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Body Dissatisfaction and Disordered Eating Among College Women's Social Networks: An Investigation of Perceived Changes Following a Dissonance-Based Body Image Intervention

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**BODY DISSATISFACTION AND DISORDERED EATING AMONG COLLEGE
WOMEN'S SOCIAL NETWORKS: AN INVESTIGATION OF PERCEIVED CHANGES
FOLLOWING A DISSONANCE-BASED BODY IMAGE INTERVENTION**

by

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ABSTRACT

BODY DISSATISFACTION AND DISORDERED EATING AMONG COLLEGE WOMEN'S SOCIAL NETWORKS: AN INVESTIGATION OF PERCEIVED CHANGES FOLLOWING A DISSONANCE-BASED BODY IMAGE INTERVENTION

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Body dissatisfaction is associated with numerous health consequences and is pervasive among college women. Effective interventions exist that reduce body dissatisfaction in college women by helping them resist sociocultural pressures to conform to the appearance ideal, such as the Body Project. Yet research is limited on whether social and behavioral processes help participants reduce their engagement in sociocultural appearance-ideal messages and contribute to the intervention's effectiveness. The primary purpose of the present study was to examine these social and behavioral processes, including the changes in college women's social networks associated with their participation in the Body Project. Undergraduate and graduate students participated in the two session, peer-led version of the Body Project and completed measures at five timepoints (Baseline 1, Baseline 2, Post-intervention, 1-month Follow-up, 3-month Follow-up). The measures assessed constructs examined previously in Body Project research in addition to body dissatisfaction maintenance behaviors (appearance comparison tendency, body checking, and negative body talk) and participants' perceived social networks' body dissatisfaction and related behaviors. Seventy-nine completed Baseline 1, of which 39 completed at least one Body Project session and 31 completed the full two-session intervention. Because of the coronavirus pandemic, Body Project groups were stopped indefinitely and 22 who completed Baseline 1 were unable to attend their pre-scheduled group. Latent growth models with three piecewise slopes (assessment effects, intervention effects, and maintenance effects) were used to examine changes

in these measures beyond the effects of time. Significant intervention effects were found for the previously measured constructs and the body dissatisfaction maintenance behaviors examined. One marginally significant change in participants' social networks was found; the friends participants removed from their social networks engaged in more disordered eating than the friends they added at 1-month follow-up. Despite this limited evidence for social network change, the study revealed several ways in which social networks may perpetuate body dissatisfaction and related behaviors. This was one of the first studies to examine these social and behavioral processes within the Body Project and assess these constructs in women's social networks. Findings suggest that additional processes, including reductions in body dissatisfaction maintenance behaviors and the facilitation of perceived group similarity and closeness contribute to the intervention's effectiveness and should be explored further in future research and considered in the development of cost-effective intervention modifications.

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This dissertation is dedicated to my mom, dad, and sister
for their continuous love and support.

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CHAPTER I

INTRODUCTION

Body dissatisfaction, defined as displeasure with the size and shape of one's body, is associated with numerous negative health consequences, including eating disorder development, physical activity avoidance, lowered self-esteem, and overall poorer quality of life (Bucchianeri & Neumark-Sztainer, 2014). The rates of body dissatisfaction are particularly high among college women with approximately 80% endorsing maladaptive beliefs about their body shape and weight (Fitzsimmons-Craft, 2011) and 13% meeting criteria for an eating disorder (Eisenberg et al., 2011). The many negative health consequences associated with body dissatisfaction and the high incidence of body dissatisfaction in college women has led to the development of body image interventions for this population (Alleva et al., 2015; Stice et al., 2017). These interventions are diverse in their content and modality, yet they all aim to reduce the negative impact of appearance-ideal sociocultural messages (i.e., messages that promote the sociocultural standards of attractiveness) on women's body image. In previous intervention studies, efficacy is demonstrated by reduced outcome measures of body dissatisfaction, appearance-ideal internalization, and disordered eating symptomatology (Stice et al., 2017). Even though the interventions aim to reduce the harm of appearance-ideal sociocultural messages, few examine how these interventions may alter women's engagement with these messages, such as their involvement in negative body talk with their friends and appearance-focused social media. Although appearance-ideal messages are all around us, skills learned in interventions can help women change the frequency and nature in which they engage with these messages to promote a positive body image. The implementation of these skills may not only lead to changes in women's body dissatisfaction and disordered eating behaviors, but also

lifestyle changes related to the behaviors they engage in and the friends they spend time with to maintain these improvements.

The Body Project, a dissonance-based group intervention, is currently the leading body image intervention for college women with prolific research support spanning 20 years and demonstrating its success in reducing body dissatisfaction and disordered eating (Stice et al., 2017). In addition to its empirical support, the Body Project leverages a unique social environment, a supportive group comprising of women with shared experiences. Although nonspecific factors related to the group modality have been implicated as contributors to the Body Project's effectiveness (McMillan et al., 2011), the social aspects of the intervention have been underexamined. Aside from the group environment, the intervention facilitates an attitude shift away from the appearance ideal and provides women skills to combat negative body-focused peer interactions (Becker & Stice, 2017). The intervention has been well-supported, but its implementation is costly, requiring extensive training and staff involvement, and online translations of the program have been less effective than the traditional group modality (Stice et al., 2017). The purpose of the present study is to close gaps in the literature by examining social processes and behavioral changes related to the intervention's effectiveness, including changes in participants' social networks. Following the intervention, women may seek interactions that help maintain their positive body image, which may lead them to spend less time with friends who adhere to appearance-ideal attitudes and behaviors or facilitating similar attitudinal and behavior changes in those friends. This examination of the social mechanisms associated with the intervention's effectiveness has the potential to help inform modifications to body image intervention implementations and online translations.

In the following sections, the Body Project intervention and relevant research is described to provide context for the ways in which the present study adds to this body of research.

Following this description, a discussion of sociocultural influences, including peer influences, on body dissatisfaction is provided to highlight these extensions and the importance of examining social networks in the context of body dissatisfaction. Given the present study's purpose of extending our understanding of social network changes that occur in relation to body image interventions, social network theories and research are next discussed.

The Body Project

The Body Project was developed based on dissonance theory with a goal of facilitating attitudinal and behavior changes to reduce body dissatisfaction and prevent eating disorder development (Becker & Stice, 2017). According to dissonance theory, when a person's cognitions do not align with their behaviors psychological discomfort known as dissonance arises and motivates behavior change to produce greater consistency and alleviate the discomfort (Festinger, 1957; Stice, Shaw, et al., 2008). In accordance with this theory, the Body Project encourages women to take a counter-attitudinal stance to the appearance ideal in order to create dissonance and provoke change in their behaviors that align with the appearance ideal (e.g., reduction in dieting and negative body talk; Stice, Shaw et al., 2008). This is achieved through a series of verbal, behavioral, and written exercises that encourage women in a group environment to critique the appearance ideal and combat appearance-focused information. The development of the Body Project, including the format and administration of these activities, has gone through an iterative process that started with establishing the intervention's efficacy and has culminated in disseminating the intervention to college campuses in 125 different countries using undergraduate peer facilitators as intervention administrators (Becker & Stice, 2017).

Efficacy, effectiveness, and dissemination. As previously noted, the Body Project intervention has been shown to significantly reduce body dissatisfaction and eating disorder symptomatology in multiple efficacy trials conducted by independent teams and has produced significantly larger effects than alternative interventions (Becker et al., 2005; Halliwell & Diedrichs, 2014; Mitchell et al., 2007; Serdar et al., 2014; Stice, Marti et al., 2008; Stice et al., 2006). The first randomized controlled trials examined the program's efficacy in reducing body dissatisfaction in adolescent girls (14-19 years of age) with body concerns compared to an eating disorder prevention program that promotes healthy weight management through diet and exercise, an expressive writing control condition, and an assessment-only control condition (Stice, Marti et al., 2008; Stice et al., 2006). Both interventions were administered in three 1-hour sessions by trained graduate students. Findings demonstrated that intervention groups experienced significant reductions in body dissatisfaction and related measures compared to both the active and assessment-only control groups, but the Body Project group showed greater reductions with some reductions persisting through 3-year follow-ups (Stice, Marti et al., 2008).

