Sexual Violence and Eating Disordered Behaviors in College Women: Examining the Roles of Embodiment and Body Image

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Sexual violence and eating disordered behaviors in college women: Examining the roles of embodiment and body image

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By
Kelly Bradley
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Abstract

Research shows that college women who experience sexual violence, which is prevalent on campuses, are more likely to develop eating disordered behaviors and body image issues (Breland et al., 2018; Gomez, Kilpela, Middlemass, & Becker, 2021; Groff Stephens & Wilke, 2016; Krause et al., 2018; White, Reynolds-Malear, & Cordero, 2011). Newer qualitative research has focused on embodiment, women’s lived experiences in their bodies, rather than solely on body image. Research by Piran (2016) shows that sociocultural factors, including sexual violence, contribute to disruptions in embodiment and, subsequently, eating disorders. The current study sought to better understand the role of sexual violence on eating disordered behaviors through embodiment and body image in the current era of the #MeToo Movement. The study also examined the moderating effects of the presence of physical sexual violence and the level of impact of sexual violence on embodiment and body image and, in turn, eating disordered behaviors. Findings show that, in the presence of physical sexual violence, more frequent sexual violence was associated with disruptions in embodiment and poor body image, which were associated with eating disordered behaviors. When high impact sexual violence was present, more frequent sexual violence was associated with disruptions in embodiment, but not body image, which was associated with eating disordered behaviors. In order to potentially prevent future eating disorders, assessment and treatment efforts for sexual violence should focus on assessing type of sexual violence and impact and then appropriately intervening to improve embodiment and body image.
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Chapter 1: Introduction

More women die from eating disorders than from any other psychological disorder (Smink et al., 2012). College women, in particular, are at a higher risk of developing eating disorders. Research shows that up to 32% of college women have diagnosable eating disorders and many more engage in eating disordered behaviors (White et al., 2011). College women are also three times more likely to experience sexual violence than women of other ages (Krause et al., 2018). Sexual violence, an all-encompassing term that includes any form of unwanted sexual contact including childhood sexual abuse, sexual harassment, and sexual assault, is a risk factor for developing an eating disorder (Breland et al., 2018; Gomez et al., 2021; Wonderlich et al., 2001). Many studies that have examined both eating disorders and sexual violence have focused specifically on the association between childhood sexual abuse and eating disorders (Lalor & McElvaney, 2010; Wonderlich et al., 2001). The studies that have examined sexual violence later in life have found that it is associated with bulimia nervosa, purging behaviors, and higher body shame and dissatisfaction (Dansky et al., 1997; Groff Stephens & Wilke, 2016). However, the link between sexual violence and eating disorders is still somewhat unclear. Both eating disorders and sexual violence have high rates of comorbidity with depression, substance abuse, suicide, and borderline personality disorder; thus, those who experience both are even more at risk for these serious mental health issues (Bulgin & Frederick, 2016; Hudson et al., 2007). In addition, there is some newer research by Niva Piran (2017) on embodiment, which encompasses all of women’s experiences living in their bodies and the sociocultural pressures they face, rather than just their body image. This newer research has shown that sexual violence is a potential social factor that disrupts women’s embodiment, and Piran argues that disruptions in embodiment contribute to eating disordered behaviors, poor body image, self-harm, and self-
objectification (Piran, 2017). It is crucial to better understand how sexual violence has impacted women’s experiences living in their bodies in order to inform treatment and future research. Additionally, current research is needed given the increased attention sexual violence has received since the #MeToo Movement. This paper will begin with a literature review on eating disorders, body image/embodiment, and sexual violence. The present study will then be presented and the results will be discussed to understand (1) the indirect effects of sexual violence on eating disordered behaviors through embodiment, (2) the indirect effects of sexual violence on eating disordered behaviors through body image, and (3) the moderating effects of the presence of physical sexual violence and the level of impact of sexual violence on embodiment and body image, and, in turn, eating disordered behaviors. Implications and limitations will then be reviewed.
Chapter 2: Literature Review

Sexual violence is associated with many negative consequences, including eating disordered behaviors and poor body image (Dansky et al., 1997; Groff Stephens & Wilke, 2016). Although there is some current research on the relationship among sexual violence, body image, and eating disorders, the current research does not include embodiment, which is important to consider in the era of the #MeToo Movement and the increased discourse on sexual violence. Because of the #MeToo Movement, there is a heightened awareness of sexual violence and stronger support for survivors. The #MeToo Movement originated in 2006 but became popular in the media in 2017 and spread to a total of 85 countries (Russel et al., 2018). The movement has led to less tolerance of and more open dialogue on sexual violence. In addition, the Rape, Abuse, and Incest National Network (RAINN) reported that 2018 was the busiest year in their 25-year history (“In 2018, RAINN helped”, 2018). Despite the positive aspects of the movement, there are also concerns for survivors. One of these concerns includes the way that reading others’ stories and increased media coverage could be triggering for survivors of sexual violence (Mendes et al., 2018). Another concern is that survivors often face backlash for coming forward, as seen in the high-profile case of Dr. Christine Blasey Ford and Brett Kavanaugh. Ford received numerous death threats and questions about her character for coming forward with her story. Ford’s case was also very public, so she received an outpouring of support from those who believed her story. However, women who have less privilege and resources than her might have seen the backlash she received as a reason not to report their own experiences of sexual violence (Taub, 2019). Little research has been done regarding the relationship between sexual violence, body image, and eating disordered behaviors in the current climate of #MeToo.

Sexual Violence
Sexual violence is a broad term that can include a range of experiences including sexual harassment, childhood sexual abuse, unwanted sexual activities that do not include intercourse, threat of harm in refusing sexual activities, and rape. Women are disproportionately affected by sexual violence; one in five women and one in 71 men will be raped in their lifetime (Black et al., 2011). Rape is just one form of sexual violence; one in three women will experience some form of physical sexual violence in their lifetime (Smith et al., 2017). A study by The American Association of University Women showed that 62% of college women had experienced sexual harassment at their university (The American Association of University Women, 2005).

Research also shows that sexual harassment is common in middle school and in high school, indicating that girls begin experiencing forms of sexual violence at early ages and it continues through adulthood (The American Association of University Women, 2011). Women are three times more likely to experience sexual violence while in college as compared to other times in their lives (Krause et al., 2011). About 27% of college women report experiencing physical sexual violence while in college, although numbers are likely higher given that many women do not report their experiences (Gross et al., 2006). Additionally, when sexual harassment, which is even more prevalent than physical sexual violence, is included in the definition of sexual violence, these numbers are higher (The American Association of University Women, 2005).

In addition to experiencing sexual violence as an adult, 39% of women experience childhood sexual abuse (Lalor & McElvaney, 2010). One study shows that women who experience childhood sexual abuse are more likely to experience later sexual violence (Lalor & McElvaney, 2010). One potential reason for revictimization is that people who experience childhood sexual abuse might use emotional avoidance as a coping skill during the abuse, and
later in life that emotional avoidance might cause them to miss cues of danger (Lalor & McElvaney, 2010).

Sexual violence has various short- and long-term consequences for survivors. The effects are wide-ranging and depend on various factors, including the developmental period during which the violence took place, the history of prior abuse, and the type of sexual violence experienced. Both childhood sexual abuse and sexual violence in adulthood are associated with poor physical health, including headaches, pelvic pain, other gynecological symptoms, pain disorders, and gastrointestinal disorders (Golding, 1999). A 23-year longitudinal study showed that childhood sexual abuse survivors experienced many health consequences including earlier onset of puberty, cognitive deficits, hypothalamic-pituitary-adrenal attenuation, more major illnesses, and higher healthcare utilization (Trickett et al., 2011). Sexual harassment without physical sexual assault can also lead to physical symptoms including high blood pressure in otherwise healthy women (Thurston et al., 2019). Sexual violence is also associated with mental health concerns including posttraumatic stress disorder, depression, anxiety, substance abuse, low self-esteem, and suicide thoughts and attempts (Ackard & Neumark-Sztainer, 2002; Dansky et al., 1997; Lalor & McElvaney, 2010). Repeated victimization, especially when there is childhood sexual abuse, is associated with a higher risk of developing mental health issues (Teva et al., 2013). In addition, repeated victimization is associated with poor coping, difficulty in interpersonal relationships, and affect regulation problems (Classen et al., 2005). Trauma in general is associated with greater eating disorder severity, and sexual violence specifically is associated with eating disordered behaviors and poor body image (Ackard & Neumark-Sztainer, 2002; Brewerton, 2007; Dansky et al., 1997; Faravelli et al., 2004; Hayes et al., 2021; Scharf et al., 2019; Tagay et al., 2010).
Eating Disordered Behaviors

One potential major consequence of sexual violence is eating disordered behaviors (Breland et al., 2018; Dansky et al., 1997; Gomez et al., 2021; Groff Stephens & Wilke, 2016). Eating disordered behaviors exist on a continuum, with healthy eating on one end, eating disordered behaviors in the middle, and diagnosable eating disorders on the other end. Eating disordered behaviors can include chronic dieting, restrictive eating, binge eating, purging, over-exercising, rigid rules for eating, and using diet pills, laxatives, and other unhealthy strategies for weight loss (Dansky et al., 1997). Dieting is a problematic eating behavior because 35% of people who diet progress to pathological dieting/eating disordered behaviors, and 20 to 25% of those pathological dieters eventually progress to eating disorders (Shisslak et al., 1995). One study found that 31% of women between the ages of 25 and 45 report purging as a way to control their weight (Reba-Harrelson et al., 2009). Additionally, another study found that only 20% of college students eat three meals per day, with many eating less (Scott-Sheldon et al., 2008). Diagnosable eating disorders include anorexia nervosa, bulimia nervosa, binge eating disorder, and other specified feeding or eating disorder or OSFED (American Psychiatric Association, 2013). Anorexia nervosa involves severe restriction of food intake, high levels of body image disturbance, and extreme fear of weight gain. Bulimia nervosa involves binge eating episodes (i.e., eating large quantities of food in a short period of time) and compensatory behaviors, which can be purging, exercise, or fasting. Binge eating disorder involves binge eating episodes without regular compensatory behaviors. OSFED is a category that encompasses eating disordered behaviors that do not fit neatly into the other categories but cause significant distress and/or impairment in an individual’s life. Symptoms can include, but are not limited to, restriction, bingeing, purging, body image disturbance, and compulsive exercise.
College in particular is a high-risk period for developing eating disorders. One study showed that college women’s dieting and eating disordered behaviors significantly increased from 1995 to 2008 (White et al., 2011). According to this study, 23.4% of college women in 1995 had diagnosable eating disorders, and that number increased to 32.6% in 2008 (White et al., 2011). The most common eating disorder diagnosis found in the participants was Eating Disorder Not Otherwise Specified, or EDNOS (which in the current diagnostic system is known as OSFED), with 26.0% of college women qualifying for an EDNOS diagnosis in 2008 (White et al., 2011). In addition, 4.0% qualified for a bulimia nervosa diagnosis and 3.0% qualified for a binge eating disorder diagnosis. The study also found that 4.2% of students dieted in 1995 for weight loss reasons compared to 22% of students in 2008 (White et al., 2011). In addition, diagnosable eating disorders typically begin between the ages of 18 and 21, the age of most college students (Hudson, 2007).

