THE BODY PROJECT: A NARRATIVE AND SOCIAL NETWORK ANALYSIS

A Dissertation

Presented to

The Faculty of the University of Virginia

In Partial Fulfillment of the Requirements for

Doctor of Philosophy

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by

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August 2018

Abstract

This dissertation explored the impact of a body acceptance intervention program, The Body Project (Stice, Shaw, Burton, & Wade, 2006) and sought to describe the processes of such impact and to describe hypothesized indirect intervention effects on the friends of participants using a sample of college females. Intervention participant interview and survey data were utilized to attempt to replicate findings from past trials of the Body Project and to apply mixed methods to summarize participants' experiences prior to, during, and after the intervention. Intervention participants' peers provided data to describe potential impact of the intervention on peers of participants. Beneficial intervention effects found in previous evaluations were replicated in the current study with the intervention reducing expressed fat talk concerns, dieting/restrained eating, and thin ideal internalization, and increasing body satisfaction. Participants' narratives portrayed complex relations between body image, food orientation, self-other comparison, and presentational concerns, and discussed ways in which body image was impacted by relationships or relational motivations and concerns. Personal narratives shifted for most participants after undergoing the intervention demonstrating reductions in tensions related to body, food, and exercise. Peers demonstrated a significant change in self-reported dietary restraint during the course of their friend's participation in the intervention. Peer initial survey and change scores of fat talk, dieting/restrained eating, thin ideal internalization, and body satisfaction were not correlated with participant baseline survey scores or participant survey score change variables. Intervention recommendations are provided based on participant feedback and quantitative and qualitative findings.

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APPROVAL OF THE DISSERTATION

This dissertation, "The Body Project: A Narrative and Social Network Analysis" has been approved by the Faculty of the University of Virginia in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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DEDICATION

To my sisters - to the girls we were and the women we've become. I love that I get to take this journey with you.

ACKNOWLEDGEMENTS

This project relied on the collaboration, guidance, and support of a team of people. Thank you to everyone who touched this project. It could not have happened without you.

I would like to thank my dissertation committee. To my chair, Patrick Tolan, thank you for the guidance and space you have given me over the last five years to grow and learn as a researcher and as a clinical psychologist. I have been inspired by your commitment to interventions, your systemically focused orientation, and your openness to continuously ask, explore new questions, and consider my perspectives. Your advice to research the topics I think about when I stop working has allowed me and propelled me to be engaged in work that I feel incredibly grateful to do; it has been a gift to my learning that I will carry with me and for which I feel incredibly grateful. Thank you to Nancy Deutsch for being there as research questions and methodology questions guided me to you. Your commitment to social justice and valuing participants voice in their lived experiences inspires me, and your mentorship has been invaluable to me over the last five years. Jason Downer, thank you for your willingness to join this committee, your helpful methodology and timeline encouragement throughout, and your responsiveness to my assorted questions about program requirements. Lee Llewellyn, I have enjoyed getting to know you through our work on the Coalition for Eating Disorders and Exercise Concerns. I really appreciated your willingness to sit on this dissertation committee, to share your clinical and research expertise, and to mentor the undergraduate research assistants who worked on this project. Thank you all for your support throughout this endeavor.

Thank you to the Women's Center, especially Charlotte Chapman and Amy Chestnutt for believing in the importance of this research and the funding that helped support this project in conjunction with the Curry School of Education IDEA grant.

Thank you to Melanie Brede for helping to train the intervention leaders and for your smiling face throughout data collection and to Peter Lovegrove for your guidance with analysis plans.

Thank you to the research team, Carolina Anaya, Alexa Bream, Heidi Chang, Taylor Clark, Andrea Coppola, Carolina Cordova, Meghan Costello, Michelle Cox, Caroline Fowler, Lindsay Mottola, Melissa Picon, Tayler Young, and Sabiha Zaman, without whom, this work would not have been possible. To the EDEC interns who helped with recruitment, Tricia O'Donnell and Madison Baril, and Laura Widener who also helped lead groups, thank you. Thank you to Aisha Griffith for helping train the research team.

Thank you to my colleagues Samantha Ludin, Shannon Reilly, and Supriya Williamson for dedicating your time to lead intervention groups.

Thank you to my colleagues, my mentors, my friends, my family and everyone who encouraged me each in their own ways during this project.

Finally, thank you to all the participants in the study for sharing your time and voices!

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CHAPTER ONE

Aims and Purpose

Replication, Exploration, Description, and Expansion

The purpose of this study was focused on replication, exploration, description, and expansion (Marshall & Rossman, 2011) of understanding about the potential value of a body image oriented intervention designed for young adult females. Aims of this project include replicating past Body Project intervention studies, exploring the impact on the intervention on peers of intervention participants, and describing and expanding understanding of participants' experiences to include participants' perceptions of experiences and participants' communication about the intervention.

This study is comprised of five questions: 1) Can previous impacts of the Body Project intervention be replicated in this sample? 2) How do female college students' descriptions about their body, food, and exercise change across participation in the Body Project? 3) How does a participant's body, food, and exercise narrative relate to self-reported fat talk, thin-ideal internalization, body satisfaction/dissatisfaction, dieting, negative affect, and eating disorder symptomatology and does this relationship change after intervention? 4) Which participant characteristics influence exposing friends to the intervention program content and how is that exposure related to intervention effects on participants? 5) If friends are exposed to intervention content, is this exposure evident in friends' and participants' body, food, and exercise narrative and survey data?

CHAPTER TWO

Background and Significance

Disordered Eating and Eating Disorders

Eating disorders. Eating disorders are characterized by problematic food practices, with attendant social impairment, and correlates such as increased suicidality (Arcelus, Mitchell, Wales, & Nielsen, 2011; Hudson, Hiripi, Pope, & Kessler, 2007). These disorders have the highest mortality rate of any psychiatric condition (5.9% for Anorexia Nervosa, 1.9% for Bulimia Nervosa, and 3.9% for Eating Disorder Not Otherwise Specified; Arcelus et al., 2011; Hudson et al., 2007). Moreover, eating disorders disproportionately affect youth and adolescents. It has been reported that between 12 and 13 percent of adolescents will experience an eating disorder at some point during their youth (Culbert, Racine, & Klump, 2015; Stice, Marti, & Rohde, 2013b; Stice, Marti, Shaw, & Jaconis, 2009). Stice, Marti, Shaw, and Jaconis (2009) studied a community sample of adolescents and found the peak age of onset for Bulimia Nervosa and Binge Eating Disorder was 17-18 years old and the peak age of onset for Purging Disorder was 18-20 years old. In a sample of 1,666 participants diagnosed with Anorexia Nervosa, average age of onset was found to be 18.5 years old (Favaro, Caregaro, Tenconi, Bosello, & Santonastaso, 2009). Cumulatively, this research suggests that late adolescence into emerging adulthood is a developmentally sensitive period for eating disorder onset (Liechty & Lee, 2013; Slane, Klump, McGue, & Iacono, 2014).

Disordered eating. Disordered eating, meaning engaging in levels of over-eating, under-eating, or compensatory behaviors after eating affects a substantial portion of women. For example, in the 2013 Youth Risk Behavior Survey, approximately 25% of female tenth grade students reported trying to lose weight by fasting for 24 hours or more in the previous month (Kann et al., 2013). In a sample of adult women, 6% reported fasting for weight-loss purposes, 18% reported overeating, and 30% reported feeling a loss of control while eating (Bush, Rossy, Mintz, & Schopp, 2014). Half of teenage girls reported utilizing additional "unhealthy weight-control strategies such as skipping meals, fasting, smoking cigarettes, vomiting, and taking laxatives" (Neumark Sztainer, 2005, p. 5). Twenty-five percent of college-aged females reported utilizing binging and purging as weight-management techniques (The Renfrew Center, 2003). The frequency of eating disorder symptoms outside of diagnostic samples are relevant because individuals who report subclinical levels of eating disorder symptoms report similar levels of psychosocial impairment as individuals with diagnostic levels of eating disorder symptoms (Culbert et al., 2015; Stice et al., 2009; Stice et al., 2013b). Moreover, Stice, Davis, Miller, and Marti (2008a) studied a sample of adolescent females to determine whether fasting and dietary restraint predicted the onset of bulimia and binge eating at a five-year follow up. This Stice et al. (2008a) study found that 13% of participants who reported fasting at time one reported an onset of bulimia at the five-year follow-up, a 2.35 odds ratio.

The frequency of eating disorder symptoms outside of diagnostic populations, the functional impairment associated with subclinical eating disorders (Stice et al., 2009), and the increased risk of eating disorder development associated with the presence of

certain symptoms (e.g. fasting) suggests that eating disorder pathology is better understood on a continuum rather than categorically (Bush et al., 2014). Consequently, eating disorder prevention efforts can be conceptualized as exerting possible change on multiple points of the continuum, thereby effecting change on a wider population of individuals.

Given the impairment, chronicity, suicidality, and mortality associated with eating disorders, eating disorder prevention efforts are extremely important. Body dissatisfaction, which will be discussed further below, is a risk factor for disordered eating and eating disorders, including being a diagnostic symptom (Stice, Becker, & Yokum, 2013a). Stice, Rohde, Gau, and Shaw (2012) utilized a sample of high-risk adolescents, meaning those endorsing body dissatisfaction, and found that participants who denied risks associated with pursuing the thin ideal presented an odds ratio approximately equal to five for later eating disorder onset. Because body dissatisfaction has been identified as a significant risk factor for eating disorder development (Rohde, Stice, & Marti, 2015), prevention efforts focusing on reducing body dissatisfaction have demonstrated body image improvement and reduced eating disorder rates in populations of high school and college women (Stice et al., 2013a). Due to the frequency of body dissatisfaction and eating disorder behaviors in college-aged females and the risk for eating disorder onset during this developmental period, this dissertation study will examine an eating disorder prevention program in a sample of college-aged females.

Feminist Perspectives on Disordered Eating and Body Image

Feminist theorists have noted the significant pressures placed on the physical appearance of females and the ways in which these pressures impede female power

(Eckerman, 2009; Seid, 1994; Wolf, 1991). With an increased occurrence and awareness of eating disorders and the development of the diagnosis of Bulimia Nervosa, the late 1980's and early 1990's saw a surge of cultural critiques from feminist theorists concerning pressures girls and women experience in relation to their bodies. Wolf (1994) termed women's continual pursuit to "lose 10-15 pounds", as benchmarking reaching acceptable body image, the One Stone Solution. Wolf (1991) critically stated that women traded a sense of strength or empowerment for time in pursuit of this weight loss, thereby continuously limiting their power in a state of chronic dissatisfaction stemming from always being about 10-15 pounds away from a desired weight. Rothblum (1994) discussed the co-occurrence between women's increases in economic and sexual liberties and the increased constraints placed around women's physical bodies. She reflected, "I worry – despite our new methods of sexual freedom-that female bodies are as terrifying and repulsive as ever, as greatly in need of purification and mortification. Certainly these days, when I hear people talking about temptation and sin, guilt and shame, I know they're referring to food rather than sex. Everything, for women, boils down to body size" (Sternhall, 1985, as cited by Rothblum, 1994, p. 53).

Theorists have associated the pressures women experience to maintain their bodies and deny their hunger with a claim of morality, as exemplified by the ways in which being overweight is associated with negative personality qualities or personal failings (Tischner & Malson, 2012). These conversations about morality also are reflected in the ways in which culture approaches an emaciated body, noting "the self-starving body, although regarded as pathological by the medical profession, acquires honorific ascription; it is a symbol of the positive attributes of willpower, self-control,

asceticism, and personal strength" (Eckerman, 2009, p. 17; Malson, 2009). Eckermann (2009) supports this claim by reflecting on comments made in response to anorexia, such as, "I wish I could catch a dose of that" (p. 17). Coinciding with commentary about willpower and personal strength reflected by individuals who restrict their food intake, "obesity science has been resolute in its determination to see obesity as either, on the one hand, an impersonal biomedical disease and contagion or, on the other, the deplorable personal moral failing of bad parents, lazy children, and malevolent corporations" (Gard, 2009; p. 39). Theorists postulate that the higher levels of eating disorders, depression, and anxiety in adolescent and adult women compared to men is the consequence of the heightened expectation of bodily control, body monitoring, and associations with morality and virtue (Seid, 1994).

Others have noted conflicting narratives present in women's conversations about navigating pressures related to body maintenance and food. A qualitative study with individuals who engaged in either restriction or binge/purging behaviors noted "conflicting imperatives . . . in constructions of young women's identities" related to bodily control and bodily restriction (Eckerman, 2009, p. 9). Such commentaries have challenged the notion that women either resist or capitulate to societal pressures concerning their bodies and food. Malson and Burns (2009) rejected the notion that "eating/embodiment [acts] as *either* resistance *or* conformity to 'cultural norms', imagining instead that these distressed experiences and practices simultaneously express a multiplicity of potentially contradictory positions and effects" (Malson & Burns, 2009, p. 4). These researchers highlight the complicated experience women must navigate

living in their bodies, rejecting the idea that women's experiences can fit into distinct categories.

Feminist theorists have argued that interventions affecting body image and eating disorders need to be based on a recognition that "the concept of the multiply constituted self, propounded by postmodern theorists, challenges cognitive dissonance theory, bridging 'order' and 'disorder' to explain their coexistence in any one embodied self" (Eckermann, 2009; p.16). This is in contrast to the prevailing approach in clinical and preventive efforts; which is to emphasize cognitive dissonance as the means to reducing eating disorder risk factors (Stice, Shaw, Becker, & Rohde, 2008c). However, to date, there has been a disconnect between the utilization of a cognitive focus to exert intervention effects and a coinciding recognition of the "multiply constituted self" (Eckerman, 2000). The present study seeks to reconcile the disconnect between the research on eating disorder prevention and the research on women's narratives about their bodies to describe any process of change in women's narratives about their bodies, food, and exercise after participating in a cognitive-dissonance based eating disorder prevention intervention. Attention will be paid to themes including: concurrently held dissonant or competing views, moralistic viewpoints towards food and weight, conflicting pressures, and chronic body dissatisfaction.

Eating Disorder Risk Factors

Negative self-concept, weight and shape concerns, female gender, adverse experiences, and comorbidity of other mental health concerns (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004) among other factors are known risk factors for eating disorder development. In a review of eating disorder risk factors, Culbert, Racine, and

Klump (2015) concluded that sociocultural pressures for thinness combined with biological characteristics were the most established risk factors for eating disorder development. Among these, body dissatisfaction predicts unhealthy weight control behaviors (Neumark-Sztainer et al., 2006) and acts as a pliable risk factor that past eating disorder prevention programs have focused on reducing. The following section will discuss the nature and prevalence of body dissatisfaction and factors associated with body dissatisfaction including: thin ideal internalization, self-objectification, peers, media exposure, obesity stigmatization, and fat talk.

Body dissatisfaction. Given that research suggests body dissatisfaction is a crucial construct in preventing eating disorders (Stice, Rohde, Gau, & Shaw, 2012), it is important to understand the definition and prevalence of body dissatisfaction. Depending on the population sampled and the operational definition utilized, body dissatisfaction has been reported at extremely varied rates ranging from 11% to 72% for United States women (Fiske, Fallon, Blissmer, & Redding, 2014) and over 50% for female adolescents and young adults (Rayner, Schniering, Rapee, & Hutchinson, 2013). In a meta-analysis of body dissatisfaction identified studies, 46 to 66% of adult women reported weight dissatisfaction (Fiske et al., 2014). In the studies identified in this meta-analysis, the criterion varied from asking someone if they have body image concerns to utilizing standardized measurements and cut off points to assess presence of body dissatisfaction (Fiske et al., 2014). Depending on the specific research questions and goals, both more lenient and stringent methods may be appropriate to utilize as an operational definition of body dissatisfaction. The current research study will allow women to self-select into the study based on self-reported body image concerns.

The phenomenon of body dissatisfaction is so prevalent in westernized countries that researchers have termed this phenomenon "normative discontent" (Rodin, Striegel-Moore, & Silberstein, 1985; Tantleff-Dunn, Barnes, & Gokee Larose, 2011). Utilizing the term normative discontent inadvertently may undercut and minimize the individual and societal costs of body dissatisfaction. While pervasive and normalized, body dissatisfaction poses real harm and is not the trivial experience that normative discontent may imply. Dissatisfaction has been correlated with decreased self-esteem, social functioning problems, reduced health behaviors, and increased rates of depressive symptoms (Cash, Phillips, Santos, & Hrabosky, 2004).

Given the numerous psychiatric and social impairments associated with body dissatisfaction, researchers have attempted to ascertain the factors that comprise and characterize the experience of body dissatisfaction. Research suggests that the intensity of variability in body dissatisfaction over a day is associated with greater body image disturbance (Melnyk, Cash, & Janda, 2004), suggesting that women with higher levels of body dissatisfaction are most susceptible to changing internal and external factors encountered daily. This variability in day-to-day experience and reaction to idealized beauty standards also implies that women's experiences of their bodies are susceptible to their environment (Paquette & Raine, 2004) and potentially malleable if external environmental constraints impacting body dissatisfaction are shifted. Body dissatisfaction is a highly prevalent experience for women that is associated with negative psychosocial impacts and variable daily experiences; while current prevention research has demonstrated change in body dissatisfaction ratings after participation in

interventions (Stice et al., 2013a), little is known about women's perceived experience of body image during and after these interventions.

Body dissatisfaction in diverse populations. Historically, body image disturbance frequently has been considered a middle to upper middle class adolescent white female phenomenon (Bordo, 2009). Thompson (1994) suggested that the profile of a person with an eating disorder "reflects which particular populations of women have been studied, rather than actual prevalence. Racial stereotyping and mainstream health professionals' lack of familiarity with ethnic diversity may have obscured attention to women of color" (Thompson, 1994, p. 355). Research of late has begun to challenge previously held stereotypes concerning who is affected by body dissatisfaction and make greater effort to appropriately assess body image disturbance in previously under considered populations. This includes affording specific attention to body image concerns reflective of diverse beauty ideals (e.g. skin color, hair texture, eye and nose shape) (Gillen, 2013). As attention is paid to diverse experiences of body satisfaction and dissatisfaction, researchers may better be able to assess the nature and experience of body satisfaction in diverse populations of individuals.

Research studies examining body dissatisfaction in racially diverse samples have yielded varying results (Gillen & Lefkowitz, 2011, Gillen & Lefkowitz, 2012). Gillen and Lefkowitz (2011) examined differences between perceived body size and ideal body size in a sample of undergraduate students; they found that the majority of Latina and White women endorsed a desire for a thinner body compared to their male counterparts. The Black participants in the study did not exhibit this gender difference (Gillen & Lefkowitz, 2011). No White participants in the Gillen and Lefkowitz (2011) study

reported a desire to be larger than their current body size. Gillen (2013) used a similar sample of undergraduate students to examine racial differences in body satisfaction trends. This study yielded similar results and indicated that Black women endorsed a more positive body image than White and Asian women. However, White women were significantly more likely to endorse satisfaction with their facial features and hair as compared to Asian American and Black women (Gillen, 2013). This data may suggest that Anglo-European facial features and hair texture are more desirable according to perpetuated beauty ideals. Corresponding to this Anglo oriented beauty ideal, Cachelin, Monreal, and Jaurez (2006) found Mexican American women whose national identities were more "Anglo oriented" exhibited higher levels of thin ideal endorsement. Cumulatively this research suggests that different aspects of body image may be more salient depending on the intersection between an individuals' racial identity and purported beauty ideals.

Traditional measures of body satisfaction and dissatisfaction normed on primarily white college women may miss key aspects of body dissatisfaction that are salient for women outside of that norming population. Interview-based studies have helped reveal the ways in which women across ages and ethnicities engage in body-monitoring and body-control strategies (Reel, SooHoo, Franklin Summerhays, & Gill, 2008). Antin and Hunt (2011) interviewed a sample of Black women living in low-income census tracks. Initially, the interviews were intended to examine food selection in low-income communities and researchers had not considered discussing body image with this sample. However, because the topic of body image frequently emerged in these interviews, researchers began to ask more specific questions about the women's experiences with

their bodies (Antin & Hunt, 2011). Their analysis revealed complex body image narratives illustrating conflicts between personal ideals, cultural images of beauty, and public health discourse about obesity. This study's data is relevant in demonstrating the complexity of women's body image both in the individual and across socioeconomic and ethnic lines. Additionally this widens the attention to consider "how eating problems may begin as ways in which women cope not only with sexism, but also with racism, classism, sexual abuse, heterosexism, and poverty" (Thompson, 1994, p. 356). Attending to a more expansive consideration of how eating disorders may serve as an individual's reaction to cultural pressures or adverse experiences may help clinicians and prevention scientists in the development of both prevention and treatment protocols. Interview data allowed for an understanding of the multiple influences and conflicting narratives that participants in the Antin and Hunt (2011) study embodied. Utilizing interview data may help participants from diverse ethnic groups describe pressures they experience in the intersection of culture and beauty ideals and provide descriptive information about how individuals navigate these pressures. Attention to socioeconomic and racial identity will be paid while examining themes that emerge in the interviews in the current study.

Self-objectification. Self-objectification the viewing of the self as an object or from another's perspective (Frederickson & Roberts, 1997), has been associated with body dissatisfaction and eating disorder symptomology (Dakanalis et al., 2016; Frederickson & Roberts, 1997), with some studies suggested that body focused shame mediates the relationship between self-objectification and eating disorder symptomology (Noll & Frederickson, 1998). Frederickson and Robert's (1997) self-objectification

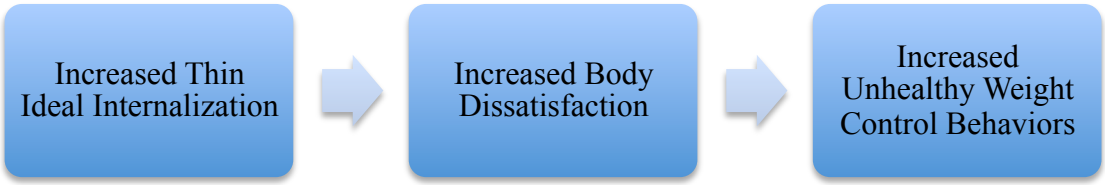
theory posits that increased objectification is associated with increased self-monitoring and decreased awareness of internal bodily states leading those with higher levels of self-objectification to be at risk for anxiety, body dissatisfaction, and depression. Body surveillance is a construct that has been conceptualized as self-objectification put into action (Fitzsimmons, 2011), meaning the process of actively evaluating one's physical appearance through the perspective of another person. Frederick, Forbes, Grigorian, and Jarcho (2007) utilized the constructs of objectification theory and self-surveillance to examine potential differences in body satisfaction among a diverse mixed-gender sample; they found minority women and women with higher body mass indexes seemed particularly negatively affected by self-objectification, supporting the theory that deviation from Anglo-oriented thin/beauty ideals may put individuals at higher risk when they engage in increased self-surveillance.

A portion of prevention efforts that aimed at eating disorders emphasize reducing self-objectification and thin ideal internalization and have produced positive effects (Kroon Van Diest & Perez, 2013). Moreover, other researchers have examined the relation between communication about appearance and self-objectification, finding that these constructs are positively associated and negatively associated with health related measures (Arroyo, Segrin, & Harwood, 2014; Cory & Burns, 2007). Gapinski, Brownell, and LaFrance (2003) utilized an experimental manipulation to explore the impacts of appearance related communication when participants were wearing a bathing suit (deemed a high objectification condition) or a sweater (deemed a low objectification condition). This study found that rated levels of self-objectification were associated with negative feelings and body dissatisfaction, but that these results were not affected by

objectification condition, suggesting that these correlations were more dependent on characteristics of the individual rather than the situation. The current study will assess whether or not voices of self-objectification are present in interviews with college women during the course of a body image intervention. Moreover, attention will be paid to participants' perceptions of factors that contribute to increased awareness of their bodies and to perceived psychosocial impacts of increased or decreased awareness.

Beauty ideal/thin ideal. From qualitative studies of body dissatisfaction, participants have reported experiencing both strong pressure to achieve idealized female beauty and substantial distress in their striving or failing to achieve these beauty standards (Coffey, 2013). The notion of the thin ideal is a beauty standard that impacts body dissatisfaction in equating thinness with desirability, beauty, happiness, and success; reductions in thin ideal internalization have mediated reductions in unhealthy weight control behaviors (Figure 1: Stice et al., 2013a). The degree to which an individual internalizes this thin ideal has been correlated with negative body image and risk for eating disorder development. Individuals who perceive higher levels of discrepancy between their own body image and their perceptions of the ideal body have been found to experience higher levels of body dissatisfaction (Gillen & Lefkowitz, 2011).

Figure 1. Relationship Between Thin Ideal and Unhealthy Weight Control Behaviors



Obesity stigmatization. In conjunction with the current idealization of thin female bodies, contemporary culture stigmatizes overweight and obese individuals (Ambwani, Thomas, Hopwood, Moss, & Grilo, 2014; Burke, 2012; Klaczynski, 2008; Greenleaf, Starks, Gomez, Chambliss, & Martin, 2004). Body states perceived as overweight based on current cultural norms are associated with negative personality and psychological characteristics including attributes of blame and laziness (Tischner & Malson, 2012). These negative associations with being overweight were present in interviews with overweight teenagers (Wills, Backett-Milburn, Gregory, & Lawton, 2006), held by ethnically diverse groups of adolescents (Klaczynski, Daniel, & Keller, 2009), and present across age groups (Klaczynski, 2008).

Women are disproportionately affected by this fear of fatness and obesity stigmatization as they hold more stigmatizing views, more frequently report weight-related stigmatized experiences, and are more likely to be perceived as overweight compared to men (Greenleaf et al., 2004; Klaczynski et al., 2009). In a study by Ambwani, Thomas, Hopwood, Moss, and Grilo (2014), 95% of women endorsed obesity stigmatizing perceptions and one-third reported that obesity would be among the most negative things that could happen to an individual. Obese girls compared to average weight children and obese boys were more likely to endorse body dissatisfaction, dieting restraint, and dieting behaviors (Vander Wal & Thelen, 2000). Additionally, in a different study, overweight women endorsed higher levels of body dissatisfaction and lower levels of life satisfaction compared to average weight controls (Annis, Cash, & Hrabosky, 2004) and seem to maintain these attitudes across the lifespan. These experiences of body dissatisfaction were higher in women with earlier onsets of obesity controlling for current

BMI (Wardle, Waller, & Fox, 2002). This data pattern may reflect an internalization of obesity stigmatizing views. Additionally, women may be more cognizant of gender disparities and increased fat stigmatizing experiences compared to men.

It could be argued, that instead of this stigmatizing effect, body dissatisfaction accompanying obesity could be motivating for encouraging healthy weight loss. However, in interviews with overweight teenagers, weight loss intentions were rarely connected with health related concerns (Wills et al., 2006). In fact, research studies have found that college women's reported discrepancies between individual perceptions of ideal body size and current body size (Anton, Perri, & Riley, 2000) and experiences of stigmatization (Lewis et al., 2011) were associated with reduced engagement in health behaviors. Additionally, moral associations with celebratory eating (eating birthday cake) were associated with less reported control over eating and unhealthier eating habits (Kuijer, Boyce, & Marshall, 2015).

Various forms of data including interview data, survey data, and experimental data have been used to document obesity stigmatization and fear of fatness (Ambwani et al., 2014; Greenleaf et al., 2004; Latner, Rosewall, & Simmonds, 2007). Because of the damaging impacts of current beauty ideals and stigmatized views of obesity, overweight individuals are more susceptible to body dissatisfaction and stigmatizing experiences. The current social climate and westernized culture idealizes thin bodies and shames and stigmatizes overweight bodies thereby creating bookends of societal pressures to achieve or attempt to approximate societal beauty ideals. Body dissatisfaction ensues when individuals find themselves unable to achieve these standards. This dissertation will be cognizant of tracking the ways in which beauty ideals, thin ideals, stigmatizing

experiences, obesity stigmatization, and fear of fatness are present and interrelate in the interviews of participants in the study.