The efficacy findings have also been extended to ecologically valid implementations (Stice, Butryn et al., 2013; Stice et al., 2015; Halliwell et al., 2015; Stice, Rohde et al., 2013). Stice, Rohde, and colleagues (2013) were the first to conduct an effectiveness trial on college campuses where college clinicians recruited participants and delivered the intervention in ecologically valid university settings on seven different college campuses. They compared a dissonance-enhanced version of the program that emphasized the voluntary nature of the group, video recorded sessions, and administered harder homework assignments to an educational brochure control condition. Results indicated that the dissonance-enhanced Body Project produced significantly greater reductions in body dissatisfaction and other disordered eating risk

factors than the control condition. The effect sizes indicate that the effects of intervention were on average more than half a standard deviation change in outcomes, and these reductions remained at the 1-year follow-up. These findings highlight the intervention's effectiveness on college campuses when it is administered by college clinicians.

An additional body of work has examined whether the intervention can be peer-delivered (i.e., trained undergraduate students to facilitate groups; Halliwell et al., 2015; Stice, Rohde et al., 2013) and internet-delivered (Stice et al., 2012; Stice et al., 2017) to facilitate broader dissemination of the program. In addition to making campus implementation and dissemination easier, peer-led groups may also induce greater feelings of support and connectedness among groups by containing only same-aged peers (Greif et al., 2015). Conversely, the internet-delivered version may not replicate change related to group dynamics but increase access to the intervention for women on and off college campuses. Stice and colleagues (2017) examined which of the three delivery methods, clinician-led, peer-led, and internet-delivered, produced greater symptom reductions in college women. The internet-delivered version of the Body Project includes six 40-minute modules involving activities and games designed to critique the appearance ideal. The study found that both group-based interventions produced greater symptom reductions than the internet-delivered version. The effects produced by the two group-based versions did not significantly differ suggesting that peer-led groups may be as effective as clinician-led groups with the proper training (Stice et al., 2017).

Although the peer-led version of the Body Project may be easier to disseminate than the clinician-led version, both group-based versions are costly to implement and maintain on college campuses. The peer-led version requires extensive training and supervision of peer facilitators to ensure their competence and adherence to the scripted protocol (Rodgers & Franko, 2015).

Longitudinal research on the program's sustainability on eight college campuses that conducted effectiveness trials found that only one campus was continuing to deliver groups two years after the effectiveness trial ended (Rohde et al., 2015). The most common reported barriers to maintaining the program were the time required to deliver the program and high staff turnover rates. Further, the primary deterrent of the program reported by undergraduate women was the time required of the intervention (Atkinson & Wade, 2013). To reduce the burden on participants, the two 2-hour session version of the program is recommended and will be used for the present study (Body Project Peer-Leader University 2 Session Version Script, Becker et al., 2018; see Appendix A for the script). It includes the same material as the four 1-hour session version used in previous studies (Stice, Rohde et al., 2013; Stice et al., 2017), but reduces the likelihood of participant drop-out by reducing the number of sessions. Yet further modifications are still needed to reduce the remaining costs associated with the intervention. Given that the internet-delivered version demonstrated lower reduction rates across symptoms than the group-based versions (Stice et al., 2017), a better understanding of the contributors to the group-based version of the intervention's effectiveness is needed to inform better cost-efficient translations.

Mechanisms of change. Research focused on understanding the intervention's mechanisms of change have found that reductions in thin-ideal internalization significantly mediate the effects of the intervention on body dissatisfaction and disordered eating reductions (Seidel et al., 2009; Stice et al., 2007). This suggests that the dissonance experienced in the intervention reduces women's internalization of the thin-ideal (i.e., desire to prescribe to the societal standards of attractiveness), which, in turn, reduces their body dissatisfaction and disordered eating. In order to examine the association between dissonance and symptom reduction, McMillan and colleagues (2011) examined differences between high- versus low-

dissonance conditions in an experimental study. Similar to the dissonance-enhanced condition in Stice, Rohde and colleagues (2013), the high-dissonance condition involved reminding participants of their voluntary participation and making homework more challenging yet optional. Further, accountability was increased by videotaping sessions, asking them to write their names on their assignments, and not informing the group their responses were confidential. In contrast, the low-dissonance group was informed they were expected to complete activities and homework, but the homework was easier and there were fewer opportunities to participate in group discussions. Findings demonstrated that both conditions were effective in reducing body dissatisfaction, thin-ideal internalization, and disordered eating symptomatology (McMillan et al., 2011). Women in the high-dissonance condition experienced greater reductions in disordered eating symptomatology, but not greater reductions in thin-ideal internalization. This suggests that the content of the intervention, psychoeducation on the costs of the appearance-ideal and body acceptance activities, and the nonspecific factors, such as group support and normalization of body dissatisfaction experiences, that were consistent between conditions may play just as important of a role in the intervention's effectiveness as the thin-ideal internalization reduction produced by cognitive dissonance.

The findings that the internet-delivered version of the intervention produced smaller effect sizes than the traditional peer-led group environment provide further support for group-related nonspecific factors being important in fostering symptom reductions (Stice et al., 2017). With a nonspecific label, these group processes, aside from expectations of change (Roehrig et al., 2006), have not been directly measured in the literature. It is likely that perceived group closeness and similarity may foster a normalizing and validating environment for participants that is important in the change process.

In addition to the perceptions of the group environment, the application of the skills learned in the intervention to participants' lives following the intervention have not been directly measured. The intervention provides women practice in combating negative body talk (i.e., statements made by others speaking negatively of their own or someone else's body) and persuading a friend against making decisions based on body dissatisfaction (e.g., dieting, avoiding activities) as well as discussions on reducing other behaviors that increase body dissatisfaction, such as body checking (e.g., looking at the mirror each time they go to the bathroom, examining the spread of their thighs when they sit) and making appearance comparisons to others including unattainable images on social media (Greif et al., 2015). These collective behaviors, negative body talk, body checking, and appearance comparisons, are habitual behaviors that are pervasive across society and have been found to contribute to body dissatisfaction maintenance (Fitzsimmons-Craft et al., 2014). Although the intervention is effective in reducing body dissatisfaction and thin-ideal internalization that are likely to facilitate reductions in these behaviors concurrently, these behaviors may be more challenging to change within women's social networks. Discussing body attributes and checking one's appearance in the mirror are often perceived as benign behaviors that are usually encouraged by other women. For women who take part in the Body Project, they leave a supportive environment that has combated these behaviors and return to their social networks where many of these behaviors may still be encouraged and normalized. To maintain the reduction of body dissatisfaction accomplished through the intervention, these women may be challenged to facilitate change in their social networks to reduce these behaviors or to shift their time from women who are engaging in these behaviors often to those who are engaging in them less often. These changes

they make consciously or unconsciously in their social networks may help them maintain the benefits received from the intervention across time.

To address these limitations in research on the Body Project and other body image interventions, the present study examined participants' group perceptions following the intervention and the changes participants experience in their engagement in body dissatisfaction maintenance behaviors and social networks. The present study is also an effectiveness trial for the two-session peer-led version of the intervention. Although this format is recommended by the intervention authors (Becker et al., 2018), a limited number of published studies have used this version. Further information on the roles body dissatisfaction maintenance behaviors and social networks play in maintaining body dissatisfaction and related behaviors in college women will be discussed in the following sections to help describe the significance of these limitations in Body Project research.