The consequences of eating disorders are both physical and psychological. Physical consequences of anorexia nervosa can include low body weight, cardiac issues, gastrointestinal issues, dehydration, kidney problems, anemia, amenorrhea, and death (Mehler & Brown, 2015). Physical consequences of bulimia nervosa can include the potential for gastric rupture, inflammation of and possible rupture of the esophagus, tooth decay, gastrointestinal issues, peptic ulcers, and pancreatitis (Mehler & Rylander, 2015). Physical consequences of binge eating disorder can include high blood pressure, high cholesterol, heart disease, Type II diabetes, and gallbladder disease (Wassenaar et al., 2019). Physical consequences of OSFED depend on the individual’s symptoms but can include a range of consequences including those seen with anorexia nervosa, bulimia nervosa, and binge eating disorder. Eating disorders also have the highest mortality rates of all psychological disorders (Smink et al., 2012). Psychological
consequences of all eating disorders include high rates of comorbidity with anxiety, depression, substance abuse, and suicide (Hudson et al., 2007). Other psychological consequences include affect dysregulation and interpersonal difficulties. These psychological consequences are similar to those for victims of sexual violence. Thus, those who experience sexual violence and develop eating disorders are likely at a greater risk for developing these negative consequences (Bulgin & Frederick, 2016).

**Body Image and Embodiment**

Body image issues, which are closely tied to eating disorders, also increase after sexual violence (Davidson & Gervais, 2015). Body image is a global concept that refers to the self-evaluation of the body, particularly focusing on appearance (Mendelson, Mendelson, & White, 2001). It includes perceptions, thoughts, and feelings about one’s body. There are multiple terms used synonymously with body image, such as body esteem, body satisfaction, and body perception. When an individual views their weight and shape negatively it can be considered body dissatisfaction. Body dissatisfaction is both a risk factor for and symptom of eating disorders (Stice et al., 2011; American Psychiatric Association, 2013). Many factors, including sexual violence, can disrupt how a woman views her body. Research on women’s body experiences has largely focused on poor body image and body dissatisfaction (Heatherton et al., 1995; Neighbors & Sobal, 2007; Tylka & Piran, 2019). Focusing on how the body looks can lead to objectification of body parts and of women in general. Some authors and researchers argue that body disruption is not just seen in the body dissatisfaction of women, but also in a disruption in embodiment (Piran, 2016). Piran (2012) argues that embodiment, which is a construct that refers to women’s lived experiences in their bodies, shapes the way that women experience their bodies. Embodiment can be considered an umbrella term for all experiences in the body, and
body image falls under that umbrella. Piran’s definition of embodiment stems from her longitudinal qualitative study of the lived experiences of girls and women. The definition includes five dimensions: body connection and comfort, agency and functionality, experience and expression of desire, attuned self-care, and inhabiting the body as a subjective versus an objective site (Piran, 2019). Body comfort and connection involves feeling in tune and comfortable with one’s body while engaging with the world (e.g., being comfortable and present at a party as opposed to being preoccupied with how your body looks). Agency and functionality involves feeling comfortable expressing one’s opinions and views freely “both through physical functionality and through the power of voice” (Piran, 2019, p. 12). An example of agency and functionality includes comfortably speaking out about personal views and opinions even when others might not agree. Experience and expression of desire includes connection to appetite and sexual desires and expressing them with agency (e.g., feeling comfortable expressing desires with a sexual partner). Attuned self-care includes engagement in interests and engagement with the world while being guided by emotional, relational, and bodily cues (Piran, 2019). An example of attuned self-care includes being aware of and responding to hunger and fullness cues. Inhabiting the body as a subjective site involves resisting objectification and an example includes dressing the body in a way that is comfortable rather than by the standards of society (Piran, 2019). Embodiment can be disrupted in any of these areas depending on an individual’s experiences.

Piran’s definition of embodiment is informed by phenomenologist Merleau-Ponty who viewed the mind and body as fundamentally intertwined (Piran, 2016). Given that the function of the body is to live in and move through the world, but there are enormous sociocultural pressures on girls and women to be physically desirable to others, women’s relationships with their bodies
and the world are often complicated (Frost, 2001). The time and resources spent on conforming to the pressures of society can cause considerable difficulty and distress in girls’ and women’s lives, as seen in Piran’s (2016) research. Piran conducted a large-scale qualitative research program to explore embodiment with girls and women of all ages. Her study showed that embodiment is disrupted by the social and cultural experiences that girls and women face, and sexual violence is one of these experiences that can lead to disruption in embodiment (Piran, 2016). With the literature on women’s body experiences moving towards a focus on embodiment, the present study provides new information about how sexual violence is related to women’s embodiment.

**Sexual Violence, Eating Disordered Behaviors, Body Image, and Embodiment**

Given that sexual violence often involves a violation of the body, it makes sense that a woman could experience a disruption in embodiment and that body image issues and eating disordered behaviors could occur as a result. Research on sexual violence, body image, and eating disorders has not included embodiment thus far given that it is such a new construct in the field. However, there has been specific research on body image and eating disorders in relation to sexual violence. When a violation occurs to the body, some women experience increased body shame and dissatisfaction and feel disconnected from their bodies (Bell et al., 2014; Dansky et al., 1997). They might feel as though their body betrayed them or their physical shape or weight was a contributing factor to the assault (Bell et al., 2014). These assumptions may increase the risk of using eating disordered behaviors (i.e., restricting intake, bingeing, over-exercising, etc.) in an attempt to change the body (Bell et al., 2014).

Research that has been done on eating disorders and childhood sexual abuse shows that childhood sexual abuse is a risk factor for developing eating disorders and adolescent girls and
women who have experienced sexual violence are more likely to report eating disorders (Ackard & Neumark-Sztainer, 2002; Brewerton, 2007; Faravelli et al., 2004; Tagay et al., 2010). Bingeing and purging behaviors, specifically, have shown an association with sexual violence. Research shows that children who were sexually abused have higher levels of purging and dieting behaviors than children who were not sexually abused (Wonderlich et al., 2000). Furthermore, Dansky et al. (1997) conducted a survey about sexual violence and eating disorders in adult women and found that 26.6% of their participants with bulimia nervosa had experienced rape. Additionally, participants with bulimia were more likely to report sexual molestation and aggravated assault (Dansky et al., 1997). Groff Stephens and Wilke (2016) found that sexual violence in adult women was associated with purging behaviors and the severity of the sexual violence increased the behaviors. Specifically, they found that experiencing severe sexual violence in the last year predicted purging behaviors in the last 30 days (Groff Stephens & Wilke, 2016). Additionally, Gomez et al. (2021) found that sexual violence is an independent predictor of eating disorders.

Limited research has also been conducted on sexual harassment and eating disordered behaviors. One study showed that girls who experience sexual harassment while in high school are more likely to report self-harm behaviors, suicidal thoughts, and maladaptive dieting (Chiodo et al., 2009). A study by Harned (2000) showed that sexual harassment was associated with eating disordered behaviors even when controlling for experiences of physical sexual violence and physical abuse. The study also found that body image issues and eating disordered behaviors were outcomes of sexual harassment (Harned, 2000). A second study by Harned and Fitzgerald (2002), which focused on sexual harassment in the workplace, confirmed the link between eating disordered behaviors and sexual harassment for women. Another study found an association
between more frequent sexual harassment and more frequent eating disorder symptoms (Romito et al., 2016). Additionally, a systematic review found a small but significant effect for the relationship between sexual harassment and eating disordered behaviors (Hayes et al., 2021).

Piran’s (2017) longitudinal research on embodiment has shown that as girls transition to early adolescence, they become uncomfortable with their appetites, both for food and sexual experiences. Social and cultural experiences, like being viewed as an object and living in rape culture, contribute to girls’ negative experiences in and feelings toward their bodies (Piran, 2017). As girls become women, these experiences in the world and with their bodies only continue. In older adolescence, during the typical college years, women “often engage in body practices aimed at the constriction of body size, self-sexualization, and approximating an idealized image of women,” (Piran, 2017, p. 198). Piran (2017) also notes that women in late adolescence are more at risk for sexual violence “as they become more regularly engaged in sexual activities in a culture that does not sanction women’s agency, nor their well-being, in desires,” (p. 198). Girls and women also face objectification and sexualization of their bodies. Piran (2017) notes that in her research, girls and women felt the only way to cope with these issues was to present themselves in ways that matched the culture’s oppressive requirements of them, furthering disruptions in their embodiment and potentially leading to the negative consequences that she found in some of the females in her study (e.g., eating disordered behaviors, body dissatisfaction). Additionally, Piran and Teall (2012) wrote that given the sociocultural pressures women face in relation to their bodies, eating disorders may be best understood in relation to a “lived experience of restricted agency,” (p. 176).
The Present Study

The existing literature is somewhat limited, but indicates that there are many social issues that might contribute to disruptions in embodiment, one of which is sexual violence (Piran, 2017). Sexual violence has been shown to increase women’s risk for body image issues and eating disordered behaviors, but many studies are outdated, especially given the #MeToo Movement. In light of the #MeToo Movement, and given the absence of literature on women’s embodiment and sexual violence, the current study examined the mediating effects of sexual violence on eating disordered behaviors through embodiment and body image and the moderating effects of physical sexual violence (as opposed to sexual harassment) and the impact of sexual violence on embodiment and body image, and, in turn, eating disordered behaviors. In this study, it was hypothesized that sexual violence would have an indirect effect on eating disordered behaviors in college women and that both embodiment and body image mediate that relationship, with embodiment being a stronger mediator. It was also hypothesized that embodiment and body image would mediate the relationship between sexual violence and eating disordered behaviors when physical sexual violence (as opposed to sexual harassment) is present and when participants rate their experiences of sexual violence as having a strong impact on their lives.
Chapter 3: Methods

Participants

Participants in the study were 250 American college women between the ages of 18 and 24. The mean age of the participants was 21.99 (SD = 1.61). Participants were required to be in college and have started prior to completing the study. Participants were recruited through Amazon Mechanical Turk (MTurk). MTurk is an online crowdsourcing website where people can sign up to do various types of online work, including participating in research. Overall, 398 people completed the survey, but 148 participants were removed from the study because they did not correctly follow instructions (i.e., responded to questions about height and weight in Eating Disorder Examination Questionnaire in ways that did not make sense). Demographics of participants are presented in Table 1.