Tripartite influence on body image. Peers, family, and the media have been identified as the tripartite influence on body dissatisfaction (Shroff & Thompson, 2006). Peers and the media will be discussed below as they exert higher levels of influence on adolescent body image (Shroff & Thompson, 2006).

Media influence. Consistent with the tripartite influence on body dissatisfaction (Shroff & Thompson, 2006), experimental and correlational studies of media exposure have demonstrated associations between thin-ideal media exposure and body dissatisfaction in female adolescents (Anschutz, Spruijt-Metz, Van Strien, & Engels, 2011; Dalley, Buunk, & Umit, 2009). In a seminal study, Becker, Burwell, Herzog, Hamburg, and Gilman (2002) documented a significant increase in eating disorder symptoms in a population of Fijian adolescents after western television was introduced to the community. Current reviews of eating disorder risk factors have less consistently documented a negative causal influence of media exposure and instead suggest that media exposure exacerbates negative body image only in viewers already at risk based on elevated baseline body dissatisfaction levels (Culbert et al., 2015) and thin ideal internalization (Durkin & Paxton, 2002). In an experimental study Cahill and Mussap (2007) exposed participants to traditional idealized bodies (pictures of thin models for women and pictures of muscular models for men) and demonstrated that participants experienced higher levels of negative affect post-exposure than at baseline. This effect was mediated by body dissatisfaction and thin ideal internalization supporting previous research that media exposure may differentially affect individuals with higher baseline

levels of body dissatisfaction and thin ideal internalization. Comparable effects were demonstrated in an experimental manipulation of exposure to media images of models (Birkeland et al., 2005). Similarly to the rates of thin ideal internalization, rates of obesity stigmatizing views increase with level of media consumption. In children ages 10-13, obesity stigmatizing attitudes were associated with media consumption of television, magazines, and videogames (Latner et al., 2007). Media exposure seems to reinforce messages idealizing thinness and stigmatizing obesity with negative impacts typically mediated by baseline body dissatisfaction levels. Participant perceptions of the media impact on body image will be attended to during interview analysis.

Peer influence. Peers' opinions and influence may be particularly salient for impacting body image and providing a system or network through which intervention effects can be disseminated. Consequently, it is important to understand the context, patterns, and mechanism of peer influence on eating behaviors and body image. As social network and Internet based platforms are introducing new means of peer interactions, it is also important to assess how peer influence may operate across these varying platforms in influencing body image.

Shared behaviors. Research suggests that during adolescence and into young adulthood, the friend group exerts the strongest influence and accounts for a significant percentage of the variance in individuals' development, maintenance, and intensification of negative body image (Lev-Ari, Baumgarten-Katz, & Zohar, 2014), eating disorder symptoms and unhealthy weight-control behaviors (Eisenberg, Neumark-Sztainer, Story, & Perry, 2005; Hutchinson & Rapee, 2007; Levine, Smolak, & Hayden, 1994; Shroff & Thompson, 2006). An association between peer dieting behavior and unhealthy weight

control behaviors has been established at the social clique and school-wide level (Eisenberg et al., 2005). Moreover, amount of peer-based comparisons have been correlated to body dissatisfaction and pursuit of thinness (Lev-Ari et al., 2014). College roommate dieting behavior has been found to be associated with disordered eating of the participant at a ten-year follow-up (Keel, Forney, Brown, & Heatherton, 2013). Large epidemiological studies have found that eating disorder behaviors including diet pill use, dietary restriction, and over exercising were significantly clustered by geographical county (Forman-Hoffman & Cunningham, 2008). While both community and peer ideals emphasizing pressures to be thin contribute to this clustering (Lieberman, Gauvin, Bukowski, & White, 2001), Forman-Hoffman, and Cunningham (2008) emphasized the impact of the social/cultural environment in the presence of disordered eating behaviors. Additionally, researchers have examined the prevalence of disordered eating behaviors at the peer and school level and have found that both friends' dieting behaviors and school prevalence of weight-loss intentions were associated with disordered eating behaviors such as vomiting, fasting, and diet pill and laxative use (Eisenberg et al., 2005). The relationship between eating disorder symptoms and geographical county was stronger for adolescent females compared to adolescent males and suggests some element of eating disorder symptom education, social contagion, or cultural norming around eating disorder symptoms (Forman-Hoffman & Cunningham, 2008).

Selection. Researchers have found peer selection to account for some of the similar rates of disordered eating and eating disorder symptoms in peer groups (Rayner et al., 2013). Congruently, young-adult women who endorse a positive body image report seeking peers and associates who also endorse a positive body image; this may be that

they are purposely avoiding exposure to negative body image information and environments (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). Young adolescents who endorsed more positive body image place greater importance on the function of their bodies over their body appearance (Frisen & Holmqvist, 2010; Homan & Tylka, 2014). Peer groups may promote this functional emphasis. Overall, peer selection may promote increased positive body image by providing individuals with a positive peer environment or may influence intensification of negative body image through frequent peer reinforcement or normalization of negative body image.

Norming/Influence. While peer selection seems to account for a percentage of the variance in shared eating disorder symptoms and body image attitudes among members of a friend group, individuals with higher proclivities towards body dissatisfaction and eating disorder symptomology may encourage negative behaviors within the group as well. For example, peers may engage in body dissatisfaction encouraging behaviors, such as comparing themselves with peers who have more societally desirable characteristics (Arigo, Schumacher, & Martin, 2014; Fitzsimmons, Craft, & Accurso, 2016). Consequently, the peer environment may serve both as an environment selected because of eating and body image similarities and as an environment that further contributes to the development of body dissatisfaction and eating disorder symptomology.

Mechanisms of impact. Other peer-focused research has examined the mechanisms by which peers influence body dissatisfaction messages. Individuals who make more comparison between themselves and their peers demonstrate higher levels of body dissatisfaction (Lev-Ari et al., 2014). The impact of comparison seems to influence

peers both in person and on social media platforms. Frequent Facebook use and peer-based Facebook comparisons were associated with increased eating disorder symptoms in a cross-sectional analysis (Mabe, Forney, & Keel, 2014). While not causal, this study demonstrates how peer-based comparisons may be associated with eating pathology in internet-based as well as in face-to-face interactions. In examining the impact of peers in eating disorder prevention programs, it may be important to discuss social media behavior and its influence on peer norms and personal experiences of body satisfaction and dissatisfaction.

This cumulative research suggests that peer groups are associated with young women's body image and related eating disorder risk and may be a valuable resource in eating disorder prevention. Collectively, these studies suggest that interventions that exert influence on peer perceptions and peer norms may be particularly effective in reducing body dissatisfaction and disordered eating in female adolescent populations.

Fat talk. Fat talk is a particular mechanism of social communication that contributes to body dissatisfaction. Examples of fat talk include: 1) "I wish I could be as skinny as you!" 2) "Do I look fat in this?" 3) "You look amazing! How much weight have you lost?" and 4) "She totally shouldn't be wearing those pants! Her butt is huge" (Becker, Stice, Rohde, & Shaw, 2012). Nichter (2000) first coined the term fat talk to describe female adolescents' negative body related communication. This Nichter study was important in that it indicated multiple roles of fat talk including: social joining, communicating distress, and gaining reassurance. Since Nichter (2000), researchers have observed that fat talk is a communication pattern that transcends adolescence and can be

observed in conversations between women across cultures and age groups (Arroyo & Harwood, 2012; Eun Lee, Taniguchi, Modica, & Park, 2013).

While researchers have begun to study the occurrence of fat talk among men, women seem to be more frequently exposed to fat talk and feel pressured to engage in fat talk in their social relationships (Martz, Petroff, Curtin, & Bazzini, 2009; Payne, Martz, Tompkins, Petroff, & Farrow, 2011). In a cross-sectional longitudinal study, Tzoneva, Forney, and Keel (2015) found that women in their 20s were more likely to be exposed to fat talk than women in their 30s and 40s and than men. Additionally, Tzoneva et al. (2015) confirmed past positive correlations between fat talk and disordered eating behaviors. Fat talk has been studied among college age women finding one-third to one-half of college students report engaging in frequent fat talk (Ousley, Cordero, & White, 2007). Such communication is associated with higher levels of body dissatisfaction, eating pathology, and thin-ideal internalization (Garnett et al., 2014; Ousley et al., 2007; Salk & Engeln-Maddox, 2011). While frequently women report feeling reassurance from engaging in fat talk (Salk & Engeln-Maddox, 2011), a meta-analysis of fat talk studies suggest that both personal and friends' frequency of fat talk are likely correlated and causal in affecting body dissatisfaction (Sharpe, Naumann, Treasure, & Schmidt, 2013).

Experimental manipulations of fat talk have replicated pathogenic effects suggested by correlational studies (Katrevich, Register, & Aruguette, 2014; Salk & Engeln-Maddox, 2012; Stice, Maxfield, & Wells, 2003). For example, Stice, Maxfield, and Wells (2003) created an experimental situation in which a researcher confederate expressed body discontent and weight loss intentions directly in front of a research participant. Results from this experimental manipulation of fat talk demonstrated that

participants in the condition with the fat talking researcher confederate exhibited elevated levels of body dissatisfaction. These elevated levels of body dissatisfaction were not moderated by initial measured reports of thin-ideal internalization and body dissatisfaction (Stice et al., 2003). This important finding demonstrates the pathogenic effects of fat talk while teasing apart the relationship between initial body dissatisfaction and likelihood to engage in fat talk. Salk and Engeln-Maddox's (2012) experimental manipulation of fat talk additionally revealed that hearing a confederate engage in fat talk increased the likelihood of a research participant engaging in fat talk and increased levels of body dissatisfaction and guilt. This result remained when researchers controlled for initial levels of body dissatisfaction. Collectively these results suggest that individuals with higher levels of body dissatisfaction are more likely to engage in fat talk. However, initial levels of body dissatisfaction do not solely account for the impacts of fat talk. Instead fat talk appears to be a unique pathogenic contributing cause of body dissatisfaction (Salk & Engeln-Maddox, 2012).

Researchers have found that fat talk may predict an individual's felt pressure to be thinner, body dissatisfaction and depression levels (Arroyo & Harwood, 2012). The frequency of peer fat talk has been found to moderate the relation between an individual's own body dissatisfaction and eating disorder symptomology (Forney, Holland, & Keel, 2012). The frequency and pressure to engage in fat talk among peers is notable given the negative outcomes for girls and women associated with frequent fat talk (Garnett et al., 2014; Ousley et al., 2007; Salk & Engeln-Maddox, 2011). Due to the negative outcomes associated with engagement in fat talk and the continuity of this communication pattern across developmental time periods, minimizing fat talk during adolescence may reduce

body dissatisfaction and improve psychological outcomes spanning into later developmental periods. The accumulated studies indicate that body dissatisfaction is a risk factor for fat talk engagement, and that fat talk has negative impact on body image. Consequently the relation appears to be cyclical such that initial levels of body dissatisfaction predict more frequent fat talk (Arroyo & Harwood, 2012) and frequency of fat talk further increases body dissatisfaction. The current study will utilize survey measurement and interview data to examine the presence of fat talk and individual experiences associated with fat talk during the course of a body dissatisfaction intervention.

Prevention

Prevention scientists have identified body dissatisfaction, the negative appraisal of one's physical characteristics, and dieting as risk factors for eating disorders. Both body dissatisfaction and dieting are potentially malleable constructs to target and reduce subclinical and full-diagnostic level disordered eating (Seidel, Presnell, & Rosenfield, 2009). Given the established relations between body dissatisfaction and fat talk, campus campaigns have implemented "Fat Talk Free Week" with the intention of reducing fat talk, body dissatisfaction, and eating disorder symptoms among college women. An initial pilot study indicates that a campaign such as Fat Talk Free Week may reduce fat talk among college women (Garnett et al., 2014). Participants who pledged to abstain from participation in fat talk reduced their fat talk communication. Armitage (2012) noticed an absence in the research on the effects of practicing body focused self-affirmations and found that helping individuals practice self-affirmation prior to rating body dissatisfaction reduces self-reports of body dissatisfaction. The effect seems to

exert influence by reducing the importance assigned to physical appearance. These findings suggest that reducing fat talk and increasing affirming self-talk may increase body satisfaction and in turn, help prevent/reduce disordered eating.

The Body Project. Given the evidence suggesting substantial peer influence on and peer network involvement in body image, thin idealization, and fat talk, interventions may increase effects by incorporating an emphasis on peer relations and utilize peer networks as an avenue to change norms and reduce exposure to these risk factors. Consistent with a focus on peers, successful eating disorder prevention programs, such as the Body Project, have utilized a group-based prevention platform (Becker, Smith, & Ciao, 2005; Stice et al., 2008c; Stice et al., 2013b).

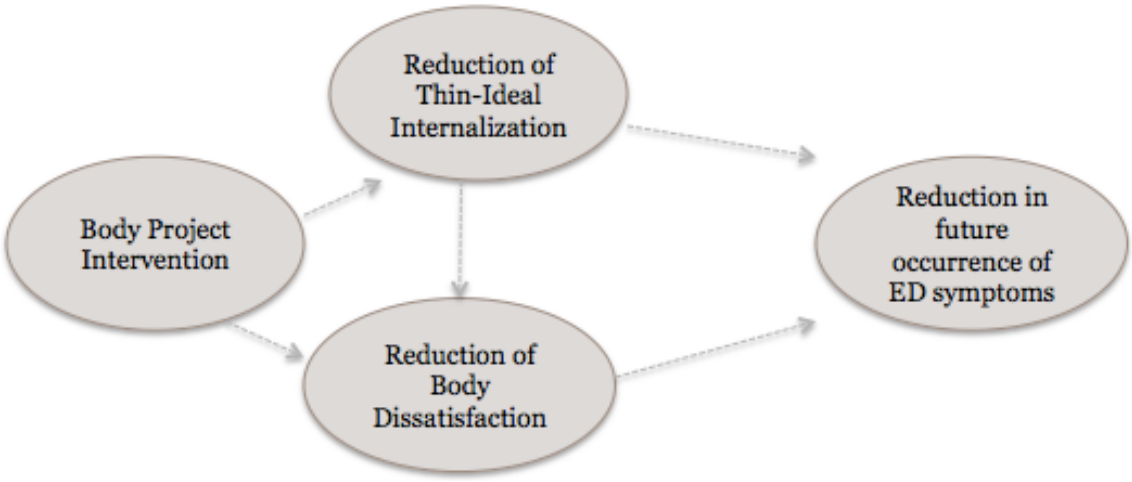
The Body Project purports that publicly rejecting and disputing the thin-ideal of female beauty, an ideal that equates thinness with desirability, happiness, and status (Tiggeman, 2003) elicits cognitive dissonance, an emotional discomfort when thoughts and actions are discordant (Stice, Rohde, Durant, Shaw, & Wade, 2013c). Theoretically, this cognitive dissonance prompts a reduction in participants' thin-ideal internalization and reduces body dissatisfaction and future eating disorder symptomology (Stice et al., 2013c). Mediation studies have supported the theory of change of the program (Stice et al., 2011). The logic model of this intervention is presented in Figure 2 on the following page.

In the context of the intervention, participants are encouraged to look at pictures of models and describe the images they see. Following this brainstorming component, participants discuss whether this idealized version of beauty is attainable and who benefits from perpetuating and pursuing the thin ideal of female beauty. This activity

promotes dissonance by encouraging participants to identify and vocalize the ways they do not personally benefit from pursuing an idealized, often unattainable depiction of female beauty. Programs that increase the level of dissonance have shown increased intervention effects (McMillan, Stice, & Rohde, 2011).

Figure 2.

Body Project Logic Model



*Adapted from Blue Prints Programs logic model for the Body Project Intervention and Stice & Shaw (2002).

Supports for the positive impact of the Body Project intervention have been documented in efficacy (Stice et al., 2012; Stice et al., 2006) and effectiveness trials (Stice et al., 2013c; Stice et al., 2012; Stice, Marti, & Cheng, 2014).

Support for the benefits of the intervention have been documented utilizing different research methods. Researchers have utilized survey data to monitor change in participants' levels of thin-ideal internalization, body dissatisfaction, dietary restraint, bulimic symptomatology and other relevant variables (Becker et al., 2010). Moreover,

fMRI data has demonstrated neurological changes in dissonance program participants' responsiveness to perceived rewards associated with the thin ideal (Stice et al., 2013a). Overall success of dissonance-based eating disorder prevention programs, specifically the Body Project, have been demonstrated in short-term and long-term follow-ups showing reductions in self-objectification, thin ideal internalization, body dissatisfaction, and eating disorder symptomology (Perez, Becker, & Ramirez, 2010; Stice, Marti, Spoor, Presnell, & Shaw, 2008b). Moreover, positive preventative impacts have been confirmed when the program was led by trained professionals or trained peers (Stice et al. 2013c) and has shown additional protective effects for peer facilitators (Becker, Bull, Smith, & Ciao, 2008). Additionally, the short time frame (four to six hours) may enhance participant willingness to engage in the intervention as researchers have found time to be an impediment to participation in college eating disorder prevention programs (Atkinson & Wade, 2013).

While cognitive dissonance programs have demonstrated small to large effect sizes (.11-.74) for participants as measured by Cohen's d values in reducing participants' body dissatisfaction and thin-ideal internalization (Becker et al., 2010; Perez et al., 2010; Stice et al., 2008b; Stice et al., 2013a), an important question is whether these effects might extend through social relationships of participants to peers. Might the cognitive and self-image changes lead to changes in how the participants talk about eating and body image with peers and therefore lead to derived benefits for those peers. Cumulative research supporting shared peer values about body image and eating, both positive and negative, raises the question of how the peers of intervention participants may be exposed or influenced (Keel et al., 2013). Peer networks may substantially moderate the impact

and sustaining of effects. Females with friendships and acquaintances in primary social groups who exhibit more fat talk, thin idealization, and body dissatisfaction may not maintain gains from the intervention in the same way as peers in less pressured environments. Participation in a dissonance program may also create a willingness to voice alternative views or to question peer group norms promotive of body dissatisfaction. Thus, it seems valuable to investigate how peer relationships affect and might be affected by exposure to interventions expected to change risk for disordered eating by reducing thin ideal internalization and body dissatisfaction.

Prevention through social network. The value of peer network study has been theorized and demonstrated in substance abuse prevention research (Valente, Gallaher, & Mouttapa, 2004; Valente et al., 2007). Because peers are thought to exert significant influence on substance related behaviors, specifically during adolescence, Valente, Gallaher, and Mouttapa, (2004) theorized that utilizing peer networks for prevention based programming may be particularly effective. Valente et al. (2007) examined the impacts of a social-network based substance abuse prevention program. They found this program to be effective when participants had non-substance using peer environments. However, when participants were situated in substance-endorsing peer environments, the intervention program yielded potentially iatrogenic results (Valente et al., 2007). Given the commonality of shared peer behavior with substance use and disordered eating behaviors, the current study sought to analyze peer communication impacts after participation in a body image intervention.

Research has indicated that peers share body image attitudes and disordered eating behaviors (Rayner et al., 2013). These shared peer values seem to be a product of

both peer selection and peer group behaviors that encourage body dissatisfaction or disordered eating behaviors. While substance abuse prevention literature (Valente et al., 2007) has tracked substance abuse prevention programs impacts through social networks, to the knowledge of the research team, eating disorder prevention researchers have yet to examine social communication and transmission of body image intervention impacts through peer relationships. The absence of research on peer transmission of body image intervention effects suggests the need for this study.

Summary and Implications of the Research

The accumulated research indicates that body dissatisfaction is a prevalent and caustic experience for women, both due to its negative psychosocial correlates and also on account of the risk it poses for future eating disorder development. Women are at greater risk for body dissatisfaction due to the pressures placed on women to meet sociocultural expectations of beauty, increased numbers of weight-related stigmatization experiences, and self-reported amounts of comparison and communication about appearance with peers. Thin ideal internalization, self-objectification, media consumption, appearance related communication, and unhealthy weight control behaviors of peers are associated with increased body dissatisfaction and risk for eating disorder development.

Prevention scientists have found cognitive dissonance based interventions on body dissatisfaction and eating disorder prevention to reduce thin ideal internalization, which mediates a reduction in body dissatisfaction and unhealthy weight control behaviors (Stice, Presnell, Gau, & Shaw, 2007). Current research has emphasized understanding the processes of change through mediation and moderation models of

survey-reported constructs or clinical interviews of eating disorder symptoms. However, this research has not incorporated women's perceptions of experiences in the intervention or their communication related to pre-determined risk factors. Moreover, while researchers have utilized group interventions to deliver the Body Project, researchers have not yet examined processes of effect on peers and the potential of positive social contagion from the intervention. The current study seeks to fill these gaps in the literature by examining possible changes in participant narratives about their body, food, and exercise and how these may relate to intervention processes of change and measured survey scores. Second, given the association between peer attitudes and behavior and unhealthy weight control behaviors, the study will seek to describe whether participant change during the course of the intervention may be associated with peer change in thin ideal internalization, dietary restraint, fat talk, and body dissatisfaction, and associated changes in interviewed peers' narratives.

The Current Study

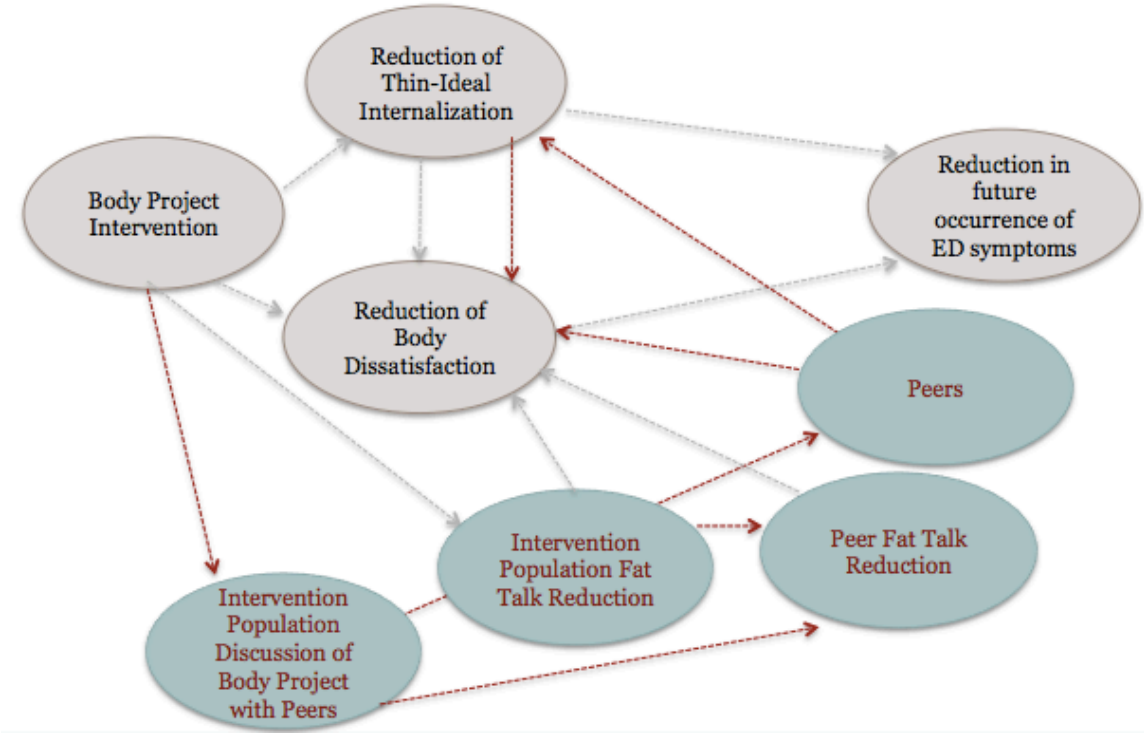
The current study utilized an intervention design to measure intervention effects and patterns of social communication and peer transmission associated with participation in the Body Project intervention, an eating disorder prevention program. Intervention effects and patterns of social transmission were measured through survey data of fat talk, thin-ideal internalization, body satisfaction/dissatisfaction, dieting, negative affect, and eating disorder symptomatology in a sample of college women who self-selected into the study based on self-reported body image concerns, and their identified peers. A subsample of participants and peers of participants completed interviews attempting to gain information about the potential perceived processes of impact and communication

associated with intervention participation. The study hypothesized that participants' interview narratives will provide a more complex picture of participant thin ideal internalization and body dissatisfaction than survey scores allow for; this complex picture will allow for better understanding of the interplay of factors that relate to change during the course of the intervention. Second, this study hypothesized that amount of participant change in the intervention will be associated with a positive rippling effect of intervention effects to the peers of participants that will be documentable in participants' peers survey scores and interview data.

The intervention logic model suggests that the Body Project intervention reduces the occurrence of thin ideal internalization, which reduces body dissatisfaction, and that the intervention reduces body dissatisfaction independently. The logic model of the intervention as adapted from the Blueprints Programs and Stice and Shaw (2002) is presented in gray bubbles with black ink in Figure 3. This model purports that the Body Project intervention prompts a reduction in body dissatisfaction and thin ideal internalization, which mediate a reduction in unhealthy weight control behaviors (Stice et al., 2011). The current study hypothesized that the reduction in body dissatisfaction and thin ideal internalization in the intervention sample reduce the occurrence of fat talk in the intervention sample. This reduction in fat talk accompanied with a discussion of the intervention with peers was hypothesized to reduce peer fat talk, which then reduces both peer and intervention participant body dissatisfaction and thin ideal internalization. Figure 3 illustrates the logic model of the Body Project and the added hypothesized mechanism of peer social contagion from the intervention.

Figure 3.

Intervention and Peer Contagion Mechanisms



*Intervention population effects in black text. Peer hypothesized secondary impacts displayed in maroon text.

CHAPTER THREE

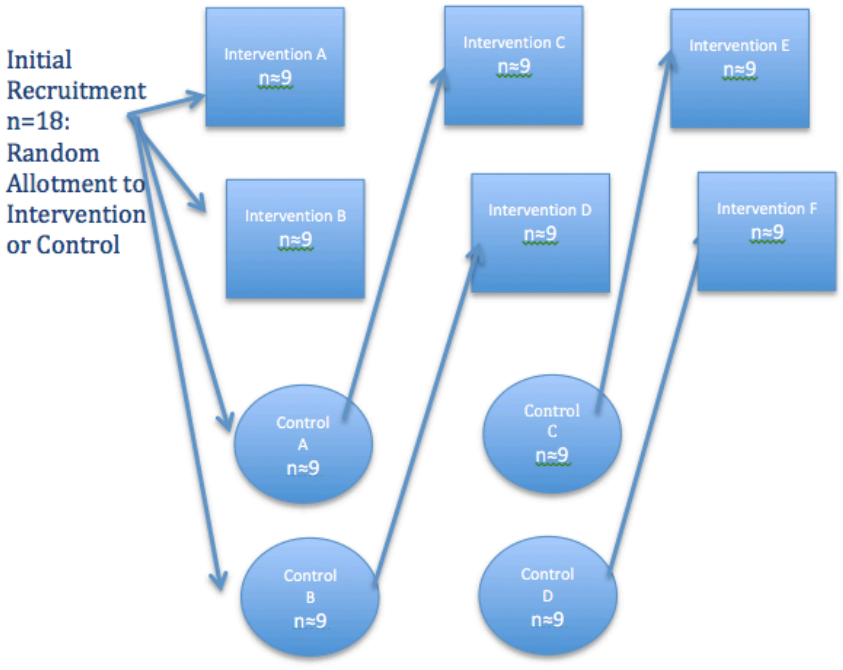
Methods

Design

The current study utilized a randomized-control (RCT) multiple baseline with waitlist controls mixed methods design (see Figure 4). Four samples were recruited: the intervention RCT sample, a subsample of that group who were engaged for qualitative interviews, peers of the RCT participants, and a subsample of the peer sample who were engaged in qualitative interviews.