Sociocultural Factors Associated with Body Dissatisfaction in College Women

Body image is a multidimensional construct that encompasses an individual's self-perceptions, their cognitive-affective responses, and behaviors related to their bodies (Cash & Deagle, 1997). Body dissatisfaction is the cognitive-affective domain of body image and refers to the negative thoughts and feelings about one's body (Gardner, 2011). Body dissatisfaction is associated with numerous negative health consequences and is pervasive, affecting as many as 72% of women and 61% of men (Fiske et al., 2014). Although everyone is at risk for body dissatisfaction, college women are among the age and gender group with the greatest risk with as many as 80% affected (Fitzsimmons-Craft, 2011). College has been theorized to be a vulnerable developmental period and environmental context for the development of body dissatisfaction for several reasons. College is a time when peer interactions and influence increase as does the

salience of weight and shape concerns that impact college women's self-concept formation (Fitzsimmons-Craft, 2011). Sociocultural factors are implicated in the majority of theories describing the development and maintenance of body dissatisfaction and disordered eating (Fitzsimmons-Craft, 2011). In conjunction with the increase in exposure and susceptibility to sociocultural factors, college is often when clinically significant body dissatisfaction and eating disorders emerge (Stice, Marti et al., 2013).

According to sociocultural theories, body dissatisfaction is the result of internalizing the increasing pressures for women in Western society to meet the appearance standards of beauty (Fitzsimmons-Craft, 2011). Although what is considered the "appearance ideal" is evolving, the messages delivered by the media, family, and friends communicate that the appearance ideal is associated with positive attributes and rewards (e.g., happiness, wealth, fame, success). Not only is this appearance ideal portrayed as desirable, but also achievable. Paradoxically, the degree of thinness and physical fitness required is far from achievable and the costs associated with attempts to achieve these standards are anything but desirable. Although exposure to these messages alone may contribute to body dissatisfaction, theory suggests that sociocultural messages are particularly harmful if the person internalizes them or "buys into" what they are communicating (Fitzsimmons-Craft, 2011). The internalization of these messages has traditionally been labeled thin-ideal internalization, which encompasses the degree to which a person believes that thinness is desirable and achievable. Given that the appearance-ideal standard is evolving and becoming even more unattainable with current expectations to be physically fit as well as thin, the term appearance-ideal internalization is the preferred term today. It is theorized that the less a person internalizes messages surrounding this ideal, the more

likely they will be able to avoid the negative consequences of body dissatisfaction and disordered eating associated with the internalization.

Yet considering the high rates of body dissatisfaction, many women do internalize these sociocultural messages to be thin and physically fit. Body dissatisfaction arises when women ascertain that there is a discrepancy between their bodies and the appearance-ideal body that is internalized to be appropriate and necessary for female beauty. Several studies have demonstrated that increases in internalization is associated with greater body dissatisfaction (Keery et al., 2004; Shroff & Thompson, 2006; Stice & Whitenton, 2002). Further research suggests that people are active participants in these messages and their engagements with them are deliberate (Fitzsimmons-Craft, 2011). Therefore, social-cognitive processes have been used to explain the connection between internalization and body dissatisfaction. Three social-cognitive theories explain how women receive information about their bodies and their perceptions of how others perceive their bodies to understand the distance between their actual body and their ideal body: social comparison theory (Festinger, 1954), objectification theory (Fredrickson & Roberts, 1997), and the tripartite influence model (Thompson et al., 1999). The social-cognitive processes described in these theories are particularly relevant to college women who, in their developmental stage, are forming their self-concept and, in their environmental context, are surrounded by peers.

Social comparison theory. Social comparison theory explains that we have a natural desire to assess our progress in life, and that we often do this by making comparisons between ourselves and those around us (Festinger, 1954). We make comparisons to those we perceive to be closer to our perceived ideal through upward comparisons, to those we perceive to be a similar distance to our ideal through lateral comparisons, and those we perceive to be further

from our ideal through downward comparisons. These comparisons can be performed both intentionally and unintentionally and with various motivations and consequences (Fitzsimmons-Craft, 2011; Suls et al., 2002). In the context of the appearance ideal, upward appearance comparisons are pervasive among women and particularly common among college women (Fitzsimmons-Craft, 2011; Leahey et al., 2007). According to research that tracked the number of times college women make comparisons, college women make upward comparisons two times as often as downward comparisons to peers and three times as often as downward comparisons to media images (Ridolfi et al., 2011). These upward appearance comparisons that involve comparing one's body weight and shape to those who are thinner, more physically fit, or more attractive provide a context for college women to evaluate their bodies and gather information on where their bodies stand in relation to the ideal. Although there is mixed research surrounding the effects of these upward appearance comparisons, the majority of studies link these behaviors with increases in negative affect and body dissatisfaction (Leahey et al. 2007; Leahey & Crowther, 2008; Myers & Crowther, 2009; Myers et al., 2012). Considering the frequency at which women engage in these upward appearance comparisons, they are a major contributor in maintaining women's body dissatisfaction throughout their everyday lives. Given the context of college campuses, college women are particularly susceptible in engaging in these comparisons on a daily basis. College women also tend to meet the characteristics of those more likely to engage in comparisons, a strong activation yet uncertainty about self and an interest in being part of a group and the thoughts and feelings of others (Stapel & Tesser, 2001).

There is substantial evidence that many college women engage in appearance comparisons (Summerville & Roese, 2008) and that they engage in them often (Ridolfi et al., 2011). Ecological momentary assessment (EMA) research has been used to collect data on the

comparisons women engage in throughout their everyday experiences in their natural environments by prompting them to complete surveys on their comparisons, thoughts, feelings, and other behaviors on mobile devices. Leahey and colleagues (2007) utilized EMA to examine the associations between naturally occurring appearance comparisons and state body dissatisfaction and affect in college women. They found that upward appearance comparisons were associated with greater affect, body dissatisfaction, as well as thoughts of dieting and exercise. In a more recent study, Leahey et al. (2011) examined whether women with high body dissatisfaction and eating pathology, high body dissatisfaction only, and low body dissatisfaction experienced different cognitive-affective responses to these comparisons. Regardless of the level of body dissatisfaction, all women experienced negative cognitions and emotions after upward appearance comparisons, including increased feelings of guilt, body dissatisfaction, and thoughts of dieting. Women with high body dissatisfaction and eating pathology and high body dissatisfaction only, made more upward appearance comparisons than low body dissatisfaction women and were more negatively affected than low body dissatisfaction women with more intense negative emotions and thoughts of dieting than low body dissatisfaction women. This EMA research suggests that these upward appearance comparisons are important behaviors to consider when examining changes in body dissatisfaction. Even if participants in the Body Project experience decreases in body dissatisfaction, they may still be susceptible to engaging in upward appearance comparisons and experiencing negative consequences. Whether the intervention helps decrease the frequency of these comparisons in women could aid in our understanding of the intervention's mechanisms of change and understanding of appearance comparisons. If participants experience a reduction in these comparisons, it may suggest that the attitudinal shifts experienced in the intervention are sufficient enough to change the habitual

behavior. If the frequency of comparisons persists, it may suggest either that participants experience barriers in maintaining their body dissatisfaction that are not currently prevented by the intervention or that there are healthier ways to engage in these comparisons that do not negatively impact participants' symptom reductions.