Procedures

The present study was approved by the West Chester University Institutional Review Board. The study was completed on MTurk which allowed participants to remain anonymous. Anyone can use MTurk if they sign up for an account, and MTurk advertised on its website for this study. Prior psychological research has used MTurk to recruit participants (Berinsky et al., 2012; Chandler & Shapiro, 2016). Advertising identified this study as a study about the experiences of American college women. Those who chose to participate in the study and met inclusion requirements followed a link to Qualtrics to fill out the measures.

After informed consent (see Appendix A) was obtained, data was collected on body image, embodiment, eating disordered behaviors, and experiences of sexual violence. The measures took approximately 30 minutes to complete. Workers on MTurk earn an average of $1.38 per hour, but it is encouraged to pay more (Chandler & Shapiro, 2016). Therefore,
participants were compensated $2 through MTurk, which is higher than average for 30 minutes of work (Chandler & Shapiro, 2016).

After the participants completed the measures on Qualtrics, they were given a list of resources to use if they felt they needed support. Resources included the National Eating Disorders Association Helpline and website and the National Sexual Assault Hotline and website (see Appendix B).

Table 1

Participant Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>White</td>
<td>74.4</td>
</tr>
<tr>
<td></td>
<td>Black/African American</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Latinx/Hispanic</td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>Native American</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2.0</td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td>Heterosexual</td>
<td>80.0</td>
</tr>
<tr>
<td></td>
<td>Gay/Lesbian</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Bisexual</td>
<td>16.0</td>
</tr>
<tr>
<td></td>
<td>Asexual</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>0.4</td>
</tr>
<tr>
<td>Year in College</td>
<td>First year</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>Second year</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td>Third year</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>Fourth year</td>
<td>37.6</td>
</tr>
<tr>
<td></td>
<td>Fifth year</td>
<td>10.0</td>
</tr>
<tr>
<td>Family Income</td>
<td>$20,000 or less</td>
<td>14.0</td>
</tr>
<tr>
<td></td>
<td>$20,001 – 30,000</td>
<td>15.6</td>
</tr>
<tr>
<td></td>
<td>$30,001 – 50,000</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>$50,001 – 70,000</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td>$70,001 – 100,000</td>
<td>17.2</td>
</tr>
<tr>
<td></td>
<td>$100,001 or more</td>
<td>12.8</td>
</tr>
</tbody>
</table>
Measures

Demographic information, including age, race/ethnicity, sexual orientation, and socioeconomic status, was collected through a demographics questionnaire. Histories of mental health diagnoses (including anxiety disorders, depressive disorders, eating disorders, trauma disorders, and borderline personality disorder) were also assessed within the demographics questionnaire (see Appendix C). Self-report questionnaires were used to assess sexual violence, body image, embodiment, and eating disordered behaviors.

Sexual Violence. A modified version of the Sexual Experiences Questionnaire-Department of Defense (SEQ-DoD; Fitzgerald et al., 1999) was used to assess frequency of experiences of sexual violence (see Appendix D). The SEQ-DoD includes 23 items about both sexual harassment and physical sexual violence. Items range in level of invasiveness from “Repeatedly told sexual stories or jokes that were offensive to you” to “Had sex with you without your consent or against your will”. One modification that was made was the addition of one item to assess experiences of online sexual harassment (i.e., “Someone spread sexual pictures, rumors, or information, about you through online platforms including social media, text, or email”). Participants were instructed to consider the course of their lives when responding to items. Items have response options of never, once or twice, sometimes, often, and many times (coded as 0, 1, 2, 3, and 4 respectively). Higher scores indicate more frequent experiences of sexual violence. A second modification that was made is that an impact score was obtained. In order to account for the impact of each experience, participants rated how much each experience of sexual violence has had an impact on their life with response options of 0 (no impact), 1 (mild impact), 2 (moderate impact), and 3 (strong impact). Although the SEQ-DoD was developed for use in the military, a shortened version has previously been used in research.
with university students (Rosenthal et al., 2016). The SEQ-DoD has good psychometric properties including reliability and validity (Fitzgerald et al., 1999). It was adapted from the original version of the Sexual Experiences Questionnaire (SEQ) which has an internal consistency coefficient of .92 based on a large sample of college students (Fitzgerald, 1995). A factor analysis of the SEQ yielded three factors (gender harassment, unwanted sexual attention, and sexual coercion) and new items and a fourth factor were added to the SEQ-DoD (Fitzgerald, 1999). The SEQ-DoD’s four subscales (sexist hostility, sexual hostility, unwanted sexual attention, and sexual coercion) have shown good internal consistency reliabilities of .83, .91, .85, and .95 respectively (Fitzgerald et al., 1999). For the present study, the scale was scored by summing the responses of all items together to get a total score for sexual violence. The modified version of the SEQ-DoD used in this study demonstrated excellent internal consistency (Cronbach’s alpha = .97). The presence of physical sexual violence was determined by examining answers to items that specifically assess physical sexual violence (i.e., items U through X). An impact score was calculated by summing the ratings of reported impact of sexual violence. A dichotomous variable was created to differentiate those who endorsed physical sexual violence from those who did not.

**Body Image.** The Body Esteem Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson, & White, 2001) is a 23-item measure that was used to assess body image in participants (see Appendix F). The BESAA’s items are related to body image in particular domains including appearance (e.g., “I worry about the way I look”), weight satisfaction (e.g., “I really like what I weigh,”), and evaluations attributed to others about one’s appearance (e.g., “People my own age like my looks”). Participants rated their degree of agreement with each item on a 5-point Likert scale. The total score was used in this study to measure body esteem/body
image; lower scores indicate lower body esteem and higher body image concerns. The BESAA has been found to be reliable and valid with individuals aged 12 and older. The three subscales have shown high internal consistency (Cronbach’s alphas .92, .94, and .81). The subscales also have good convergent reliability (r = .47 to .63) with the Rosenberg Self-Esteem scale (Mendelson et al., 2001). While the authors of the BESAA do not discuss the use of a total score, researchers have used a total score as a measure of overall body esteem (Modica, 2019). In the present study, the BESAA demonstrated excellent internal consistency (Cronbach’s alpha = .96 for the total score).

**Embodiment.** The Experience of Embodiment Scale (EES; Piran & Teall, 2012) was used to measure participants’ embodiment (see Appendix E). The EES is a 34-item measure that assesses women’s experiences living in their bodies. While body image can be a component of embodiment, the construct of embodiment is much broader. The EES is based on the five dimensions of embodiment that emerged from Piran’s qualitative work. An exploratory factor analysis validated those five dimensions and revealed a sixth factor (Piran & Teall, 2012). The six subscales on the EES include Positive Connection with Body (e.g., “I feel in tune with my body”), Body-Unencumbered Adjustment (e.g., “I sometimes tend to blame my body for difficulties I am having”), Agency and Expression (e.g., “I am comfortable voicing my views, opinions, and beliefs”), Experience and Expression of Sexual Desire (e.g., “I feel disconnected from my own sense of sexual desire”), Self-Care and Attunement (e.g., “I take good care of, and am respectful of, my body”), and Countering Self-Objectification (e.g., “I focus more on what my body can do than on its appearance”). Participants rated each item on a Likert scale, with options of 1 (strongly disagree), 2 (somewhat disagree), 3 (neither agree nor disagree), 4 (somewhat agree), and 5 (strongly agree). A total score was calculated with higher scores
indicating higher levels of embodiment. The EES is highly correlated with the BESAA (.75 and .77 at the p<.001 level in two studies evaluating the psychometric properties of the EES) (Piran, 2020). Piran (2019) notes that the EES has high internal consistency (alpha = .91 to .94) and high test-retest reliability (r = .93). In the present study, the EES demonstrated excellent internal consistency (Cronbach’s alpha = .96).

**Eating Disordered Behaviors.** The Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008) is a 28-item measure that assesses eating disordered behaviors in the past 28 days (see Appendix G). The EDE-Q has four subscales including Restraint (e.g, “Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded?)”). Eating Concern [e.g., “Has thinking about food, eating, or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading?)”), Shape Concern (e.g., “How uncomfortable have you felt about seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing, or taking a bath or shower?)”), and Weight Concern (e.g., “Have you had a strong desire to lose weight?”). The items are rated on a 6-point scale in terms of frequency, with options of 0 (never), 1 (1-5 days), 2 (6-12 days), 3 (13-15 days), 4 (16-22 days), 5 (23 to 27 days), and 6 (every day). Research shows that the EDE-Q is a reliable and valid measure for assessing eating disorder symptoms (Berg, Peterson, Frazier, & Crow, 2012). Four studies have shown that the EDE-Q has acceptable internal consistency with alphas for the subscales ranging from .70 to .93 (Berg et al., 2012). In the present study, a total score for the EDE-Q was used to assess a range of eating disordered behaviors; the higher the score, the more frequent the behaviors. The EDE-Q demonstrated excellent internal consistency in the present study (Cronbach’s alpha = .97).
Additional Sexual Violence and #MeToo Movement Items. Eight items were asked to gather additional information about participants’ experiences of sexual violence and the impact of the #MeToo Movement (see Appendix H). Two questions assessed participants’ ages when sexual violence occurred (e.g., “When did your experiences of sexual harassment occur?” and “When did your experiences of physical sexual violence occur?” with answer options of Age 0-10 (Preschool/Elementary School), Age 11-14 (Middle School/Junior High School), Age 15-18 (High School), and Age 18+ (College). If participants did not indicate experiences of sexual violence, they were not presented with these questions. Other questions about sexual violence included: “Has any sexual violence (including sexual harassment) that you’ve experienced ever negatively impacted your feelings about your body?” and “Is any sexual violence (including sexual harassment) that you’ve experienced currently negatively impacting your feelings about your body?” (answer options: Extremely negatively, Moderately negatively, Slightly negatively, and Not at all); “Has any sexual violence (including sexual harassment) that you’ve experienced ever impacted your eating habits? Check all that apply.” (answer options: It has led to overeating/binge eating, It has led to restricting my eating, It has led to purging (self-induced vomiting, laxative use), It has never impacted my eating habits, and Unsure), and “Is any sexual violence (including sexual harassment) that you’ve experienced currently negatively impacting your eating habits? Check all that apply.” (answer options: It’s currently contributing to overeating/bingeing, It’s currently contributing to restricting my eating, It’s currently contributing to purging (self-induced vomiting, laxative use), It’s not currently impacting my eating habits, and Unsure).

