The Influence of Self-Enhancement and Stress on Weight Gain

Olivia Grondalski, Pre Med and Psychology
Advisor: Dr. Erin O'Mara

Background

Self-enhancement is a positive illusion (i.e., overly positive or favorable attitudes that people have towards themselves), which is used for promotion and maintenance of a positive sense-of-self.

One way people self-enhance is to perceive their physical appearance more positively.

- People perceive themselves as slightly more physically attractive than they actually are (Epley & Whitchurch, 2008)

Stress is associated with drive to eat, and food frequency intake (nutritious vs palatable non-nutritious; Groesz, McCoy, Saslow, Stewart, Adler, & Epel, 2012)

- Exposure to laboratory stressors and perceived stress were associated with greater food intake

- More stressed individuals were significantly more likely to eat high fat and sugary foods

The Current Study

Do people also perceive their physical body size to be more attractive than it actually is?

Body self-enhancement is the degree to which a person *underestimates* their physical body size.

The present research examines whether body self-enhancement and stress interact to predict subsequent Body Mass Index (BMI)
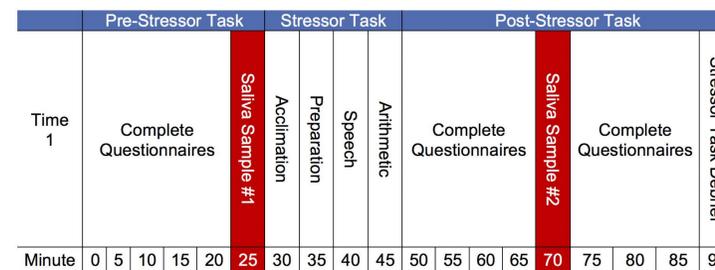
Method

Participants
- N = 75 (Time 1), N = 42 (Time 2)
- Undergraduate participants at UD, participated in exchange for course credit.

Procedure
Longitudinal design: approximately one-month between Time 1 and Time 2 assessments


Stressor Task (Time 1 only):
- Modified Trier Social Stress Test (TSST; Birkett, 2011; Kirschbaum, Pirke, & Hellhammer, 1993)

Stress:
- Self-reported stress: Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983)
- Physiological stress: baseline cortisol (Saliva Sample #1) and stress reactivity (Sample #2 cortisol – Sample #1 cortisol)

Body Self-Enhancement
- Body Dissatisfaction Scale Tool (Mutale, Dunn, Stiller, & Larkin, 2016)
- BMI, calculated from participants measured height and weight
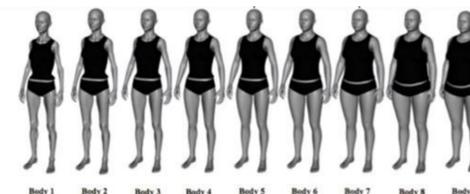
1. Which body best represents your current body?
2. Which body best represents how you ideally would like to look?
3. Select the body size closest to your current body where, if that was your actual body, you would be upset with how you look.

- Body Self-Enhancement = BMI from #1 < Actual BMI

Results

Self-reported stress (left figure) and baseline cortisol (physiological stress; right figure) each interacted with body self-enhancement to predict Time 2 BMI.

At low levels of stress, higher body self-enhancement is associated with *lower* Time 2 BMI.
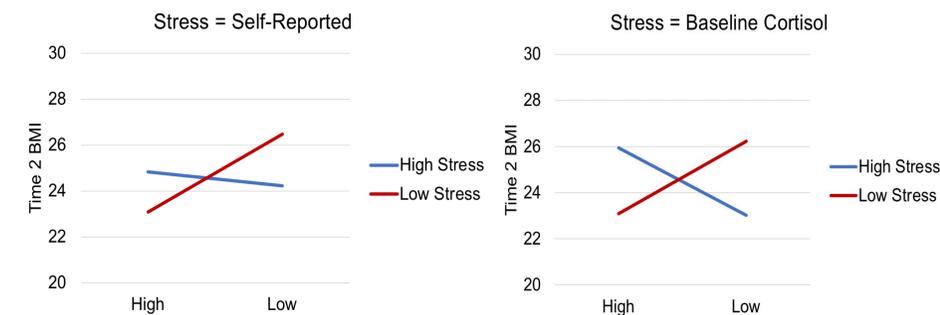
Stress reactivity interacted with body self-enhancement to predict Time 2 BMI.

At high levels of stress reactivity, higher body self-enhancement is associated with *higher* Time 2 BMI.
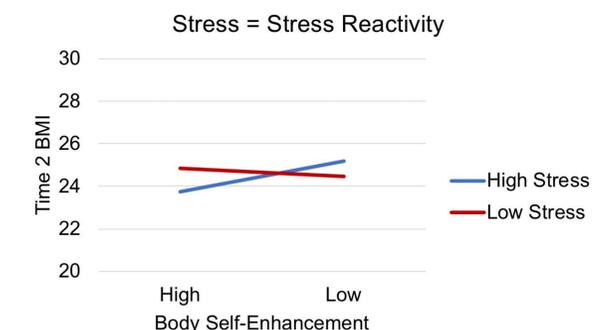
Conclusions

Lower Time 2 BMI was associated with low levels of self-reported stress and low baseline physiological stress when participants underestimated their physical body size.

Higher Time 2 BMI was associated with low levels of stress reactivity, or the difference between sample #2 cortisol and sample #1 cortisol, when participants underestimated their physical body size.

Future research would benefit from a larger sample size and studying other potentially confounding variables.