Objectification theory. Objectification theory (Fredrickson & Roberts, 1997) also helps explain the link between sociocultural factors and body dissatisfaction and disordered eating among college women. Throughout history, the female body has been sexualized and viewed as an object to be looked at, which has placed greater emphasis on women's appearance than other identity attributes (Fitzsimmons-Craft, 2011). According to objectification theory, because the female body exists in a sociocultural context, girls learn to view themselves from other's perspectives and treat themselves as objects to be looked at. This internalization of the observer's perspective, called self-objectification, is displayed in the form of excessive body surveillance or monitoring to ensure compliance with the appearance ideal. Given that sociocultural messages convey that the female body is malleable to meet these standards, body surveillance is one way that women learn the discrepancies between their bodies and society's prescribed ideal body (Fitzsimmons-Craft, 2011). When discrepancies are found, women may feel dissatisfied with themselves, and engage in disordered eating to reduce the gap between their actual and ideal body (Fairburn et al., 1999). Research suggests that body surveillance behaviors can partially explain the development of body dissatisfaction in college women (Fitzsimons-Craft et al., 2014; Forbes et al., 2006; Fredrickson et al., 1998; Knauss et al., 2008). The findings of a recent study using a prospective research design suggest that greater self-objectification tendency is more predictive of later onset of clinically significant disordered eating than even that of appearance-ideal internalization in college women (Dakanalis et al., 2016). Others have found both the

process of self-objectification and body surveillance to be mediators in the appearance-ideal internalization and body dissatisfaction relationships (Myers & Crowther, 2007). Both of these findings highlight the importance of considering self-objectification and body surveillance in the context of body dissatisfaction and disordered eating.

Body checking, a form of body surveillance that involves repeated behaviors used to assess one's body size, shape, or weight, is a common focus in body dissatisfaction research (Walker et al., 2018). Research suggests that body checking behaviors can come in many forms, such as pinching one's fat, weighing oneself, looking at one's appearance in reflective surfaces, and assessing the spread of one's thighs when sitting. These behaviors often magnify body imperfections and become repetitive in nature, leading to an ongoing cycle of body checking behaviors and body dissatisfaction (Stefano et al., 2016). An EMA study on body checking conducted by Stefano and colleagues (2016), found that college women with high body concern engaged in body checking at least once per day, with an average of 28 checking behaviors reported by participants per day. The researchers also found that naturally occurring body checking behaviors significantly predicted body dissatisfaction and negative affect. Similar to appearance comparisons, body checking behaviors are closely linked to body dissatisfaction maintenance and their habitual nature may place women at greater risk for developing body dissatisfaction even after reductions have been achieved. Whether participants continue to engage in these behaviors, as well as upward appearance comparisons, following the Body Project may inform our understanding of the intervention's effectiveness. If these behaviors persist, it may be because the intervention does not reduce the salience of appearance content to participants as theorized, but instead reduces the negative consequences of their appearance-ideal driven behaviors.

Tripartite influence model. The tripartite influence model (Thompson et al., 1999) extends social comparison theory and objectification theory by illuminating the three influences that transmit sociocultural messages of the appearance ideal, an individual's parents, their peers, and the media. These three sources can directly or indirectly exert their influence either through explicit comments on appearance attributes, through subtle associations between the appearance ideal and desirable rewards (e.g., happiness, fame, success, wealth), and through modeling maladaptive behaviors (e.g., weight-control techniques, negative body talk; Mills & Fuller-Tyszkiewicz, 2017). When considering college women, both media and peer influence are primary concerns as peer influence replaces parental influence during this time as the dominant source of approval (Fitzsimmons-Craft, 2011) and media exposure is more accessible than ever with the invention of smartphones and social networking sites (Duggan & Brenner, 2013).

According to a Pew Research Center study, 18-29 year-old women who use wireless internet are the demographic group most likely to use social networking sites (Duggan & Brenner, 2013). Social networking sites are more likely to portray unrealistic appearance-ideal messages than other forms of media as they are often more personal, involving content about oneself and friends as well as celebrities (Mills & Fuller-Tyszkiewicz, 2017). They also include a variety of content, such as text, pictures, and videos, and ways to engage with this content, ranging from actively posting messages to passively viewing or liking others' messages (Mills & Fuller-Tyszkiewicz, 2017). Experimental research that involves presenting images of thin and physically fit women pulled from magazines and other media sources to college women has shown that exposure to these images alone is associated with subsequent increases in their state body dissatisfaction (Homan et al., 2012; Tiggemann et al., 2009). Considering the frequency at which college women not only view but participate in social media activity containing

appearance-ideal images, makes this a concerning finding. Cross-sectional research also demonstrates a positive association between Facebook use and body dissatisfaction among college women (Howard et al., 2017). However, whether college women engage in social media to seek reassurance and validation from others may be associated with additional negative consequences, including disordered eating (Howard et al., 2017). Although understanding the negative impacts of social media use is an emerging area of research with still much left unknown, it appears that exposure to social media content and engaging in it in certain ways can perpetuate negative feelings women have about their bodies.

In addition to their high rates of social networking site use, college women are also exposed to the appearance-ideal standards of their friends through other mechanisms. As explained previously, college women frequently look to the peers around them to assess how their appearance matches up to same-aged peers through appearance comparisons. Peers also communicate appearance-ideal standards to one another in other indirect as well as direct ways. For example, research on adolescent girls demonstrates that perceived pressure to be thin from friends, appearance teasing from friends, and exposure to friends' weight-control behaviors is associated with greater body dissatisfaction (Webb & Zimmer-Gembeck, 2014). A study examining the conversation topics college women discuss with their close friends found that 56% talked about dieting, 14% about binge eating, 3% about self-induced vomiting, 89% about working out, and 22-39% about comparisons to others (Bardone-Cone et al., 2016). The frequency at which women engaged in appearance-related conversations was significantly associated with greater body dissatisfaction and disordered eating. Being part of a friend group that adheres to the appearance ideal standards of attractiveness appears to increase one's exposure to appearance-focused behaviors and chance of experiencing body dissatisfaction.

Although engaging in conversations on appearance-related topics is associated with increases in body dissatisfaction, the conversations are likely to be more detrimental if they are negative in nature (Mills & Fuller-Tyszkiewicz, 2017). Negative body talk, also commonly referred to as fat talk, includes making disparaging remarks about one's appearance or another's appearance (Mills & Fuller-Tyszkiewicz, 2017). It is a common phenomenon among female friends that may be done in an attempt to alleviate one's body image concerns, expressing in-group and out-group affiliations, providing social validation, or masking other underlying issues (Mills & Fuller-Tyszkiewicz, 2017). Research demonstrates that women with higher body dissatisfaction are more likely to engage in negative body talk, but that the association between negative body talk and body dissatisfaction is bidirectional (Mills & Fuller-Tyszkiewicz, 2017). Not only do women with higher levels of body dissatisfaction engage in negative body talk, but negative body talk is associated with increases in body dissatisfaction and appearance-ideal internalization (Arroyo & Harwood, 2012; Salk & Engeln-Maddox, 2012). However, additional experimental and prospective studies are needed before negative body talk can be considered a direct predictor of body dissatisfaction (Mills & Fuller-Tyszkiewicz, 2017). One major strength of the Body Project is that it provides participants skills to combat negative body talk when it arises through modeling behaviors of peer facilitators and practicing negative body talk responses. Yet research on the intervention falls short on informing us how the intervention may influence changes in participants' negative body talk and their perception of negative body talk among their social networks. This may not only inform the ways in which the intervention is effective in reducing body dissatisfaction but may contribute to our understanding of the association between negative body talk and body dissatisfaction across time.

Summary of sociocultural factors. Sociocultural factors play an important role in the development and maintenance of body dissatisfaction in college women. Sociocultural messages of the appearance ideal are transmitted from friends, family, and the media and influence how women feel about their bodies. In their developmental stage and environmental context, college women are most susceptible to receiving and internalizing these messages. Body dissatisfaction arises when these messages are internalized, and women engage in behaviors that illuminate the discrepancies between their actual bodies and the ideal bodies portrayed in these messages. Social comparison theory, objectification theory, and the tripartite influence model explain the mechanisms by which women develop awareness of their bodies compared to others and how others perceive these bodies. With this heightened awareness and emphasis on appearance in the development of self-concept, these mechanisms lead college women to frequently engage in upward appearance comparisons, body checking, and negative body talk. Not only are these behaviors particularly common among college women and their social networks, but they are also major contributors to body dissatisfaction maintenance.