Questions were also asked about the participants’ experience with the #MeToo Movement. The first question was “Are you familiar with the #MeToo Movement? Check all
that apply” with answer options of Yes, I saw others using the hashtag on social media; Yes, I used the hashtag myself; Yes, I saw/heard information about the #MeToo Movement in the general media (e.g., TV, radio, videos, news articles); and No. The next questions were “How does the attention that the #MeToo Movement has brought to experiences of sexual violence affect you?”, “How does the attention that the #MeToo Movement has brought to experiences of sexual violence affect your body image?”, and “How does the attention that the #MeToo Movement has brought to experiences of sexual violence affect your eating habits?” with answer options of Extremely negatively, Somewhat negatively, Not at all, Somewhat positively, Extremely positively, and Unsure.
Chapter 4: Results

Using a moderated mediation analysis and assuming a small to moderate effect size (.50) and an alpha level of .05, the study needed a total sample of 84 participants to achieve power of .80 (Cohen, 1992). A larger sample of 250 participants was used in order to increase power and increase the likelihood of obtaining participants who have had experiences with sexual violence and/or eating disordered behaviors.

Descriptive Statistics

Descriptive statistics were used to describe the participants in terms of age, race/ethnicity, sexual orientation, socioeconomic status, year in college, and past mental health diagnoses. Pearson’s r correlations were used to examine zero-order correlations among variables measured in the study. Descriptive statistics and frequencies were also used to understand the items about sexual violence and the #MeToo Movement.

Of the 250 participants, 70% (174) had experienced sexual harassment, whereas 30% (76) had not. The majority of participants (51.2%) endorsed experiencing sexual harassment at age 18 or older, with some participants endorsing experiences at multiple time points. Of the 250 participants, 47.6% (119) had experienced physical sexual violence, while 52.4% (131) had not. The majority of participants (60.5%) experienced physical sexual violence at age 18 and older, with some participants endorsing it at multiple time points. Participants were also asked about their understanding of and interacting with the MeToo hashtag. Of the 250 participants, 75.6% (189) saw others using #MeToo on social media, 16% (40) used the hashtag themselves, and 52.8% (132) saw or heard information about the movement in general, with some participants choosing multiple responses. Six percent (15) of the participants were not familiar with #MeToo.

Most participants either reported a positive effect (43.6%) or no effect (35.6%) of the increased
attention on sexual violence from the #MeToo movement. Most participants either reported no effect (50.8%) or a positive effect (30.4%) on their body image from the increased attention on sexual violence from the #MeToo movement. Most participants reported either no effect (64.8%) or a positive effect (16.4%) on their eating habits from the increased attention on sexual violence from the #MeToo Movement. See Table 2 for more details.

Table 2

Participants’ Experiences of Sexual Violence and #MeToo

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Harassment</td>
<td>Never experienced SH</td>
<td>76</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td>Experienced SH</td>
<td>174</td>
<td>70.0</td>
</tr>
<tr>
<td></td>
<td>SH between 0 and 10</td>
<td>27</td>
<td>10.8</td>
</tr>
<tr>
<td></td>
<td>SH between 11 and 14</td>
<td>57</td>
<td>22.8</td>
</tr>
<tr>
<td></td>
<td>SH between 15 and 18</td>
<td>94</td>
<td>37.6</td>
</tr>
<tr>
<td></td>
<td>SH at 18+</td>
<td>128</td>
<td>51.2</td>
</tr>
<tr>
<td>Physical Sexual Violence</td>
<td>Never experienced PSV</td>
<td>131</td>
<td>52.4</td>
</tr>
<tr>
<td></td>
<td>Experienced PSV</td>
<td>119</td>
<td>47.6</td>
</tr>
<tr>
<td></td>
<td>PSV between 0 and 10</td>
<td>16</td>
<td>13.45</td>
</tr>
<tr>
<td></td>
<td>PSV between 11 and 14</td>
<td>27</td>
<td>22.69</td>
</tr>
<tr>
<td></td>
<td>PSV between 15 and 18</td>
<td>42</td>
<td>35.29</td>
</tr>
<tr>
<td></td>
<td>PSV at 18+</td>
<td>72</td>
<td>60.5</td>
</tr>
<tr>
<td>Familiarity with #MeToo Movement</td>
<td>Not familiar</td>
<td>15</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>Saw others using #</td>
<td>189</td>
<td>75.6</td>
</tr>
<tr>
<td></td>
<td>Used hashtag myself</td>
<td>40</td>
<td>16.0</td>
</tr>
<tr>
<td></td>
<td>Generally saw/heard about movement</td>
<td>132</td>
<td>52.8</td>
</tr>
<tr>
<td>How does attn on SV from #MeToo affect you</td>
<td>Extremely negatively</td>
<td>10</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Somewhat negatively</td>
<td>13</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>89</td>
<td>35.6</td>
</tr>
<tr>
<td></td>
<td>Somewhat positively</td>
<td>74</td>
<td>29.6</td>
</tr>
<tr>
<td></td>
<td>Extremely positively</td>
<td>35</td>
<td>14.0</td>
</tr>
<tr>
<td></td>
<td>Unsure</td>
<td>29</td>
<td>11.6</td>
</tr>
<tr>
<td>How does attn on SV from #MeToo affect BI</td>
<td>Extremely negatively</td>
<td>10</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Somewhat negatively</td>
<td>16</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>127</td>
<td>50.8</td>
</tr>
<tr>
<td></td>
<td>Somewhat positively</td>
<td>55</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td>Extremely positively</td>
<td>21</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>Unsure</td>
<td>21</td>
<td>8.4</td>
</tr>
<tr>
<td>How does attn on SV from #MeToo affect eating</td>
<td>Extremely negatively</td>
<td>7</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>Somewhat negatively</td>
<td>16</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>162</td>
<td>64.8</td>
</tr>
<tr>
<td></td>
<td>Somewhat positively</td>
<td>30</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Extremely positively</td>
<td>11</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>Unsure</td>
<td>24</td>
<td>9.6</td>
</tr>
</tbody>
</table>
Descriptive statistics about mental health diagnoses were also calculated. Of the 250 participants, 42% (106) reported being diagnosed with a psychological disorder (not including eating disorders), with some participants (11) endorsing more than one diagnosis. The most commonly experienced psychological disorders were anxiety disorders, which 36.4% (91) of participants endorsed, and depressive disorders, which 28.4% (71) of participants endorsed. Of the 250 participants, 17.6% (44) participants had been diagnosed with an eating disorder, with some participants endorsing more than one eating disorder diagnosis in their lifetime. The most commonly experienced eating disorder was anorexia nervosa, which 8.0% (20) of participants endorsed, followed by binge eating disorder, which 7.6% (19) of participants endorsed. The breakdown of diagnoses is shown in Table 3 below.

Table 3

Participants’ Mental Health Diagnoses

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psych disorders (not including eating disorders)</td>
<td>Anxiety Disorder</td>
<td>91</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>Depressive disorder</td>
<td>71</td>
<td>28.4</td>
</tr>
<tr>
<td></td>
<td>PTSD</td>
<td>21</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>Borderline PD</td>
<td>6</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>9</td>
<td>3.6</td>
</tr>
<tr>
<td>Eating Disorders</td>
<td>Anorexia nervosa</td>
<td>20</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>Bulimia nervosa</td>
<td>10</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Binge eating disorder</td>
<td>19</td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>Other specified feeding/eating disorder</td>
<td>6</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Participants who experienced sexual violence (including sexual harassment) were asked about the perceived impact of those experiences on their feelings about their body and their eating behaviors. Most participants who experienced sexual violence (84.7%) believed that their experiences have had some level of negative impact on their feelings about their body over the
course of their lifetime. Most participants who experienced sexual violence (68.7%) reported that their experiences had some level of negative impact on their current feelings about their body. Many participants who experienced sexual violence (37%) endorsed that their experiences had impacted their eating habits over the course of their lifetime. Many participants who experienced sexual violence (35.5%) endorsed that their experiences were currently impacting their eating habits. See Table 4 for details.

Table 4

Impact of Sexual Violence on Feelings about Body and Eating Behaviors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>n.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has SV ever impacted feelings about body</td>
<td>Extremely negatively</td>
<td>42</td>
<td>16.8</td>
</tr>
<tr>
<td></td>
<td>Moderately negatively</td>
<td>55</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td>Slightly negatively</td>
<td>47</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>26</td>
<td>10.4</td>
</tr>
<tr>
<td></td>
<td>I’ve never exp. SV</td>
<td>80</td>
<td>32.0</td>
</tr>
<tr>
<td>Is SV currently impacting feelings about body</td>
<td>Extremely negatively</td>
<td>27</td>
<td>10.8</td>
</tr>
<tr>
<td></td>
<td>Moderately negatively</td>
<td>46</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>Slightly negatively</td>
<td>41</td>
<td>16.4</td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>52</td>
<td>20.8</td>
</tr>
<tr>
<td></td>
<td>I’ve never exp. SV</td>
<td>84</td>
<td>33.6</td>
</tr>
<tr>
<td>Has SV ever impacted eating habits (check all)</td>
<td>Led to overeating/bingeing</td>
<td>36</td>
<td>14.4</td>
</tr>
<tr>
<td></td>
<td>Led to restricting</td>
<td>48</td>
<td>19.2</td>
</tr>
<tr>
<td></td>
<td>Led to purging (SIV, vomiting, laxatives)</td>
<td>23</td>
<td>9.2</td>
</tr>
<tr>
<td></td>
<td>Never impacted eating</td>
<td>67</td>
<td>26.8</td>
</tr>
<tr>
<td></td>
<td>Unsure</td>
<td>37</td>
<td>14.8</td>
</tr>
<tr>
<td></td>
<td>I’ve never exp. SV</td>
<td>85</td>
<td>34.0</td>
</tr>
<tr>
<td>Is SV currently impacting eating habits (check all)</td>
<td>Contributing to current overeating/bingeing</td>
<td>35</td>
<td>14.0</td>
</tr>
<tr>
<td></td>
<td>Contributing to current restricting</td>
<td>28</td>
<td>11.2</td>
</tr>
<tr>
<td></td>
<td>Contributing to current purging</td>
<td>17</td>
<td>16.8</td>
</tr>
<tr>
<td></td>
<td>Not currently impacting</td>
<td>76</td>
<td>30.4</td>
</tr>
<tr>
<td></td>
<td>Unsure</td>
<td>34</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td>I’ve never exp. SV</td>
<td>87</td>
<td>34.8</td>
</tr>
</tbody>
</table>

Testing of Hypothesized Indirect Effects

In order to test the hypothesized relationships among sexual violence, eating disordered behaviors, embodiment, and body image, moderated mediation analyses were used. Indirect effects (mediation) were tested using bootstrapping estimates for 5000 samples (Preacher &
Hayes, 2008). A total of two models were tested in order to examine one dependent variable (eating disordered behaviors), two mediator variables (embodiment, body image), and two moderators (the presence of physical sexual violence, impact of sexual violence). The impact of sexual violence as a moderator was structured such that the effect was tested at three levels: low (-1SD), medium (mean), and high (+1SD). Bivariate correlations between the measures were calculated and are presented in Table 5.