Figure 4:

Multiple Baseline Waitlist Control Design



*Group size varied from 7-11 due to participant no-shows and to allow for participant rescheduling of missed groups

Samples.

Intervention RCT sample. Intervention participants were recruited from a medium sized university in the mid-Atlantic. Female students were recruited to seek participation in the group intervention. The intervention was offered on campus through the school's women's center and other partners. To ensure the protection of participants, IRB approval was obtained. Participant informed consent was obtained and participant information was carefully recorded and maintained on locked computers and in locked cabinets.

Intervention sample recruitment. Advertisements for the intervention combined with a snowball recruitment technique (Emerson, 2015; Noy, 2008; Valerio et al., 2016) were utilized to attempt to maximize the number of university female students who knew about the intervention and associated research project. Fliers were posted around the university in dorms, walkways, and residence halls and at establishments surrounding the university and often frequented by students. Email list serve notifications were distributed to classes, student groups, sororities, and other organizations. Attention was paid to distribute emails to student groups representing diverse representations of students and groups serving minorities at the university. Advertisements in university email based mailings and emails to list serves were sent multiple times to encourage participation. Research assistants posted information about the intervention on their Facebook pages and on groups with which they were associated. As flyers and emailing began, the team became aware that recruitment emails were being forwarded from the original emails sent directly

from the research team. This "snowball" sampling was then purposefully promoted, so that subsequent communication between researchers and organization leaders encouraged the distribution of recruitment materials.

Three hundred and eleven university women responded via email expressing initial interest about participating in the study. When these emails were received, the PI provided information about the intervention and study and provided a URL link to complete the consent and initial survey online. The initial email is included in Appendix A.

*Eligibility***.** Eligibility for participation in the intervention was assessed based on participant responses to the Eating Disorder Diagnostic Scale (Stice, Fisher, & Martinez, 2004; Stice, Telch & Rizvi, 2000), with the goal of excluding those who provided responses that indicated a potential clinical level eating disorder because the program is not intended to serve as a treatment for clinical eating disorders. This scale has demonstrated internal consistency (α=.89) and test-retest reliability (r=.87) and convergent validity with the Eating Disorder Diagnostic Interview (r=.82) (Stice et al., 2008a; 2013c). Sample items include: "How many times per week on average over the past month have you made yourself vomit to prevent weight gain or counteract the effects of eating" and "Over the past month, have you had a definite fear that you might gain weight or become fat?" This scale in conjunction with body mass index (BMI) was used to determine whether individuals were eligible to participate in the study.

Individuals whose behavior reported in the initial survey indicated potential Anorexia Nervosa, Bulimia Nervosa, Binge Eating Disorder, or an Otherwise Specified Eating Disorder (Purging Disorder) (American Psychiatric Association, 2013) were

excluded from participation and provided treatment referrals and encouraged to pursue those resources. Exclusion criteria were developed from DSM 5 criteria: 1) BMI below 17; or 2) one episode of binge eating ("eating in a discrete period of time an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances, and a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control how much one is eating") and one episode of purging by vomiting, laxative, or diuretic use on average at least once a week); or 3) purging by laxatives or vomiting on average at least once weekly; or 4) at least one episode of "binging" and seven episodes of compensatory exercise endorsed on average per week; or 5) at least one episode of "binging" and seven episodes of fasting endorsed on average per week (American Psychiatric Association, 2013). A list of resources was provided to participants who endorsed elevated or clinical levels of eating disorder symptomology.

*Baseline survey completion***.** Of the 311 students expressing initial interest in the study, 217 people began the online survey with 171 people completing, a 78.8% completion rate. Of the 171 people who completed surveys, two did not consent to be part of the study. Of those completing, 111 people were eligible for participation based on the criteria described above (64.5% eligible).

Intervention RCT group assignment. 111 participants were assigned a number according to the order they entered into the study. Recruitment for the intervention continued over the academic semester. Groups were formed continuously throughout the intervention utilizing a random number generator. The first 18 students were randomly assigned to intervention or wait-list.

Subsequent groups of nine were assigned to control for the next group (who were wait-list controls in prior sequence).

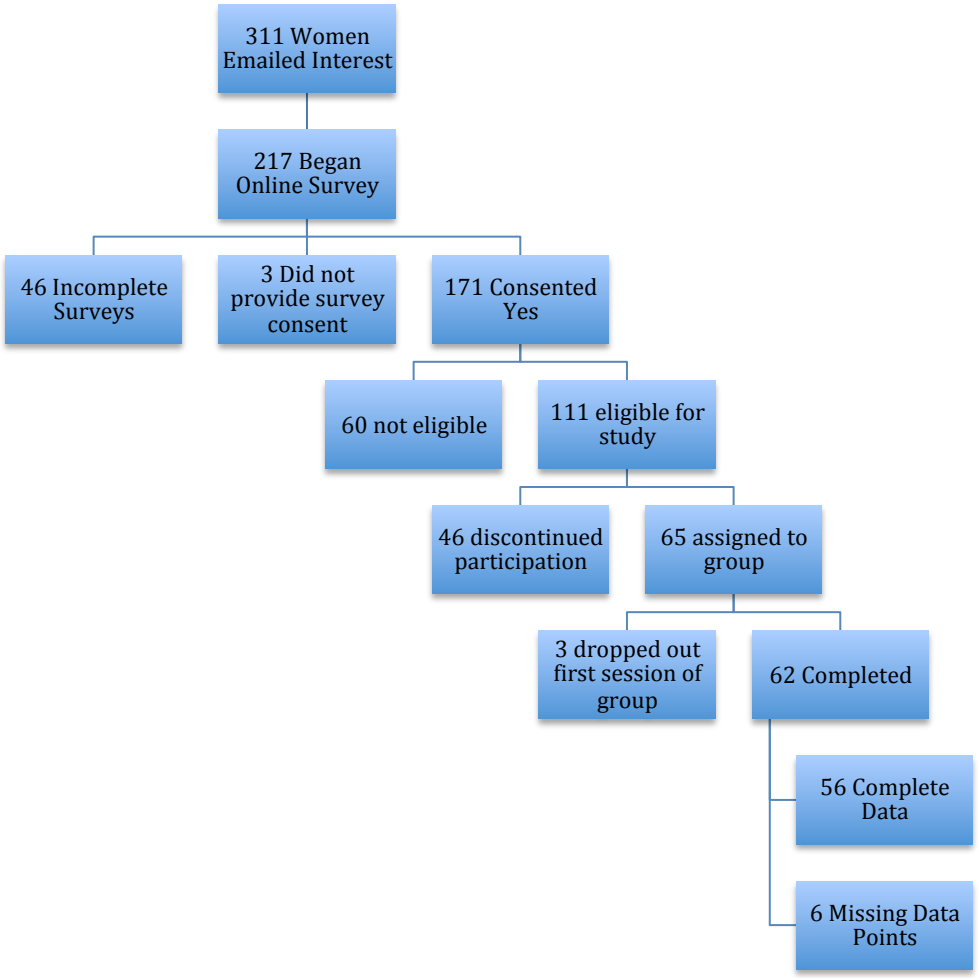
Of those meeting eligibility requirements, 46 discontinued participation by either not responding to the scheduling email or not attending the first intervention session. Also, in some cases scheduling required that groups be a bit larger or smaller than nine. This resulted in seven groups of 7-11 participants formed.

As necessary due to participants' scheduling constraints, participants were reassigned due to schedule problems (n=16). These participants were reassigned using a random number generator and taking into consideration any scheduling limitations they let the researchers know about of ahead of time (e.g. unable to meet Tuesday nights). The last intervention group did not have a corresponding waitlist control group.

Sixty-five participants participated in at least one session and of those 62 completed the intervention (attended through last session). They constituted the RCT sample given that the waitlist control design controlled for any threat of differential attrition. Outcome was only assessed for participants with the third data point rather than estimate post-test. Chart 1 on the following page demonstrates the entry of participants into the study.

Chart 1.

Consort Chart



*Intervention RCT sample description***.** The average age of participant was 20.79, standard deviation 2.01, range 18 to 28. One participant identified as American Indian, six participants identified as Asian, ten participants identified as Black, six participants as Hispanic, and 46 participants identified as White.[1] Additional demographic information about the RCT sample is provided in Table 1 below.

***Excluded participants*.** 60 people who completed the baseline survey were not eligible to participate in the intervention due to previously determined criteria based on

[1] N is greater than 62 for participant race because participants were able to select more than one race.

DSM-5 criteria that suggested these participants might have a *clinically significant* eating disorder. The mean age of this sample was 20.22, standard deviation 1.37, range 18 to 23. Seven participants identified as Asian, one participant identified as Black, four participants identified as Hispanic, 47 participants identified as White, and one identified as an unspecified race. Additional demographic information about these individuals is included in Table 1 below. Baseline scale scores for excluded individuals are compared to baseline scores for completed RCT participants in Table 2.

Table 1.

Demographic Information RCT and Excluded

	Mean Height	Mean Weight	Mean BMI	Past Eating Disorder	Parent 1 Education	Parent 2 Education
RCT Sample	65 in. (SD, 2.33, range 61 in. to 71 in.)	136.42lbs (SD, 17.77, range 108 lbs. to 185 lbs.)	22.51, SD, 2.52, range 19.01 to 30.11)	n=4	4.97 (4=trade/ technical school and 5= college graduate)	5.26 (5= college graduate and 6=some postgraduate work)
Excluded	65.15 (SD, 2.93, range 56 in. to 72 in.)	145.41 lbs. (SD, 24.75, range 99lbs. to 220 lbs.)	24.02 (SD, 3.92, range 16.46 to 36.61)	n=8	5.45 (5= college graduate and 6=some postgraduate work)	5.71 (5= college graduate and 6=some postgraduate work)

Table 2.

Baseline Scale Score Means: RCT Sample and Excluded

	Thin Ideal	Dutch Restrained Eating	Body Satisfaction	Fat Talk Concerns	Fat Talk Compare
RCT	3.63 (SD, .51)	2.51 (SD, .7)	2.72, SD, .69)	2.91 (SD, 1.29)	2.63 (SD, 1.09)
Excluded	3.82 (SD, .54)	3.21 (SD, .62)	2.5 (SD, .63)	3.62 (SD, 1.71)	3.45 (SD, 1.64)

Intervention interview subsample. Participants from each intervention group (excluding the first and last intervention groups) were purposefully selected for qualitative interviews (n=12). Participants from the first and last groups were excluded from interviews because the PI both led those groups and conducted all interviews for the study. On the day that two interventions were led concurrently, all interview participants assigned to that date participated in the group that the PI did not lead. These participants were excluded from interview selection or placed in a group not led by the PI in an effort to reduce social-desirability in post-intervention responses because the interview asked directly about the participation in the groups.

Interview participants were selected to represent a range of individuals with varying levels of thin ideal internalization and body satisfaction. While selecting participants, effort was paid to select participants representing a range of races with attempt to have more than one interview participant for each minority represented in the interview sample. After the first five interviewees were selected, researchers examined the range of BMIs. In order to increase the diversity of participant BMI in the interview sample, BMI was added as a criterion of consideration for interview selection.

After calculating for the mean and standard deviation of the first 127 people who completed the survey, risk categories were developed and from these categories, interview participants were purposefully selected. Utilizing the mean scores on the outcome measures from the initial 127 individuals who completed the baseline survey, individuals whose baseline measurements fell one standard deviation above the mean on Dutch Restrained Eating scale (van Strien, Fritjters, Van Staveren, Defares, & Deurenberg, 1986), Thin Ideal Internalization (Stice et al., 2006), and Fat Talk scale (Engeln-Maddox, Salk, & Miller, 2012) were considered high-risk. Table 3 presents the risk score cut offs from the sample utilized for interview selection beside the mean from the sample of participants who were both eligible and completed the intervention. Those who fell one standard deviation below the mean on the above measures were considered low-risk, and those who fell within a standard deviation of the mean were considered mid-risk. For the body satisfaction measure (Berscheid, Walster, & Bohrnstedt, 1973 as cited in Stice et al., 2006), those who fell one standard deviation below the mean were considered high-risk and those who fell one standard deviation above the mean were considered low-risk. Those who fell within one standard deviation of the mean were considered mid-risk. Because utilizing all four outcome measures to select interview participants yielded too many potential iterations of risk presentations, body satisfaction and thin ideal internalization scores were utilized in conjunction with BMI and race to purposefully select a diverse representation of interview participants both in terms of demographic characteristics and in terms of risk level.

Table 3.

Interview Purposeful Selection Cut-Off Scores for Risk Categories

	Scale Mean Scores			
	Low Risk (selection sample)	High Risk (selection sample)	Low Risk (completed intervention)	High Risk (completed intervention)
Thin Ideal Internalization	3.12	4.20	3.12	4.14
Body Satisfaction	3.55	2.11	3.41	2.03

Eleven participants completed pre- and post-intervention interviews. Three participants were selected to participate, but declined and dropped out of the study prior to the first intervention session. One participant completed the pre-interview and then decided to drop out of the study. She allowed for her first interview still to be utilized in analyses. Total sample of interview participants was equal to 12. Participant race was distributed as 58% White (7 participants), 8% Black (1 participant), 16% Biracial (2 participants), 16% Asian (2 participants). Participant BMI ranged from 20.89 to 29.67, mean 23.70, mode 22.

The research team intended to over represent participants with two baseline high-risk scores and two baseline low-risk scores. However, the availability of these participants was limited. Two participants with two high-risk scores were interviewed. One of these participants dropped out of the study after pre-interview. Three participants with one high-risk score were interviewed. Four participants with all mid-risk scores were interviewed. Two participants with one low-risk score, one mid-risk score were interviewed, and one participant with two low-risk scores was interviewed.

Peer sample. All consenting participants were asked to identify up to eight friends (oversampling with intention to recruit four peers per participant) defined as individuals with whom they most frequently interact and have contact (Gest, Osgood, Feinberg, Bierman, & Moody, 2011). Intervention participants were informed that they did not need to provide peer information in order to be eligible to participate in the study. If peer data was provided from individuals who were also participating in the intervention, their data was utilized exclusively as intervention participant data and their peer data was dropped from analyses.

Emails were sent to peers with a link to the peer pre-survey one week prior to the start of the intervention for the friend who nominated them. If phone numbers were provided instead of emails, peers were called and asked if they wanted to participate in the study. If they said yes, the caller took the peers' email and sent the link to the initial survey. Informed consent from the peer sample was obtained in the online survey. Peers were sent a link to the post survey at an approximate two-week follow-up after their friends' participation in the intervention. This follow-up survey link was sent to peers regardless of whether they completed the pre survey. This peer sample provided survey data and was used to track potential spread of intervention effects to friends.

Thirty-six participants, 58% from the RCT sample, cumulatively submitted 191 peer names: 36 participants provided at least one peer name; 32 of the 36 participants provided two peer names; 27 of the 36 participants provided three peer names; 26 of the 36 participants provided four peer names; 22 of the 36 participants provided five peer names; 18 of the 36 participants submitted six peer names; 15 of the 36 participants submitted seven peer names, and 15 of the 36 participants submitted eight peer names.

Peers were assigned a variable corresponding to their intervention participant. Eight sets of peer variables were created to correspond with the maximum number of peers an intervention participant could nominate. These sets were divided into pre-participant intervention and post-participant intervention time points. Table 4 illustrates the number of completed peer responses in relation to the number of peer names that were submitted. The first peer pre-intervention variables, as represented in the first line of the table, had 27 peer responses. This means that 27 peers provided data that was utilized in the peer analyses. The first peer post-intervention variables had 25 peer responses, meaning that 25 of the first 27 peers also provided post data. The peer response rates for each time point (number of peers divided by total number of peer names submitted) and response rate per participant (number of peer responses/ number of completed RCT participants) are included in Table 4.

Table 4.

Peer Response Rates

	Number of Peer Responses to Survey Pre and Post	Peer Response Rate	Response Rate/ Participant
Peer 1 Pre	27	.14	.44
Peer 1 Post	25	.13	.40
Peer 2 Pre	18	.09	.29
Peer 2 Post	14	.07	.23
Peer 3 Pre	10	.05	.16
Peer 3 Post	5	.03	.08
Peer 4 Pre	5	.03	.06
Peer 4 Post	3	.02	.05
Peer 5 Pre	1	.01	.02

Because not all participants provided peer names and not all peers who were contacted selected to participate, intervention participants had varying numbers of peers

with provided data. Additionally, some peers provided data at one time point, while other peers provided data at both time points. Consequently, intervention participants also had varying number of peers with matched data. The research team elected to utilize the first peer with matched data for any participant whose peers provided peer data (N=25). Additional peers were not included in the analyses.

Peer interview subsample. A subsample of the identified peers of the intervention participants also was asked to participate in baseline and follow-up interviews. These peers were selected from peers of intervention participants in the interview subsample. Separate informed consent was obtained for these two interviews. Peer interview participants were interviewed prior to her friend's participation in the intervention and at an approximate two-week follow-up from the time that their nominating intervention participant completed the intervention. Peers and intervention participants were asked whether they discussed the intervention together or changed any behavior with her peer during this two-week period. Intervention interview participants were not selected based on whether or not they had provided peer data. Consequently, not all intervention interview participants had provided peers to be recruited for the study. Additionally, from the intervention interview participants who did provide peer data, some of their peers elected not to participate. Because of these two recruitment issues, not all intervention interview participants had corresponding peer interviews. A total of eight peers were interviewed, representing six of the intervention interview participants.

Intervention Description

The Body Project is a scripted two two-hour[2] group intervention spaced over a

[2] Other iterations of the Body Project are available utilizing longer and shorter intervention time (i.e. four session and six session formats).

two-week period. The approach promotes cognitive dissonance regarding the thin-ideal of female beauty for the purpose of body dissatisfaction reduction and eating disorder prevention (Stice et al., 2013a). For example, during one activity, participants utilize a roundtable brainstorm to identify physical qualities of a perfect woman. The brainstorm yields a list of often conflicting and unattainable qualities in an attempt to help intervention participants to realize that the thin ideal is elusive and unattainable. This activity lays the groundwork for participants to begin questioning the benefits and costs associated with pursuing the thin-ideal and in doing so elicits cognitive dissonance. Additional topics and activities include: questioning the thin-ideal, practicing ways to reject the thin-ideal in contexts with family and peers, and reducing fat-talk, positive or negative conversation among family and friends that reinforce the thin-ideal of female beauty. A script of the intervention can be found at bodyprojectsupport.org or upon request to the PI.

Consistent with the script during session one, participants were introduced to the intervention and verbally made a voluntary commitment to participate. Facilitators defined the thin ideal or the beauty ideal, used interchangeably during the intervention. After defining the thin ideal, the group brainstormed costs associated with the thin-ideal, participated in verbal challenges to respond to thin ideal statements, discussed Fat Talk, discussed behavioral challenges around things participants typically avoid due to body image concerns, and then planned for home exercises. For homework between sessions, participants wrote a letter to a young girl discussing the costs of the thin ideal, stood in front of a mirror labeling things they like about themselves, and tried out an activity twice

doing something that they typically avoid due to body image concerns (Becker et al., 2012; Stice, Shaw, & Rohde, 2012).

Following the script during session two, participants restated their voluntary commitment to participate, read aloud the letters they wrote in between sessions, and debriefed the mirror and behavioral challenge exercises. Then participants broke into groups for a role-play in which they discouraged a friend (facilitator) from pursuing the thin ideal. The concept of body activism was then introduced and participants discussed ideas related to body activism. To consolidate what participants learned over the sessions, the group discussed future pressures to be thin, developed quick comebacks to fat talk, processed the benefits of the group, concluded with a self-affirmation exercise, and planned for home exercises after the conclusion of the group (Becker et al., 2012; Stice, Shaw, & Rohde, 2012).

The intervention has been used at the university for the past eight years through a university eating disorders education and prevention initiative. Intervention sessions have been provided to sororities, in classes, to resident advisors, and to group fitness instructors. The program has been directed towards individuals thought to hold social influence within the university community. The current design attempted to examine and describe potential social transmission of intervention effects among peers. Future research studies may be able to test these social transmission hypotheses on a larger scale.

Groups. Groups were facilitated by individuals trained to lead the Body Project either by a staff member who was a trained trainer, or the National Eating Disorders Association Body Project facilitator training program. Groups were led by either one

clinical psychology graduate student and one undergraduate student or by two clinical psychology graduate students. Due to the limited availability of group facilitators, the PI had to lead three groups. There were no interview participants selected from the groups led by the PI. All other groups were observed by the PI through a one-way mirror to help with consistency of intervention provision and completion and to allow for observation of group makeup and dynamics. One group was not observed due to its time co-occurrence with a group led by the PI. Group facilitators provided written summaries of groups to the PI to help assess specific themes that arose during the groups and assess for any implementation issues in the group not observed by the PI. No such issues were noted. Groups were offered on Tuesday evenings, Thursday evenings, and Saturday mornings.

Procedures. Interviews were conducted in the intervention interview sample at pre- and at post-intervention regarding body, food, and exercise narratives and experiences/feelings in the intervention (post-intervention interview only). Interviews regarding body, food, and exercise narratives were conducted in the peer interview sample at baseline and two-weeks after the nominating peer completed the intervention. Non-interview intervention participants completed surveys at entry into the study, immediately before the intervention, and immediately after the intervention. All intervention participants completed paper survey measures of fat talk, thin-ideal internalization, body satisfaction/dissatisfaction, dieting, positive and negative affect, and eating disorder symptomatology (at entry into the study, immediately before the intervention, and immediately following the intervention). The baseline survey measurement was gathered online at qualtrics.com. Non-interview peer participants were asked to complete online survey measures prior to the intervention participants' first

intervention session and again to serve as follow-up measures two weeks after their intervention participant friends completed the intervention. This data collection and intervention sequence occurred over seven waves. Intervention waves five and six occurred at the same time to avoid offering an intervention over spring break.

Intervention participants participated in the Body Project intervention in two, two-hour sessions over two weeks. If a participant missed the second group of the intervention for unplanned reasons, they were encouraged to participate in the second group in the subsequent time wave. This change in protocol was noted with their data. Two participants missed their second scheduled group and rescheduled.

Surveys were completed during the intervention time to help reduce missing data. Follow-up phone calls were placed for participants who missed interviews or groups sessions to check about rescheduling.

Compensation for study participation was stratified across data collection and intervention participation to encourage participation in the full project. Participants were given a $10 amazon gift card for each phase of data collection. Intervention and peer interview participants received a $10 gift card for interview one and a second $10 gift card for interview two. Intervention participants received a $10 gift card for completion of intervention session one and a second $10 gift card for completion of intervention two. These gift cards were distributed at the end of the study (maximum $40).

Table 5 provides a timeline for group assignment and enrollment and data collection sequences. Because each participant served as her own control (wait list control) each participant provided three data points- initial baseline, post-test for control (which was also pre-test for intervention) and post-intervention. At post-test, an

additional question asked each intervention participant if she discussed the experience or content of the intervention with friends.

Table 5.

Data Collection Timing Sequence

	Baseline Ongoing Survey	Interview	Survey	Intervention	Survey	Interview	Survey	Intervention	Survey	Interview	2-week Post Intervention Interview/ Survey	Survey	Intervention	Survey	Interview	2-week Post Intervention Interview/Survey
Intervention A	X		X	X	X											
Interview A	X	X	X	X	X	X										
Peer Group A																
Interview Peer A																
Intervention B	X						X	X	X							
Interview B	X					X	X	X	X	X						
Peer Group B							X		X		X					
Interview Peer B						X	X				XX					X
Intervention C	X											X	X	X		
Interview C	X											X	X	X	X	
Peer Group C												X				X
Interview Peer C												X				XX

*Data collection sequence continued for seven intervention groups.

Consenting peer participants identified by the intervention group completed the same survey protocol as the intervention participants and control participants. Non-interview peer participants were entered into a raffle to win an amazon gift card.

Measures

Scale reliability for the current sample was calculated using the sample of individuals who completed the intervention. Survey data was entered and maintained on SPSS, a statistical platform that allows for the management of quantitative data.

Demographics. Age, race, nationality, and parental socioeconomic status were gathered in the beginning of the survey data.

Moderators. Past Body Project research has suggested that negative affect may moderate the effect of the intervention (Muller & Stice, 2013; Stice et al., 2013a). Initial positive and negative affect scores were calculated and correlated with change scores to determine whether they should be included in outcome analyses. Because they were not significantly correlated, these were not included in the outcome analyses.

Positive Affect and Negative Affect Scale (Watson & Clark, 1994). The scale presents 60 affect items and asked participants, using a five-item Likert scale, to rate their level of endorsement over the last week from "not at all" to extremely." The scale has demonstrated internal consistency (α=.95) and test-retest reliability (r=.78) (Stice et al., 2006). Sample items include: " "Disgusted with self," "sad," and "shaky." Scores were recorded as the average of non-missing data for the overall positive affect and overall negative affect subscales.

Outcome measures. Past Body Project intervention research has suggested that the intervention operates by reducing levels of thin-ideal internalization and body dissatisfaction, which then reduces the occurrence or future occurrence of eating disorder symptomology (Stice et al., 2013a). These constructs were evaluated using the surveys recommended and utilized by the Body Project research team.

Thin-ideal internalization. The Thin-Ideal Internalization scale is a six-item scale developed by Stice, Shaw, Burton, and Wade (2006). The items present thin-ideal statements and asked respondents, using a five-item Likert scale to rate their level of agreement with the statements, ranging from strongly disagree to strongly agree. Internal consistency (α=.91) and test-retest reliability (r=.80) have been demonstrated with the scale (Stice et al., 2008a; 2013c). Sample items include: "Slim women are more

attractive," and "Women with toned bodies are more attractive." Scores were recorded as the average of non-missing data. Alpha for the current sample was equal to .81 at baseline, .86 at pre measurement, and .95 at post.

Body dissatisfaction. The Body Dissatisfaction Scale is a nine-item scale that asked respondents to assess their self-reported satisfaction and dissatisfaction with body parts and body shape utilizing a five-point Likert scale ranging from extremely satisfied to extremely dissatisfied (Berscheid, Walster, & Bohrnstedt, 1973 as cited in Stice et al., 2006). Internal consistency (α=.94) and a three-week test-retest reliability (r=.9) have been demonstrated with this scale (Stice et al., 2008b). Additionally Stice et al. (2008b) established this scale's predictive validity for detecting the onset of bulimic symptoms and intervention effects (Stice et al., 2013a). Sample items include: "Over the past month, have you felt fat?" "Over the past month how satisfied were you with your: Weight, Figure" etc. Scores were recorded as the average of non-missing data. Alpha for the current sample was equal to .86 at baseline, .84 at pre measurement, and .92 at post.

Fat talk. The Negative Body Talk (NBT) scale (r=.74) is a 13-item likert scale with a seven-point response scale (1=never, 4=sometimes, 7=always) to measure women's frequency of body related speech with negative valence (Engeln-Maddox, Salk, & Miller, 2012). The scale is divided into two subscales. The first subscale, the Body Concerns subscale (7 items, r=.68) measures women's frequency of self-reported negative comments about their own body made to their friends. The second subscale, the Body Comparison subscale (6 items, r=.61) measures women's frequency of making vocalized comparisons to their peers about other women's bodies. This scale was validated with a population of college women, similar to the proposed current sample.