Social Networks and Body Dissatisfaction

The research on sociocultural factors related to body dissatisfaction highlight the important role of peers in the formation of college women's body image and their negative cognitive-affective appraisals of this image. It was previously discussed that peers transmit pressures to obtain the appearance ideal through participating in social networking sites, modeling weight-control behaviors, engaging in negative body talk, and simply being in close proximity to provide opportunities for appearance comparisons (see the Tripartite Influence Model section above for further details on peer influence). Much of our understanding of peer influence on body image, including these behaviors, derives from two fundamental theories,

social identity theory (Tajfel, 1978) and social learning theory (Bandura, 1977). Social identity theory explains that one's self-concept is closely tied to social relationships and perceived membership in a relevant social group. As groups encourage uniformity to emphasize in-group and out-group differences, members of the group may develop similar views of their bodies and engage in similar weight-control activities that promote body dissatisfaction (Webb & Zimmer-Gembeck, 2014). With respect to body dissatisfaction, it suggests that people adopt behaviors that promote body dissatisfaction through imitating others and engaging in behaviors related to perceived social outcomes, such as performing weight-control behaviors for the expectation of increased social approval and avoiding high-fat meals to prevent social disapproval.

Not only can similarities between friends be achieved through socialization as described above, the process by which individuals conform to the group they are part of by adopting new attitudes and behaviors, they can also be formed through the friends they select, known as selection. In the selection process, individuals may select friends that appear to share similarities. The term homophily has been used to describe the preference for other individuals who are similar to us (McPherson et al., 2001). Homophily is likely involved in both the selection and socialization processes; individuals are more likely to select friends with similarities and interact more frequently with those who are similar to them providing opportunity for these similarities to be maintained and further developed (McPherson et al., 2001). A study on college women found that those who did and did not become sorority members were similar on measures of drive for thinness (Allison & Park, 2004). Yet, three years later, the sorority women reported higher drive for thinness than non-sorority women. Although it is possible that the women who sought sorority membership shared similarities that made them susceptible to developing a higher drive for thinness, this example suggests that the socialization experienced while in the

sorority contributed to their increased desire to be thin. Other research on disordered eating in college women has found differences in socialization of appearance attitudes and behaviors over time depending on whether women self-select the relationship. For instance, college women who lived together demonstrated similarities in drive for thinness (Meyer & Waller, 2001) and bulimic behaviors (Zalta & Keel, 2006) over time if they chose to live together rather than if their roommates were randomly assigned. This suggests that similarities in appearance attitudes and behaviors can be involved in both the selection and socialization processes in relationships college women choose, such as their friendships.

Social networks in the present study. Although there is evidence that the friends college women choose to spend time with can influence their appearance attitudes and behaviors, few studies have examined college women's perceptions of appearance attitudes and behaviors of multiple friends that make up their social networks. The past studies discussed examined their closest friends, roommates, and sororities. The present study aims to examine a more complete picture of these constructs in their social networks by asking them to report on the appearance attitudes and behaviors of their ten closest friends. This egocentric design has been used in several other studies to gather the perceptions participants have about their friends (Hallgren et al., 2016; DeMartini et al., 2013; Stice, 1998). While it will gather their perceptions, rather than their friends' actual behaviors, their perceptions are more likely to have an impact on their own behaviors than their friends' actual behaviors (Bauman & Fisher, 1986). Examining the association between these perceptions and college women's appearance attitudes and behaviors will add to our understanding of the similarities within social networks on these constructs and how perceptions of social networks may help to maintain body dissatisfaction and disordered eating.

The role social networks may play in maintaining body dissatisfaction and disordered eating is also important to consider in the context of body image interventions. Although an important feature of the Body Project is the group environment that allows women to connect based on shared body weight and shape concerns, participants return to their original social networks after the intervention. These social networks are the same relationships that they may have selected based on shared appearance values and behaviors or that may have influenced the development of their body dissatisfaction and disordered eating previously. Therefore, interacting with friends after the intervention may pose challenges for women to maintain the intervention benefits. It is likely that one of three responses will occur: 1) participants may pass their new attitude and behaviors onto their social network whereby their social network changes to accommodate their change, 2) they may spend less time with the members of their social network with high body dissatisfaction and who engage in related behaviors, and may even select new friends based on their new appearance attitudes and behaviors, or 3) they may maintain the same social network and their social network maintains their same appearance attitudes and behaviors, but then they experience difficulty maintaining the intervention benefits. Examining these responses can provide further insight into how the intervention is effective as well as inform necessary modifications to the intervention. If the third response is true, it may tell us that social networks pose additional obstacles for participants that they may not be able to navigate with the current skills they learn in the intervention. It may inform future intervention modifications that directly address these concerns and provide solutions. Conversely, if one of the first two are true, it may highlight a unique advantage to the Body Project group-based intervention that may be considered in other interventions. Particularly, if the first response is true, it may mean that implementing the Body Project on college campuses impacts many more

people than those that attend groups as the social networks of these friends may also be positively affected. Therefore, the benefits of the program may align with the costs associated with its implementation.

As explained earlier, college is a vulnerable period for the development of body dissatisfaction because of the increase in peer interactions and influence. This makes the social networks college women are part of particularly important in the study of body dissatisfaction in this population. Examining the association between college women's body dissatisfaction and related behaviors and that of their social networks is important to add to our understanding of the ways in which social networks may help maintain body dissatisfaction. Evaluating the changes in social networks after an intervention will inform the ways in which participants in the intervention respond to the intervention and integrate the changes into their lives.

The Present Study

The primary purpose of the proposed study was to examine the changes in college women's social networks associated with their involvement in an empirically-supported body image intervention, the Body Project. Given the numerous studies that have demonstrated the Body Project's efficacy, the present study is an effectiveness trial that examined the intervention's implementation in a racially diverse university and its role in changing participants' perceived social networks. To examine changes in these social networks following the intervention, a multiple baseline and follow-up design was used. Participants were asked to complete questionnaires on their body dissatisfaction, disordered eating behaviors, and body dissatisfaction maintenance behaviors (e.g., appearance-related comparisons, body checking, negative body talk) in addition to rating the degree to which each of their closest friends feel dissatisfied with their bodies and their engagement in different disordered eating behaviors (e.g.,

restriction, binge eating) and body dissatisfaction maintenance behaviors (e.g., negative body talk) two times prior to the intervention. The first baseline measure was administered 2-3 weeks before the intervention by email and the second was administered at the start of the first session. The observed changes in these measures between these two times points provide an assessment of change related to time that was used to assess whether changes observed post intervention are greater than what would be expected due to time alone. Post-intervention measures were gathered after the completion of the two-session intervention and at 1- and 3-month follow-ups. Secondary to examining social network changes associated with the intervention, several additional aims are included for the purpose of examining the interventions effectiveness and understanding the association between perceived social network body-related thoughts and behaviors on women's body dissatisfaction and disordered eating behaviors.

Aim 1. To evaluate the effectiveness of the Body Project on a large, state-supported, Southeastern campus that is attended by primarily White (47%) and Black (30%) students.

Hypothesis 1a. As demonstrated in previous research on different campuses, women who complete the Body Project will experience significant decreases in measures of body dissatisfaction, disordered eating, and appearance-ideal internalization following the intervention and will maintain reductions for three months.

Hypothesis 1b. In addition to observed reductions in outcome measures in previous research, women who complete the Body Project will also experience decreases in body dissatisfaction maintenance behaviors (e.g., appearance comparison tendency, body checking, negative body talk).