**Table 5**

*Bivariate Correlations*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Body image</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Eating disordered behaviors</td>
<td>-.71*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3. Sexual violence</td>
<td>-.30*</td>
<td>.50</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4. Embodiment</td>
<td>.88*</td>
<td>-.75*</td>
<td>-.40*</td>
<td>-</td>
</tr>
</tbody>
</table>

* Correlation is significant at the .01 level (2-tailed)

The conditional indirect effect of sexual violence on eating disordered behaviors through embodiment and body image was tested (see Figure 1). The conditional variable in the model was the presence of physical sexual violence, where the presence of the physical sexual violence was hypothesized to strengthen the mediation of embodiment and body image in the relationship between all sexual violence and eating disordered behaviors.
Note: Moderated-Mediation of the relationship between sexual violence on eating disordered behaviors through embodiment and body image. Conditional factor: presence of physical sexual violence.

The conditional indirect effect of sexual violence on eating disordered behaviors through embodiment and body image was tested with a conditional variable of the impact of sexual violence (see Figure 2). Greater impact of sexual violence was hypothesized to strengthen the mediation of embodiment and body image in the relationship between sexual violence and eating disordered behaviors.
Figure 2

Model 2

![Diagram](image-url)


Moderated mediation analyses were conducted to examine whether the presence of physical sexual violence and the impact of sexual violence are moderators of the indirect effects of sexual violence on eating behaviors via embodiment and body image. To test the strength of the moderated mediation conditional process modeling (PROCESS macro) for SPSS was used (Hayes Model 7). Statistical mediation is supported if the bootstrapped confidence interval for the indirect effect does not contain zero (Hayes, 2013). The results are presented in Table 6.

Model 1 was tested first (see Figure 3). The variable sexual violence was entered as a predictor (X), the variable presence of physical sexual violence was entered as a dichotomous moderating variable (W), the variables embodiment and body image were entered as mediating variables (M1 and M2), and the variable eating disordered behaviors was entered as the outcome variable (Y). The results show that the conditional indirect effect of sexual violence on eating
disordered behaviors via embodiment and body image is significant when physical sexual
violence is present (see Table 6). Coefficients for Model 1 are presented in Figure 3. With
embodiment as the mediator, the conditional effect of the presence of physical sexual violence is
.0056 with 95% CI .001 to .01. With body image as the mediator, the conditional effect of the
presence of physical sexual violence is .01 with 95% CI .006 to .02. When physical sexual
violence is not present, there is not a significant conditional indirect effect of sexual violence on
eating disordered behaviors (see Table 6 for confidence intervals).

Model 2 was then tested (see Figure 4). The variable sexual violence was entered as a
predictor (X), the variable impact of sexual violence was entered as a continuous moderating
variable (W), the variables embodiment and body image were entered as mediating variables
(M1 and M2), and the variable eating disordered behaviors was entered as the outcome variable
(Y). The results show that the conditional indirect effect of sexual violence on eating disordered
behaviors via embodiment, but not body image, is significant when the impact of sexual violence
is rated strongly (see Table 6). Coefficients for Model 2 are presented in Figure 4. With
embodiment as the mediator, the conditional effect of high impact sexual violence is .01 with
95% CI .0006 to .03. When the impact of sexual violence is rated lower, the conditional indirect
effect is not significant (see Table 6 for confidence intervals).

In order to test the hypothesis that embodiment would be a stronger mediator than body
image, a simple mediation was conducted (Hayes Model 4). Results indicate that there is no
significant difference between the two mediators in terms of their role in the relationship
between sexual violence and eating disordered behaviors, $B = .0068$, 95% CI: (-.0036, .0179).
**Table 6**

*Coefficients and Confidence Intervals*

<table>
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Moderated mediation of relationship between SV and ED behaviors through embodiment and body image (conditional factor: presence of physical SV)

**Embodiment as Mediator**

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**Conditional effects- embodiment**

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**Conditional effects- body image**

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Moderated mediation of relationship between SV and ED behaviors through embodiment and body image (conditional factor: impact of SV)

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**Body Image as Mediator**

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**Conditional effects- embodiment**

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**Conditional effects- body image**

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Figure 3

_Model 1 Tested_

- Presence of Physical Sexual Violence
  - Embodiment
    - Eating Disordered Behaviors
  - Sexual Violence
    - Body Image
  - $a_1 = -0.96$
  - $a_2 = -0.39$
  - $b_1 = -0.02$
  - $c' = 0.02$

Figure 4

_Model 2 Tested_

- Presence of Physical Sexual Violence
  - Embodiment
    - Eating Disordered Behaviors
  - Sexual Violence
    - Body Image
  - $a_1 = -0.43$
  - $a_2 = 0.01$
  - $b_1 = -0.02$
  - $b_2 = -0.02$
  - $c' = 0.02$
Chapter 5: Discussion

The purpose of the present study was to test whether certain variables act as mediators and moderators in the association between sexual violence and eating disordered behaviors in college women. Proposed mediators were embodiment and body image, and proposed moderators were the presence of physical sexual violence (as opposed to non-physical sexual harassment) and strength of impact of sexual violence. Descriptive statistics examined participants’ reported experiences before testing the models. The information obtained provides valuable insight into the sample. Seventy percent of the participants had experienced sexual violence at some point in their lives. Other studies have found that 27% of college women have experienced physical sexual violence (Gross, Winslett, Roberts, & Gohm, 2006) and 62% have experienced sexual harassment (The American Association of University Women, 2011). While the finding from the present study seems high, it does include both physical and non-physical types of sexual violence and indicates a significant need to focus on the treatment and prevention of sexual violence on college campuses. Many participants had a diagnosis of one psychological disorder, including eating disorders, and some participants endorsed multiple disorders. Past research has shown that sexual violence is associated not only with eating disorders, but also with anxiety, depression, PTSD, and substance use disorders (Ackard & Neumark-Sztainer, 2002; Dansky et al., 1997; Lalor & McElvaney, 2010). It is likely that participants who did experience sexual violence had more mental health concerns than those who did not. Although another study found that up to 32% of college women have eating disorders (White et al., 2011), 17.6% of participants in the present study endorsed having an eating disorder. It is possible, and even likely, that some participants had diagnosable eating disorders without knowing it, and therefore did not report them. It is known from prior research that college women in particular
are at higher risk for eating disorders and sexual violence, and the results of this study support this research given that the participants were college students and their rates of eating disorders and experiences of sexual violence were high (Krause et al., 2018; White et al., 2011). Regarding their perceptions of the impact of sexual violence on their feelings about their bodies, most participants who experienced sexual violence believed it negatively impacted their feelings about their body over the course of their lifetime and that it is currently negatively impacting their feelings about their body. These findings support past research which has shown that sexual violence can negatively impact body image (Davidson & Gervais, 2015). In addition, research has found that experiences of sexual violence are significantly correlated with body image dissatisfaction, which is predictive of other mental health concerns like depression, anxiety, and PTSD (Jaconis et al., 2019). The present study also asked participants who have experienced sexual violence about how they perceived the impact of these experiences on their eating habits across their lifetime and at the current moment, and many indicated “no impact.” It is possible that participants who have experienced both sexual violence and eating disordered behaviors are unaware of the connection between the two. It is also possible that participants who have experienced sexual violence are less in tune with their bodies and their needs due to disruptions in embodiment, and thus are not even aware that they engage in eating disordered behaviors. However, 37% of participants did say that sexual violence has impacted their eating over the course of their lifetime, and 35.5% said it is currently impacting their eating, indicating that some participants did have an awareness of at least one way in which sexual violence has affected them.

The present study also adds a deeper understanding of the ways in which college women have experienced the #MeToo Movement. The large majority of participants had heard of or
interacted with the #MeToo Movement hashtag on social media. The majority of participants also reported a positive effect (43.6%) from the #MeToo Movement, and only 9.2% reported a negative effect (35.6% reported no effect). This positive finding is understandable given that there have been positive outcomes from the #MeToo Movement in general, including that survivors have had a chance to be heard, possibly for the first time (North, 2019). The movement has also contributed to broader social change, like some states expanding laws to protect survivors (North, 2019).

Given the main purpose of the current research was to test embodiment and body image as mediators in the relationship between sexual violence and eating disordered behaviors, two models were tested. As hypothesized in Model 1, in the presence of physical sexual violence, more frequent sexual violence was linked to disruptions in embodiment and body image concerns, which, in turn, were associated with an increase in eating disordered behaviors. The findings suggest that the physical nature of sexual violence is key in understanding the impact sexual violence has on a woman’s embodiment and body image and how that then is associated with eating disordered behaviors. While these findings are correlational and do not indicate a clear causal relationship, based on other research demonstrating the role of sexual violence on body dissatisfaction and disruptions in embodiment, and the roles of body dissatisfaction and poor embodiment as factors contributing to the development of eating disordered behaviors, it is reasonable to propose the direction these relationships likely take.

The findings from the present study expand upon findings from previous research by showing two mechanisms (embodiment and body image) through which sexual violence, particularly physical sexual violence, is associated with increased eating disordered behaviors. Embodiment and body image were found to account for a significant part of the relationship. It is
known from prior research that disruptions in embodiment and poor body image are risk factors for eating disorders and that there are established associations between sexual violence and eating disordered behaviors and poor body image (Ackard & Neumark-Sztainer, 2002; Brewerton, 2007; Dansky et al., 1997; Faravelli et al., 2004; Tagay et al., 2010). Much of this past research has focused on childhood sexual abuse, rather than sexual violence experienced as an adult. More recently, Gomez et al. (2021) found an association between sexual trauma and eating disorders and found that sexual trauma was an independent predictor of eating disorders in a study of adult women.

The present study’s findings not only support but also expand upon these previous findings, highlighting the important role of the type of sexual violence (i.e., physical) and the role of two important mediators. Specifically, it is understandable that, in the presence of physical sexual violence, more frequent sexual violence is associated with poor body image because past research shows that physical sexual violence is associated with increased body shame and dissatisfaction, which fall under the broad continuum of body image (Dansky et al., 1997; Bell et al., 2014). After an experience of physical sexual violence, body image may worsen because women are likely to feel unhappy with or negatively towards their bodies. It is also understandable that, in the presence of physical sexual violence, more frequent sexual violence is associated with disruptions in embodiment because embodiment involves how comfortable and at home a woman feels in her body. The key aspects of embodiment, which include body connection and comfort, agency and functionality, experience and expression of desire, attuned self-care, and inhabiting the body as a subjective versus an objective site (Piran, 2019), are likely impacted by a violation from physical sexual violence. For example, a woman might feel less connected to and comfortable in her body after experiencing sexual violence in
general, and especially physical sexual violence which involves a violation of the physical body. She might feel less agency and less comfortable expressing herself and her views due to a sense of helplessness and less confidence following sexual violence. She might struggle with experiencing or expressing desire given that any sexual activity could be experienced negatively after sexual violence. If she is less connected to her body or blames her body for the sexual violence, she might not feel deserving of self-care. She also might begin to view her own body objectively rather than feeling connected to it as her own. These disruptions in embodiment and worsened body image could then contribute to eating disordered behaviors. Past research has shown that survivors of physical sexual violence, like sexual assault and rape, are more likely to report eating disorders, especially bulimia nervosa and purging behaviors (Ackard & Neumark-Sztainer, 2002; Brewerton, 2007; Faravelli et al., 2004; Tagay et al., 2010; Groff Stephens & Wilke, 2016). One particular study found that more severe physical sexual violence was associated with increased eating disordered behaviors (Groff Stephens & Wilke, 2016). The findings from the present study add to this prior research by showing that disruptions in embodiment and poor body image likely play a role in the development of eating disorders after experiencing physical sexual violence. In addition, participants in the present study were all college women, and college can be a challenging time where individuals are becoming more independent, are learning about themselves, and are often concerned about appearance, so the impact of physical sexual violence on body image and embodiment could be especially strong during this time.