Sample items include: “I wish my body looked like hers.” “I need to go on a diet.” Scores were recorded as the average of non-missing data per scale. Fat Talk Concerns scale alpha for the current sample was equal to .91 at baseline, .89 at pre measurement, and .92 at post. Fat Talk Compare scale alpha for the current sample was equal to .87 at baseline, .89 at pre measurement, and .93 at post.

Dieting. The Dutch Restrained Eating Scale (van Strien, Fritjters, Van Staveren, Defares, & Deurenberg, 1986) is a ten-item scale about dieting behaviors. Internal consistency (α=.95) and test–retest reliability (r=.82) have been demonstrated with this scale. Respondents are asked to rate their frequency of dieting behaviors on a five-item Likert scale ranging from “never” to “always.” While the scale has been shown to be valid in reporting self-perceived energy intake, it is not valid for assessing actual energy intake (Stice et al., 2006). However, researchers have utilized the scale effectively to predict bulimic symptoms and demonstrate Body Project intervention effects (Stice et al., 2004; 2006; 2013a). Sample items include: “If you put on weight, did you eat less than you normally would?” and “How often did you refuse food or drink because you were concerned about your weight? Scores were recorded as the average of non-missing data. Alpha for the current sample was equal to .83 at baseline, .93 at pretest, and .93 at posttest.

Qualitative Data Interviews

The intention of the interview portion of the study was to allow for an integration of survey measurement with interview data to better understand the meaning participants assert about their own daily experiences (Tolman & Szlacha, 1999) and experiences in the intervention. This interview method is based in an assumption that “the way people

talk about their lives is of significance, that the language they use and the connections they make reveal the world that they see and in which they act" (Gilligan, 1993; p. 2). This mode of data collection prioritizes the participant as an "authorit[y] on their own experience," a form of feminist research methodology (Tolman & Szalacha, 1999, p. 303). This method of data collection was intended to develop a deeper and more complex understanding of college women's experiences with body, food, and exercise, and also how these experiences related to their intervention experience and relationships with their peers. A hypothesis grounding the analysis was that individual participant narratives would contain a "collectivity of different voices" which stem from "that person's history" and the "myriad ways in which human society and…history shape [their] voice" (Gilligan, Spencer, Weinberg, & Bertsch, 2003, p. 254). Researchers utilized Tolman and Debold's (1994) notion of resistant reading to utilize the researchers' knowledge of cultural pressures experienced by young adult women to help with the identification of these voices of pressure and tension that emerged in their narratives. Specific attention was afforded to descriptions of social communication, changes in social behavior, and shared discourse and language among participants and peers. A pilot study was utilized to formulate the interview protocol for the larger project.

Interviews were conducted at pre-intervention and post-intervention. These interviews sought to elicit participants' narratives surrounding body, food and exercise. Interviews pursued understanding of participants' perceptions of their experiences during the intervention and potential shift or changes in body, food and exercise narratives. Participants were asked about cognitions, affective experiences, and illustrative personal examples to characterize body image concerns and beliefs, orientation to food and eating,

and related physical exercise practices, motivations, and cognitions. During interviews participants were also asked to create a timeline of their body image experiences (McAdams, 2008) and to graph their experience of body satisfaction over the previous week, previous month, and their lifetime thus far (Ehrlich & Deutsch, 2015; Underwood, 2013). In post-interviews, participants were asked to reflect on their previous graphs to determine whether they would graph their experiences of those previous time periods the same way. Participants were then asked to graph their experience of the previous week and previous two weeks. Participants were asked to add any new events or events they had not included but wanted to include on their timeline.

An interview protocol was utilized, and follow-up questions were asked to understand participants' meaning behind word selection and the nature of participants' individual experience (Hill et al., 2005). Post-interviews introduced questions that directly asked about participants' thoughts and feelings related to intervention content. These questions were only asked at post-interviews so as not to expose intervention participants to the intervention content prior to the start of the intervention.

Interview responses were recorded, transcribed and coded, with transcribed and coded data stored and analyzed using Dedoose software, a statistic software platform that allows for the management and manipulation of quantitative and qualitative data (Dedoose Version 5.0.11, 2014). This is secure software, but for additional protection, only interviews with pseudonyms were uploaded to the software. Recordings of interviews were stored on a password-protected computer in a locked office. A backup hard drive copy was stored in a locked desk inside a locked office. Survey data and interviews were double-checked to ensure validity of both transcription and data entry.

Data Analyses

The study asked five questions. These questions and the methods that will be utilized to answer them are presented in Table 6.

Table 6.

Research Questions and Planned Analyses

Purpose	Sample	Type of Data	Planned Analysis
Question 1) Can previous impacts of the Body Project intervention be replicated in this sample?			
Replication	Intervention Sample	Survey	Independent sample t-test
Question 2) How do female college students' descriptions about their body, food, and exercise change across participation in the Body Project?			
Expansion	Intervention Interview Sample	Interview	Code with coding guide. Create code count and assess for changes in code count.
3) How does a participant's body, food, and exercise narrative relate to self-reported fat talk, thin-ideal internalization, body satisfaction/dissatisfaction, dieting, negative affect, and eating disorder symptomatology and does this relationship change after intervention?			
Expansion, Triangulation	Intervention Interview Sample	Interview and survey data	Group participants by initial risk category and qualitatively assess presence of relationship between risk category and changing code counts
4) Which participant characteristics influence exposing friends to the intervention program content and how is that exposure related to intervention effects on participants?			
Expansion	Intervention Sample, Peer Sample	Survey Data	Correlate intervention sample change scores with peer sample change scores. If significantly correlated, develop plan to assess for characteristics influencing relationship
5) If friends are exposed to intervention content, is this exposure evident in friends' and participants' body, food, and exercise narrative and survey data?			
Expansion	Intervention Interview Sample, Peer Interview Sample	Survey and interview data	Code peer interviews for intervention language and times intervention peer is named. Assess for change in peer interview survey score. Determine if relationship is present between peer interview survey score change and presence of intervention peer name/presence of intervention language.

Quantitative data analysis. Bivariate correlations were conducted to analyze the relation between participant characteristics and outcome variables to assess for other possible explanations for change and determine whether additional covariates should be added to the outcome equation.

To test the impact of the intervention on participants, two-tailed t-tests were applied to the five outcome variables, Thin Ideal Internalization, Body Satisfaction, Dutch Restrained Eating Scale, Fat Talk Concern, and Fat Talk Compare. As this was a waitlist control design, relative change between initial and the second data point (while in non-intervention condition) was compared to change between the second and third data point (intervention condition) (Hedge & Cook, personal communication, April 3, 2017). For each outcome, a relative change score was calculated based on Outcome (relative change) (Y) = (t3-t2)-(t2-t1) plus covariates and error term. That this difference was not zero (significantly) for the sample was then tested.

Testing pre-test growth patterns. As further test of the robustness of these findings, a t-test was conducted to determine whether the change during control period differed significantly from zero.

Moderator analyses. Given the sample size, formal moderator analyses were not feasible. Therefore, variables hypothesized to moderate the outcome, (positive/negative affect and BMI) were correlated with change scores to check whether these variables related to extent of change during intervention, and therefore might be potential moderators of effects. Because only one variable and change score were significantly correlated, these variables were not utilized as moderators in outcome analyses.

Analysis of peer participant quantitative data. Outcome change scores for

impact on peers were calculated by subtracting peers' pre-intervention score from their post-intervention score. One sample t-tests were utilized to calculate whether these scores were significantly different from zero. Correlations of peer with participant change scores were measured to assess whether peer and participant change was correlated significantly.

Qualitative analyses.

Researcher as instrument. Because qualitative data analysis requires that the researcher use themselves as a mechanism for analysis (i.e. for conducting interviews, identifying themes, counterpoints, and voices), it is important that the researcher identify their orientation to information, educational background, and lenses of influence as to how they may interpret the data. An assumption from Spencer grounded the interview process, suggesting that "human development occurs in relationship with others and, as such, our sense of self is inextricable from our relationship with others and with the cultures with which we live" (Spencer, 2000 as cited in Gilligan et al. 2003, p. 254). Because of the ways in which culture can be experienced unconsciously, I utilized Tolman and Szlacha's (1999) interpretation of resistant reading to allow myself to identify cultural pressures experienced by participants that participants may not have awareness or words to describe. Due to the utilization of myself for data collection and analysis, I provide a brief synopsis of myself as a researcher and the framework and educational background from which I am oriented.

I am trained from a clinical psychology perspective and consequently my focus is often individual and deficit focused. My previous research training in Positive Youth Development, a framework that emphasizes individual strength and resilience, offers me

a balance and complement to the traditional deficit focus of clinical psychology. I have clinical experience working with individuals with eating disorders, and am consequently poised to be aware of possible body image and eating related distortions. My clinical experience has prepared me to conduct interviews, which will be a central part of this pilot study and my dissertation. Additionally I have been trained in the Body Project intervention by the National Eating Disorders Association and have facilitated Body Project interventions in the past. This provides me with an understanding of the content of the intervention and the intended mechanisms of action. My emphasis for the current study is on the intersection between the individual, gender, and society. I utilize a critical approach in my analyses of women's lived experiences in their bodies and related cultural pressures. Consistent with the Body Project intervention, I have the belief that women face significant pressures in current westernized cultures, and am poised to identify these cultural pressures in my research on women's issues and body image/food related concerns.

Research team. The research team is comprised of three clinical psychology doctoral students who helped facilitate the group interventions, and twelve undergraduate psychology major research assistants, and one recent graduate. Three Women's Center interns were part of the dissemination team and helped facilitate the intervention in conjunction with the clinical psychology graduate students, two undergraduate research assistants and the PI. These facilitators were trained by a trained Body Project facilitator trainer. The director of the counseling program at the Women's Center provided clinical oversight of the Body Project intervention groups. I consulted with the dissertation committee members throughout the research for feedback on methods.

Qualitative data procedures. During the transcription process, the PI and undergraduate research team met weekly to discuss hypothesized themes based on the literature and the program theory and to identify emergent and trenchant themes based on information the transcribers were hearing in the interviews. The transcribers completed a narrative summary after completing each interview to track responses to certain questions and provide feedback about the content of interviews. The PI met with dissertation committee members during this time to further support the organization of the transcription process and finalize planning for analyses.

The study initially planned to use the Listening Guide approach as modified by Tolman and Szalacha (1999) to analyze the interview data. However, after completing the pilot study and utilizing the pilot interviews to develop a coding guide, the length of interviews and discontinuity of narratives, due to the questions' order and topical focus, made this analysis process unfeasible and without direct benefit in helping answer the specific research questions. With consultation from committee members, the PI developed a coding guide utilized by the research team to code for what were hypothesized to be key voices present in the interviews, based on key voices that were identified in the pilot interviews. These voices, or thematic codes, were developed based on the information consistencies across interviews as interpreted within the framework applied here and related prior research findings (Braun & Clarke, 2006). These codes included body, food, exercise, morality, beauty ideal, counter-beauty ideal, wavering, demographic, and relational. Additionally, responses to select questions were compared across interviews in order to provide information about the types of responses elicited by specific interview questions. So for example, after coding training (described below)

research assistants individually coded each interview as a whole, applying the codes to excerpts in which those themes were present (code definitions and the coding process are described below). In addition, after initial coding was completed, I organized the data by interview question and compared responses to key interview questions (e.g., Tell me about your body; If I gained five pounds I would. . .) across participants to examine patterns of themes within particular topics.

Some of the tenets of the Listening Guide approach were returned to, however, after initial coding and used to develop final conclusions about how the themes formed over-arching patterns in the participants' narratives, a process that will be described below. Given that women's narratives about their bodies and food were hypothesized to represent a complex amalgamation of influences (Eisenberg et al., 2005; Lev-Ari et al., 2014), the last step helped to encourage a complex understanding of the participants' narrative as understood through the context of the interview (Haden & Hoffman, 2013). Combined, this multistage process allowed for both intra- and inter-individual understandings of the data.

A priori code definitions.

Morality code. Morality was defined as statements that include an internal value system in relation to food, exercise, or body. This included expressions of guilt, conversation about willpower, self-control, something being good or bad, or statements that you should or should not do something. Morality codes also included statements like "I let myself have pizza," or "I rewarded myself with a treat."

Beauty ideal code. Beauty ideal included statements that expressed that thinness is desired and/or discuss pursuit of an idealized beauty or an ideal state. These also

included statements in which the participant is pleased with their body in reference to a way that it meets a cultural beauty standard, including beauty standards of different cultures. This code also included statements that equate thinness with health and statements in which the achievement of a beauty standard was the prominent intention or desire. Fat talk, i.e. conversation and comparisons about one's own body or other people's bodies were included in this code. Given the ways in which the word health was often utilized in a way that conflated health with thinness, participants' statements were coded as beauty ideal if the word health could be swapped interchangeably with the word thin or beauty to convey a beauty ideal statement. An example beauty ideal statement reads as follows: "Um, I think a healthy person doesn't have much fat on them – You know, they don't jiggle."

Counter beauty ideal code. Counter beauty ideal statements included expressions rejecting the thin ideal/ beauty ideal or addressing the consequences of pursuing the thin ideal. This included statements that rejected the notion that thinness is equated with happiness, health, etc. Counter beauty ideal statements were also coded if participants expressed sentiments that were supportive of the notion that various body sizes can be healthy. Sample counter beauty ideal statements included; "BMI is kind of dumb because you could be really muscular and have a higher BMI than someone who has no muscles." This statement was coded as counter beauty ideal because it encompassed the notion that weight and body mass index are limited means by which to evaluate health. Another counter beauty ideal statement included, "It's really hard to tell if someone is healthy just by looking at them." When statements included both beauty ideal and counter beauty ideal codes in one statement, researches coded the whole statement as

wavering and parsed out the counter beauty ideal and beauty ideal statements into separate codes.

Wavering code. Wavering statements were defined as those that expressed vacillating or uncertain opinions between two concepts (either distinctly separate concepts or concepts that represented gradations of each other). In order to identify wavering statements, researchers looked for statements with linguistic indicators of uncertainty (I don't know, um, like, hmm) to cue into potential wavering. An example wavering code included, "Um I don't know, I guess to be healthy you need to be thin, but then I guess you could also be too thin."

Body, food, and exercise codes. Body, food, and exercise codes were utilized for any statements discussing body, food, or exercise. Any comment about food or nutrition was coded with a food code. Sample items included "I feel ashamed when I eat pizza" (double coded for food and morality) and "I ate a lot of ice-cream so I went to work out" (double coded for food and exercise). Any comment about exercise or movement was coded with an exercise code. Sample items included: "I really like to take dance classes" and "I am really insecure about my arms, so I am trying new arm exercises" (double coded for exercise, body, and beauty ideal). Any comment about bodies (the participants' or someone else's' body), how the body looks or actions the body takes, (i.e. laugh, sleep), and/or feelings the body has (i.e. hungry, bloated) was coded with a body code. This also included comments about how men view bodies (the participant's or someone else's). Sample body code included, "I always avoid looking at my stomach."

Relational code. The relational code was utilized for any statement in which the participant reflected on a relationship with another person, group, or social media

platform. This code also included any statements in which the participant discussed a relationship with another person, other people's relationships, or discussed something another person said.

Intervention codes. The intervention code was utilized in the post-interview for any comments about change or implied change related to the intervention. This included the participant introducing or discussing terms or activities utilized in the intervention. Changes and updates to the body dissatisfaction/satisfaction graphs and timelines were coded with an intervention code.

Coding process. To ensure comparability across coders, the research team developed a shared definition of a "statement," i.e., the level at which the data should be coded. Individual statements in interviews were coded utilizing this guide. A statement was defined as a string of words that provide a self-contained meaning. Research assistants were instructed that when coding, they should code the full statement that was subsumed by the code. Statements could be double-coded. A common example of a double coded statement would be one coded with a food code and a morality code (e.g. I feel guilty when I eat pizza).

Research assistants utilized the coding guide and coded the intervention and peer interviews. Interviews were double coded to allow for analysis of interrater reliability. Coding pairs met together after the interviews and were double coded to rectify any discrepancies in their coding. Weekly lab meetings were utilized to discuss any concerns or questions that arose during the coding process. Additionally, research assistants made note of particular passages that they were unsure of and those excerpts were coded within the weekly meeting.

Researchers utilized Dedoose to create a count of the number of times each code emerged in the participants' interviews. Percentage of statements reflecting each code was calculated. The percentage was calculated based on the count of a single code in the interview divided by the overall number of total codes in that participant's interview at each time point (Tolman & Szalacha, 1999). The percentage was calculated in order to adjust for the length of participants' interviews, which varied, and for the possibility that codes could occur more frequently in some interviews simply because some participants were more verbose than others. Co-occurrence of codes was assessed to determine shifting relationships in the presence of the same codes in single statements.

Intervention codes were coded in the second interview. Researchers established a count of intervention codes to determine whether the presence of intervention codes was associated with both perceived change and survey score change after the intervention.

The intent of the qualitative analysis was to identify different "voices" emerging in the narratives as representing different personal, cultural, or intervention based perspectives, beliefs, and viewpoints (Gilligan et al., 2003). The data was analyzed to compare how these voices/codes changed over the course of exposure to the intervention and post-intervention, as well as how such change related to perceived and reported benefit from the intervention. After analyzing shifting codes and presence of codes across participants, the research team determined that this micro level analysis of individual codes, while helpful for identifying the prevalence of different topics across interviews, was not effective at capturing the multidimensional meaning of the narratives presented in the participants' interviews (Adler & McAdams, 2007), the initial goal for the interviews. When reading across all interviews, the most present theme across

interviews seemed to reflect conflict within individual narratives, conflict that cut across specific topics. For example, a participant discussed concern for a friends' eating behavior in one statement and in another statement expressed admiration for her friends' determination to eat healthy. The initial coding plan did not allow for the statement expressing concern about unhealthy eating behaviors to be analyzed with the statement expressing envy or admiration. Looking at data within individual codes split up these crosscutting narratives of conflict and made it challenging to analyze the nature of the conflict across themes within the interviews. Consequently, the PI and qualitative dissertation committee advisor determined that the interviews needed to be analyzed with the interview as the unit of analysis in line with narrative approaches (Gilligan, 1993; Josselson, 1996; McAdams, 2008).

Intervention participant interviews were read multiple times and moments of presented conflict were identified. A moment of conflict was defined as a point in the narrative where the participant presented a conflicting viewpoint with herself (Gilligan et al., 2003). While these codes could occur within a single statement as would have been captured by the wavering code, it was important to analyze at the level of the narrative because frequently a participant made a statement at one point in the narrative that conflicted with a statement made at an entirely different point in the interview. Utilizing a holistic and interview level approach was necessary to identify these points of contradiction and conflict. Narratives were also read and marked for moments of tension, places in the narrative where the participant noted a struggle or pull between two states or two ideas representing a belief in both conflicting states. Based on the themes that emerged in these multiple readings (Braun & Clark, 2006) additional codes were

developed and added to those listed above. These codes included: tension, parameter, peer response, share, compare, presentation, and universality. During the process of micro coding, the concept of academic stress and its relation to body image, exercise, or eating behavior was noted in multiple participant interviews. Though not included as an additional micro code, researchers made note of any participant interviews in which academic stress was discussed in relation to body image, food, or exercise.

Tension. Tension was defined as a behavioral or cognitive state concerning body, behavior around body, food, or exercise in which shifts of the state increase or decrease satisfaction. These behavioral states included balance between exercise and body satisfaction, balance between dieting and body satisfaction, utilizing clothing as a means of attempting to feel satisfied. These ideological states included desire to lose weight, desire to get more toned, desire to exercise more, and desire to eat differently. For example, a participant feeling better about her body after exercising and worse when she does not exercise was considered a tension state. In order to reduce the subjectivity around what constitutes normal behavior (e.g. a desire to exercise three to five times a week), the research team coded any statement that reflected some tension or balance with a tension code.

Parameter. Parameter was defined as a general rule about food, exercise, or bodies. Parameter codes were utilized when the participant was discussing general ideas about their considerations of health and health behavior. For example, participants discussed parameters such as eating 1200 calories a day when trying to lose weight or eating vegan as examples of behaviors promotive of weight loss or considered healthy. Parameter codes are different from tension codes in that they reflect an understanding of

health behaviors rather than the personal application of health behaviors into a participants' life.

Compare. Compare codes were utilized when the participant discussed an experience of comparing their body, food, or exercise behavior to people around them, to people on social media, or to people in the media. This code was also utilized when participants noted that they felt insecure when listening to their friends make comparisons with other people's bodies.

Presentation. Presentation codes were utilized when the participant discussed a sense of being on display, a pressure to look put together for other people, or an awareness of other people looking at their body in a certain setting. Unless a comparison code was explicitly stated, presentation codes were utilized when participants noted a sense of discomfort in their bodies in settings in which they were wearing bathing suits such as pools and beaches. For example, a presentation code was utilized when a participant noted that she feels most self-conscious of her body when she feels on display.

Share. Share code was coded when participants identified a shared experience around discussing body image concerns with other women. Though this code was mostly utilized when participants were discussing their intervention experience, any time in which participants noted having this experience with their friends or family members, this code was also utilized. This was not a post-interview only code; however, it appeared most frequently in the post interviews.

Universality. Universality codes were utilized when participants discussed an awareness of the pressures that women experience related to their bodies, food, and

exercise. This code was different from the share code in that it was utilized when participants made a global statement about the pressures women experience rather than discussing the experiencing of learning about and sharing these pressures with other women.

Peer response. Interest in communicating statements, views, and practices that reflect dissonance to the thin-ideal or rates of intent to disseminate counter thin-ideal narratives associated with the intervention were recorded by marking these statements with a peer response code in the post-interview. This code was only utilized when responses or desired responses were made to peers or siblings. This code was not utilized when responses or desired responses were made to parents. Researchers established a count of peer response codes to determine whether the presence of peer response codes was associated with both perceived change and survey score change after the intervention and whether it was associated with the presence of peer intervention codes in the peer post-interview. Table 7 presents an example statement from the interviews for each a priori and emergent code.

Table 7.

Example Statements of A Priori and Emergent Codes

Code	Definition	Coded Statement
A Prior Code		
Morality	Statements that include an internal value system in relation to food, exercise, or body.	Not having, having any idea whatsoever I feel like, would just, would be kinda scary. (N: Mhm) Of being like Oh, I don't know what I put into my body right now like, **it's good or if it's bad** like, (N: Mhm) yeah. I just don't know if I'd like know how to, how to, like think about it necessarily either (N: Mhm).

Beauty Ideal	Statements that expressed that thinness is desired and/or discuss pursuit of an idealized beauty or an ideal state.	No...you're not actually wanna go to the gym, **you're just trying to do that so you know you can like flatten your stomach a little bit.**
Counter Beauty Ideal	Expressions rejecting the thin/beauty ideal or addressing the consequences of pursuing the thin ideal.	A healthy person (pause) um, looks (pause) uh, (laughs) (pause) I don't know…I'm just visualizing athletes in my head. (N: Uh-huh) And how many different body types there are, so, **ya know clearly like, there's not more-there's not one body type.**
Wavering	Wavering statements were defined as those that expressed vacillating or uncertain opinions between two concepts (either distinctly separate concept or concepts that represented gradations of each other).	It's really hard to say what does a healthy person look like... **I don't know if looks is the first thing you'd focus on, (N: mhm) per say (?) (N: mhm) 'Cause you can be like, skinny-fat, (N: mhm) where you're not very healthy, but then you look (pause) like you can fit into like size zero clothing. (N: Mhm) But, that, may not even be healthy,** (N: mhm) ya know, 'cause you could have the other end of the spectrum so (pause) (sighs) I don't, I don't think there's one type, you can't say there's one type. (N: Mhm) (laughs)
Body	Any comment about bodies.	I don't know. I'm paying a lot more attention to my **body** than I usually do, (N: uh-huh) which is good and bad. (N: Uh-huh) Um just, making note of that, (N: yeah) so.
Food	Any comment about food.	Um, I love **food**, I'm a total **foodie.** (N: Mhm) I got that from mom.
Exercise	Any comment about exercise.	Healthy means... having a good diet, um, and (pause) um... having a certain **level of fitness.**
Relational	Any statement in which the participant reflected on a relationship with another person, group, or social media platform.	Um, my favorite things about myself. Um, I really like my hair. Um. **Everyone's always like, really jealous of it**, which is great.
Intervention	Any comment about the intervention.	It was great. (N: Mhm) I wasn't expecting- I don't know what I was expecting, um but it was good, it felt really good to…be with women…who experience very similar problems.
Emergent Codes		
Tension	Behavioral state or ideologies about personal	Uh you're like…suck in your tummy like, pull your shirt out or like, if you

	body or behavior around body, food, exercise maintaining satisfaction/dissatisfaction	have like a crop top on (?), you like pull your shorts up higher…Because then it gives you like the…flat tummy and then like, hourglass kinda figure.
Parameter	A general rule about food, exercise, or bodies.	Um, so... I guess... behaviors and actions, it's somebody who... I think- engages in some type of physical activity (N: Mhm) like, sitting down and like, laying in a bed all day I would say is not healthy.
Presentation	A discussed a sense of being on display, a pressure to look put together for other people, or an awareness of other people looking at their body in a certain setting.	Um... most aware [of my body] would probably be like, at the gym (N: Mhm) um, or like at the beach (N: Mhm), um, things like that . . . Um, but any time I feel like, I'm like, on display (N: Mhm), that's when I'm like aware of it.
Compare	A discussed experience of comparing their body, food, or exercise behavior to people around them, on Facebook, or in the media.	And we have so much free time (?) that like, maybe there's just more time to like examine yourself and your body's changing (N: Mhm) it- there's- I don't know, there's a bigger pool of people to compare yourself to
Share	An identified a shared experience around discussing body image concerns with other women.	I think we were talking about that a lot in the group (N: Mhm) and in the sessions and everything like that and it was, it was comforting- comforting to like, feel that and like see that from other girls as well and to realize that like oh, half the time I'm like really confident but it's just like me like ignoring my issues and being like, don't worry about your body.
Universality	A discussed awareness of the pressures that women experience related to their bodies, food, and exercise.	I think all women…I would say not just, and I mean it's a biased standpoint 'cause it's people who have signed up for a body positivity class (?) but I think all women really do struggle with…their um how they're perceived and the, the pressures that um, that come with ya know being in our - our culture.
Peer Response	Interest in communicating statements, views, and practices that reflect dissonance to the thin-ideal or rates of intent to disseminate counter thin-ideal narratives associated with the intervention	I think I think most about my reactions now when people say certain things (N: Mhm), just because I before may have, like – I usually, like, would be like, " oh yeah, you're right," but now I'm like, "oh it's kinda mean," (N: Mhm) like, so

Peer interview analysis. Peer interviews were coded with codes from the initial coding guide without the additions of the added codes. Peer interviews were not coded with the second round of codes because quantitative analyses for peer interviews had already been completed and revealed no correlated peer changes and limited overall peer change. Additionally, interview peers reported limited conversation about the intervention or noted change in behavior of intervention participants. Consequently, it seemed superfluous to enter into a second round of coding with the peer interviews, as this coding would have been less important in answering the research question about potential impacts on peers. Peer interviews were also coded to indicate any time in the post interview the interviewee mentioned an intervention participant. Researchers utilized a code count of the intervention peer code and examined these codes to be able to describe any social transmission of the intervention content that may not have been identified in quantitative analyses.

CHAPTER FOUR

Results

Research Question One

RCT outcome effects. The first research question asked: Can previous impacts of the Body Project intervention be replicated in a University of Virginia sample?

Preliminary analysis. Bivariate correlations were conducted to analyze the relation between participant characteristics and outcome variables to assess for other possible explanations for change and determine whether additional covariates should be added to the equation. These correlations are provided in Table 8.