Aim 2. To explore the degree to which Body Project group dynamics (perceived group similarity and closeness) predict decreases in outcome measures described in Aim 1.

Hypothesis 2a. Women who report higher perceived similarity with their Body Project group will experience greater reductions in outcome measures following the intervention and at 1- and 3-month follow-ups.

Hypothesis 2b. Women who report higher perceived closeness with their Body Project group will experience greater reductions in outcome measures following the intervention and at 1- and 3-month follow-ups.

Aim 3. To examine the association between perceived social network body dissatisfaction and related behaviors and college women's body dissatisfaction and disordered eating behaviors.

Hypothesis 3a. Women's perceived social network body dissatisfaction and related behaviors will significantly predict their body dissatisfaction and disordered eating.

Aim 4. To evaluate the changes in women's social networks (e.g., perceived body dissatisfaction and related behaviors, identified close friends) from the start of the intervention to 1 and 3 months following the intervention.

Hypothesis 4a. Following the intervention, women's perceived social network body dissatisfaction and related behaviors will decrease with time.

Hypothesis 4b. Following the intervention, women's identified social network will change (i.e., friends will be added or removed) in accordance with Hypothesis 4a; friends high in body dissatisfaction and related behaviors will be removed and friends low in body dissatisfaction and related behaviors will be added.

Aim 5. Given the campus from which participants will be recruited almost evenly comprises of White (47%) and Black (30%) students and few studies on the Body Project have

examined race differences in outcome measures, the fifth research aim is to examine whether there are participant race differences and group minority/majority race differences in Aim 1.

Limited research on race differences in Body Project outcomes suggests that the intervention is just as effective for racial minority students as it is for White students (Cook-Cottone et al., 2010; Rodriguez et al., 2008). However, the sample of one of these studies comprised of fifth-grade students (Cook-Cottone et al., 2010) while the other only examined differences in Hispanic and Asian American women (Rodriguez et al., 2008), therefore, limiting the generalizability of their findings to this study. Other research indicates that White women experience higher levels of body dissatisfaction and eating pathology than Black women (Wildes et al., 2001) suggesting that differences may exist in their intervention outcomes. The small body of relevant research on race differences in Body Project effectiveness does not inform us whether Black women benefit from the Body Project in the same way as White women. It also does not inform us whether race minority or majority status within the groups they attend have any effect on intervention effectiveness. Given the racial makeup of the campus and the voluntary nature of Body Project groups, it is probable that the racial makeup of Body Project groups will differ from one another, with groups comprising of mostly Black women and others with mostly White women. It is possible that Black women in a group of mostly White women may experience differences in intervention outcome measures than Black women in a group of mostly other Black women. With limited research on race differences and group dynamics on Body Project effectiveness, this fifth aim examining differences in participants' race and group race minority/majority status in Aim 1 analyses will be exploratory in nature.

Aim 6. To explore whether descriptive qualities of the intervention moderate intervention outcomes examined in Aim 1.

In the post-intervention survey, participants were asked to report on the homework exercises they completed and the degree to which they thought the intervention was helpful and inclusive to their appearance ideal in whichever way they may define it. The results of these items will be examined as moderators in Aim 1 analyses to evaluate whether there are any significant differences in outcome measures if participants do not complete homework exercises, perceive the intervention less helpful or inclusive of their appearance ideal. Given its novelty, this aim will be exploratory in nature.

CHAPTER II

METHOD

Participants

College students interested in attending a body acceptance program were recruited to participate via class and student organization announcements, flyers, online postings, and tabling advertisements. Those interested were directed to complete an online survey where further information about the Body Project was provided and their student status, email address, and availability were collected. The researcher used contact information from the survey and responses gathered from tabling recruitment efforts to contact current students and schedule them for Body Project groups.

Two different analytical approaches were considered for study analyses, hierarchical linear modeling and latent growth modeling within the structural equation modeling (SEM) framework, because the best-suited approach depended on whether there were any significant differences in intervention outcomes between Body Project groups. Initial intraclass correlation coefficient (ICC) calculations revealed there were only small degrees of variance at the group level across most intervention outcomes (see Table 1). Because of these findings and previous research on the Body Project that also found limited group differences in intervention outcomes (Stice et al., 2015), it was determined that hierarchical linear modeling that accounts for group-level differences was not needed. Instead, latent growth modeling was used for study analyses. According to SEM model stability rules of thumb, a 10:1 sample size-to-parameter ratio is adequate to ensure stable estimates (Kline, 2011). Given the primary aim of the study was to examine changes in participants' social network body dissatisfaction and related behaviors across timepoints, this proposed latent growth model was used to determine the number of

estimated parameters. The model, including one variable (e.g., body dissatisfaction) measured at five timepoints with three observed piecewise slopes (see Figure 1), requires 18 estimated parameters. According to the SEM rules of thumb, a sample of 180 would be adequate to estimate model statistics and an initial sample of 216 would allow for up to 20% attrition across study timepoints.

Due to the coronavirus pandemic that began in the U.S. in March 2020, Body Project groups were cancelled from this time onward, before this targeted sample size was obtained. This affected twenty-two participants who completed Baseline 1 but were unable to attend their scheduled groups, as well as numerous potential participants who might have signed up for the study after that time. Prior to these cancellations, we also experienced higher attrition rates than we anticipated; of the 57 participants who already had a chance to complete later sessions, 32% dropped out between Baseline 1 and Baseline 2 and 21% between Baseline 2 and Post-intervention. This resulted in a sample of 79 who completed Baseline 1, of which 39 completed at least one Body Project session and 31 completed the full two-session intervention. A more detailed breakdown of study attrition is provided in the Attrition section in Descriptive Statistics.

Table 1

Intraclass Correlation Coefficients (ICCs)

Measure	ICC T	ICC P	ICC G
BSQ (body dissatisfaction)	.49	.39	.12
EPSI (disordered eating)	.46	.53	.02
SATAQ (appearance-ideal internalization)	.32	.67	.01
PACS-R (comparison tendency)	.42	.41	.18
BCQ (body checking)	.50	.40	.10
FTQ (negative body talk)	.39	.60	.00

Note. ICC T = Intraclass correlation coefficient at the time level, ICC P = Intraclass correlation coefficient at the person level, and ICC G = Intraclass correlation coefficient at the group level.

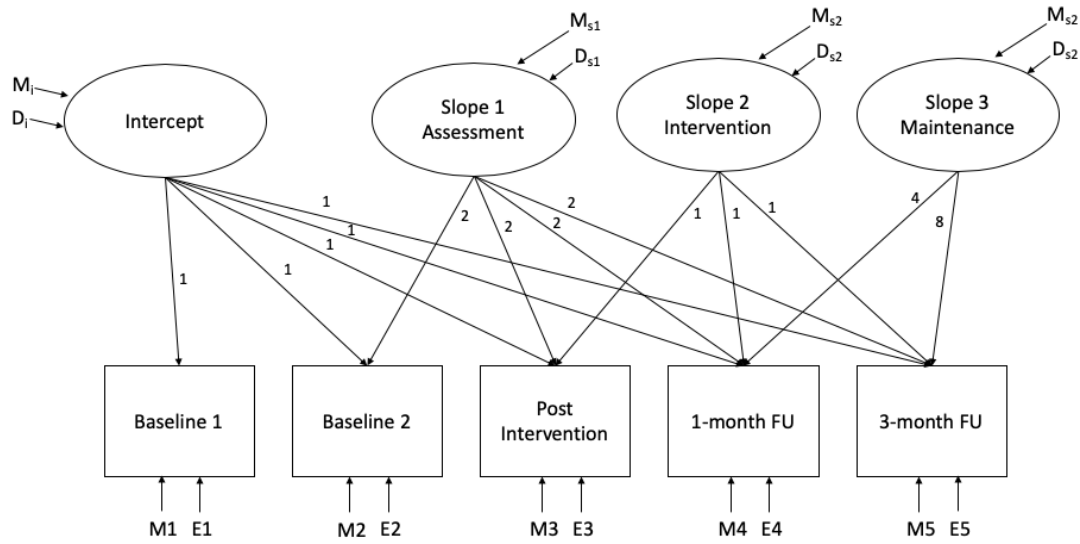


Figure 1. Primary model used in study analyses examining assessment effects (Slope 1), intervention effects (Slope 2), and intervention maintenance effects (Slope 3). The square boxes represent the five timepoints: Baseline 1, Baseline 2, Post-intervention, 1-month Follow-up, and 3-month Follow-up. M labels with subscripts represent the latent means for the intercept and three slopes, D labels represent latent disturbances, and E labels represent error terms. The slope loadings reflect time elapsed between timepoints with one being equivalent to one week.