It was also hypothesized in Model 1 that embodiment would be a stronger mediator than body image in the relationship between sexual violence and eating disordered behaviors, but results showed that neither embodiment nor body image is stronger. Embodiment was originally
predicted to be stronger because of how broad it is and how it incorporates more of one’s experiences with their body, such as their feelings of connection to and comfort with their body, their comfort level expressing their sexuality, and their awareness of and response to their body’s needs. However, the finding that neither is stronger is reasonable because embodiment and body image are likely equally affected when sexual violence is physical and involves a violation of the body, and thus both play a role in the relationship between sexual violence and eating disordered behaviors.

As hypothesized in Model 2, when sexual violence is perceived as being highly impactful, more frequent sexual violence was associated with disruptions in embodiment, which in turn lead to eating disorders. However, this relationship was not found for body image. It may be that highly impactful sexual violence affects the experiences that women have living in their bodies, which is more in line with embodiment, and not just the way they view, think about, and perceive their physical bodies, which is more in line with body image. When sexual violence is experienced as having a strong impact on one’s life, it is understandable that this would result in experiences of disruptions in a multitude of areas. In terms of disruptions in embodiment, a woman might feel a sense of decreased agency, like she cannot express her needs after being violated, and not having control over the situation. She might feel less comfortable expressing her desires to sexual partners, which could lead to problems in relationships. She might feel less comfortable with her body or blame it for what happened to her, which could contribute to difficulties taking care of herself and prioritizing her physical and mental health. She also might experience difficulty implementing self-care and might struggle to meet her basic needs. In addition, it is possible that mental health is negatively impacted, as previous literature has shown to be common after sexual violence (Ackard & Neumark-Sztainer, 2002; Dansky et al., 1997;
All of the aspects of embodiment that might be disrupted by experiencing high-impact sexual violence could then contribute to eating disordered behaviors as a way to cope, numb, or distract from the trauma that was experienced.

Body image was hypothesized to be a mediator in addition to embodiment when sexual violence is perceived as highly impactful; however, this hypothesis was not supported. Because previous studies have shown that body image is negatively influenced by sexual violence, it would be reasonable to expect body image to mediate the relationship between sexual violence and eating disorders when level of impact is rated highly. However, the question in the study about perceived impact of sexual violence was not specific to the impact on the body, but asked about the overall impact on participants’ lives, which is more related to embodiment. Additionally, all types of sexual violence, including non-physical sexual harassment, were included in this model. Non-physical sexual harassment might not negatively affect body image specifically because the body was not physically violated, but still can have a significant impact on one’s life in ways that would disrupt embodiment. The BESAA and EES were highly correlated in this study, but these results from Model 2 show that although they are related, they are distinct constructs. Model 2’s findings are unique in that previous research has not examined survivors’ own perceptions of the impact of sexual violence on their lives. In addition, it is important to note that the present study was completed after the #MeToo Movement brought more societal awareness to the impact of sexual violence, and this societal awareness could have increased individuals’ own awareness of the impact of their experiences as well.

In addition to both models’ findings, this study also supports and expands upon the current research on embodiment. Prior to this study, embodiment had not been tested as a mediator in the relationship between sexual violence and eating disordered behaviors. Piran’s
(2016) research suggests that eating disordered behaviors are a potential way that women cope with experiences of sexual violence, which have contributed to disruptions in embodiment. The present study’s findings support Piran’s work and provide useful information about the role embodiment plays in the relationship between sexual violence and eating disordered behaviors.

Limitations

The present study has several limitations. One limitation is the reliance on self-report. It is possible that some participants are less introspectively aware and therefore are unable to accurately represent their experiences. It is also possible that they chose more socially acceptable answers rather than answering truthfully, or do not want to think about their negative experiences with sexual violence given that avoidance is a common response to trauma. However, given the sensitive nature of the questions in this study, an anonymous self-report format is more likely to get honest answers from those who are more introspectively aware, are emotionally able to reflect on their experiences, and are not concerned about social acceptability (Tourangeau & Yan, 2007). Participants also could have misunderstood questions, but very specific instructions were given to manage misunderstandings with questions. In addition, because the study was conducted using self-report measures, participants could have been answering randomly or not putting in appropriate effort to answering items. However, participants’ data was only accepted for use in the study if they appeared to fully followed instructions, so it is likely that the data for those who did not put appropriate effort into responding were rejected. The high Cronbach’s alphas found for the study measures likewise suggest appropriate and consistent responding by the participants. Another limitation is that although participants were college students, details about their student status (full or part time) and living situation were not assessed, so it is possible that some of them could be students whose college experiences are slightly different
than typical college students (i.e., they might not live on campus or might be part time students who spend less time on campus than typical students). However, all participants were within the ages of traditional college students, which suggests that they are traditional college students in other ways. Additionally, participants were recruited through MTurk and could potentially not be representative of college students as a whole. However, research shows that data completed by MTurk workers has high concurrent and convergent validity (Chandler & Shapiro, 2016).

Another limitation is that the data for this study were collected in March 2020, at the very beginning of the COVID-19 pandemic. It is possible that participants were experiencing more stress than usual and answering questions in a way that might reflect that stress (i.e., overreporting distress). It is also possible that participants overreported the impact of sexual violence based on their distress level from the pandemic. Another limitation is that the results of this study are only generalizable to college women in the United States and it is unclear if the same patterns would be seen in younger or older women who experience sexual violence. Similarly, given that the sample was predominantly white, heterosexual women, it is unclear if the results would generalize to women of other racial and ethnic backgrounds or women in the LGBTQIA+ community.

Clinical Implications and Future Research

The implications of the present study are wide-reaching. In terms of clinical implications, specific efforts could be made to inform treatment for individuals who have experienced sexual violence. For example, given that many participants experienced the #MeToo Movement as having a positive impact, and based on past research that shows that social support after sexual violence is beneficial (Orchowski & Gidvcz, 2012), treatment should include some form of social support (i.e., support group or group therapy in addition to individual therapy; therapy
goals focused on increasing support system). Support groups, including those that most university counseling centers provide, can be used as a safe space for survivors to connect with each other and foster the same feelings of support that the #MeToo Movement has brought (Artine & Buchholz, 2016). However, some participants did report experiencing the #MeToo Movement negatively, so clients who have experienced sexual violence should be assessed for their feelings about the increased attention on sexual violence. If they do feel that it has had a negative impact, they can work on setting boundaries with social media and learning and utilizing coping skills for when they are triggered.

The results of the present study also have implications for the treatment of disruptions in embodiment and body image concerns following experiences of sexual violence, which then could prevent the development of eating disorders. Despite body image not being a particularly strong mediator in the relationship between sexual violence and eating disordered behaviors, and not being a statistically significant mediator with impact level as a moderator, most participants who experienced sexual violence endorsed some level of negative impact on their feelings about their body. These endorsements indicate clinical significance and a need to assess and potentially treat body image after sexual violence. To target both disruptions in embodiment and poor body image immediately after sexual violence, it would be wise to inform sexual violence crisis counselors about the concept of embodiment and the idea of survivors reclaiming their body and their sense of agency. Crisis counselors work with individuals very soon after their experience of sexual violence and they could focus on helping these individuals stay connected to their body rather than viewing it as an object that was damaged. These immediate interventions could target any disruptions in embodiment by preventing disconnection from and discomfort with the body, and could also prevent increased body image concerns by addressing negative ways in which the
body is now being viewed. These interventions could also focus on reducing blame for the body which is common after sexual violence.

Therapists who do long-term work with clients who have experienced sexual violence should assess for disruptions in embodiment and body image concerns by asking about participants’ feelings about their body, experiences living in their body, and eating behaviors. Women who present for therapy after experiencing sexual violence might not initially report eating disordered behaviors or body image and embodiment concerns as related symptoms, so a thorough assessment is very important. For example, given that the current findings indicate that embodiment plays a role in the relationship between sexual violence and eating disordered behaviors, questions could focus on areas of embodiment that might have been particularly affected. Therapists could ask how clients feel expressing their needs, if they feel comfortable and connected to their body and their body’s cues, and if they blame their body in any way for what happened. Given that body image also plays a role in the relationship between sexual violence and eating disordered behaviors, it would be prudent to thoroughly assess body image by asking about the client’s thoughts, feelings, and perceptions about the way their body looks and how these thoughts might impact their eating. Because physical sexual violence is associated with more disruptions in embodiment and more negative body image, specific information could also be gathered about the types of sexual violence a client has experienced (i.e., whether physical or non-physical). Additionally, an assessment of the impact level of the sexual violence is important. When any kind of sexual violence exists and a client reports a high level of impact, then extra attention should be given to understanding their embodiment, including feelings about their body, their comfort level in their body, their feelings of agency, and their subjective versus objective experiences in their body.
In addition to conducting a thorough assessment, therapists who work with individuals who have experienced sexual violence should be well-versed in treatment interventions aimed at improving body image and minimizing disruptions in embodiment which could then help to prevent future eating disordered behaviors. Interventions could include mindfulness-based yoga, meditation, and other activities that encourage a stronger connection with the body, which could then decrease the likelihood of using eating disordered behaviors to cope and could improve body image (Piran & Neumark-Sztainer, 2020). Research has shown that mindfulness-based yoga can lead to improved affect and embodiment, which could help to prevent eating disorders (Cox et al., 2020). In addition, yoga that is sensitive to the specific issues of sexual violence survivors has been shown to increase self-compassion and improve emotional wellness, which could potentially also help to improve embodiment (Crews et al., 2016). Mindfulness-based interventions in general also show promise for sexual violence survivors as they increase self-compassion and self-worth and decrease self-blame (Szoke & Hazlett-Stevens, 2019). Given that they do improve these areas, they also likely improve embodiment (i.e., increasing self-compassion and self-worth could lead to better self-care, improved feelings of agency).