BMI Time 1 and BMI Time 2 were both significantly inversely correlated with the Fat Talk Concerns Scale, r = -.34 and r = -.31 respectively. The rest of the correlations were not statistically significant.

Mean and standard deviations of each of the outcome variables were compared for trends across time. Table 9 presents the mean and standard deviations of the Thin Ideal Internalization scale at baseline, pre-intervention, and post-intervention. Mean Thin Ideal Internalization scores exhibited a decreasing trend both from baseline to pre and pre to post. Mean Dutch Restrained Eating scores exhibited a decreasing trend both from baseline to pre and pre to post. Mean Body Satisfaction scores exhibited an increasing trend both from baseline to pre and pre to post. Mean Fat Talk Concerns scores exhibited

a decreasing trend both from baseline to pre and pre to post. Mean Fat Talk Compare scores exhibited a decreasing trend both from baseline to pre and pre to post.

Table 8.

Correlation of Change Variables by Potential Confounding Variables

	Age	BMI T-1	BMI T-2	Positive Affect	Negative Affect
Thin Ideal Change	.06	.12	.10	.14	.01
Dutch Change	-.24	-.17	-.14	-.18	-.03
Body Satisfaction Change	.02	.08	.16	-.04	-.12
Fat Talk Concerns Change	.02	-.34**	-.31*	-.11	.09
Fat Talk Compare Change	.01	-.12	-.15	-.11	.19

**. Correlation is significant at the .01 level (2-tailed)
*. Correlation is significant at the .05 level (2-tailed)
(Positive affect and negative affect were assessed from PANAS scores at baseline)

Table 9.

Descriptive Statistics of Outcome Variables Across Time

	Time Point								
	Baseline			Pre			Post		
Outcome	n	Mean	SD	n	Mean	SD	n	Mean	SD
Thin Ideal	62	3.63	.51	60	3.45	.59	59	2.55	.77
Restrained Eating	62	2.51	.70	59	2.40	.79	59	1.99	.71
Body Satisfaction	62	2.72	.69	59	2.81	.61	59	3.22	.72
Fat Talk Concerns	62	2.91	1.29	59	2.86	1.21	59	2.29	1.02
Fat Talk Compare	62	2.63	1.09	59	2.40	1.04	69	2.01	.96

Testing pre-test growth patterns. To further inform about the meaning of the RCT results, change during baseline to pretest was also evaluated. A t-test was conducted to determine whether the change during control period differed significantly from zero. Baseline to pre-score outcome change scores were calculated by subtracting the baseline score from the pre-score. As can be seen in Table 10, Thin Ideal

Internalization, Dutch Restrained Eating, and Fat Talk Compare scores significantly decreased between baseline and pre-scores. These analyses suggest that the impact was to increase positive growth in relation to the affected outcome rather than reverse a problematic trend or to instigate a stable situation.

Table 10.

Outcome Change Between Pre-Score and Baseline

Outcome		Outcome Change			
	n	Mean	sd	t	p
Thin Ideal	60	-.18	.50	-2.75	.01
Dutch Restrained Eating	59	-.12	.45	-2.05	.05
Body Satisfaction	59	.06	.56	.78	.43
Fat Talk Concerns	58	-.10	.96	-.79	.43
Fat Talk Compare	58	-.28	.81	-2.65	.01

Correlation among outcomes. In order to determine whether outcome variables were assessing distinct outcomes rather than measuring the same outcome multiple times, bivariate correlations were conducted to assess the relation between the outcome variables at each time point. Results are presented in Table 11 (baseline), Table 12 (pre-intervention), and Table 13 (post-intervention). Significant correlations within time correlated between .28 and .71, with all but 8 correlations below .40 and only one above .60. The baseline Fat Talk Concerns scale and Fat Talk Compare scale were correlated significantly at r = .71. This correlation suggests that these scales demonstrate a strong relation and overlap of construct measurement. Given that these scales are both part of the larger Fat Talk Scale and measure an individuals' amount of reported Fat Talk, this

high correlation between scales is understandable. However, these two subscales are of conceptually distinct constructs of descriptive interest for this study, so both were retained for outcome analysis.

Table 11.

Correlation of Outcome Variables (Baseline)

		Thin Ideal	Dutch Restrained Eating	Body Satisfaction	Fat Talk Concerns
Dutch Restrained Eating	Pearson	.20			
Body Satisfaction	Pearson	-.38**	-.29*		
Fat Talk Concerns	Pearson	.36**	.34**	.44**	
Fat Talk Compare	Pearson	.21	.13	-.11	.71**

**. Correlation is significant at the .01 level (2-tailed).
*. Correlation is significant at the .05 level (2-tailed).

Table 12.

Correlation of Outcome Variables (Pre)

		Thin Ideal	Dutch Restrained Eating	Body Satisfaction	Fat Talk Concerns
Dutch Restrained Eating	Pearson	.29*			
Body Satisfaction	Pearson	-.38**	-.37**		
Fat Talk Concerns	Pearson	.32*	.43**	-.42**	
Fat Talk Compare	Pearson	.28*	.38**	-.05	.58**

**. Correlation is significant at the .01 level (2-tailed).
*. Correlation is significant at the .05 level (2-tailed).

Table 13.

Correlation of Outcome Variables (Post)

		Thin Ideal	Dutch Restrained Eating	Body Satisfaction	Fat Talk Concerns
Dutch Restrained Eating	Pearson	.44**			
Body Satisfaction	Pearson	-.38**	-.47**		
Fat Talk Concerns	Pearson	.41**	.39**	-.38**	
Fat Talk Compare	Pearson	.37**	.37**	-.18	.45**

**. Correlation is significant at the .01 level (2-tailed).
*. Correlation is significant at the .05 level (2-tailed).

Outcome analyses. To test if the intervention had a significant effect, two-tailed t-tests were applied to each of the five outcome variables, Thin Ideal Internalization, Body Satisfaction, Dutch Restrained Eating Scale, and Fat Talk, to compare the impact of the intervention. As this was a waitlist control design, relative change between initial and the second data point (while in non-intervention condition) was compared to change between the second and third data point (intervention condition).

For each outcome, a relative change score was calculated based on Outcome (relative change) (Y) = (t3-t2)-(t2-t1) and error term. That this difference was different from zero for the sample was then tested. This formula took into account any change between baseline and pre-tests when assessing for change during the intervention condition. Results are detailed below and presented in Table 14. As can be seen in Table 14, the effects were significant for all changes in outcome except Fat Talk Compare.

Table 14.

Change Variables One-Sample T-Test

Outcome	n	Mean relative change	sd	t	P
Thin Ideal	57	-.70	1.02	-5.25	<.01
Dutch Restrained Eating	56	-.31	.77	-3.04	<.01
Body Satisfaction	56	.36	.87	3.09	<.01
Fat Talk Concerns	56	-.44	1.41	-2.36	.02
Fat Talk Compare	56	-.16	1.13	-1.10	.28

To determine whether participant initial scale score related to their intervention change score, participant initial scale scores were correlated with intervention change scores. Participant baseline body satisfaction score was significantly correlated with body satisfaction intervention change score. These correlations are presented in Table 15 below. As can be seen only baseline Body Satisfaction predicted extent of change in Body Satisfaction during the program time.

Table 15.

Correlation of Baseline and Outcome Change Scores

		Pearson Correlation of Baseline Scale Score and Intervention Change Score				
		Thin Ideal Change	Dutch Change	Body Satisfaction Change	Fat Talk Concern Change	Fat Talk Compare Change
Thin Ideal	R	-.01	.02	.02	-.02	-.05
Dutch Restrained Eating	R	.14	-.09	-.21	.05	-.22
Body Satisfaction	R	-.14	.13	.30*	-.05	-.09
Fat Talk Concerns	R	.09	-.20	-.08	.06	.02
Fat Talk Compare	R	-.05	-.07	-.02	.09	.12

*. Correlation is significant at the .05 level (2-tailed).

Research Question Two and Three

Research questions two and three are presented together to allow for a holistic presentation of the results which discuss the ways in which participants survey scores, narratives, and intervention experiences related to the documented and perceived impact of the intervention on participants. The second research question asked: How do female college students' descriptions about their bodies, food, and exercise change across participation in the Body Project? The third research question asked: How does a participant's body, food, and exercise narrative relate to self-reported fat talk, thin-ideal internalization, body satisfaction, dieting, negative affect, and eating disorder symptomatology and does this relationship change after intervention?

The scale scores of the intervention sample interviewees are summarized in Table 16. Participants selected pseudonyms for themselves that are used throughout the discussion of the results.

While outcome measure t-tests for the full intervention sample were significant for four out of the five measures, in order to better understand the impact of the intervention on individual interview participants, participant relative change scores were assessed based on their initial risk category. These scores are presented in Table 16. Pre-interviews occurred between baseline and pre-intervention survey measurement. Post-interviews occurred after post-intervention survey measurement. Nine participants showed a relative decrease in thin ideal internalization from pre-intervention to post-intervention. One participant demonstrated a relative increase, and one participant exhibited no relative change. All participants demonstrated a relative decrease in thin ideal internalization from baseline to post-intervention. Five participants exhibited a

relative increase in body satisfaction from pre-intervention to post-intervention. Five participants exhibited a relative decrease in body satisfaction from pre-intervention to post-intervention. Ten participants exhibited a relative increase in body satisfaction from baseline to post-intervention. One participant exhibited no relative change in body satisfaction from baseline to post-intervention. Participant relative survey change was considered when assessing participant perception of change during the intervention and participant perception of intervention experience to take into consideration whether participant discussion of the intervention was associated with participant relative change (i.e. did participants with greater relative change between pre- and post- scores utilize more positive language when discussing their intervention experiences).

From multiple readings and coding, three dimensions of experience emerged in the narratives: academic stress, conflict/ tension, and relational experiences. The academic stress dimension highlights the relation between academic stress and body image. The conflict/ tension dimension identifies the ways in which participants experience their relationship with their body as something to be controlled from within a range of rules or parameters in which they are supposed to fit, on one side is extreme restriction and another side is avoidance of being overweight, and the third side is a felt obligation to appear confident and body accepting. The third dimension focuses on the ways in which participants experience their own individual bodies as relational experiences, bodies on display to be presented or observed. The relational theme highlights the ways in which participants first noticed their bodies through experiences of having their bodies commented on, noticing behaviors or reactions with other people's bodies, or seeing their body in a photograph. Below I discuss each theme in depth and the

ways in which they presented themselves in the women's narratives, with attention paid to any patterns of change that were identified from pre- to post-intervention.

Table 16.

Participant Scale Score Change Scores

	Average Scale Score				Post-Pre Change	Post-Baseline Change
		Baseline	Pre	Post		
High Risk						
Gloria	Thin Ideal	**4.38**				
	Body Satisfaction	**1.89**				
Irene	Thin Ideal	**4.5**	3.50	3.75	.25	-.075
	Body Satisfaction	**2.00**	2.33	2.00	-.33	0
One High Risk						
Amy	Thin Ideal	3.88	2.88	1.38	-1.50	-2.50
	Body Satisfaction	**1.89**	2.11	2.78	.67	.89
Rose	Thin Ideal	3.75	3.38	2.63	-.75	-1.12
	Body Satisfaction	**2.00**		3.66		1.66
Elyse	Thin Ideal	3.75	3.00	2.50	-.50	-1.25
	Body Satisfaction	**2.00**	3.11	2.78	-.33	.78
Mid-Risk						
Amber Rose	Thin Ideal	3.50	3.00	2.13	-.87	-1.37
	Body Satisfaction	3.44	3.56	4.22	.66	.78
Shirley	Thin Ideal	3.88	3.69	3.00	-.69	-.88
	Body Satisfaction	3.44	3.22	3.89	.67	.45
Katie	Thin Ideal	3.75	3.25	2.00	-1.25	-1.75
	Body Satisfaction	2.22	3.00	2.78	-.22	.56
Alice	Thin Ideal	3.38	1.00	1.00	0	-2.38
	Body Satisfaction	2.89	3.33	3.44	.11	.55
One Low-Risk						
JC	Thin Ideal	3.00	2.38	2.13	-.25	-.87
	Body Satisfaction	2.89	3.89	2.15	-1.74	.74
Sam	Thin Ideal Body	3.88	3.63	3.25	-.38	-.63
	Satisfaction	3.78	4.33	4.11	-.22	.33
Low-Risk						
Angelica Berkley	Thin Ideal	2.75	2.50	1.13	-1.37	-1.62
	Body Satisfaction	4.00	3.67	4.56	.89	.56

*Bolded scores are considered high risk and underlined scores are scores considered low risk at time of interview selection.

Academic Stress

The centrality of academic stress and its relationship to body image distress emerged in 92 percent (n=11) of interviewees' experiences. While the presence of academic stress is not surprising, given that these women are college students at a highly selective university, the ways in which this stress intertwined with body image and food related behaviors has implications for the intervention and the students' overall health. There were no observable changes in discussions about academic stress and body image between pre- and post-interviews. Consequently, results related to academic stress are presented as an amalgamation of pre- and post-interviews. The relationship between academic stress and body image occurred in one of two ways: 1) through a reduced sense of academic competence increasing focus on body image, or 2) through an increase in stress yielding a related decrease in health behaviors and increase in unhealthy behaviors.

For 33% of participants (n=4), Katie, Shirley, Alice, and Gloria, entry into university life sparked a reduced sense of academic competence. Though not all first-year students during the time of the interview, they all reflected on the transition into the university either as freshman or transfer students. These participants attributed a reduced sense of academic competence to either harder classes, classmates with whom they compared themselves who the participants perceived as more intelligent, and/or a reduced sense of being smart or academically capable despite trying hard and using skills they used in high school. Seventeen percent of participants (n=2) specifically discussed the ways that this academic experience felt out of control and threatening to their conceptualizations of their self-worth. Katie shared that she felt the transition to college had yielded a bigger impact on her body image than anything else.

> Um…I feel like it…definitely had, I feel like the biggest impact out of anything in my life so far(?)[3] …I wasn't doing too well in a class (N: Mhm) and it kind of just made me…Freak out a lot and (N: Mhm). I kind of just started tightening down on [food] and, [food] really kind of became something else that I could control, 'cause it felt like I- I didn't really have control over, over what was going on with my school . . .and kind of just realizing like, 'Ok, well, if I'm not like happy with that like, here's one thing I can make myself happy about (Katie, Interview 1).

Here Katie discussed the tension between feeling less competent with school and focusing more intensely on her body and food choices to try to alleviate the school-related discomfort.

Like Katie, Shirley noted that she tried to control her image as a way to control something and to feel good about an aspect of her identity. Shirley reflected that she felt uncomfortable discussing college during the first interview because she had not figured it out yet, but felt more comfortable to share her experiences during the second interview, even if she was still learning how to understand her experience and navigate college life.

> So...now I added more stuff to the college (laughs). Um, first semester I said became the most self-aware of my mental health and insecurities about intelligence. This led to body image self-consciousness. So, first semester since I wasn't doing well academically, (N: Mhm) um. I became really anxious-anxious when it came to like my like, calculus class and, ya know my test grades and my, I wasn't doing that well in my classes and so I was very insecure. And then I was trying to basically latch on to like my body (N: Mhm) and I was like okay this is the only thing that can't go like, if I lose this then I'll lose everything. And so, I just basically- but I was still like not confident 'cause I was like, my body could be better. (N: Mhm) So I focused more on my body because it was the only thing that I felt like I had (Shirley, Interview 2).

Shirley was able to identity this dynamic as it was happening, seek support, and reassess goals and values, while Katie was not as aware of this process while it was happening. Gloria did not explicitly state this relationship but noted the ways that she focused on exercising when academic stress was feeling overwhelming. The commonality between

[3] (?) – Question marks with parentheses in the middle or end of quoted statements were utilized during transcription to indicate increased pitch at the end of statements.

these experiences was a sense of a need to compensate by increasing exercise and restriction when academic competency felt threatened.

The second way in which conversations about academic stress arose during the interviews related to the overlap between academic stress and body image concerns and academic stress, an associated decrease in health behaviors, and an associated increase in body image concern. Ninety-two percent of participants (n=11) discussed academic stress's impact in one of these three ways. The first relationship between academic stress and body image centered on the increase of stress yielding a corresponding decrease in body satisfaction. Irene shared:

> Um, and then, um, on Monday, I was really stressed out, and when I get stressed out, I tend to, um, bring in the outside factors. Um, that makes my stress worse. Um, so like even though my body has nothing to do with my school work, I still like, um, dwell on that when I get really anxious or really stressed out (Irene, Interview 1).

This trend was most observable when participants were drawing their graphs and described peaks and plateaus in body image occurring in response to increased workload or times of increased academic stress. Irene's quote best encapsulates this trend.

The second relationship between academic stress and body image focused on increasing the use of food to modulate academic stress levels. Seventeen percent of participants (n=2) explicitly discussed binge eating during high school as a way to deal with intense course loads and late work hours. One participant noted that her coursework felt like a "huge like wall of stress . . . which meant binge eating." The two participants who discussed binge eating in high school noted that they had developed skills to reduce this behavior in college. Though binging when stressed is a behavior that individuals in college engage in (Heron, Scott, Sliwinski, & Smyth, 2014; Schaumberg, Anderson,

Reilly, & Anderson, 2014), because participants who endorsed binging weekly or more were not eligible for the study, this behavior was not noted by study participants as a current behavior. In relation to current eating and studying patterns, participants discussed working late and eating late, having less healthy food choices during these late work hours, or eating foods at night while studying that were typically avoided during the day. JC reflected on these patterns in relation to her monthly fluctuations in body image:

> So...usually, it's the same kind of stress every week unless there's an assignment, which is more stressful. (N: Mhm) And so...um, I mean there are periods where I...am going to the library a lot or staying up late and doing things and they're periods where I'm not able to eat (N: Mhm) and like, or eat right and like at normal times and not being able to go out and then they're times when I do have time to do that kinda stuff. And so yeah, that's basically every month (JC, Interview 2).

The third area in which academic stress related to body image focused on participants' reduction of self-care behaviors (gym, sleep) when busy due to academic load. Amy discussed the relationship between academic stress, health behaviors, and body image in her first interview. She noted:

> So I did a straight line in dissatisfied (N: Mhm) because of my exams I have not been going to the gym and eating healthily(?). Because, I like to stay up late when I study(?)and I eat, when I do that (N: Mhm) (Amy, Interview 1).

Participants discussed late night study hours, availability of food choices late at night, eating food while studying to modulate stress levels, not going to the gym, and/or reduced sleep as health behaviors that shifted with increases in academic stress. These shifts in health behaviors were perceived to negatively impact body image. One participant shared that when her academic schedule became more rigorous, she found herself exercising more routinely as a way to take time for herself and reduce stress. This was the only interview in which a participant directly communicated a relationship

between an increase in academic stress corresponding with an increase in non-compulsive exercise. The distinction between compulsive and non-compulsive exercise was assessed by the researcher in drawing distinction between the ways in which this participant discussed exercise as a positive outlet rather than as a counterbalance to something else not going well or as a guilt-inducing situation when she did not exercise.

Body Satisfaction: A Tension State

One hundred percent of participants (n=12) described a state of some level of suspended tension between satisfaction and dissatisfaction with their bodies, meaning a state dependent on individual action, stress level, dietary consumption amount, and peer group behavior. Bordo (2009) described this state of tension in her analysis:

> The young girls who emulate these bodies are 'passing' – they look great and many may seem to be eating healthfully, too. It's hard to see that there's anything wrong. But the hours spent at the gym are excessive, and when the girls miss a day, they are plunged into deep depression. Their sense of self-acceptance, although you can't tell just from looking, in fact hangs on a very slender thread (p. 48).

The research team termed this as a tension state because women reflected on often feeling pulled in contrasting directions in an attempt to feel satisfied. This tension was enacted by behaviors such as frequent clothing changing to find an outfit that made participants feel comfortable in their bodies, exercising when feeling body dissatisfaction, feeling body dissatisfaction when not exercising, and dissatisfaction after food choices that the participant deemed "bad" or "unhealthy" (LaMarre & Rice, 2016). These behaviors are described in the subthemes below: food and tension, exercise and tension, clothing choice, and body acceptance and tension.

Description of these states of tension emerged in participant interviews both through descriptions of overt behavior and in descriptions of thoughts, intentions, or

goals. While efforts to exercise, select nutrient dense food choices, or choose clothes that feel flattering are not inherently negative behaviors and serve some health benefits, the focus of this theme is on the participants' either conscious or unconscious experience of being suspended and pulled in this tension state with increases or decreases in body satisfaction relating to efforts to sustain this tension. Attention is afforded to the degree to which this state is driven by external parameters including rules and threats or conscious denial and ignoring of the tension state.

Individuals who described the process of navigating parameters with more fluidity/flexibility seemed to exhibit better body satisfaction and lower thin ideal internalization. Participants whose descriptions were limited and narrow demonstrated increased risk and increased tension across their interviews. For example, when participants had a notion of a more narrow range of acceptable behaviors (i.e. the idea gaining five pounds was considered significant weight gain and approached with alarm or concern, certain foods were associated as bad and avoided due to fear of losing control or feeling emotionally negative after eating them, or a sense of body image was variable on a daily basis based on food choice and exercise amount), then participants seemed to be more distressed on a daily basis or chronically dissatisfied with their bodies. When the frame of appropriate behavior was too small, the range of space between healthy behavior and unhealthy behavior, healthy foods and unhealthy foods, and healthy weight versus unhealthy weight seemed to correlate with participants' increased vulnerability to daily fluctuations in body satisfaction leading participants to be more susceptible to daily changes dictated by life, finals, less sleep, etc. Complete denial of this range suggested

an avoidance of approaching body image or food and exercise concerns that were voiced indirectly at other points during the interview.

Food choice and tension. One hundred percent of participants (n=12) noted some degree of relationship between their food choices and experience of body satisfaction or dissatisfaction. This tension was reflected both in thoughts about and behaviors related to food.

Thoughts. Participants experienced cognitive tension between idealized food choices and actualized food choices. Irene reflected on her food choices and the ways in which they impact her relationship with her body after she graphed her experience of body satisfaction and dissatisfaction. She noted:

> Mmm, I guess it's like a tug of war. It's like I wanna be healthy, but sometimes I'm not. So, and it's just constantly back and forth, and I find an equilibrium at that like line that I drew, like right underneath the satisfaction. (Irene, Interview 1).

Because Irene described not being able to sustain her perception of health choices related to food and finds herself sometimes having aberrations from her goals, she finds her state of body satisfaction consistently below satisfied. Irene communicated a significant level of distress about her body image throughout the interview and her language surrounding this tension reflected that level of distress.

Amy's conversation about food choices provides a different type of example related to thoughts tension and food choice. While Amy described a low-level of chronic dissatisfaction or tension, she did not express a high level of distress from this experience, but rather an acceptance of the tension and continual pursuit of eating better or losing weight. Her described experience of tension reflected this nonchalant attitude about the ways in which she feels a sense of guilt related to food choices. It was unclear

during the interviews whether Amy's dismissal of her dissatisfaction was related to its low level of salience in her life or a mechanism of coping with the dissatisfaction. In response to a question about feeling out of control with eating she stated:

> Mm…yeah, if I have a craving for something like, (N: Mhm) if I need chocolate, (quietly ->) I'll eat chocolate, a lot of the time–
> N: Does it feel out of control?
> P: Uh…not really, (N: Mm) it's just like, I shouldn't do it but I'm gonna do it, so (Amy, Interview 1).

In the above quote, Amy described a similar experience of tension that Irene described, but without the same level of emotionality. Both examples demonstrate participants' pursuit of attempting to "eat better." The tension reflected by these examples and in this state is the tension in continuously attempting to do something differently. It seems that for these participants, their rules around food may be setting themselves up to feel guilty or disappointed when they cannot maintain the strict parameters they have set for themselves (i.e. Amy never eating chocolate or Irene only eating vegetables, as described at another point in her interview).

Behavior. This tension state with food is also noted with a shifting sense of body image based on food choices. Sam entered the intervention with a low-risk body image score. During her interview she described not having significant body image concerns and having never struggled with her weight. The salience of body image is lower for her compared to other individuals in the interview sample. However, she still described navigating tension with her food choices, though less distressed in this process than participants who exhibited lower levels of body satisfaction. She described tension with her food choice by noting:

> Okay. So I would say during the general week I start off like good about my body and then somewhere near Wednesday or Thursday of every week I start being like "oh my god, how much have I worked out this week, how much have I eaten" and then the weekend starts and I stop caring- (N: Mhm) It's like a weird lull in the week, most week where I'm like "oh god I need to be more conscious of what I'm eating" (Sam, Interview 1).

While some of Sam's tension is related to concern about overeating, she also noted that if she has not eaten enough, she eats more to prepare for drinking. The quote below demonstrates that her goal is not only food control, but also drinking safety behaviors. This attention towards eating more is not present in interviews of participants whose focus is more narrowly attended to weight loss and who describe more distress associated with the food-tension state.

> Um... If I haven't eaten enough my mind goes I need to go immediately and go eat, um if I've eaten too much... usually I drink less when I've eaten too much just because to combat the overeating, right yeah (Sam, Interview 1).

Gloria entered the intervention with high-risk scale scores and described a history of significant concern and distress related to her body, exercise, and food choices. Though never diagnosed, she revealed that she probably had an eating disorder during a period of high school. Gloria reflected on the current tension she experiences with watching what she eats.

> N: Mhm. Um, what does it mean to watch what you eat?
> P: Um, just be mindful of what's going into your body, I guess (N: Mhm). Mostly people say like watch what you eat as in like I'm cutting out carbs or I can't eat that, it has too much sugar (N: Mhm). So I guess just being aware of what you put in your body.
> N: Mhm. Do you feel like that's something you do?
> P: It's, it's something I do. 'Cause now I like being healthy in the sense that I like eating healthy food (N: Mhm) because it makes me feel great. Sugar winds me up and makes – my mind goes weird places when I have a lot of sugar (N: Mhm). Um. So… I g- I guess that sense, and also that you just don't feel your best when you don't eat healthily (?).
> N: Mhm. What would happen if you didn't watch what you eat?
> P: Um. (pause) I, I don't know. I can't imagine not watching what I eat.

Throughout her interview, Gloria seemed to conflate the notions of healthy, low-fat, and low-sugar. It is unclear what she means by feeling that her "mind goes weird places" when she has a lot of sugar. Based on other information in her interview, it seems that she likely feels uncomfortable by the deviation from "health" and the addition of extra calories. The combination of Gloria experiencing this tension as very internalized and her desire to shift out of being restrictive and overly focused on her body increased the difficulty of disentangling aspects of her speech that are illustrative of the tension state. While she noted at other points in the interviews an intention to be less obsessive with food, her statement indicating that maintenance of watching what she eats is so ingrained that she is unable to conceptualize not engaging in that behavior suggests that she is still struggling to release some of that obsessive awareness. These above behaviors related to food selection or food observation demonstrate the ways in which participants described maintaining a tension state and emotional vulnerability between food choice and body satisfaction.

Exercise and tension. One hundred percent of participants in interview one (n=12) and two (n=11) related body satisfaction to frequency of exercise and/or last experience of exercise. Participants relayed cognitive tension in this domain by focusing on goals such as increasing exercise frequency or intensity. Eighty-two percent of participants (n=9) demonstrated a reduction in tension/ exercise code co-occurrence from interview one to interview two. Individual scores are presented in Table 17.

Table 17.