Measures

Demographics. A demographics questionnaire (see Appendix B) was used at the start of the first baseline questionnaire packet to assess participants' gender, race, year in school, and a number of other demographic characteristics.

Social network. An adapted version of the Brief Important People Interview (BIPI; Zwyiak & Longabaugh, 2002) was used to gather participants' perceptions of their ten closest friends (see Appendix C for the questionnaire). The BIPI is a brief version of the Important People Interview (IPI; Clifford & Longabaugh, 1991), and both versions have been used and adapted previously in alcohol research that assess drinking status and frequency of drinking for each member of participants' social network (Hallgren et al., 2016; DeMartini et al., 2013). The BIPI in this study was adapted to include questions about body dissatisfaction and disordered eating behaviors, in place of the alcohol-use questions used previously. It follows the same structure as the BIPI by first asking participants to identify their ten closest friends by providing their first names and last initials (ex. Jane S.). They are instructed to consider the friends they consider part of their social network and have spent regular face-to-face time with in the past 30 days. After listing their social network, they are then directed to answer questions on each friend that assesses the friend's age, race, gender, type of relationship (e.g., roommate, friend, romantic partner), frequency of contact, and appearance attitudes and behaviors. The questions that assess appearance attitudes and behaviors ask participants to rate how dissatisfied each friend is with their body and whether they engage in disordered eating behaviors (e.g., restriction, over-exercising, purging, laxatives/diuretics, and overeating) and body dissatisfaction maintenance behaviors (e.g., negative body talk, appearance-focused social media).

Multiple question formats were used to gather participant responses. Responses were collected for the body dissatisfaction item on a 5-point scale (0 = *very satisfied with body* to 4 = *very dissatisfied with body*). Responses were collected for behavior items in a dichotomous format (0 = *no*, 1 = *yes*). An average social network body dissatisfaction value was calculated and used in analyses. The proportions of disordered eating behavior, negative body talk, and appearance-focused social media behavior within social networks were used for analyses to examine whether the proportion of perceived social network behaviors predict women's body dissatisfaction and disordered eating.

Body dissatisfaction. The Body Shape Questionnaire (BSQ-16; Evans & Dolan, 1993) was used to assess participants' body dissatisfaction. The BSQ-16 is a 16-item questionnaire that measures concerns about body shape (see Appendix D). It asks participants to rate the frequency with which they experience body dissatisfaction on a 7-point scale (0 = *never* to 6 = *always*). Higher scores indicate greater body weight and shape concerns. Participants' summed BSQ-16 total score was calculated and used to assess their body dissatisfaction at each time point. Traditionally, it asks participants to assess how they have felt about their body in the last four weeks, but the instructions were modified in this study to examine feelings over the past two weeks. This allowed for changes between the two baseline measures that were two weeks apart and between the second baseline measure and the post measure that was two weeks apart to be examined. In previous research, the scale has demonstrated good internal consistency ($\alpha = .93-.97$; Evans & Dolan, 1993) and adequate convergent validity with other measures of body dissatisfaction ($r = .58-.81$; Rosen et al., 1995). In the present study, the scale demonstrated good internal consistency ($\alpha = .94-.97$).

Disordered eating. The Eating Pathology Symptom Inventory (EPSI; Forbush et al., 2013) was used to measure participants overall disordered eating and engagement in specific disordered eating behaviors (see Appendix E). It is a 45-item multidimensional measure of eating pathology that includes 8 subscales: Body Dissatisfaction, Binge Eating, Cognitive Restraint, Purging, Restricting, Excessive Exercise, Negative Attitudes toward Obesity, and Muscle Building. Responses to the items are gathered on a 5-point scale (0 = *Never* to 4 = *Often*). The sum of the 45 items was used to gather a total disordered eating score; higher scores suggest greater disordered eating. Because the EPSI does not include a similar question for laxative use, the diuretic item was replicated and modified to assess laxative use and added as item 46. This additional item was not included in the total disordered eating score calculation. Although the instructions of the questionnaire ask participants to self-report on the past four weeks, this number was changed to two weeks in the present study to allow for comparisons to be made between baseline and post-intervention measures. The scale has demonstrated good internal consistency in college women ($\alpha = .86$; Forbush et al., 2014). It has also demonstrated excellent convergent validity with other measures of disordered eating and body dissatisfaction and discriminant validity with positive and negative affect measures (Forbush et al., 2014). In the present study, the scale demonstrated good internal consistency ($\alpha = .90-.94$).

Appearance-ideal internalization. The Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-4R; Schaefer et al., 2017) was used to assess participants degree of appearance-ideal internalization (see Appendix F). The SATAQ-4R is a 31-item measure that examines internalization of appearance ideals and perceived interpersonal and societal pressures to adhere to these ideals. The measure includes four subscales to assess the amount of pressure obtained from each source: peers, family, significant others, and the media. Responses are

gathered on a 5-point scale (1 = *definitely disagree* to 5 = *definitely agree*). An appearance-ideal internalization total score was calculated by reverse scoring three items described in the scale instructions and summing all responses; higher total scores indicate greater appearance-ideal internalization. Previous research demonstrates that the scale has good internal consistency ($\alpha = .82-.96$), test-retest reliability, and construct validity with measures of drive for thinness and body dissatisfaction within a sample of young adult women (Schaefer et al., 2017). In the present study, the scale demonstrated good internal consistency ($\alpha = .92-.93$)

Appearance comparison tendency. The Physical Appearance Comparison Scale (PACS-R; Schaefer & Thompson, 2014) was used to assess participants' tendency to compare their physical appearance to the appearance of others (see Appendix G). The PACS-R is an 11-item measure that assesses this tendency in eight social contexts and with five different aspects of one's physical appearance. The scale asks participants to indicate how often they make each type of comparison on a 5-point scale (0 = *never* and 4 = *always*). Participants' responses on these 11 items were summed to determine appearance comparison tendency; higher scores indicate greater appearance comparison tendency. Schaefer and Thompson (2014) found high internal consistency ($\alpha = .97$) within a sample of female undergraduate students. Additionally, they found the measure to have high convergent and discriminant validity. The measure was significantly positively correlated with measures of eating pathology and internalization of appearance ideals ($r = .63-.68$) as well as significantly negatively correlated with measures of body satisfaction ($r = -.55$) and self-esteem ($r = -.39$; Schaefer & Thompson, 2014). In the present study, the scale demonstrated high internal consistency ($\alpha = .95-.97$)

