhibitory Learning (IL) model

Treatment progress measured by:

- Completion of exposure list items
- Elimination of safety behaviors
- Changes in cognitions
- Increased tolerance of anxiety/uncertainty
- Improvements in quality of life

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## Why IL might be especially relevant for EDs

- ED fears may be more distal (e.g., weight gain does not occur right in the moment)
- Surface-level fears may be realistic (e.g., weight gain does occur during weight restoration phase of treatment), but avoidance is still not adaptive or functional
- Some evidence that within-session habituation may not be associated with outcomes for exposure with EDs
- Role of related emotions such as disgust – does not habituate as easily (or at all)

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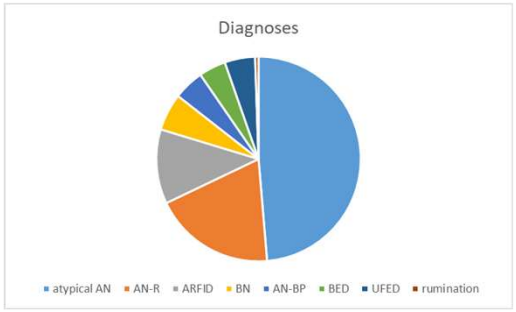
## Pilot study




Cares, S. R., Zickgraf, H., Stettler, N. M., & Essayli, J. *Manuscript in preparation.*

N = 187 (83% female*)

Admission BMI: M= 24.75 (9.26)
range = 14.67-65.22, median = 21.59

- 60% of sample with "normal" or "overweight" BMI; 20% underweight, 20% obese range BMI

Discharge BMI: M = 25.35 (8.38), range = 15.25-62.53, median = 22.73

Average weight gain (kg):

- Women: 1.19 (8.05), -62.3, 18.3
- Men: 4.81 (5.28), -3.0 - 20.20

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## Setting up exposures – habituation

- Create an exposure hierarchy based on stimuli that will provoke fear/anxiety
- Start with “challenging yet manageable”
- Stay in the exposure trial until anxiety is cut in half
- Discourage any avoidance or safety behaviors
- Move on to the next exposure once peak anxiety is low (≤2) for 5 trials

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## Setting up exposures – inhibitory learning

- Generate an exposure list around key fear themes
- Pre-exposure: ask patient to identify worst case scenario or what they believe they can't tolerate
- Exposure trial lasts as short or long as necessary to test the prediction
- Post-exposure: Ask the patient to reflect on what happened
- Move on to new exposures once the patient endorses or demonstrates confidence in tolerating distress without avoiding or using safety behaviors
- Combine exposures and practice in new contexts

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## Case example – "Laura"

- 23-year-old cisgender woman
- OSFED (atypical anorexia nervosa) and OCD
- White, from the Midwest region
- U.S. citizen
- Able-bodied but fragile physical health due to malnourishment
- Christian, not a major part of their life
- Bisexual
- Middle-class family

**A**ge and generation
**D**iagnosis status
**D**isability & physical health status
**R**eligion and spirituality
**E**thnicity and race
**S**exual orientation
**S**ocioeconomic status
**I**ndigenous heritage
**N**ational origin
**G**ender identity

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## Case example

- Identify fears maintaining ED symptoms through review of symptom measures (e.g., EDE-Q) and clinical interview
  - Weight/shape concerns, compulsive exercise, caloric intake
- "Downward arrow" to identify underlying/core fears
  - Weight gain, uncertainty/loss of control, social rejection
- Develop lists of exposures targeting different themes


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## Case example

Example exposure: Wear a tight shirt/leggings in public

| Complete before exposure trials: | | |
|---|---|---|
| Feared outcome | Belief outcome will occur (0-7) | Confidence in tolerating without safety behaviors (0-7) |

| Trial #1 | |
|---|---|
| Peak distress | Final distress |
| Alterations made | |

| Complete after all exposure trials: | | |
|---|---|---|
| Belief outcome will occur (0-7) | Confidence in tolerating without safety behaviors (0-7) | Usefulness of this exposure (0-7) |

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## Pilot study

Primary outcome: Fear of food measure, food anxiety (transdiagnostic)

Secondary outcome: EDE-Q (sensitivity analyses removing patients with ARFID)

Covariates: sex, length of stay, admission weight

Longitudinal multilevel models with condition*time interaction – hypothesis: participants experience differential effect of treatment based on assigned condition

Random slopes

Cares, S. R., Zickgraf, H., Stettler, N. M., & Essayli, J. Manuscript in preparation.

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## Pilot study

Fear of food outcome:

- Effect of time (treatment worked!)
- No effect of condition*time (treatment response was the same between conditions)
- Effect of sex (men had lower fear scores)
- Model prediction: -8.21 (2.3) change in FOF scores from admission to discharge

Cares, S. R., Zickgraf, H., Stettler, N. M., & Essayli, J. Manuscript in preparation.

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## Pilot study

EDE-Q outcome (similar results with/out ARFID):

- Effect of time
- No effect of condition*time
- Effect of sex (men had lower EDE-Q scores than women)
- Model prediction: -1.28 (0.26) change in EDE-Q scores from admission to discharge (0-6 scale)

Cares, S. R., Zickgraf, H., Stettler, N. M., & Essayli, J. Manuscript in preparation.