Tension Code Co-Occurrence

	Tension/Body			Tension/Food			Tension/ Exercise			Tension/ Beauty Ideal		
Participant	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
Gloria	39			16			6			6		
Irene	33	14	-19	25	9	-16	12	2	-10	7	6	-1
Amy	39	37	-2	20	7	-13	17	17	0	19	18	-1
Rose	79	47	-32	26	15	-11	29	11	-18	22	10	-12
Elyse	35	14	-21	10	7	-3	9	4	-5	20	7	-13
Amber	20	10	-10	13	4	-9	9	2	-7	2	1	-1
Rose												
Shirley	26	19	-7	9	9	0	4	2	-2	15	3	-12
Katie	41	23	-18	18	6	-12	7	10	3	17	5	-12
Alice	11	8	-3	2	4	-2	6	1	-5	1	2	1
JC	30	16	-14	14	8	-6	12	2	-10	7	2	-5
Sam	18	6	-12	7	0	-7	6	3	-3	3	2	-1
Angelica	30	12	-18	3	5	-2	9	3	-6	4	0	-4

Thoughts. In regards to being asked about typical New Year's resolutions in her pre-interview, Irene responded, "I normally do have one, and it's normally to eat better, or exercise more." This state of cognitive tension overlaps between food and exercise and illustrates the way in which Irene experiences tension by frequently wanting to exercise more or "eat better." The tension in this cognitive state is marked by chronic dissatisfaction from consistently attempting to be thinner through means of increased exercise. The identification of this tension in Irene's interview is supported by her assertions at other points in the interview that she feels a chronic sense of "tug of war" in her relationship with food and her body and that she thinks about food all of the time, that it enters and impacts all of her decisions. Irene's statement is representative of other participants' comments indicating a frequent pull or sense of obligation to exercise more. When discussing her body image, Elyse noted this cognitive tension, sharing:

> So, I don't think, it's like, that negative- like I don't know, I guess like, there'll be days where I'm like, I really really wish I like, w-weighed ten less pounds (N: Mhm) like, I should exercise, you know? (N: Mhm) Like but, it's never anything darker than that (N: Mhm) like, I don't let it- it doesn't like impact my feelings of self-worth (N: Mhm) or anything like that, it's just like, oh, I wish I like, f-felt- it's, I'm like, such a creature of habit (?) (N: Mhm) so like, when I get off the wagon and I like, eat like shit and I don't go to the gym and stuff like, I feel- I don't feel well and then when I get back in that habit like I feel so much better and I'm happier and I'm like, this is awesome, (N: Mhm) like, you're looking good, progress and th- (N: Mhm) you know? (N: Mhm) So it's... it's never really like that dark (N: Mhm), so it's probably like, skewed- I'm probably have like, much more like, satisfaction than, dissatisfaction (?) but like, there's always- sometimes I'm just like, ugh, (N: Yeah) you know? But I don't think it's that... dark, I guess. (Elyse, Interview 1).

While Elyse asserts that her relationship with exercise is not that "dark," in that it does not impact her sense of self-worth, during her second interview, she described learning to be more accepting of herself and focusing less on magnifying the negatives. She noted; "I'm, gonna strive for and really just try to focus on the positives (?) rather than like magnifying the negatives" (Elyse, Interview 2).[4] This second interview quote introduces some question as to whether Elyse felt comfortable to acknowledge fully during the first interview the ways in which her body image was impacting her experiences.

Behavior. Amy related her experience of body satisfaction to her exercise behaviors and food choices. She noted that she was feeling more satisfied at the beginning of the month. She shared:

> Um, I was going to the gym every day. And, eating very healthily (N: Mhm), so. I was tryna get- tryna get this body for beach week (laughs) and, so that's why I was satisfied, because it was working. And now it's not (Amy, Interview 1).

Amy's discussion of her exercise tension state is illustrative of the fragility inherent in the tension state. Amy described a more rigid experience of her relationship with body

[4] A longer version of this quote is presented on page 93.

image and exercise, finding that when she exercise she feels better, but when she does not, she feels dissatisfied with her body image. While described in varying degrees, participants' described relationship with exercise presents an image of a tenuous state in which participants (to varying degrees) feel unhappy with themselves or dissatisfied in relation to their ability to maintain exercise habits and food choices with which they feel satisfied. Participant degree of actually feeling satisfied when habits were maintained and degree to which they set achievable/sustainable goals varied.

Clothing and tension. Participants varied in the degree to which their clothing selection seemed intentional in an effort to feel more confident or selected as a means to cover or compensate for body image concerns. The word dressed was used in 33% of participant interviews (n=4). The word clothes was used in 50% participant interviews (n=6). The word wear (without saying clothes in the same statement) was used in 42% of participant interviews (n=5). Elyse's discussion of changing clothes to increase body satisfaction was described as a reflexive process that is representative of the process of attempted to change clothes as a means to compensate for dissatisfaction. She noted: "I'm like getting dressed, and I'm like, uck, I feel so fat, like, I have to change" (Elyse, Interview 1).

Angelica Berkley discussed the ways in which she was hoping that exercise and clothing choices would help her feel more comfortable in her body for beach week. For Angelica, the clothing choice seemed more intentional in an effort to feel confident rather than reflexive in a state experience of body dissatisfaction. The interviewer asked:

> N: What would provide you with confidence for beach week?
> P: I have no idea (N: Yeah), I'm hoping that feeling in shape with do that? (N: Mhm). Um . . . My goal is to have a bikini? But I might do like a high-waisted one (N: Mhm), so that's like a balance? Um so yea, I don't – I'm not really sure. I'm trying to figure out why it is that I feel that way (N: mhm). About – especially my – my. . . torso area (Angelica Interview 1).

The tension in the above passage is reflected in Angelica Berkley's attempt to choose clothing that covers the area of her body with which she feels most uncomfortable. Both examples highlight the ways in which some participants discussed varying levels of body satisfaction either based on clothing choice or by which clothing choice was utilized to attempt to reduce dissatisfaction.

Body acceptance and tension. Participants described obstacles they experienced in the pursuit of body satisfaction. Shirley shared that as she has learned about feminist constructs in her Women, Gender, and Sexuality course that she wants to feel more accepting of herself. However, she noted that she feels pulled between beauty ideals she used to pursue and what she has learned in her class. She described this experience of feeling pulled between these different ideologies by saying:

> So, I guess it was just kind of like, now I'm still teetering in between the two, (N: Mhm) but I am kinda going towards the like, what are you talking about like who cares like, (N: Mhm) yeah you gained a couple pounds like, okay like (N: Mhm) what's the- what's the, who cares? (N: Mhm) So, it's kind of like I'm still teetering in between (Shirley, Interview 1).

Here Shirley was able to identify the experience of the tension rather than simply respond to the pressure, but she still described struggling with how to navigate between her awareness of the tension and her felt experiences of dissatisfaction.

Amy on the other hand described feeling the pull of the tension, but did not have the awareness of the experience in the same way that Shirley noted. Amy reflected:

> Um…I would like to lose…certain like s- target- I don't know what you call like spot target (?) or whatever (?),(N: Mhm) uh, certain parts of my body that I'd like to lose weight upon (?). Uh, so, I don't like love my body but I don't hate my body. (N: Mhm) Just, I'm…in…neutral (N: Mhm), at the moment (Amy, Interview 1).

The contrast between Amy and Shirley illustrates the different ways in which participants experience the tension as syntonic. Amy's experience is more syntonic in that she conflates body acceptance with perceived body improvement. Shirley's exposure to her coursework has provided her more understanding to disentangle the conflation of body acceptance and body improvement. Participants differed both in the personal salience of the tension, in the dissatisfaction cycle of the tension, and in the degree to which they were able to verbalize a consciousness of the tension.

Participants graphed their experience of body image variably in both pre- and post-interviews, these depictions varied from participants who graphed a highly variable weekly and monthly experience of body image to those for whom the variability was less intense, but the body satisfaction remained suspended in a state of either slightly satisfied or slightly dissatisfied.

Though participants continued to express statements suggestive of an experienced tension state, for most participants, their assertion of parameters around health behaviors shifted from pre- to post-interview. Table 18 demonstrates changing parameter and tension codes from pre- to post-interviews. Participation in the intervention coincided with participants' increased awareness of this tension state and reduced rigidity within the tension. This change can be observed both in participants' changing code counts from pre- to post-interview and in participants' changing language around this state of tension.

Table 19 illustrates participants shifting code co-occurrence between the parameter code and body, food, exercise, and tension codes.

Table 18.
Code Occurrences: Parameter and Tension in Pre and Post Interviews

	Parameter			Tension			Total Codes	
Participant	Pre	Post	Δ	Pre	Post	Δ	Pre	Post
Gloria	1			26			266	
Irene	9	6	-3	26	15	-11	247	302
Amy	10	9	-1	27	22	-5	211	188
Rose	3	3	0	33	21	-12	375	309
Elyse	8	2	-6	18	14	-4	190	217
Amber Rose	3	4	1	14	4	-10	266	221
Shirley	15	9	-6	9	5	-4	446	310
Katie	8	6	-2	18	16	-2	263	336
Alice	1	3	2	8	6	-2	173	249
JC	5	3	-2	16	10	-6	229	231
Sam	9	6	-3	12	5	-7	197	156
Angelica	6	1	-5	13	6	-7	233	180

Table 19.

Code Co-Occurrences: Parameter

	Code Co-Occurrences											
	Parameter/ Body			Parameter/ Food			Parameter/ Exercise			Parameter/ Tension		
Participant	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
Gloria	1			0			0			0		
Irene	8	3	-5	5	4	-1	2	2	0	1	0	-1
Amy	4	5	1	6	9	3	3	3	0	1	0	-1
Rose	0	10	10	3	1	-2	3	2	-1	0	14	14
Elyse	9	0	-9	7	2	-5	5	2	-3	0	0	0
Amber	1	3	2	4	7	3	1	2	1	3	0	-3
Rose												
Shirley	14	13	-1	18	12	-6	5	9	4	6	2	-4
Katie	6	7	1	8	4	-4	6	1	-5	0	0	0
Alice	0	4	4	1	2	1	0	2	2	0	0	0
JC	6	0	-6	3	5	2	4	3	-1	1	0	-1
Sam	6	6	0	8	1	-7	3	2	-1	0	0	0
Angelica	5	1	-4	8	0	-8	4	0	-4	0	0	0

All participants demonstrated a reduction in tension codes from pre to post interview. One-hundred percent of participants (n=11)[5] exhibited a reduction in the presence of tension and body codes. Ninety-one percent (n=10) exhibited a reduction in tension and food co-occurrence. Eighty-two percent (n=9) yielded a reduction in tension and exercise co-occurrence, and 91% (n=10) revealed a reduction in tension and beauty ideal codes between pre- to post- interviews. The one participant whose food and tension

[5] Total interview n=11 for percentages examining change in interview between interview one and two.

co-occurrence did not decrease exhibited no change from pre- to post- interviews. Her tension conversation throughout her interviews focused more on body acceptance and exercise. For her, food choice seemed to be a less salient tension experience. The two participants who exhibited increases in exercise and tension co-occurrence seemed to continue to conflate body improvement with body acceptance. For these two participants, increased attention to exercise seemed to be utilized post-interview as a way to navigate accepting the messages of the Body Project while still working to feel more accepting of their bodies through exercise.

In addition to shifting code counts, participants' reduction of tension and increase of flexibility was notable in their expressions of tension related to body, food, and exercise. Sam, Elyse, and Shirley are examples of participants who still experience some tension, but demonstrated an increase in flexibility in the tension. This increase in flexibility was noted in response to prompts about hypothetical weight gain. In her first interview response to a question about a hypothetical 30-pound weight gain Sam noted that she would "start working out more" (Sam, Interview 1). In her second interview response to the same question Sam reflected, that she would "probably worry a lot" about "how [she] gained thirty pounds" (Sam, Interview 2). Her response in interview two demonstrates an increase in self-reflection and a decrease in an immediate reflexive action to compensate for weight gain. By no longer responding with the immediate work out response, Sam demonstrated a way in which she has shifted from the tension state. In her second interview while she still acknowledged tension with weight gain, the increase in consideration of why she gained the weight shifts the tension to an inquiry into her

hypothetical weight gain rather than automatic consideration of this weight gain as reflective of personal action to be counterbalanced by exercise.

Elyse also demonstrated reflexive responses in interview one to the prompts about hypothetical weight gain.

> N: If I gained five pounds I would...
> P: ...I would, um... probably try to lose them
> N: If I gained thirty pounds, I would...
> P: ...Definitely try to lose it. And I would probably be pretty unhappy (Elyse, Interview 1).

In her second interview, though still expressing that she would not want to gain weight, she expressed more concern for the cause of the weight gain and expressed an ability to tolerate a shift in her body weight. The shift in responses demonstrates an increasing flexibility to both tolerate weight gain and reflect on possible causes of weight gain.

> N: If I gained 5 pounds I would
> P: I would probably want to lose them, but would n- I don't think- nothing would drastically change
> N: If I gained 30 pounds I would
> P: I would probably be more concerned because that would be an indicator that something was wrong. That would, like, not be a normal weight gain (N: mhm) for myself.
> N: Um, I would like to lose 5 pounds
> P: Um, yeah I probably would but I'm also pretty content with the way I am (Elyse, Interview 2).

Forty-five percent (n=5) of participants demonstrated a loosening in their responses to these prompts reflected in a reduced sense of emotionality or immediate action in response to the prompt. The presented quotes are representative of this reduction in emotionality and reflexive actions; in the second interview these quotes also introduce a desire to understand the source of the weight gain rather than the assumption inherent in the first interviews that the weight gain was a response to personal action (as interpreted

by the idea that an appropriate counter action would result in a corresponding weight loss). Nine percent (n=1) of participants responded flexibly to the prompts in interviews one and two. Thirty-six percent (n=4) of participants increased in rigidity or did not shift their responses to the weight-gain prompts between interview one and two. Nine percent (n=1) of participants rejected the question itself and responded to the question as a rejection and denial of the tension state. Alice is an example of a participant who rejected the tension state by refusing to consider the question or acknowledge that she would notice a 30-pound weight gain.

> N: If I gained 5 pounds, I would . . .
> P: Be okay… (nervous laughter).
> N: If I gained 30 pounds, I would. . .
> P: Probably still be okay (laughs). (Alice, Interview 1).

> N: If I gained 5 pounds, I would . . .
> P: P: No.
> N: No?
> P: Yeah N: What does that mean? (N laughs)
> P: Just like no. Like I don't think about it that way. I don't even own a scale (N: Okay) I don't know what 5 pounds looks like.
> N: If I gained 30 pounds, I would. . .
> P: Probably not notice. It would also probably be the dead of winter (?)(N: Mhm) Um. So. Yeah (Alice, Interview 2).

Alice's shift is not in an increase in flexibility, but rather an increased refusal to respond to the prompt and thereby respond to consideration of the weight gain tension as a real or potentially valid experience in her life.

In post-interviews, participants described an increased ability to acknowledge body image concerns rather than ignore them, but feel better able to respond to them constructively. Elyse shared:

> I just learned to be a lot more accepting, um, and I feel like I personally already feel a lot less pressure to look um, you know, thinner like that prescribed like, woman, I just (N: mhm) kind of am focusing on like, what is my, what is my healthy like how should I be look-like w-what's kind of gonna be the place where like I'm happy and healthy (N: mhm) and like, what does that look on me and that's what like I'm, gonna strive for and really just try to focus on the positives (?) rather than like magnifying the negatives (N: mhm) so. Um. I think going forward I'm just gonna try and like, when I do have issues, which like I obviously am going to have (N: mhm) like, I like, I look in the mirror and there are still things that I would obviously like to like change a little bit (?) but I think it's-I'm gonna like catch myself and be like, but like what are all the good things that we like (Elyse, Interview 2).

In her post-interview, Shirley expressed a greater confidence around navigating tension related to weight gain and body acceptance. She both acknowledged her body in noting the potential health concerns of gaining 30 pounds which differed from participants who ignored any potential concern or consequence of weight gain and from Shirley's reflection that she had previously ignored her body. However, rather than maintaining the tension state by expressing how she would try to lose the weight, she shifted the dimension by asserting that the challenge she would experience with weight gain would relate to an increase in difficulty with body acceptance. In doing so, she shifted out of the tension state surrounding maintenance of the thin ideal and into a tension with a desire to feel more comfortable with herself. She shared:

> N: If I gained thirty pounds I would...P: Maybe make, try to make sure nothing is wrong or anything but, I mean I would still have to learn to love myself. But it's fine.(N: Mhm) You're heavier? All power to you, ha.
> N: Um, do you have any concerns about gaining weight? P: Hm. (pause) I don't know. I feel like, it would make my process of learning more difficult if both my mindset and my body were changing at the same time like it's difficult as is, changing my mindset about my current body… 'cause before...definitely a month ago, it was like okay like you can gain a couple pounds here and there but, once you get to a certain point like, okay we're gonna have to work on this like (N: Mhm) change this. But now I'm like, not necessarily. Like if you- all of sudden your body changes, then just learn to love that body. (N: Mhm) Ya know, that's ya know, that's maybe that's- that's how it was meant to be like maybe that's how your body was like, going towards all along (N: Mhm) ya know so I don't think I

> would be, I'm not as scared anymore. . . And that's so freeing! I'm like, oh wow! (N: Mhm) Cool, no more expectations this is- this is cool, alright! (N: Mhm) So I like that (Shirley, Interview 2).

Shirley's tension shift was also marked by a loosening in her conceptualization of body acceptance. She reflected:

> So I feel like, especially before we started like talking about it in the sessions and everything, uh…in terms of like body stuff it was like, it's either you're really like, confident or like you completely don't like your body. (N: Mm) There's no in between. And so, I was like well okay I don't hate my body so it must mean I'm in the other group, I'm the group that uh, it's completely in love with themselves (Shirley, Interview 2).

By learning that she could not hate herself, but still struggle with self-acceptance, Shirley found more room to be honest with herself and begin a pursuit of self-acceptance that she noted felt more real. Consequently, Shirley's tension shift occurred not only in a reduction of the tension associated with rules and parameters around food, but also with a reduction in her perception of the rules and parameters associated with body acceptance.

Eight percent of participants (n=2) in their post-interviews reflected on the ways in which they felt conflicted about a reduction in the tension state. Amy expressed her experience of tension with the intervention's assertion to be comfortable in your body as it is currently. She noted:

> Um (?) just because, I feel like if you…were feeling happy with yourself (?), you'd be like okay, I don't wanna change myself. (N: Mm) Or, I like want to maintain where I'm at (N: Mhm) I guess then you could just go to the gym (?). But, where I am right now I would still like to see like improvements to my body (?) (N: Mm) so I feel like it's that, it's in conflict there (N: Mhm) But if I'm happy I can be like…I won't work out as hard at the gym 'cause I'm only maintaining where I'm at. (N: Mhm) That's one of the weird, thin lines (Amy, Interview 2).

Amy's conflict seems to center on her consideration of body dissatisfaction as a motivator for exercising. She does not seem to consider that there are other reasons for exercising and wonders what would happen if she did not "work out as hard."

Rose did not seem conflicted in the same way as Amy, but rather expressed conflict around her continued desire to lose weight. In her post-interview she considered the ways in which her desire to lose weight is not in pursuit of the thin ideal, but rather because she considers her desired weight loss appropriate.

> Well, I feel like I- I was- I'm slightly betraying the- the body…the body positive ideals in- (laughs) that we, we talked about… I- I feel slightly guilty saying that (?) still (N: Mhm) like I don't wanna be…uh (laughs) like com- feel like I've come out of the classes that we've taken and all that work and still, I perpetuate the skinny woman ideal. (N: Mhm) Um…and I don't think that's…that statement should be true for everyone. (N: Mhm) Um…but I still feel like I'm…like…there's things about my body that I wanna change through fitness (N: Mhm) that are not…something that everyone should be feeling at, like…I don't know (Rose, Interview 2).

Irene did not experience a notable or perceived shifting of parameters and tension surrounding body image. In her post-interview she reflected on ways she would like to change and shared, "Um… I'd probably like to lose a little bit of weight," mirroring her response about New Year's Resolutions in the first interview (Irene, Interview 2). Irene noted that she felt the intervention made her feel more insecure and more conscious of her body. This experience was also reflected in her survey scores changing away from the direction of the intervention effect. Irene's responses to the hypothetical weight gain are similar between interviews one and two. In interview one she responded:

> N: If I gain 5 pounds, I would….
> P: Um, probably diet.
> N: If I gained 30 pounds I would…
> P: Oh Jesus, hopefully that would never happen. Umm, I would probably. Gosh. Umm (4 second pause). Wow. (pause). I would very intensely diet. Um, yeah.
> N: My biggest concern about gaining weight is…

P: Um, going back to being skinny. Just like the struggle in that. Cause it's easy to gain pounds, it's hard to lose 'em (Irene, Interview 1).

In her post-interview, Irene responded to the same prompts:

N: If I gained 5 pounds, I would…
P: Um, diet.
N: If I gained 30 pounds, I would…
P: Excessively diet.
N: I would like to lose 5 pounds.
P: Yes (Irene, Interview 2).

The consistency of tension between Irene's first and second interviews corresponds with the ways in which Irene did not experience the intervention as helpful and reflected on it feeling harmful. While other participants experienced a loosening of the tension or reflected on conflicts they still experienced within the tension, Irene's responses neither introduce dissonance with the tension nor increase in flexibility. Her reduction in tension codes and parameter codes (Tables 17-19) may reflect a reduced openness to discuss the tension she experiences either due to frustration or dissatisfaction with the intervention or due to a sense of concern about responding against the aims of the project. When she reflected on the group she noted that during the intervention she did not share with the group her view that the thin ideal was positive and "prevented you from getting fat" because "[she] knew that was perpetuating the thin ideal and … that this was- this whole project was trying to, like, um be another perspective in, and trying to like, you know like, wade away from the thin ideal" (Irene, Interview 2), demonstrating a consciousness of the goals and the intervention and related research. Cumulatively, the above examples and subthemes within tension experience illustrate the ways in which participant thoughts and behaviors exist in a struggle to maintain body satisfaction. In post-interviews, in general, participants seemed to experience an increased level of

honesty and openness with themselves about their experiences of dissatisfaction and a loosening in some aspects of the tension, while other participants communicated conflict about reducing pursuit of the thin ideal.

Relational Experiences

The third major dimension focused on women's experiences in their bodies as relational in nature. This was highlighted in the ways that concerns about weight gain often reflected whether someone else would notice, sense of discomfort when feeling on display, body comparisons between women, and presentational concerns for potential romantic partners. The relational experiences dimension is broken into subthemes that include: women's first experience noticing their bodies, experiences of comparison, experiences of presentation, and relational experiences within the intervention. Eighty-one percent of participants (n=9) demonstrated a reduction in compare codes between pre- and post-interviews. Eighteen percent of participants (n=2) demonstrated an increase in compare codes between pre- and post-interviews. Sixty-four percent of participants (n=7) demonstrated a reduction in presentation codes between pre- and post-interviews. Thirty-six percent of participants (n=4) demonstrated an increase in presentation codes between pre- and post-interviews. These changes were accompanied by increases in share and universality codes. The compare and presentation, share, and universality code counts and code changes are presented in Table 20.

First recognition of body. One-hundred percent of interviewees (n=12) described their first experience of their body as a relational experience. Participants' experiences are presented in Table 21. These experiences varied from recognizing other people's interest in their bodies to seeing parents dieting and wanting to diet as well.

Participant age of first relational experience in her body varied from 7-17. Fifty percent of participants (n=6) noted a first body recognition experience in elementary school between the ages of seven and nine. Forty-two percent of participants (n=5) noted first body recognition in middle school. Eight percent of participants (n=1) noted a first body recognition experience in high school.

Table 20.

Code Occurrences: Compare, Presentation, Share, Universality

	Code Occurrences											
	Compare			Presentation			Share			Universality		
Participant	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
Gloria	9			14			0			0		
Irene	1	3	2	14	9	-5	0	0	0	0	0	0
Amy	4	6	2	6	12	6	0	2	2	0	0	0
Rose	7	1	-6	16	6	-10	0	2	2	0	1	1
Elyse	1	1	0	4	1	-5	1	4	3	0	1	1
Amber Rose	5	3	-2	4	5	1	0	2	2	0	1	1
Shirley	5	0	-5	9	4	-5	0	3	3	1	2	1
Katie	5	1	-4	13	9	-4	0	1	1	0	4	4
Alice	1	0	-1	0	4	4	0	2	2	0	0	0
JC	2	1	-1	8	9	1	0	2	2	0	0	0
Sam	2	2	0	5	4	-1	0	0	0	0	0	0
Angelica	2	2	0	8	2	-6	0	3	3	0	2	2

Table 21.

Participants' First Experience Noticing Her Body

Participants' First Experience Noticing Her Body

Participant	Experience
JC	Junior year - reaching sexual maturity, boys showing interest
Shirley	6th grade - mom said I had thinner body type than sister
Sam	7 years - people calling "too skinny"
Rose	6th grade - photographer asked to take photo for portfolio
Elyse	7th grade - wanted bigger "boobs" (like friends)
Amber Rose	7/8 years, saw a picture of herself and thought "I look fat"
Angelica Berkley	Other people made comments about double chin
Amy	Second grade - friend said she could do monkey bars because of "fat fingers"
Katie	7th grade - bullied about weight
Gloria	Middle school growth spurt – bigger than other people. "Girls aren't supposed to have growth spurts."
Irene	Parents were dieting Asked mom to start first diet at age 9
Alice	Young - couldn't do a backflip on playground like other kids

Comparison. Participants' frequently discussed comparing themselves to other people to either feel better about themselves or having the comparisons result in increased dissatisfaction. Sixty-seven percent of participants (n=8) specifically mentioned the transition to college as a sensitive time for peer comparison. Alice reflected on her transition to the university:

> I'm surrounded by a bunch of snobby, rich kids who are all skinnier than me, and can afford to pay a gazillion dollars on clothing (N: Mhm). Um, and – so there was some general sadness (N: Mhm) that accompanied that um but I'm over it. I have a good community here, um, at this point (Alice, Interview 1).

Her comparison left her feeling like an outsider. To deal with her sense of feeling like an outsider, both based on socioeconomic comparisons and body comparisons, Alice found

a peer group with whom she felt community. For other participants, their comparison left them wanting to change their bodies. Katie reflected on her transition:

> Um, and then also just kind of, looking at everybody else around [campus] and feeling like, like, "Oh wow, I, I don't feel like I, I look as good as, as this one girl who I pass every day going to class," or, you know, like yeah, "I look better than that girl but like, I could definitely like still, you know, look better than I (N: Mhm), than I do now," (N: mhm) just kind of that, that moment of like comparing to everybody else (Katie, Interview 1).

Within the conversation about increased comparison upon transition to college, participants made frequent reference to the university's image as being very fit. Amy reflected on the salience of this university image and its personal impact on her behavior and self-image:

> [The university] is filled with like really, athletic people, (N: Mm) and like, just overall like you're…rounded people (?) So I was kinda like, oh wow, I should probably go to the gym more. And so, it pushed me to like, have a better image like- have a better body or like, (N: Uh-huh) stuff like that, just a better image. N: What do you mean by rounded? P: Um…they like- people at UVA are really smart (N: Oh) and like- (N: Okay okay) yeah. And then they're like, also go to the gym every day like, doing this I'm like, okay like, I guess that should be my goal, (N: Mm) to be, more well-rounded (Amy, Interview 1).

In addition to college transition as a time of increased comparison, participants noted comparison with other women's bodies as a frequent experience. Amber Rose reflected on a recent experience being at a pool:

> I was in my bathing suit and there's a slight very skinny girl, like me and her were on opposite ends of the pool and it was making me very self-conscious" (Amber Rose, Interview 1).

Her sense of discomfort at the pool was related to her sense of comparison with another woman at the pool.

