Introduction

• Binge eating and binge drinking episodes among young women are an area of growing concern.
• Theories of disordered alcohol and eating behaviors posit an emotion regulatory function for these behaviors.
• Emotions consist of subjective, behavioral, and physiological components.
• Evidence from self-report is suggestive of differences in subjective experience and regulation deficits. Specifically, women who engage in binge eating behavior may lack emotional clarity and have fewer strategies to regulate their emotional experiences.

Control

• 96 IAPS images (32 of each valence) separated into two blocks.
• Trial sequence: 8 s image → 4 s blank screen → 4 “Relax” screen.
• Button press required to advance to next image.
• Startle probe: 50 ms, 95 db white noise blast presented at either 3 s (reactivity measure) or 7 s (regulation measure) post-image onset; 8 startle probes presented during inter-trial interval.
• Visual regulation cues presented at 4 s post-image onset on all trials.

Study Objective:
- To utilize the acoustic startle paradigm to investigate potential differences in emotional reactivity and voluntary emotion regulation abilities in young women who endorse sub-clinical levels of alcohol or food and alcohol binge episodes compared to women who do not endorse these behaviors.

Methods

Participants

• Females 19-25 years of age; Native English speakers or ≥10 years English fluency.
• Alcohol Group (N=17):
  - ≥2 alcohol binge episodes in past 28 days & ≤2 food binge episodes in past year.
• Combined Food and Alcohol Group (N=18):
  - ≥2 alcohol and ≤2 food binge episodes in past 28 days.
• Control Group (N=22):
  - 0 alcohol or food episodes in past 28 days & ≤2 of either episode type in the past year.
• Food binge = eating a large amount of food given the circumstances and experiencing a loss of control.
• Alcohol binge = ≥2 drinks containing alcohol within a two hour period.

Procedure

- Nine practice trials to allow for startle habituation.
- 96 IAPS images (32 of each valence) separated into two blocks.
- Trial sequence: 8 s image → 4 s blank screen → 4 “Relax” screen.
- Button press required to advance to next image.
- Startle probe: 50 ms, 95 db white noise blast presented at either 3 s (reactivity measure) or 7 s (regulation measure) post-image onset; 8 startle probes presented during inter-trial interval.
- Visual regulation cues presented at 4 s post-image onset on all trials.

Results

Emotion Reactivity

- Significant Valence main effect
  - Negative > Neutral > Positive

Main effect for group and group by valence interaction non-significant.

Analysis

- Separate ANOVAs for reactivity, regulation and image valence and arousal ratings.

- Significant Emotion Regulation main effect
  - Maintain > Decrease

- All other main effects and interactions non-significant.

Emotion Regulation

- Significant Emotion Regulation main effect
  - Maintain > Decrease

Discussion

• The typical linear effect of valence on startle magnitude was observed prior to the regulation cues and did not differ across the groups.
• This finding is consistent with past findings of comparable startle modulation in individuals with diagnosed bulimia nervosa compared to healthy controls where as previous findings in college students with heavy alcohol consumption have been inconsistent.
• Groups did not differ in their ratings of valence or arousal.
• Across groups, participants were able to effectively regulate their response as indicated by larger responses for the maintain emotion condition compared to decrease emotion condition.
• Consistent with past work the direction of change for the positive valence condition suggests the intensity of arousal rather than valence of emotion per se was regulated.
• These results suggest that women who engage in binge behavior may not have deficits in their ability to voluntarily regulate basic emotional responses.
• Therefore, while they may report difficulties regulating emotion, they do not appear to have physiological differences in regulated emotional intensity.
• It may be the case that perceived emotion regulatory ability may not accurately reflect true abilities, however, the lack of group differences in regulation may also be due to the sub-clinical nature of the groups.
• The restricted nature of the evoked emotions may have limited the ability to reveal potential emotion regulation deficits; emotions such as shame and anger may be more pertinent to these behaviors.

References