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## Pilot study takeaways

Inhibitory Learning theory and habituation are equally effective approaches to exposure in the naturalistic residential setting

- Overall treatment effect (including nutritional, psychiatric, and experiential therapies in addition to exposure work) is large
- Weight gain was minimal – some entered with high BMI and lost weight
- Both exposure approaches can produce habituation and increase tolerance/confidence; experimental difference in emphasis might not have been large enough to influence which process(es) occurred for individual patients

**Next steps:**
Explore condition-specific mechanisms (SUDs, anxiety tolerance/confidence), subgroup analyses (ED diagnosis, admission BMI category)

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## Justice-based approach to exposure therapy for eating disorders

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## What does "justice-based" mean?

"An equitable, thorough, and compassionate lens through which to conceptualize and implement mental health treatment so that all impacted persons—client, provider, and society—are respected."

Pinciotti et al., 2022

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## Origins of the justice-based approach

Initially conceptualized in the context of treating OCD with sexual orientation and gender-based themes

Societal anti-LGBTQIA+ attitudes create a context for OCD to hook onto these "undesirable" identities

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## Extension to eating disorders

We argue that societal appearance ideals create a similar context for EDs to hook onto

Body size and weight, food choices, and health are historically and currently associated with judgments about one's morality and character

Cares, S. R., Butler, R. M., Stettler, N. M., Hill, K. A., Levinson, C. A., & Pinciotti, C. M. Manuscript under review.

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## Pitfalls of exposures

Exposures can inadvertently:

- Reinforce stereotypes of or tokenize people in a marginalized group
- Harm providers or other patients from a marginalized group
- Imply being part of a marginalized group is bad or something to be feared

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## Examples of stigmatizing ED exposures

- Stand near/interact with/look at photos of higher-weight individuals
- Use weighing, mirror, or body-focused exposures with the goal of "proving" the patient is "not fat" or "will not become fat"
- Avoid prolonged mirror exposure interventions for patients in higher-weight bodies

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## Example of stigma-based reassurance

Patient "Laura" fears gaining weight and "being fat."

Expectation – "If I eat this, I will gain 5 lbs overnight."

Exposure compares the weight before eating and the following day.

Patient does not gain 5 lbs. Expectancy violation achieved.

Expectation – "If I eat this, I will gain 5 lbs, be perceived of as fat, and be rejected and alone forever."

Weighing exposure "proves" the patient has not gained 5 lbs, but does not address the underlying belief that being fat = being rejected and alone forever.

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## Designing justice-based exposures

- What is the underlying core fear being targeted by this exposure?
- What is the goal of the exposure?
- What do you want the patient to learn from the exposure?
- What *is* the patient learning from this exposure?
- What emotions do you want the patient to be more able to tolerate as a result of this exposure?
- Is the patient's anxiety rooted in stereotypes/stigma/prejudice?
- Is it appropriate or adaptive for the patient to be anxious about this idea/behavior?

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## Designing justice-based exposures

*Ask yourself:*

- Does this exposure tokenize individuals with marginalized identities or characteristics?
- Does this exposure use anyone as stigmatized props, or exploit anyone?
- Do people with marginalized identities have agency in participating in this exposure?
- Would you ask a client to do this in front of someone who holds the targeted identity?
- Would you train providers with this identity to do this exposure?
- Does this exposure reinforce stereotypes/stigma/prejudice?
- Would this exposure expose an individual's hidden identity, or "out" someone?
- Would doing this exposure harm me/my emotional state?

*If "Yes," then ask:*

- Can you make this exposure a different way and get the same result?
- Can you alter the exposure to celebrate or educate about the targeted community while still addressing the associated anxiety?

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## Justice-based exposure ideas

***Psychoeducation-based exposures*** – content that provides historical context and corrects misinformation, while also serving as a potential stimulus for anxiety

**Examples:**

- Learn about the history of the BMI or the medicalization of obesity
- Read memoirs, listen to podcasts, or otherwise learn from the lived experiences of people impacted by weight stigma

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## Justice-based exposure ideas

***Uncertainty and core fear exposures*** – target deep fear underlying surface-level fear; lean into uncertainty and inability to control

**Examples:**

- Identify exposures related to feared downstream consequences of not losing weight (e.g., being negatively judged)
- Complete open weighing under different conditions and tolerate uncertainty about one's "actual" body weight

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## Justice-based exposure ideas

***Neutral and positive exposures*** – link weight to neutral or positive experiences; challenge beliefs while increasing cognitive flexibility

**Examples:**

- Follow social media accounts of people with diverse body sizes/shapes
- Learn about and share with others information on set point theory or the fat liberation movement

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## *Challenging our own fears: Common beliefs among clinicians about exposure therapy*

***"It is unethical"***

- Approach with informed consent and the patient's best interest in mind
- Incorporate a justice-based approach

***"It is intolerable and unacceptable to patients"***

- Dropout rates equivalent to non-exposure therapy
- ED patients and families do *not* appear to dislike exposure therapy

***"It is dangerous"***

- Anxiety is an adaptive emotion and not inherently dangerous
- No evidence for increased ED behaviors

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## *Time for questions and answers*

- Please use the Q&A button to submit your question.
- If we don't get to your question, please feel free to send an email to **webinars@rogersbh.org** and we will follow up with you.


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## *Key take-home messages*

1. Exposure therapy can be an effective treatment approach for individuals with eating disorders
2. Exposures should be designed to:
   - Maximize new learning through habituation, expectancy violation, and emphasis on fear tolerance
   - Minimize harm by not reinforcing underlying assumptions that weight or fatness is inherently bad

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## *About the presenters*

**Nicole Stettler, PhD,** is executive clinical director of Eating Disorder Services and clinical supervisor for the Eating Disorder Recovery adolescent residential program

**Hana Zickgraf, PhD,** is a research psychologist with the Rogers Research Center

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