BODY IMAGE FLEXIBILITY AS A PROTECTIVE FACTOR AGAINST DISORDERED EATING BEHAVIOR FOR WOMEN WITH A LOWER BODY MASS INDEX

Mary L. Hill, Akihiko Masuda, & Robert D. Latzman 
Georgia State University
Overview

- Introduction to disordered eating
- Define body dissatisfaction, body image flexibility, & body mass index (BMI)
- Examine body dissatisfaction & body image flexibility as predictors of disordered eating behavior
- Examine BMI as a moderator
- Discuss the implications of results
Disordered Eating

- Disordered eating (DE) is a significant concern for many females that impacts multiple aspects of life
  
  - It is a multifaceted phenomenon that has been linked to
    - low self-esteem
    - depression
    - anxiety
    - medical concerns (e.g., menstrual irregularities, esophageal complications, other GI problems)

(Hudson, Hiripi, Pope, & Kessler, 2007)
(Fairburn, 2008)
(Pallister & Waller, 2008)
(Pallister & Waller, 2008)
Disordered Eating

- DE symptoms can be categorized as
  - DE cognitions – thoughts related to need for self-control through diet & weight restriction, positive beliefs about thinness, body dissatisfaction

- DE behaviors - avoiding eating when hungry, binge eating, avoiding “bad” foods, excessive dieting &/or exercise, self-induced vomiting

- DE behaviors are associated with greater distress & psychopathology
Disordered Eating

- There are many factors that contribute to the development & maintenance of DE, including:
  - Body dissatisfaction (BD)
  - Body image flexibility (BIF)
  - Body mass index (BMI)
Body Dissatisfaction

- **BD** - the negative evaluation of one’s physical appearance
  - the discrepancy between ideal & perceived body size & shape

  (Canpolat, Orsel, Akdemir, & Ozbay, 2005; Phelps, Johnston, & Augustyniak, 1999)

- Evidence has consistently shown BD to be associated with disordered eating

  (Stice & Shaw, 2002; Tylka & Subich, 2004)

- BD is a defining feature of eating disorders & maintains disordered eating

  (Cooper, 1997; Fairburn, 2008)
Body Dissatisfaction

- However, BD is common among females. Not everyone who endorses BD engages in disordered eating, particularly to a severe degree (Cash & Henry, 1995; Hilbert, de Zwaan, & Braehler, 2012)

- This suggests that there are other factors involved in disordered eating behavior
Body Image Flexibility

- BIF - the ability to experience difficult body image & other relevant internal experiences fully/openly when doing so promotes value-consistent behaviors
  
  (Sandoz, Wilson, & Merwin, 2012)

- Similar to psychological flexibility but specifically related to BD & disordered eating

  Psychological flexibility may not fully capture an open, flexible, value-consistent process for DE

  (Masuda, Price, & Latzman, 2012)
Body Image Flexibility

- BIF is associated with
  - general psychological flexibility
  - body image dissatisfaction
  - disordered eating

(Sandoz et al., 2012; Wendell, Masuda, & Le, 2012)
Body Mass Index

- BMI is associated with BD & disordered eating
  - High BMI is directly related to BD
    - (Lu & Hou, 2009; Stice & Whitenton, 2002)
  - Individuals diagnosed with anorexia & bulimia endorse greater BD
    - (Cash & Deagle, 1997)

- U-shaped relationship between BMI & disordered eating
  - Underweight & obese individuals more likely to engage in binge eating than those who fell within the normal & overweight ranges
    - (Rø, Reas, & Rosenvinge, 2012)
There may be a different mechanism underlying disordered eating in underweight individuals with eating disorder diagnoses vs. those with diagnoses who are within a normal weight range.

- One’s actual size & shape may influence disordered eating.

The extent or direction of associations among BD, BIF, & disordered eating may vary across levels of BMI.

(Geller, Cassin, Brown, & Srikameswaran, 2009)
Current Study

Research questions:
- Do BD & BIF uniquely predict disordered eating?
- Does BMI moderate these associations?
Current Study

Participants

- 259 women
- Age range 18 - 76 years old ($M=28.6$, $SD=9.0$)
- BMI score range 14.5 – 39.7 ($M=26.1$, $SD=6.7$)

Ethnic/racial makeup

- 60% “Caucasian/White” ($n = 155$)
- 24% “Latina” ($n = 62$)
- 10% “African American/Black” ($n = 27$)
- 6% “other” or “mixed” ($n = 15$)
Current Study

- Consent form & study measures were completed online
  - Demographic information (age, height, weight, & ethnicity/race)
  - Body Image Acceptance and Action Questionnaire (BIAAQ; Sandoz et al., 2012)
  - Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987)
  - 9 behavioral items of Eating Attitudes Test - 26 (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982)
# Results

Means, standard deviations, coefficient alphas, and zero-order relations among variables.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Disordered Eating Behavior (EAT-26 Behavioral)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Body Dissatisfaction (BSQ)</td>
<td>-0.43**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Body Image Flexibility (BIAAQ)</td>
<td>-0.81**</td>
<td>-0.41**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>4. Body Mass Index (BMI)</td>
<td>-0.09</td>
<td>0.19**</td>
<td>-0.13*</td>
<td>-</td>
</tr>
<tr>
<td>(M)</td>
<td>2.7</td>
<td>95.3</td>
<td>57.5</td>
<td>26.1</td>
</tr>
<tr>
<td>(SD)</td>
<td>3.7</td>
<td>39.9</td>
<td>17.7</td>
<td>6.7</td>
</tr>
</tbody>
</table>

*Note. EAT-26 Behavioral = Eating Attitudes Test behavioral items, BSQ = Body Shape Questionnaire, BIAAQ = Body Image Acceptance and Action Questionnaire.*

* *p < .05.*

** **p < .01.**
**Results**

Hierarchical regression analyses predicting disordered eating behavior.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$\Delta R^2$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 Control variables*</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td>.22***</td>
<td></td>
</tr>
<tr>
<td>Body Dissatisfaction (BSQ)</td>
<td></td>
<td>.74***</td>
</tr>
<tr>
<td>Body Image Flexibility (BIAAQ)</td>
<td></td>
<td>.69***</td>
</tr>
<tr>
<td>Step 3</td>
<td>.02*</td>
<td></td>
</tr>
<tr>
<td>BIAAQ $\times$ BMI</td>
<td></td>
<td>-.25**</td>
</tr>
<tr>
<td>BSQ $\times$ BMI</td>
<td></td>
<td>-.14</td>
</tr>
</tbody>
</table>

**Note.** EAT-26 Behavioral = Eating Attitudes Test behavioral items, BSQ = Body Shape Questionnaire, BIAAQ = Body Image Acceptance and Action Questionnaire.

* Control variables included dichotomized ethnicity and BMI.

* $p < .05$

** $p < .01$

*** $p < .001$
Results

Body mass index (BMI) scores moderate the association between disordered eating and body image (BI) flexibility. 
Note. High and low values correspond to $\pm 1$ SD from the mean.
Implications

- BD is important in understanding disordered eating across levels of BMI & may be important to target in treatment.

- BIF may be useful in understanding disordered eating among those with lower BMI.
  
  - Preliminary evidence has shown that interventions that directly promote flexibly & openly relating to difficult internal experiences have demonstrated positive outcomes.
Limitations

- Cross-sectional data
- Exclusively used self-report measures
- Participant characteristics largely unknown due to recruitment methods
- Nearly ½ of participants’ weight fell within the overweight range (47%)
- Current sample did not endorse clinically significant levels of disordered eating ($M = 2.7$, $SD = 3.7$)