Treatment interventions specifically for eating disordered behaviors should also be tailored to address any sexual violence that has been experienced. Treatment for eating disorders often focuses on decreasing disordered behaviors, especially when clients initially present for treatment, and on improving body image in a general sense (Fairburn et al., 2003). With the knowledge that those who are survivors of sexual violence are more likely to have poor body image and disruptions in embodiment related to their experiences, treatment for eating disorders for those who have experienced sexual violence should aim to address these issues more specifically. The treatment interventions aimed at improving disruptions in embodiment and poor
body image would also be beneficial in the treatment of eating disorders. For example, mindfulness-based interventions that increase self-compassion and encourage connection with the body could improve embodiment and body image and decrease eating disordered behaviors.

In addition, strategies from Dialectical Behavior Therapy (DBT) might also help in the treatment of eating disorders and sexual violence. DBT focuses on mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness (Lynch et al., 2007). Survivors of sexual violence can experience a range of mental health concerns, including affect dysregulation, depression, anxiety, suicidal ideation, and self-injury, and strategies from each of the DBT modules (i.e., distress tolerance strategies like self-soothing, distraction, and radical acceptance) would specifically target these areas (Ackard & Neumark-Sztainer, 2002; Dansky et al., 1997; Lalor & McElvaney, 2010; Lynch et al., 2007) Specific strategies from DBT’s interpersonal effectiveness module could help to improve embodiment by focusing on increasing agency and the ability to be assertive about one’s needs.

In terms of implications for future research, the present study highlights two mediators and two moderators in the relationship between sexual violence and eating disordered behaviors and allows for consideration of other potential mediators and moderators. For example, social support after experiences of sexual violence is likely a moderator between sexual violence and eating disordered behaviors (Orchowski & Gidvcz, 2012). Those who do not have social support after sexual violence might be more likely to develop eating disorders because they might feel alone in their experience if they do not have social support from people who can relate, and they might not have a safe outlet to discuss their feelings. Future research should consider the role of social support as a moderator in the relationship between sexual violence and eating disordered behaviors. The #MeToo Movement could be a mediator in that people who do not have social
support in their daily lives but have felt less alone because of the #MeToo Movement might be less likely to develop an eating disorder. If they perceived the #MeToo Movement as having a positive impact on their lives, then developing eating disordered behaviors as coping skills would be less likely, whereas if they perceived it as triggering or having a negative impact, then developing eating disordered behaviors might be more likely. Future research should also focus specifically on embodiment and sexual violence given that there have not been any studies thus far examining how sexual violence itself affects embodiment. For example, it would be interesting to know more about the impact of sexual violence on each of the specific aspects of embodiment (i.e., body connection and comfort, feelings of agency). Future research should also focus on treatment interventions to combat negative body image and disruptions in embodiment after experiencing sexual violence, which would then inform clinical practice. For example, it would be useful to know if individual or group therapy is more effective in treating negative body image and disruptions in embodiment after sexual violence; group therapy could be useful in that clients would have a support system of people who can at least somewhat relate to what they have been through, and individual therapy could be useful because clients might feel less comfortable sharing their experiences in a group setting. This research on treatment interventions, and research on the specific areas of embodiment that are most impacted by sexual violence, could help to inform treatment by focusing on improving embodiment in the specific areas that are most impacted and improving body image. This research could also potentially prevent or decrease eating disordered behaviors, which would have a valuable impact on women. It would also be beneficial for future research to continue to focus on the prevention of sexual violence on college campuses. There has been some research on educational and bystander programs to prevent sexual violence, but additional research should focus on other effective
prevention strategies given that sexual violence continues to be a significant problem on college campuses (Jouriles, Krauss, Vu, Banyard, & McDonald, 2017). Increased efforts to prevent sexual violence could help to decrease a number of mental health issues in college women, including significant body image issues and disruptions in embodiment, and could thus decrease overall eating disordered behaviors.
Acknowledgments

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Appendix A

Project Title: Sexual violence and eating disordered behaviors in college women: Examining the roles of embodiment and body image
Investigator(s): Kelly Bradley, MA
Faculty Sponsor: Deanne Zotter, PhD
Project Overview:
Participation in this research project is voluntary and is being done by Kelly Bradley as part of her doctoral dissertation. The study seeks to better understand the experiences of college women in relation to sexual violence, eating habits, and body image. Your participation will take about 30 minutes to take 6 questionnaires and you will receive $3.00 dollars in the form of online payment through Amazon MTurk. There is a minimal risk that you could feel uncomfortable answering questions about your body, eating habits, or experiences of sexual violence. Potential benefits include an increased awareness of your body image, eating habits, and experiences of sexual violence. There are also potential benefits to society given that this study will add to the current literature on sexual violence, eating habits, and body image. If you would like to take part, West Chester University requires that you agree and sign this consent form.
You may ask Kelly Bradley any questions to help you understand this study. If you don’t want to be a part of this study, it won’t affect any services from West Chester University. If you choose to be a part of this study, you have the right to change your mind and stop being a part of the study at any time.

1. What is the purpose of this study?
   o The study seeks to better understand the experiences of college women in relation to sexual violence, eating habits, and body image.
2. If you decide to be a part of this study, you will be asked to do the following:
   o Take 6 questionnaires
   o This study will take about 30 minutes of your time.
3. Are there any experimental medical treatments?
   o No
4. Is there any risk to me?
   o Possible risks or sources of discomfort include: You could feel uncomfortable answering questions about your body, eating habits, or experiences of sexual violence.
   o If you experience discomfort, you have the right to withdraw at any time.
   o If you experience discomfort, you can contact the National Sexual Assault Hotline through RAINN at 1-800-656-4673 or www.rainn.org, the National Eating Disorder Association Helpline at 1-800-931-2237 or www.nationaleatingdisorders.org.
5. Is there any benefit to me?
   o Benefits to you may include: You may have an increased awareness of your own eating habits/body image or impact of experiences of sexual violence.
   o Other benefits may include: Society will benefit from this research as it will add to current literature on sexual violence, eating habits, and body image.
6. How will you protect my privacy?
   o The session will not be recorded.
Your records will be private. Only Kelly Bradley, Deanne Zotter, and the IRB will have access to your name and responses.
Your name will not be used in any reports.
Records will be stored:
- Password Protected File/Computer
- Information will not be identifiable; participants will be completely anonymous.
  Records will be kept on Kelly Bradley's computer on a password protected file.
- Records will be destroyed 7 years after study completion.

7. Do I get paid to take part in this study?
   - You get 3.00 dollars in the form of online payment through Amazon MTurk

8. Who do I contact in case of research related injury?
   - For any questions with this study, contact:
     - Primary Investigator: Kelly Bradley at 302-367-8331 or kelly.bradley@gmail.com
     - Faculty Sponsor: Deanne Zotter at 610-436-3143 or dzotter@wcupa.edu

9. What will you do with my Identifiable Information/Biospecimens?
   - Not applicable.

For any questions about your rights in this research study, contact the ORSP at 610-436-3557.
I, _________________________________ (your name), have read this form and I understand the statements in this form. I know that if I am uncomfortable with this study, I can stop at any time. I know that it is not possible to know all possible risks in a study, and I think that reasonable safety measures have been taken to decrease any risk.

_____________________________  ______________________________
Subject/Participant Signature    Date

_____________________________  ______________________________
Witness Signature               Date
Appendix B

If you feel the need for support after answering the questions in this survey, you can contact the National Sexual Assault Hotline through RAINN at 1-800-656-4673 or www.rainn.org; or the National Eating Disorder Association Helpline at 1-800-931-2237 or www.nationaleatingdisorders.org.
Appendix C

Demographics Questionnaire

1. What is your age?
   - □ 18
   - □ 19
   - □ 20
   - □ 21
   - □ 22
   - □ 23
   - □ 24

2. What ethnic group do you belong to?
   - □ Caucasian
   - □ Native American/Alaskan Native
   - □ Native Hawaiian or Pacific Islander
   - □ Hispanic/Latino
   - □ Black/African
   - □ Asian
   - □ Other, please specify: _________________________

3. What year are you in college?
   - □ Freshman/1st year
   - □ Sophomore/2nd year
   - □ Junior/3rd year
   - □ Senior/4th or 5th year

4. What is your family income?
   - □ $20,000 or less
   - □ $20,001-$30,000
   - □ $30,001-$50,000
   - □ $50,001-$70,000
   - □ $70,001-$100,000
   - □ $100,001 or more

5. What is your sexual orientation?
   - □ Heterosexual
   - □ Bisexual
   - □ Gay/Lesbian
   - □ Other

6. Have you ever been diagnosed with any eating disorder?
   - □ Yes, anorexia nervosa
   - □ Yes, bulimia nervosa
   - □ Yes, binge eating disorder
7. If you have been diagnosed with an eating disorder, how old were you at the time of diagnosis?

8. Have you ever been diagnosed with any other psychological disorders? Choose all that apply.
   - Yes, anxiety disorder
   - Yes, depressive disorder
   - Yes, PTSD
   - Yes, borderline personality disorder
   - Yes, other ________
   - No
Appendix D

SEQ-DOD

At any point in your life, has someone:

A. Repeatedly told sexual stories or jokes that were offensive to you?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

B. Whistled, called, or hooted at you in a sexual way?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

C. Made unwelcome attempts to draw you into a discussion of sexual matters
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact
D. Made crude and offensive sexual remarks, either publicly or to you privately?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

E. Treated you differently because of your sex?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

F. Made offensive remarks about your appearance, body, or sexual activities?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

G. Made gestures or used body language of a sexual nature which embarrassed or offended you?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
4. Many times

If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

H. Displayed, used, or distributed sexist or suggestive materials?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times

If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

I. Made offensive sexist remarks?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times

If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

J. Made attempts to establish a romantic sexual relationship with you despite your efforts to discourage it?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times

If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
2. Mild impact
3. Moderate impact
4. Strong impact

K. Put you down or was condescending to you because of your sex?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

L. Stared, leered, or ogled you in a way that made you feel uncomfortable?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

M. Exposed themselves physically in a way that embarrassed you or made you feel uncomfortable?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

N. Continued to ask you for dates, drinks, dinner, etc., even though you said “No”?
0. Never
1. Once or twice
2. Sometimes
3. Often
4. Many times
If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

O. Made you feel like you were being bribed with some sort of reward or special treatment to engage in sexual behavior?
0. Never
1. Once or twice
2. Sometimes
3. Often
4. Many times
If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

P. Made you feel threatened with some sort of retaliation for not being sexually cooperative?
0. Never
1. Once or twice
2. Sometimes
3. Often
4. Many times
If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

Q. Treated you badly because you refused to have sex?
0. Never
1. Once or twice
2. Sometimes
3. Often
4. Many times

If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

R. Implied faster promotions or better treatment if you were sexually cooperative?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times

If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

S. Made you afraid you would be treated poorly if you didn’t cooperate sexually?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times

If you rated the above as 1-4, please rate the impact this experience has had on your life:
   1. No impact
   2. Mild impact
   3. Moderate impact
   4. Strong impact

T. Spread sexual pictures, rumors, or information, about you through online platforms including social media, text, or email?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times

If you rated the above as 1-4, please rate the impact this experience has had on your life:
1. No impact
2. Mild impact
3. Moderate impact
4. Strong impact

U. Touched you in a way that made you feel uncomfortable?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

V. Made unwanted attempts to stroke, fondle, or kiss you?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact

W. Attempted to have sex with you without your consent or against your will, but was unsuccessful?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact
X. Had sex with you without your consent or against your will?
   0. Never
   1. Once or twice
   2. Sometimes
   3. Often
   4. Many times
   If you rated the above as 1-4, please rate the impact this experience has had on your life:
      1. No impact
      2. Mild impact
      3. Moderate impact
      4. Strong impact
Appendix E

Experience of Embodiment Scale

Please choose the number from the following that best describes how you feel about each of the statements listed below.