Eighty-two percent of participants (n=9) demonstrated a reduction in comparison codes between interviews one and two. Irene and Amy increased discussions of

experiences of comparison between interviews. Irene's increase in comparison is consistent with a negative experience in the intervention. For Amy, these conversations focused on comparison experiences in the intervention and her sense of difficulty understanding how participants she perceived as skinny could struggle so significantly with their body image. She reflected:

> It was interesting to see like, how confident some people are versus how insecure other peop- that sounds bad, but how insecure some people are. (N: Mhm) Um. (pause) When- there's one person that…was like so tiny (N: Mhm), and she was really insecure and that was like- I- that confuses me when some people are so insecure. Uh and then other people who were…they're just more confident (N: Mhm) um even if like they weren't the fittest, they were- or most fit. (N: Mhm) They just um…like exuded confidence. (N: Mhm) They were just really happy with themselves and I was like…one day. (Amy, Interview 2).

This discussion of comparison reflects Amy's difficulty post-intervention considering how to approach body satisfaction. She remains pulled by the information she gathered from the intervention and admiration of people who she perceives as body accepting and with a personal consideration that for her, body acceptance continues to be conflated with working out in pursuit of an improved body state. For a majority of interviewed participants, comparing their bodies to other women's bodies was a source of dissatisfaction.

Body as a presentational experience. Participants often discussed their experience of their body as a presentational experience, such that their own self-consciousness or dissatisfaction was dependent on their comfort with the people around them or their sense of being observed or watched, "Um, but any time I feel like, I'm like, on display (N: Mhm), that's when I'm like aware of it" (Katie, Interview 1). Thirty-six percent (n=4) used the word "display" when discussing settings with increased awareness about her body. Thirty-six percent of participants (n=4) demonstrated an increase in

presentation codes from pre- to post-interview. Sixty-four percent of participants (n=7) demonstrated a decrease in presentation codes from pre- to post-interview. Participant presentational conversations most frequently included conversations about weight gain or loss, going to the pool or beach, going out, and looking in the mirror. Amy shared that her intervention group defined a new word for the experience of being in class and looking at other women's bodies. She explained:

> This one girl had taken a women gender studies class and then she came up with a…uh, definition of like spectatoring (?).(N: Mhm) She's like when you're in class and…I guess like you watch someone and they're sitting- sit up straight and like they're stomachs are- there's no like line or bumps whatever, and then you'll be like, sit up straight, (N: Mm) you're like copying (?) so, spectatoring is something cool that I was like whoa. 'Cause everyone in our group was like, that's so like interesting. (N: Mhm) And everyone does it. So. (Amy, Interview 2).

This group experience helped define an experience found to be common in which participants found themselves sitting and evaluating other women's bodies. Amy cited giving name to this experience as a significant part of her intervention experience. Participants seemed to cite additional body image pressures when they found themselves in situations in which they perceived a presentational pressure.

Looking in the mirror. Fifty percent of participants noted that her experience of her body is most salient when looking in the mirror at home. An additional participant noted that she is most aware of her body when she looks in the mirror at the gym. This was considered a relational experience because of the ways in which participants discussed looking in the mirror as an assessment of how other people saw them or how they measured up in some comparison and because of past research noting a relationship between mirror exposure and increased self-objectification (Quinn, Kallen, & Cathy, 2006). For many participants, mirror checking rituals promoted dissatisfaction.

However, some participants expressed positive sentiments about looking at themselves in the mirror. Sam reflected on her experience of her body as salient in the morning:

> Probably when I am getting ready. I have a tendency to stare at my body for way too long in my like very long mirror so usually when I'm getting ready I'll sit in front of the mirror … I like looking at if I've lost tone or if, um, anything looks out of place of weird. A lot of times I'm staring at my butt…Sometimes I'm like I need to do a couple more squats. (Sam, Interview 1)

Angelica reflected on her experience of her body as salient during both time points.

> Probably the beginning and the end of the day. (N:Mhm.) . . .Sometimes, I guess 'cause by the end of the day is like (sigh) and then you just look in the mirror and you're like oh. . .so either its like a good oh or its like a, oh. . . (N:Mhm.) you need to go to bed or you need to like just like, go on a run, make yourself feel better kind of thing (N:Mhm.) And the morning's just like, yeah, new day! You look great! (N:Mhm.) Get going. (Angelica Berkley, Interview 1).

Mirror behaviors or self-consciousness when looking in mirrors or reflective surfaces was an experience noted by half of the participants to induce dissatisfaction. Some participants seemed better able to navigate mirror experiences in the post-interview and cited strategies they learned in the intervention.

Weight loss or gain as a presentational experience. Fifty-eight percent of interviewees (n=7) yielded statements coded as presentation in which the word weight was utilized. These participants discussed presentational experiences or presentational concerns related to weight-loss or weight gain. Katie noted that her biggest concern about gaining weight is "looking like [she's] gained weight" (Katie, Interview 1), and Shirley reflected that "[she doesn't] really care about the weight as long as no one notices (Shirley, Interview 1). These quotes serve as examples of the ways in which participants discussed weight gain or concerns about weight gain in relation to another person noticing. This was also reflected in participants' expression of concern about weight gain

in the ways it would affect how their clothes looked. In her second interview, a participant reflected on past weight loss and noted a concern about having other people notice when she looked too thin. She shared; “I can’t believe (N: Mm) people like actually let me, leave the house like that! (N: Mm) Just ‘cause it was like, all on, all out there all on display!”

Rose discussed embarrassment she felt when she realized that her weight gain was visible to other people.

> But then like one night she was like, "oh my gosh, you've lost so much weight! I can definitely tell!" And I was like, "Woah, no I haven't. You're just really drunk" (N: Mmm). Well, I didn't say that bit to her, but I was like, "Thanks!" Like uhhh, like okay, no one's - like, I can tell myself but I'd been the only one like okay, people can tell. But I hadn't really talked to people about it. N: About gaining weight? P: Yeah, and being like, oh can you see it in my face or something. I hadn't really mentioned it to any of my friends. And like my friends are nice people, so they hadn't been like, hey your face looks a little puffy or something, even though it's like - from, I guess, the end of high school to last year I'd probably gained like ten, at least 15 pounds... 15-20 pounds. So like, you could definitely tell. (N: Mmhm) Um, and so that kind of made me embarrassed and I started going to the gym more, but not really changing my eating habits, except for like buying my own food - or my drinking habits (Rose, Interview 1).

For participants, concern about weight gain or excess weight loss was expressed in more than half of the interviews as a concern about the presentational impacts of such weight change. This seems to reflect that some of participants’ concerns about weight changes are influenced by concerns about the social implications of that weight change.

Body voice. Forty-two percent of participants utilized a body voice in their interviews, meaning they made statements in which their body functioned with its own state of agency, i.e. my body likes this, my body does this. The body voice seemed to mark two very different experiences for participants, one being a use of the body to deny

desire of certain food groups and the latter being an embodiment of the body's sense of individualized agency outside of a relational experience.

Body voice and denial. Seventeen percent of participants (n=2) made statements made through the body voice in which they denied desire of fattening or sugary foods. While the presented information did not allow for determining whether these participants really did not like dessert, it can be postulated that for these participants, some degree of intuitive eating is being used as a tactic for restriction. It is unclear to what degree the participants experience this as a felt state versus something with which they consciously experience conflict. One participant reflected:

> I still don't eat a lot of sweets just 'cause it's not really something my body, wants anymore and when I, tend to eat them I actually, get sick (N: Mm) 'cause like, my body doesn't like to accept sugar like that anymore, um, but like if I see something I want, I just kinda, I tend to eat it.

However, earlier in this participant's interview, she described a time during which she was eating more restrictively and concurrently pinning lots of pictures of dessert on Pinterest. She seemed to be allowing herself to fantasize about desserts, suggested some degree of desire, but utilized the body voice to say that her body does not want them anymore. The presence of the body voice of denial is reflective of tension a participant experiences with food choices and a sense of disconnection from her bodily experiences of pleasure and desire. This seems to be present in participants' narratives who either presently have or by history had the highest levels of thin ideal internalization and body dissatisfaction. The distancing from the body and its possible cravings of fattening or sugary foods may be a way in which these participants manage strong fears and pressures related to maintaining body size.

Body voice and lived experience. Thirty-three percent of participants (n=4) utilized the body voice as a marker of lived experience from within their individual body and separate from an objectified experience of their body, such that they spoke through the body with a sense of individual agency and direction, noting what the body wants or what the body likes. One participant attempted to utilize the body voice, but was working very hard at the same time to put down the weight loss pressures she also felt. Consequently, her use of the body voice is more nascent and surrounded with significant tension. Amber Rose discussed using her bodily cues to identify satiety levels, "I learned how to, like I eat- eat my meals slow enough that I wait and see if my body's full" (Amber Rose, Interview 2) reflecting a level of personal embodiment stemming from listening to her body's cues.

Shirley utilized body voice to discuss the history of her relationship with her body, sharing:

> My body has been through kind of a lot (?) like, I didn't like it in back in middle school in really that much and I really liked it in high school. Didn't like it last semester. Now I like it again so, I guess I've not been as accepting of my body as I should've been. (Shirley, Interview 2).

Angelica utilized the body voice in both interviews. In her first interview, the body voice is placed beside a morality statement, marking an experience of tension between experiencing her body with agency and maintaining parameters or rule-bound behavior, "My body likes good food (N: mhm). And I'm not ashamed of that" (Angelica, Interview 1) either responding to a perceived relational pressure with family or with the interviewer. In her second interview, when asked what would happen if she did not watch what she ate, which she defined as "making sure that what [she] eat[s] is healthy and whole," she replied:

> My body would be mad at me. (N: Mhm) I would feel unsatisfied, I feel I'd feel like I feel the most unsatisfied with my food when I don't eat healthy (N: Mhm) food (N: Mhm) or whole food or real food. (giggles) (N: Mhm) In that sense. Yeah (Angelica, Interview 2).

This experience of body voice does not seem to reflect a means to justify restriction, but rather an acknowledgement and attunement with her body's positive responsiveness to whole foods. Earlier in the second interview, Angelica's body voice existed independently. She shared:

> My body is rockin' (both laugh). Uh, no my-my body is happy (N: mhm) um, and does what it wants-what it wants to do (both laugh). Um, yeah. My body likes-likes to be active (N: mhm) and I love that. (N: Mhm) So yeah (Angelica, Interview 2).

The body voice did not occur frequently in interviews and consequently each occurrence was notable. The changes in the above dimensions illustrate ways in which participant narratives changed across the intervention. Aside from the participant in the high-risk category, these dimensional shifts did not seem to relate to participants' initial risk category.

Intervention as a relational experience. Most prevalent across interviews was a discussion of the impact of the group format of the intervention, sharing the experience, and getting to know other people. Eighty-two percent of participants (n=9) described some perceived positive sense of being able to experience the intervention in a group format. One participant did not discuss her own sense of shared experience, but noted that she wished she could get friends with body image concerns to participate in the classes. For some participants, the competition or comparison inherent in their body image concerns shifted to a sense of shared experience and empathy surrounding a sense of the universality of body image concerns.

JC described learning new information from the intervention:

> I've never really like consciously thought about a lot of these things that we talked about or that we covered in like the body image class and I've never actually really talked about it with anyone. Only thought about it and stuff. It was nice to, kinda cathartic in a way to be able to just put it out there. And I thought it was, a cool way to just, ya know, get to know actual people. And to know how, how they think about body image (JC, Interview 2).

Embedded in her description of learning this information was the process of learning in a group setting and getting to know other people through discussions about body image. While JC had not thought about much of the content of the intervention, Rose expressed a familiarity with the content, but noted a unique impact from talking about this content with other women. She explained:

> So the knowledge- some of the things we talked about, like points about media perception or, um, like the stress o- o- on like the average student's stuff, are like intuitive and I've thought about them on an individual basis. But to talk about them together, um, and to listen to people's, relatable, more relatable sometimes less relatable, but still, like, united under the common umbrella of, ya know this is something that's cons- like, I struggle with, um, with body image, was really great (Rose, Interview 2).

It seems that she perceived a sense of larger impact from not only considering the information, but having a shared emotionally connected experience to discuss the content and learn about other people's experiences.

Shirley noted the impact of the group on her own process of becoming more comfortable with not meeting the thin ideal. She shared:

> I became more, self aware of like certain issues and, it was- it was comforting though to see the other girls were also facing that and it was like, its not just like, cause sometimes I feel like before, it was kinda like you are the only person that and you have to compete with the other girls around you 'cause you're like, you're not sure what they're thinking and so them to, I was like okay they probably do, but I don't know for a fact. So I'm just gonna assume that they don't. But now seeing that, I'm just like it is so common like literally just…it-it is very common just because the- how relevant the media is to out self-image and everything like that. So, I think- it really did help me feel more comfortable

> because, I do value, the opinions of others around me, especially other girls. 'Cause like there is that sort of competition, supposedly, whatever. But knowing that they're also struggling and knowing that they don't – they're also working on not caring as much and having the support of other women is especially, it feels more relatable ya know (Shirley, Interview 2).

Shirley's language changed as she described shifting from a sense of competition to a sense of empathy and shared experience. While she discussed competition with "girls," she noted that feeling supported and relatable with other women felt good. She recognized that other people may also be struggling with body image and in doing so, seemed to shift from feeling competitive to feeling empathic and supported. The shift from using girls to using women seems to demonstrate the ways in which she was elevating both herself and the other participants out of a competitive, juvenile, and objectified position into an embodied sense of herself and shared experience with others.

Katie described her amazement at the short amount of intervention time compared to the amount of impact she felt. When questioned, she shared that ultimately thinking about the intervention ideas in the context of the group had the greatest impact.

> I mean I feel like it was really just, sitting down and like, with everyone in the classes and talking about it…like actually putting it out there and being like, 'Oh wow, like this is really stupid' and even some of the things that like, I never really thought about before cause, the things that I've really like, associated with it was like obviously health and then like, family and friends . . .Um and being like, oh, well there are other things associated with it too, just besides that like, just kind of larger cultural implications as well as the, the immediate impact on yourself, um and kinda being like, I feel like, it shouldn't, its already being perpetuated enough and that like I don't need to be one more person that's, that's supporting that thin ideal (Katie, Interview 2).

For Katie, sharing her own experience and beginning to understand the cultural implications of the thin ideal by experiencing the intervention in a group setting helped her step beyond her personal experience. She connected to a sense of social responsibility when she communicated that she does not want to be another person

supporting these false ideals. This desire to not be another person supporting the thin ideal emerged in 91% (n=10) of post-interviews.

Irene reflected on the ways in which the groups made her feel more aware of beauty ideals. She discussed her experience of staying quiet during the intervention because she knew that this "whole project was trying to, like, um be another perspective in, and trying to like, you know like, wade away from the thin ideal" (Irene, Interview 2). For most participants, the group format of the intervention was noted to be a positive experience that felt enjoyable to participants and from participants' perspectives, helped relay the content of the intervention.

Desire for continued community. Rose and Amy were the two participants who ended the intervention expressing the greatest amount of conflict surrounding how to accept the body positive message and continue efforts at weight loss or body improvement. They were also the two participants who provided feedback requesting some type of continued community related to the intervention.

Amy noted; "I think, if there could be like more people involved. I think first years especially should do it. . . Just to let people know like, you're okay." She described earlier in her interviews feeling alone managing what she learned in the intervention with the pressures she felt around her:

> It's hard to just like, give yourself fully to what, what we're trying to do, just like increase confidence just because, it's hard when society's, not into what you're doing as well. And then all your friends are like, not peer-pressuring you to do something else, but they're just not, they didn't do it so not as supportive of what you're doing (Amy, Interview 2).

Rose noted a desire to have maintained some connection with the group beyond the intervention. She suggested:

> I think it would've been cool to kind of…to have either an…opt-in, opt-out like collaboration . . . Like, oh lets all get chalk and write body positive images if you're free and you want like right after, whatever...Um but um, yeah we don't have to be like a sisterhood bond now but it would've been cool to like one other thing with them as a group since we have all, kind of learned the same things and talked about them (Rose, Interview 2).

Amy's desire to have more people involved and Rose's desire for continued activities may be stemming from desires to assuage the sense of thin ideal pressure they previously described feeling by seeking continued supportive relational experiences.

Desire for further action. Participants often reflected a sense of a strong emotionality around their experience in the group, either feeling mad towards society or sad for the girls and women who are suffering as a result of these ideals. Communicated with this emotionality was a desire to exert change for other women. Amber Rose reflected on her experience in the intervention:

> It was fun. (pause) It was sad but fun. (N: Mhm) Um, the second week was better (N: Mhm) because the girls had gotten more confident, um through the challenges. First week was sad, it made me sad. And um, it definitely made me more um more confident in checking other people knowing that every like woman in our group hated the beauty ideal. (N: Mhm) Like no one's happy with it. Like no one is like oh my god, this is a great idea, like. (N: Mhm) No one says that. (N: Mhm) So like the fact that every woman is like not a fan of it made me more confident to be like, no don't talk that way about your body like, (N: Mhm) everyone's beautiful you know? (Amber Rose, Interview 2).

Angelica discussed a sense of discontent with the current social pressures and noted an excitement to be able to both feel better about herself and exert a positive influence for other women.

> It felt really good to…be with women…who experience very similar problems. (N: Mhm) Um. And, it was uplifting in that sense… And realizing that I can be an agent of change. (N: Mhm) In something that's so influential in women without them really realizing it. (N: Mhm) Um. Makes me really excited. (N: Mhm) Because women should be able to feel great about themselves. (N: Mhm) And it's sad that they don't. (Anglica Berkley, Interview 2).

These expressions of desire for continued action were connected to a personally salient shared emotional experience in the intervention.

For Alice, who described her experience in the intervention positively but without much explanation or emphasis, her discussion of an emotional experience in the intervention was more distanced. She noted feeling sad for other people who experience these pressures while distancing herself from membership within that group:

> Um, just like ya know…the…vague but real desire for other girls to be happy. (N: Mhm) Um, s- sad that like, they're getting hung up on something that is in reality just so…dumb and so manufactured (?). (N: Mhm) Um. Like, ya know we talked about this in the groups but it i- the whole thin ideal is so manufactured (N: Mhm) and has like, very real benefits for…a very small group of people (?), it's obviously patriarchal bullshit, we are beyond this. (N laughs) Um and so to see like…girls…falling prey- like being victims to that (N: Mhm), that's frustrating (Alice, Interview 2).

The degree to which participants experienced a felt sense of community and shared experience from within the groups combined with the salience of their body image concerns may relate to the degree to which they perceived the intervention to be helpful.

Comparing dissatisfaction from pre- to post-interview. While comparison codes reduced for most participants between first and second interviews, participants still described experiences of comparison within the intervention. This most frequently occurred in conversations in which participants noted that in reflection of their rating of body satisfaction in the week prior to the intervention, they had actually been less dissatisfied than they realized. Sam, Elyse, Katie, Amber Rose, and Angelica Berkley, 45% of participants (n=5) redrew their body satisfaction graphs in the second interview and reflected that they had overestimated their present body dissatisfaction in the first interview. Concurrent with an analysis of overestimating present body dissatisfaction in

first interviews, some participants also relayed a sense of underestimating past experiences of dissatisfaction. Elyse reflected on her previous body satisfaction graph:

> Um, and I also think that kinda via talking to other people, I think that, like in my own head I f- I felt like I was...so dissatisfied and I think that like kinda in talking to other people I realized that like, I actually wasn't (?) (N: Mhm) like it's...if that makes sense. I know for some re- some reason like kinda hearing other people talk about stuff, I realized that it- I wasn't as unhappy as, maybe like I thought I was in my head (Elyse, Interview 2).

Sam echoed Elyse's sentiment when she reflected "Probably just like, after the class like looking back, I was like, I dunno – well, just mostly some stories people were saying I was like, I really wasn't that dissatisfied" (Sam Interview 2). The intervention seemed to allow these participants to switch to a downward social comparison for dissatisfaction with body image, making them feel better about their experience of body image than previously considered (Fitzsimmons-Craft, 2011).

Angelica, Shirley, Rose, and Elyse noted a sense of underrepresenting past body dissatisfaction. Angelica discussed a realization that she was less satisfied with her body in high school than she thought previously:

> Um when I think about it, 'cause this like my high school period, (N: Mhm) I wasn't really s--- as satisfied as I thought I was (N: Mhm) with my, with my body I mean, I worked out and whatnot, and ate healthy for really good intentions but I still I don't think was necessarily satisfied. (N: Mhm) Which is a weird juxtaposition of doing it for… good reasons (?) (N: Mhm) and healthy reasons (?) but just not also being satisfied (Angelica, Interview 2).

Rose reflected in the second interview on not realizing how dissatisfied she felt with herself in high school. She shared:

> I guess in high school I didn't really think r- initially when we were doing like body… But um…like, I definitely used food…to deal with stress (?), (N: Mhm) and so like I- I didn't r- immediately associate that with like, me not liking the way my body was (?) 'cause I didn't think it was…as connected but thinking back, it definitely was like, I don't like the way I am now, but it doesn't even matter because, like, I'm not…this isn't gonna hurt me because I don't- I already

> don't like the way I look, (N: Mm) so then like using food to deal with my academic stress um…was like a way of being like, oh this doesn't matter, I don't really care about my body (Rose, Interview 2).

The combined experience of interviewing and intervention seemed to provide increased space for participants to reflect on the significance of past experiences and reassess their current valuation of present experiences. For Angelica, Shirley, Rose, and Elyse, this process meant recognizing the depth of past negative experiences and reassessing their present senses of body satisfaction. While Shirley felt that she previously overestimated her current satisfaction level, Sam and Elyse noted that they under assessed their satisfaction.

The themes of academic stress, tension, and relational experiences present in the interviews help to expand understanding of college students' daily body image experiences and shifts that occurred in these descriptions after participating in the intervention.

Research Question Four and Five: Assessing for Peer Effects

Research question four asked: Which participant characteristics influence exposing friends to the intervention program content and how is that exposure related to intervention effects on participants? Research question five asked: If friends are exposed to intervention content, is this exposure evident in friends' and participants' body, food, and exercise narrative and survey data? In order to assess for whether peer change between pre- and post-intervention was significantly different than zero, a peer change score was calculated for each outcome variable. Peer pre-scores were subtracted from peer post-scores for each of the five outcome variables. One sample t-tests were run with each of these outcomes variables to determine whether the difference was significantly

different from zero. These results are presented below in Table 22. The peer Dutch Restrained Eating scale yielded a significant t-test, t=-2.48, suggesting that peers significantly reduced their self-reported dieting during the course of their friends' participation in the intervention. No other results were significant.

Table 22.

One Sample T-Test: Peer Change Scores

Outcome	n	Mean Relative Change	sd	t	p
Thin Ideal	25	.13	.44	1.41	.17
Dutch Restrained Eating	25	-.31	.63	-2.48	.02
Body Satisfaction	25	-.08	.43	-.98	.34
Fat Talk Concerns	25	-.15	1.21	-.63	.53
Fat Talk Compare	25	-.37	1.38	-1.35	.19

After assessing for whether peer change was significantly different from zero, peer change between peer time points was correlated with participant outcome change to determine whether peer change was significantly associated with the intervention participant change. No peer change scores were significantly correlated with intervention participant change scores. These correlations are presented in Table 23. Additionally, Peer 1 Time Point 1 scores and intervention participant Time Point 1 scores were correlated to determine whether intervention participants and their friends exhibited similar beliefs and behaviors related to thin ideal internalization, body satisfaction, self-

reported dieting, and fat talk prior to the intervention. No Peer Time Point 1 scores were significantly correlated with Participant Time Point 1 Scores. These correlations are presented in Table 24.

Table 23.

Correlation of Peer Change Scores to Participant Change Scores

	Peer Thin Ideal Internalization	Peer Restrained Eating	Peer Body Satisfaction	Peer Fat Talk Concern	Peer Fat Talk Compare
Thin Ideal Internalization	-.17	.27	-.29	.38	.29
Restrained Eating	-.15	.12	-.26	.23	.14
Body Satisfaction	-.02	.16	-.15	-.13	-.11
Fat Talk Concern	-.12	-.40	.23	-.17	-.19
Fat Talk Compare	.32	-.01	.01	-.07	-.18

No significant correlations.

Table 24.

Correlation of Peer Time 1 and Participant Time 1 Scale Scores

	Peer 1Thin Ideal	Peer 1 Restrained Eating	Peer 1 Body Satisfaction	Peer 1 Fat Talk Compare	Peer 1 Fat Talk Concern
Thin Ideal	.01	-.02	-.11	.03	-.12
Restrained Eating	.03	.03	-.19	.22	.18
Body Satisfaction	-.14	-.24	.10	-.34	-.25
Fat Talk Concern	-.13	-.22	.15	.27	-.02
Fat Talk Compare	-.28	-.10	.09	.27	.12

No significant correlations

Responding to fat talk. In order to respond to fat talk, participants had to both recognize it and feel confident to respond. Participants often noted that responding to fat talk and responding to the role-plays during the intervention were the most challenging

parts of the intervention because they did not know what to say. While there was no correlation between participants' change scores and their peers' change scores, participants in the post-interviews discussed ways that they changed their behavior with friends and family. Table 25 presents a sample of participant changed response to peers in a selection of representative change statements.

Table 25.

Responses to Peers

Participant	Participant Self-Reported Behavior Change with Peers
Sam Post	My roommate has this really strange habit of always telling me how many serving sizes she ate of like whatever it is. (Laughing while talking) This is something I realized like yesterday 'cause I was like, "I don't know how many servings anything is," (N: Mhm) so (giggles)… She was like, "well, I only ate 3 serving sizes, and I was like, I don't know, like that means nothing to me (N: Mhm), so… N: Would you – had you normally responded to her like that? P: Um, my normal response to her is usually just ignore.
Elyse Post	I have one friend who's like, I'm a whale like I like- she's like such a...hy- very hyperbolic in her conversations. I was like first of all stop. (N: Mhm) Like let's just like put things in perspective like, you're not a whale (joint laughter) like, you're- that's just like not true. I was like, and two like, who's benefiting by us talking about this? (N: Mhm) Like do you feel better? (N: Mhm) Like I don't feel better like, now I'm thinking about my body and like, yak now what animal I can compare myself too (N: Mhm) like, let's not do this and she was like, you're right like- and so I- I was like, let's say a good thing (N: Mhm) like let's- let's change it. And so...um I think they've responded pretty well. They might get annoyed but I was like sitting in my sorority this morning like going on a tangent about (N laughs) the Body Project so. (laughs) They're gonna be like stop talking about it.
Rose Post	Last night I went out to dinner with my roommate and her…her uh sorority little, and uh….her- and all of sudden someone started talking about like, oh I hate my nose. (N: Mhm) And then, someone else was like, oh like, yeah I don't really like something else, or whatever- it was exactly the kind of things that we had been doing in class and be like, don't do that. And like, and so then I did say s- like hey guys like, eh- um, like let's say- let's each say something we like about our bodies (laughs) like, we were just waiting in line for this restaurant so like, we had time to just talk and whatever. And then that was fun (N: Mhm) 'cause we were like, I really like my hair. And like, same thing. (N: Mhm) It was- It was physical traits. I guess I could've guided it a lit- away from physical traits in general but it was, it was nice to like be like let's, let's say empower ourselves (N: Mhm) right now. Um, so those comments make me…kinda uncomfortable

Interview peer participants. Peer participants noted minimal conversation about the intervention with their nominating intervention participant friends. Seventy-five percent of peer participants (n=6) noted that their peers did not discuss the content of the intervention with them. One of these participants did note that she felt her peer respond differently to a concern she shared about her body. Twenty-five participants of peers (n=2) noted that their friend shared some information about the content of the intervention. It is unclear whether some peers thought that they were not supposed to talk about the intervention with each other because of their perception of both receiving an intervention. One peer made a comment suggestive of this belief:

> But I guess we didn't talk about it that much in like terms of the study itself (N: mhm) yeah. But I- I guess it was because I hadn't had my second interview and she had (Aimee, Interview 2).

Twenty-five percent of peers (n=2) noted a perceived positive impact from the interview and perceived the interview as participation in an intervention. One of these peers noted:

> I think um going through this and like also knowing that the women's health center has been so proactive in the body image movement (N: mhm) and stuff. Um that it's like important to not ha-have like a stressor in your life (N: mhm). Yeah, it's really- I think- yeah I'm so happy I did it my third year (N: yeah) because I'm in it right now, I think moving forward I'm gonna like be much more aware of especially like negative self talk (N: mhm) and like um and if I- and like think much more cautiously about like things that I'm thinking about in terms of body image (N: mhm) ya know? (N: mhm) This is wonderful yeah (Aimee, Interview 2).

Overall peer interviews and survey score change reflected minimal exposure to intervention content. Because the design was descriptive and not experimental, no conclusive statements can be made about the cause of the observed change in dietary restraint ratings.

CHAPTER FIVE

Discussion

The results are consistent with past evaluations of the Body Project (Stice et al., 2008b) that suggest that the program decreases participants' thin ideal internalization and increases participants' body satisfaction. This result was noted in a statistically significant decrease in thin ideal internalization and restrained eating, and a statistically significant increase in body satisfaction. The change from pre- to post-measurement was significantly greater than the change from baseline to pre-measurement. The current results also add preliminary findings that the intervention may decrease participant engagement in fat talk, specifically expression of concerns about one's own body. Given that the intervention explicitly introduces the notion of fat talk, discusses its negative impact, and encourages participants to respond differently, this is a promising finding that the intervention activities on fat talk are translated into participants' daily lives with their peers.

Quantitative analyses indicated that participants experienced a significant change from baseline to pretest on measured constructs. These analyses suggest that the impact was to increase growth in relation to the affected outcome rather than reverse a problematic trend or to instigate a stable situation. Different possible factors may have contributed to this effect. This may reflect simply regression to the mean (Morton & Torgenson, 2005). However, was this the case, it would be expected that the regression would occur in both directions (i.e. lower scores getting higher and higher scores getting

lower), potentially nullifying a significant t-test finding. Another possible explanation is that participants experienced a positive impact from signing up for the intervention potentially based on hopes or expectations that the intervention might help with their body image concerns (Kirsch & Lynn, 1999). Evaluations that have not utilized a wait-list design (Stice et al., 2008b) have not noted a change in control participants from pre- to post-measurement. Consequently, this finding appears to be related to the wait-list design offering greater support for the potential of expectancy effects yielding initial significant change.

When analyzing participants' interviews to understand the ways in which participants' narratives about their bodies shifted with participation in the intervention, three notable findings emerged. These findings included: 1) academic stress was discussed as a central experience related to health behaviors and body image for the majority of participants. 2) Participants' narratives about body image, food, and exercise were interwoven with discussions of conflict and tension. This finding is consistent with past literature that women's discourses about their bodies contain a multitude of synergistic and dissonant voices (Gilligan et al., 2003). This experience of tension reduced while an increase in flexibility was noted between pre- and post-interviews for almost all interview intervention participants. 3) Relational identity was interwoven into participants' conversations about themselves and about the impact of the intervention. Participants' narratives about their bodies were often told through an objectified or relational perspective such that changes to a participants' body were frequently considered through the lens of an observer (Noll & Frederickson, 1998). Participants experienced the intervention as a centrally relational experience. These findings will be

explored further below. Implications of these findings for the intervention will be considered. Peers reported a reduction in restrained eating scale scores from baseline to post test. While other peer impacts (reduction in thin ideal internalization, fat talk, or an increase in body satisfaction) were not documented by quantitative findings, the majority of intervention interview participants noted a shift in at least one behavior with friends. The majority of peers did not report having discussed intervention content with her intervention peer or note recognizing a shift in conversations about body, food, or exercise. The discrepancy between participant and peer report is notable and will be explored further in this discussion section.

Academic Stress

The relation between academic stress and body image concerns is not a focus of significant attention in the literature, though the prevalence of eating disorders in college samples is well-documented (Bundros, Clifford, Silliman, & Neyman Morris, 2016; Schaumberg et al., 2014). As increasing pressures and course load rigor continue to grow in high school and college, and students are required to stay up late due to the combination of course load, extracurricular activities, and time management difficulties, some individuals may struggle to manage this juggle and utilize food as a coping strategy or exhibit a decrease in health behaviors. Moreover, for many, entry into elite universities marks a decline in perceived academic competence and status. Not all students who were once in the top ten percent of their high schools will be in the top ten percent in college. The interview data suggested that some students managed this decreased sense of competency with an increased focus on body image. Participants vocalized a sense of needing to compensate in the body image domain when the

academic domain felt threatened. This finding is consistent with eating disorder research that suggests that individuals with eating disorders display elevated levels of perceived control and low-self esteem (Williams et al., 1993). The idea of needing to compensate stemming from a core question of comparison and status with other people can be conceptualized as both an internalized and externalized presentational concern.

The intervention seemed to support participants in reducing their felt sense of pressure with presentational concerns. By questioning for whom the measuring up or presentation was happening, participants seemed able to alleviate some of their presentational-focused distress. Moreover, participants asserted that it felt very powerful to understand that other people were also struggling by hearing other women's stories and experiences. However, by reducing a felt sense of pressure and understanding others' experiences, participants may have to come to terms with their own body image concerns. This state may cause distress and be uncomfortable for some participants as noted by the conversations about ignoring bodies, distress, and social pressures as a means to react against and resist the felt constraints on women's bodies. While this ignoring approach may be effective and necessary for some as a coping strategy, it may limit a more integrated experience of self as fallible, vulnerable, and learning. Supporting environments of growth mindset and learning (Dweck, 2006) rather than environments supportive of effortless perfectionism, the state of achieving high physical and educational standards without displaying energy towards those pursuits, (Travers, Randall, Bryant, Conley, & Bohnert, 2015) may help college women in their growth of learning and self-acceptance.

For participants in groups, fat talk was discussed as a way to check out personal concerns and get reassurance about insecurities. Women may feel less able to directly communicate concerns they are having and instead use fat talk as a means to communicate and check various competency or confidence based concerns (Nichols, 2001). Increasing spaces where women can openly discuss and share personal experience may reduce a felt need for fat talk. Supporting such spaces and communities may help women face the various encountered challenges in their transition to college. Tolman and Debold (1994) suggested:

> We must begin to tell the truth, in groups, to one another. Our hunch is that if and when women and girls 'tell the truth' of their struggles for the power of their own desires, then we will create the knowledge that embodies the more powerful ways of being 'feminine' in the world (p.313).

How parents, peer groups, and universities disrupt environments supportive of competition and effortless perfectionism, and support the development of growth mindsets and body acceptance and the transition to college life is an important area of future consideration.

Tension

The presence of some tension with exercise and food choices can be conceptualized as a natural state of adulthood in Westernized culture in which our lifestyle and the availability of food choices necessitate some level of active maintenance and acknowledgment of parameters around health behaviors (Brug, Lenthe, & Kremers, 2006). Consequently, a complete absence of statements coded as tension and parameter might reflect a participant actively ignoring engagement in health behaviors or ignoring the tension state. Disentangling health behaviors coded as tension state from thin ideal pursuit behaviors coded as tension state is a challenging endeavor. Exercising produces

endorphins that physiologically increase mood and provide neuroprotective effects (Cotman & Berchtold, 2002). These mood enhancing effects make it challenging to disentangle to what degree participants reported feeling better about their bodies after exercise due to mood changes or due to a sense of accomplishing pursuit of a beauty ideal. Participants' assertions that healthy food choices include more fruits and vegetables are claims rooted in nutritional science and dietary recommendations (ChooseMyPlate.gov). However, it seemed to be the confusion about dietary choices, popularized diets, and emotionality following food choices that created disturbance for participants in this tension state combined with a tension reflective of attempting to meet or approximate beauty ideals.

The documentation of this tension is not new. Naomi Wolf (1991) commented on the pressures and conflicts women experience in the process of pursuing a myth of self-betterment through beauty. Underwood (2013) explored exercise behaviors of individuals in their twenties and found that participants described a narrow distinction between exercise as a "choice" and exercise as a "compulsion" (Underwood, 2013). Schaumberg, Anderson, Reilly, and Anderson (2014) found that half of the college participants in their sample reported engaging in compensatory exercise. Furthermore, self-objectification and body dissatisfaction seem to be dependent on degree of revealing clothing worn (Tiggeman & Andrew, 2012). This literature supports the finding that body image is contingent on numerous factors and constraints. These constraints seem to leave women vulnerable and in pursuit of balancing these various factors in pursuit of beauty ideals to attempt to feel comfortable in their lived experiences in their bodies. However, it seems for some that pursuit of these constraints leads to failed experiences

that make them feel worse about their bodies. The intervention seemed to help some participants alleviate aspects of the distress associated with this tension and increase dissonance with the notion of pursuing the thin ideal.

Some participants described being able to navigate the tension with relatively low levels of distress. Individuals who are naturally thinner may experience less distress in navigating the tension because of their closer approximation of current beauty ideals (Annis et al., 2004). While select participants with larger BMIs or appearance impacting medical conditions may have been forced to reconcile disconnect with beauty ideals and thus experienced a forced growth yielding higher body satisfaction. Other participants noted a daily and variable struggle in the tension state in which each behavior corresponded with an increase or decrease in body satisfaction and any amount of weight gain was feared. Researchers have documented an association between variability in body satisfaction and perception of dietary intake while attempting to lose weight (Lattimore & Hutchinson, 2010). Participants seemed to express concern that a reduction in a state of vigilance over one's body could yield this feared weight gain state. The interrelationship of the constructs within the tension combined with the physiological benefits of exercise and nutritional food choices make it challenging to extricate what is compulsive and reflexive and what is healthy and productive. Consequently, it seems that it is the emotionality and distress or ignored distress combined with rigidity that negatively impact women's experiences and shift the tension from a balancing of health behaviors to a balancing of fear and morality related to one's body.

Relational Experience

It can be argued we are relational beings and exist in our bodies in relational ways. Consequently, it is not the ignoring of the body as a relational experience but the extent to which relational translates into objectified and self-objectified that seemed to fog participants' embodied or lived experience in their bodies (Noll & Frederickson, 1998). A conflict between self in relation to others and self in relation to self emerged throughout the narratives of participants. This then seemed to correspond with participants' increased experience of their bodies as susceptible to external pressures and external constraints. Like tension experiences, the experience of the body as relational is a complicated and interwoven occurrence. John Berger, based on his cultural critique of art, discussed the inherently different ways of being in which men and women inhabit the world. He stated:

> Women watch themselves being looked at. This determines not only most relations between men and women, but also the relation of women to *themselves*. The surveyor of woman in herself *is male: the* surveyed female. Thus she turns herself into an object – and most particularly an object of vision: a sight. (Berger, 1972, p. 47).

The suggestion is not that considering other people's opinions or perceptions is an inherently negative state, but that for some participants this consideration seemed to overwhelm their own internal consideration and internal sense of embodiment. Moreover, participant experience seemed to not only be impacted by the self-presentation to men, but also self-presentation to female peers. Having the relational experience of the group in which participants were supported within relationships to consider the beauty ideal and its impact on their lived experience seemed to help participants develop skills to assert their own desires within a culture supportive of beauty ideal pressures. Moreover,

the group seemed to disrupt the presentational and competitive interaction between the participants in the group and introduce a different less objectified experience in women's relationships with each other. For many, this seemed to alleviate some of the distress previously asserted around concerns about what others would think about weight gain or failure to approximate beauty ideals.

Mirror rituals. This transition between embodied experience and presentational experience was highlighted in participants' conversations about mirror rituals. Berger commented on the use of the mirror in paintings, noting, "the real function of the mirror was to make the woman connive in treating herself as, first and foremost, a sight" (Berger, 1972, p. 51). Morning and evening mirror experiences can be conceptualized as an overlap between a participants' relational experience with herself and a participants' relational experience with other people. The mirror serves as a transitional point at the beginning of the day between private and public time and at the end of the day between public and private time. It is during this transitional time in which an individual is evaluating their appearance in preparation for being observed or evaluating their appearance after a day of being observed. Mirror exercises during the intervention seemed to help some participants shift a negative self-evaluation to a more positive self-evaluation during mirror time. Future programming might consider ways to continue to help participants reduce self-objectification when looking in mirrors and increase focus on internal experience.

Body voice. The use of the body voice marked another element of some participants' relational and embodied experiences. The body voice did not occur frequently in interviews and consequently each occurrence was notable. It is unclear

whether some participants do not utilize the body voice because they experience their hunger, desires, etc. as stemming from themselves and accordingly utilize I statements. It is also plausible that the body voice represents a transitional period of embodiment or a unique and actualized experience of embodiment. Further research is needed to understand when the body voice occurs, for whom, and in what stages of body satisfaction and embodiment. This research might help future interventionists to consider whether intentional implementation of the body voice into intervention content is helpful for participants.

Intervention as a relational experience. Findings from the ways in which participants discussed their experiences in their bodies and the ways in which participants discussed their experiences in the group suggest that the intervention may exert some of its impact by intervening on women's body images in the ways that women experience body image: relationally. This finding is consistent with recent qualitative evaluations of the Body Project (Shaw, Rohde, & Stice, 2016) in which participants made reference to the value of the group format of the intervention. The finding is also consistent with an evaluation of the Body Project that found an internet-based cognitive dissonance model was less effective than peer-led and clinician-led groups (Stice, Rohde, Shaw, & Gau, 2017).

The ways in which participants' experienced the intervention as relational mirrors the conversations participants had about their bodies as relational. Body image focused interventions may also be impacting participants not only through cognitive dissonance, but by providing a relational experience that encourages female participants to be less critical and more accepting of their bodies. Thus, as feminist psychologists have

discussed the ways in which adolescent girls develop a sense of self in relation to others while having to navigate between personal desires and desires of a partner with whom they are in relation (Surry, 1991), being in relation with current culture and beauty ideals leaves the adolescent or emerging adult navigating between conflicting pressures they cannot meet, fulfilling their own needs and approximating the ideals presented in relation before them. The group may provide a relational experience for some participants that is able to put the participant in relation with a group of people who support their pursuit of confidence, joy, and fulfillment outside of approximating beauty ideals, while eliciting dissonance with the participant's relationship with beauty ideal culture. Moreover it may provide community or a safe-space away from activities out of the group in which participants may experience their bodies on display. Popular media has recently afforded more attention to catcalling and the ways in which women experience their bodies on display during daily activities such as going to work or going running. Helping participants to navigate living in a body on display and living in relation with a potentially toxic culture may be aspects of the intervention that occur in between the script and interactions within the group and with facilitators.

Participants expressed desire for their friends and family to have greater contact with the intervention content either to support their own process of fighting the thin ideal or to support friends they saw as in need of this programming. Participant desire for continued intervention activities reflected participant desire for continued relational experiences supporting the intervention. The shared experience of the group and the desire for future shared experiences should be considered as an important aspect of the intervention from participants' perspectives.

Integrating Results

The above results provide a more complex picture of participant experience in the Body Project than has been described previously in past evaluations. Understanding and integrating the previously theorized cognitive dissonance mechanism of the intervention and the newer finding of the importance of the group format of the intervention has important implications for intervention development and consideration of future intervention goals.

Providing young women with positive relational experiences that are supportive and promotive of health may help young women face the complex tasks of navigating the tensions that seem to be inherent in their daily lived experiences while giving more precedent or voice to health and honest sharing and support giving. The Body Project has been successful in its stated and important goal of reducing unhealthy weight control behaviors and eating disorders by reducing thin ideal internalization and body satisfaction. These goals and results should not be minimized as they provide an important step in promoting women's health and providing an antidote to combat thin ideal pressures and eating disorder development.

While from a disease reduction standpoint, these achievements are the end goal, from a feminist viewpoint and from a wellness oriented perspective, they provide a substantial beginning, but are not the end. Participant narratives revealed complex pressures and tensions that participants navigate daily in regards to weight management, food monitoring, body checking or concealing, and body satisfaction. While participants experienced changes in survey scores and seemed to exhibit increased flexibility and reduced tension related to food, exercise, and body related feelings/behaviors, their

narratives continued to illustrate experiences of tension and feelings of competing pressures related to the content of the intervention and felt cultural pressures supporting beauty ideals. The actual experience of body image for the individual is a constellation of multiple pressures, motivations, voices, and desires. It is not just symptoms of thin ideal internalization, unhealthy weight control behaviors, and body dissatisfaction, but is instead a complex web of these factors that contribute to daily or weekly fluctuations in body image experience and reduce women's available cognitive load and energy. The increase in body satisfaction is not enough and continued consideration should be afforded to constraints and tensions within the experiences of being a young woman. Participants upon exit from the intervention seemed to have varying abilities to continue navigating these tensions and pressures. Given that relationships were noted as an important aspect of the intervention, some participants may need follow-up sessions once the dissonance is established to talk about how to navigate the different tensions and different voices, while other participants seemed more able to continue this process on their own or with communities already established. Consideration of next step groups such as Body Project Step Two might help provide resources for participants who seek continued community to support the integration of body image content and messages into their experience. Additionally, future programming might consider providing opt-in experiences or additional relational experiences for participants who desire more support and/or activities.

While body image was discussed as a relational experience, the impacts of positive body image relational experiences did not seem to extend to peers of participants as noted by the absence of a correlated change in peers on measured constructs and the

absence of change on body satisfaction and thin ideal internalization measures. While a significant change in dietary restraint was noted in peers of intervention participants, the design of the study limits assertions about causality and the change was not significantly correlated with rate of peer change. If the change in peer dieting behavior was related to the participants' engagement in the intervention and associated transmission of impact to peers, then peer change may not be a result of the same mediators of the intervention participant effects. Peer change may not occur in the same pattern as intervention participant change and may instead directly impact unhealthy weight control behaviors such as restrained eating.

Aside from potential constraints or methodological factors that may have contributed to the absence of correlated peer change, it is also important to consider theoretically why effects may not have been occurred. The current study hypothesized that peer effects would naturally diffuse as a result of changed intervention participant behavior and reduced fat talk. However, it is possible that if peer positive social contagion effects were to occur, the mechanism of transmission would need to be more active and more intentional or might take a more sustained amount of time. For example, participants might need to share worksheets and explain homework activities from the intervention. They might also need to involve their friends in behavioral challenges and intervention activities. Given that results suggested it is not simply the introduction of cognitive dissonance with the thin ideal, but this experience within a group context, peers might need a related group experience in order to experience secondary intervention effects. It is also possible that while shifts in behavior felt noticeable to intervention participants who were primed to focus on their fat talk, these small shifts may not have

been noticeable enough for peers to register a shift and incorporate that information into their own experience. Future studies might consider more active prompting of participants to involve their peers. Additionally, studies might consider whether provision of the intervention to key social influencers in a contained social group might promote a relational experience for non-intervention members from which they can experience intervention effects.

What is notable in the discussion of peer effects is the divergence between participants' reports about their own behavior with peers during and after the intervention and peers absence of such reports. Some participants expressed confidence in their ability to reduce peer fat talk. However, other participants noted how confusing and challenging it felt to speak back to peers. This challenge in responding to peers led some participants to request that the intervention be offered to larger groups of people such that they would not feel alone in attempting to shift a cultural orientation to bodies, food, and exercise, which felt to them like a significant and daunting task. Consequently, while participants attempted to and reported shifts in their behavior, these attempts were noted as challenging. Moreover, the majority of intervention participant peer responses seemed to focus on ending the fat talk, which in this short period of time may not have been understood and digested by peers. Future interventions might focus on how to support participants as they attempt to engage differently with their peers.

Implications for Future Intervention

During the course of the interviews, participants discussed aspects of the intervention that felt challenging and shared ideas/recommendations for addressing their concerns. These participant recommendations are consolidated below. Integrated with

these recommendations are additional suggestions based on researchers' identification of areas that participants misunderstood intervention activities or were not responsive to the intervention. Cumulatively, these results provide suggestions for the implementation of interventions similar to this one.

Participants noted that responding to fat talk and role-plays was the most challenging part of the intervention. Future participants may benefit from additional attention paid to supporting fat talk ending or fat talk shifting responses. Participants in the sessions expressed concerns such as worrying about being mean, not knowing what to say, or wondering how to still discuss and express body dissatisfaction and discontent with friends. Though time is a limited resource in the intervention and the mechanism of action is not hypothesized to be a reduction in fat talk, but rather a reduction in thin ideal internalization (Stice et al., 2006), the question of supporting participants to respond to future fat talk is still a relevant issue given the detrimental effects of fat talk (Arroyo & Harwood, 2012). Additionally, given current findings from the qualitative portion of the study and Stice, Rohde, Shaw, and Gau (2017) about the perceived importance of the group nature of the intervention, improving participants abilities to respond to their peers outside of the intervention and reduce the occurrence of fat talk surrounding them may help promote the hypothesized positive peer contagion by helping participants influence their social groups to be supportive of the intervention.

When participants discussed changing behaviors with peers, some participants seemed to conflate reassuring their friends with responding to fat talk. For example, during the fat talk activity in the intervention and in follow-up interviews participants shared that when friends complained about their bodies, they reassured them that they

look great (reassuring the concern) rather than responding in some way that would discount the fat talk (e.g. don't even waste your energy on worrying about that). Separating these responses in future interventions might better help participants to understand the difference between reassurance and reduction in relation to fat talk. Further delineating this distinction may help participants to internalize counter-thin ideal beliefs, such that they better understand that the issue is less so about gaining five pounds and more so about the over concern related to the five pounds.

Revisiting programming such as Healthy Weight (Stice et al., 2006), a program similar to the Body Project which incorporates nutritional information may help participants navigate between making healthful food choices and resisting felt pressures to pursue the thin ideal. However, findings from comparisons of the Body Project and Healthy Weight, while finding significant effects for both, noted smaller effects for Healthy Weight (Stice et al., 2006). Additional considerations for future programming might consider ways to best help participants better understand and navigate the difference between making healthful choices and making choices in which they are seeking to pursue the thin ideal or to evaluate for whom the Healthy Weight intervention is most appropriate and for whom the Body Project is a better match. However, given the state and experience of tension with this subject, this is not an easy task.

Though the intervention is clear that the Body Project is not intended as an eating disorder treatment, research continuously suggests that eating disorders exist on a continuum. Consequently, the line of diagnostic eating disorder versus subthreshold eating disorder versus an individual engaging in unhealthy weight control behaviors may be a blurry one for community-based resources offering this intervention. Additional

attention focusing on exclusion criteria and for whom the intervention is not appropriate may be helpful for translational practice. While individuals in research studies are selected out, this practice may be less consistent for participants who receive the intervention in college or community based settings. For individuals more consumed by their experience of dissatisfaction and weight-control behaviors, a conversation about body image with women experiencing "normative discontent" might not provide a shared experience and may feel confusing or distressing. Further research might consider identifying how recommended exclusionary criteria are translated from research to practice and how to identify participants for whom the group might yield iatrogenic effects.

Further research might consider group composition, and the relational factors within groups that moderate or mediate intervention effects. For example, might the group be less effective for participants who hold identities that make them feel separate from the group. While some participants noted that the diversity of the group felt important for recognizing the universality of body image concerns for women, additional attention might be afforded to a balance between created a diverse group and one within which participants feel a sense of shared concerns. Further investigation into group composition might help promote the relational experience of the group noted to be impactful.

Another consideration for future intervention might focus on the interested students who were not eligible to participate. Numerous interested students were excluded from participation based on shift from DSM-IV to DSM 5 criteria and the introduction of Binge Eating Disorder into the DSM 5. Consideration of whether or not

this intervention would be appropriate for individuals meeting criteria for Binge Eating Disorder is another area of future inquiry. Given the large percentage of interested students who were excluded, consideration should be afforded to how to best meet the needs of these individuals in college settings.

Constraints and Limitations

This study focused on an intervention for college women at a predominantly white institution. Though efforts were made to recruit a diverse sample, representation of minorities in the intervention sample did not correspond to current demographics in the United States. The representation of minorities in the sample limits generalizability outside of women at a predominantly white elite institution. Due to the sample size of interview participants and interview participants' peers' knowledge of the participants in the sample, to avoid discussing interviews in ways that could be identifying, themes related to identifiable information including racially-specific beauty concerns were not discussed in the results. The sample size limited the ability to control and test for nested groups and group composition. Examining impact of group composition both demographically and based on risk level may benefit future inquiries.

Social contagion. While a change in restrained eating was noted in peers, design limited interpretation of this result and additional impacts on peers were not documented in the quantitative results. These results may have several limitations and so need to be interpreted cautiously. One, it was challenging to ensure that peers completed surveys within close proximity to participants completing the program. Two, researchers could not ensure that the peers who completed the surveys had contact with the intervention participants during the time that participants were in the intervention. Three, it was

challenging to recruit peers and the sample size of peers who completed both pre- and post-surveys was small thereby limiting power and an ability to detect effects. Four, not all intervention participants provided the name of peers. Five, the peer aspect of the study was designed to be descriptive with no control group measured; consequently the findings are limited in being descriptive and no causal claims can be made. Six, the narrow time window for peers to provide data also limited this aspect of the data collection. Seven, it was also unclear whether participants in the interview inadvertently thought that they were not supposed to discuss the content of the intervention with peers in the study. As this is the first study, to the knowledge of the author, that attempted to track peer positive social contagion during a body image intervention, and given that null findings are less frequently published, it is unclear whether other studies have found similar inconclusive results

Conclusion

Overall, results suggest that the Body Project programming yielded a positive impact on participants. Both qualitative and quantitative results support this conclusion. Participants exhibited a significant change in desired directions in Thin Ideal Internalization, Body Satisfaction, Restrained Eating, and Fat Talk Concerns during the course of the intervention. Moreover, participants generally seemed to describe their experiences in the intervention in positive terms, documented by a reduction in voiced experiences of tension, comparison, and presentation for most interview participants. Overall participants suggested that participating in the intervention in the group format helped them better identify and organize the idea and costs associated with the thin ideal and develop skills to respond to those pressures in the future. Participants frequently

cited a desire to change the larger social context supportive of beauty ideals either through their own future behavior or by impacting the behavior of their peers, siblings, or parents. Participants benefited from a reduced sense of isolation in their own body image concerns, which seemed to increase their sense of community and camaraderie with other women. Future research is needed to explore the question of positive peer social contagion from an eating disorder prevention intervention.

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Appendix A.

Initial Email

Thank you so much for your interest!

The study is on college women's experiences with food and body image. In the course of the study I would ask you to complete two surveys and participate in two two-hour sessions on body image with about 10 other college women.
The first step for participating is to complete an online survey:
<survey link>

In order to qualify you need to be between the ages of 18-28 and not currently engaging in diagnostic levels of eating disordered behavior. If you have eating disordered thoughts, these would not disqualify you from participating. If you are unsure, I am happy to speak with you, or you can go ahead and complete the survey and if there was any concern, I would provide you with treatment resources. The reason for this is that this intervention is not a treatment for eating disorders.

After that, when we get enough participants for a group, I would go ahead and schedule it. I would schedule it to make sure you could attend both groups. If you could email me your general availability, I would really appreciate it!

After the groups, we would ask you to complete another online survey. You get $10 for participating in each group, ($20 total), and an additional $20 if you are selected and agree to participate in the interview portion of this research project.

I will also ask you to name some friends so that I can also hear about your friends' experiences with food and body image. If you are not comfortable providing friends' information, you can just skip that survey question.

If this sounds good to you, you can go ahead with the survey. Consent to participate in the research appears at the beginning of the survey. Please call or email with any other questions or concerns.

All the best,
Nora