Indicate your response by selecting a number beside each statement: That is, “1” if you Strongly Disagree; “2” if you Somewhat Disagree; “3” if you Neither Agree nor Disagree; “4” if you Somewhat Agree; OR “5” if you Strongly Agree.

Please provide responses for how you currently feel (past four weeks).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel in tune with my body</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. I feel alone with my body</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. I feel &quot;detached&quot; and separate from my body</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. I feel depressed/anxious/scared in/about my body</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. I care more about how my body feels than about how it looks</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. I focus more on what my body can do than on its appearance</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. My eating habits are a way for me to manage my emotions or how I have felt about myself</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. Generally I feel good/comfortable in my body</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. I am proud of what my body can do</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. I feel dissatisfied, envious and frustrated when I compare my body to other females</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>11. I feel joy in my body</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>12. My body reduces my sense of self worth in the world</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>13. I sometimes tend to blame my body for difficulties I am having</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>14. I am comfortable with my sexual feelings/desires</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>15. I engage in potentially harmful or painful behaviours (e.g., disordered eating, binging, purging, denying physical needs, skin cutting, burning, drug use, excessive alcohol consumption)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>16. I have an eating disorder</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>17. I take good care of, and am respectful of, my body</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>18. I ignore the signs my body sends me (e.g., of hunger, stress, fatigue, illness/injury)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>19. I spend a lot of time/energy/money engaging in activities that I hope make me fit with cultural ideals of beauty (e.g., exercise, clothing, make-up, hair, plastic surgery, skin bleaching)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I am comfortable voicing my views, opinions and beliefs</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>21. I find it difficult to express my emotions</td>
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<td></td>
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<tr>
<td>22. I am aware of my needs</td>
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<td></td>
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<tr>
<td>23. It is hard for me to read/identify my feelings</td>
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<tr>
<td>24. I am comfortable with, and proud of, who I am</td>
<td></td>
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</tr>
<tr>
<td>25. I consider myself to be a powerful woman</td>
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<tr>
<td>26. I am aware of, and confident in, my strengths and abilities</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>27. My dissatisfaction with my body/appearance has a negative effect on my social life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. I feel disconnected from my own sense of sexual desire</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. I express what I want and need sexually</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. I feel that I cannot express what I want or need in a dating/partnership relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>31. I have difficulty asserting myself with others in the world</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>32. I believe in my ability to accomplish what I desire in the world</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. I put a priority on listening to my body and its needs (e.g., stress, fatigue, hunger)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. I constantly think about the way my body fits with cultural standards of beauty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F

Body Esteem Scale for Adults and Adolescence (BESAA)

Instructions: Indicate how often you agree with the following statements: Ranging from never (1) to always (5), circle the appropriate number besides each statement.

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I like what I look like in pictures
2. Other people consider me good looking
3. I’m proud of my body
4. I am preoccupied with trying to change my body weight
5. I think my appearance would help me get a job
6. I like what I see when I look in the mirror
7. There are lots of things I’d change about my looks if I could
8. I am satisfied with my weight
9. I wish I could look better
10. I really like what I weigh
11. I wish I looked like someone else
12. People my own age like my looks
13. My looks upset me
14. I’m as nice looking as most people
15. I’m pretty happy about the way I look
16. I feel I weigh the right amount for my height.
17. I feel ashamed of how I look
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Weighing myself depresses me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. My weight makes me unhappy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. My looks help me to get dates</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21. I worry about the way I look</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22. I think I have a good body</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23. I’m looking as nice as I’d like to</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Appendix G

Eating Disorders Examination Questionnaire

**EATING QUESTIONNAIRE**

Instructions: The following questions are concerned with the past four weeks (28 days) only. Please read each question carefully. Please answer all of the questions. Please only choose one answer for each question. Thank you.

Questions 1 to 12: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

<table>
<thead>
<tr>
<th>On how many of the past 28 days ......</th>
<th>No days</th>
<th>1-5 days</th>
<th>6-12 days</th>
<th>13-15 days</th>
<th>16-22 days</th>
<th>23-27 days</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2 Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Have you had a definite desire to have a totally flat stomach?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Have you had a definite fear of losing control over eating?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Have you had a definite fear that you might gain weight?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Have you felt fat?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Have you had a strong desire to lose weight?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Questions 13-18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days).

Over the past four weeks (28 days)........

13 Over the past 28 days, how many times have you eaten what other people would regard as an unusually large amount of food (given the circumstances)?

14 ....On how many of these times did you have a sense of having lost control over your eating (at the time that you were eating)?

15 Over the past 28 days, on how many DAYS have such episodes of overeating occurred (i.e. you have eaten an unusually large amount of food and have had a sense of loss of control at the time)?

16 Over the past 28 days, how many times have you made yourself sick (vomit) as a means of controlling your shape or weight?

17 Over the past 28 days, how many times have you taken laxatives as a means of controlling your shape or weight?

18 Over the past 28 days, how many times have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat or to burn off calories?

Questions 19-21: Please circle the appropriate number. Please note that for these questions the term "binge eating" means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

19 Over the past 28 days, on how many days have you eaten in secret (i.e., furtively)?.......Do not count episodes of binge eating

<table>
<thead>
<tr>
<th>Days</th>
<th>No days</th>
<th>1-6 days</th>
<th>6-12 days</th>
<th>13-16 days</th>
<th>16-22 days</th>
<th>23-27 days</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

20 On what proportion of the times that you have eaten have you felt guilty (felt that you’ve done wrong) because of its effect on your shape or weight? .....Do not count episodes of binge eating

<table>
<thead>
<tr>
<th>Guilt</th>
<th>None of the times</th>
<th>A few of the times</th>
<th>Less than half</th>
<th>Half of the times</th>
<th>More than half</th>
<th>Most of the time</th>
<th>Every time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

21 Over the past 28 days, how concerned have you been about other people seeing you eat? .....Do not count episodes of binge eating

<table>
<thead>
<tr>
<th>Concerned</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Markedly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Questions 22-28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days)

<table>
<thead>
<tr>
<th>On how many of the past 28 days ......</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Markedly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has your weight influenced how you think about (judge) yourself as a person?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has your shape influenced how you think about (judge) yourself as a person?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How dissatisfied have you been with your weight?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How dissatisfied have you been with your shape?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?</td>
<td>0 1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is your weight at present? (Please give your best estimate). .................................

What is your height? (Please give your best estimate). ..................................................

If female: Over the past three-to-four months have you missed any menstrual periods? ................

If so, how many? ..................................................

Have you been taking the "pill"? .........................
Appendix H

Additional Sexual Violence and #MeToo Movement Questions

1. When did your experiences of sexual harassment occur? Check all that apply.
   - Age 0-10 (Preschool/Elementary School)
   - Age 11-14 (Middle School/Junior High School)
   - Age 15-18 (High School)
   - Age 18+ (College)

2. When did your experiences of physical sexual violence occur? Check all that apply.
   - Age 0-10 (Preschool/Elementary School)
   - Age 11-14 (Middle School/Junior High School)
   - Age 15-18 (High School)
   - Age 18+ (College)

3. Has any sexual violence (including sexual harassment) that you’ve experienced ever negatively impacted your feelings about your body?
   - Extremely negatively
   - Moderately negatively
   - Slightly negatively
   - Not at all

4. Is any sexual violence (including sexual harassment) that you’ve experienced currently negatively impacting your feelings about your body?
   - Extremely negatively
   - Moderately
   - Slightly negatively
   - Not at all

5. Has any sexual violence (including sexual harassment) that you’ve experienced ever impacted your eating habits? Check all that apply.
   - It’s led to overeating/binge eating
   - It’s led to restricting my eating
   - It’s led to purging (self-induced vomiting, laxative use)
   - It’s never impacted my eating habits

6. Is any sexual violence (including sexual harassment) that you’ve experienced currently negatively impacting your eating habits? Check all that apply.
   - It’s currently contributing to overeating/bingeing
   - It’s currently contributing to restricting my eating
   - It’s currently contributing to purging (self-induced vomiting, laxative use)
   - It’s not currently impacting my eating habits
7. Are you familiar with the #MeToo Movement? Check all that apply.
Yes, I saw others using the hashtag on social media
Yes, I used the hashtag myself
Yes, I saw/heard information about the #MeToo Movement in the general media (e.g., TV, radio, videos, news articles)
No

8. How does the attention that the #MeToo Movement has brought to experiences of sexual violence affect you?
Extremely negatively
Somewhat negatively
Not at all
Somewhat positively
Extremely positively

9. How does the attention that the #MeToo Movement has brought to experiences of sexual violence affect your body image?
Extremely negatively
Somewhat negatively
Not at all
Somewhat positively
Extremely positively

10. How does the attention that the #MeToo Movement has brought to experiences of sexual violence affect your eating habits?
Extremely negatively
Somewhat negatively
Not at all
Somewhat positively
Extremely positively
Appendix I

IRB Approval Letter

TO: Kelly Bradley & Deanne Zotter
FROM: Nicole M. Cattano, Ph.D.
Co-Chair, WCU Institutional Review Board (IRB)
DATE: 2/13/2020

Project Title: Sexual violence and eating disordered behaviors in college women: Examining the roles of embodiment and body image
Date of Approval: 2/13/2020

 Expedited Approval
This protocol has been approved under the new updated 45 CFR 46 common rule that went in to effect January 21, 2019. As a result, this project will not require continuing review. Any revisions to this protocol that are needed will require approval by the WCU IRB. Upon completion of the project, you are expected to submit appropriate closure documentation. Please see www.wcupa.edu/research/irb.aspx for more information.

Any adverse reaction by a research subject is to be reported immediately through the Office of Research and Sponsored Programs via email at irb@wcupa.edu

Signature:

Co-Chair of WCU IRB

WCU Institutional Review Board (IRB)
IORS#: 1OR600004242
IRB#: IRB00005030
FWA#: FWA00014155

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