Body checking. A shortened version of the Body Checking Questionnaire (BCQ; Reas et al., 2002) was used to assess participants' body checking behaviors (see Appendix H). The

original BCQ is a 23-item measure that assesses appearance body checking behaviors, including checking to see thighs spread when sitting down, pinching stomach to measure fatness, and checking appearance in reflective surfaces. A shortened 10-item version has been used to reduce participant burden as well as reduce overlap with appearance social comparison measures (Ridolfi et al., 2010). The shortened version assesses the most commonly endorsed BCQ items and has demonstrated adequate internal consistency ($\alpha = .89$; Ridolfi et al., 2010) that is comparable to that of the original measure ($\alpha = .83-.92$; Reas et al., 2002). The original measure has also demonstrated good convergent validity with body dissatisfaction and disordered eating measures (Reas et al., 2002). Responses are gathered on a 5-point scale (1 = *Never* to 5 = *Very Often*). Participants' body checking total score was calculated by summing all ten items; higher scores indicate more body checking behaviors. In the present study, the scale demonstrated good internal consistency ($\alpha = .77-.90$)

Negative body talk. The Fat Talk Questionnaire (FTQ; Royal et al., 2013) was used to examine the frequency in which participants engage in negative body talk with their friends (see Appendix I). The FTQ is a 14-item questionnaire that assesses negative body talk frequency with one or several close female friends. The items range from assessing complaints participants make to friends about their weight and eating behaviors to the pressures they feel to be thin. Responses are gathered on 5-point scales (0 = *Never* to 4 = *Always*). A total negative body talk score was gathered by summing all items; higher scores indicate greater frequency of engaging in negative body talk. The scale demonstrates good internal consistency ($\alpha = .94$), test-retest reliability, convergent validity with measures of body dissatisfaction, objectified body consciousness, restrained eating, and social physique anxiety and discriminant validity with a measure of social desirability within a female college sample (Royal et al., 2013). Scores were not correlated with

BMI suggesting that negative body talk is performed by women with various body shape and sizes (Royal et al., 2013). In the present study, the scale demonstrated good internal consistency ($\alpha = .91-.97$)

Perceived Body Project group similarity and closeness. Single items were created from the adapted Brief Important People Interview (BIPI; Zwyiak & Longabaugh, 2002) used to assess participants' social networks to assess participants' perceived feelings of similarity to and closeness with other group members (see Appendix J). Responses to the singles items "How similar do you feel to other members of the group?" and "How close/trusting/intimate do you feel to the group?" were collected on a 5-point scale (1 = *Not very similar or close* to 5 = *Very similar or close*). Higher scores on each item indicate greater feelings of perceived similarity and closeness. These items were only included in the questionnaires participants' were asked to complete immediately following the intervention.

Participant intervention evaluation. Items were included at the end of the post-intervention questionnaire packet to gather participants' feedback on the Body Project (see Appendix K). These items assess participants' perceptions of the helpfulness of the intervention and the perceived inclusivity of the intervention to their appearance ideal as well as the homework exercises participants completed.

Intervention

The Body Project. The Body Project was delivered in two 2-hour groups sessions scheduled a week apart and in accordance with the Body Project two-session manual (Becker et al., 2018). An additional half hour was added to each session making it two 2.5-hours the groups were together in total to allow participants time to complete questionnaires. As designed, the groups did not exceed 15 individuals, including both participants and 2-3 group facilitators.

Group facilitators were undergraduate or clinical psychology doctoral students trained by a Body Project Lead Trainer to facilitate groups using the scripted manual (see further details in the Facilitator Training, Competency, and Program Adherence section below). The two sessions comprised of verbal, written, and behavioral exercises during which participants critiqued the appearance ideal, reflected on ways the appearance-ideal has affected them personally, and practiced challenging appearance-ideal statements.

In Session 1, participants worked together to define the appearance ideal, discussed costs pursuing the appearance ideal, generated examples from their life when they followed the appearance ideal and what they would do instead considering the costs, practiced challenging negative body talk, and reviewed the homework exercises for the week. The homework exercises involved engaging in behavioral challenges where participants engaged in activities they have avoided due to body concerns, writing a letter to a young girl about the costs associated with the appearance ideal, and writing a list of aspects they like about themselves while looking in the mirror. In Session 2, participants discussed each home exercise, dissuaded peer facilitators from pursuing the appearance ideal in role-plays, generated a list of ways they can avoid the appearance ideal, reflected on future occasions they may be pressured to adhere to the appearance ideal and how they may avoid it instead, practiced challenges to appearance ideal statements, and discussed additional challenges and self-affirmations in closing.

Facilitator training, competency, and program adherence. All facilitators, including doctoral students and undergraduate students, attended a 14-hour training led by the Body Project Collaborative, the group of researchers and clinicians that have developed and disseminated the intervention. The training was led by a Body Project Lead Trainer who travels the country to train facilitators for the intervention and trainers for the facilitators. The training

was administered in two 7-hour days during which facilitator trainees went through the protocol several times to allow each an opportunity to facilitate at least one Session 1 and Session 2 and be a participant at least two other times. After each session, trainees received feedback from the Lead Trainer and the trainer trainees consisting of clinical psychology doctoral students, clinical psychology faculty, and counseling center staff. The Lead Trainer modeled implementing the training and providing constructive feedback to facilitator trainees to prepare the trainer trainees to supervise the current facilitators and train new facilitators.

The doctoral students supervised the undergraduate facilitators, and the doctoral students were supervised by a clinical psychology faculty member who is also a licensed clinical psychologist. At least one doctoral student facilitated each group. Following each group session, doctoral students initiated discussions among the facilitators on the strengths and challenges of each session and also provided constructive feedback to undergraduate facilitators on their facilitation skills and program adherence. In addition to live supervision and discussions, doctoral students also completed the intervention fidelity form (Appendix L) following each session to evaluate and track program adherence. The author also completed additional intervention fidelity forms while listening to selected audio recordings to provide an additional fidelity check. The author reviewed the recordings of five (50%) groups that varied by initial fidelity ratings and facilitators.

Procedure

Refer to Figure 2 for an overview of the study's procedure. Approval for the study was obtained from the Old Dominion University Institutional Review Board. Participants were recruited through class and student organization announcements, flyers, tabling events, and online postings and scheduled for two 2.5-hour sessions one week apart. Those who expressed

interest were screened either via email or in-person communication or an interest survey that assessed for basic demographic information and weekly availability for scheduling purposes. Demographic information was gathered to assess their student status and gender identity. Only current students at Old Dominion University were eligible to participate. Gender identity was not used to determine study eligibility, but rather to ensure that we met the recommendations by the Body Project Lead Trainer of only having male participants who were willing to discuss feminine appearance standards and not having any more than two male participants in a single Body Project group. Those interested who reported a male identity were provided clarifying information on the Body Project and the “Perfect Woman” appearance standards that are discussed in the intervention.

Once individuals were scheduled for groups, they were provided with instructions to provide informed consent and complete Baseline 1 two-three weeks prior to their group session. Email reminders were provided to scheduled participants daily until they completed Baseline 1. Before the first group session, participants provided verbal consent and completed Baseline 2 on tablets. Once all group members completed Baseline 2, the trained facilitators initiated the first Body Project session. Consistent with the Body Project two-session manual, participants were asked to complete three homework exercises between the first and second session. During the second session, participants provided verbal consent to continue engaging in the intervention, participated in the remainder of the intervention facilitated by the same facilitators, and completed Post-intervention questionnaires on tablets directly after the intervention. If participants were unable to attend their second group session or if they missed their second group session, they were offered to meet individually with a trained Body Project facilitator to receive the information they missed from the second session.

As explained at the start of the first session and in the informed consent, participants were sent email invitations to complete the 1-month and 3-month follow-up questionnaires electronically. To compensate for the additional time and effort to complete follow-up assessments, participants were provided ten dollars in the form of Amazon e-gift cards for each of the two follow-up surveys completed. In addition to offering compensation for completing the two follow-ups, participants were also sent email and text reminders to complete the follow-ups to increase study compliance rates. Participant email addresses and phone numbers and permission for their use were gathered at the start of the first group session. The email reminders occurred daily until follow-ups were completed. Follow-up completion rates were closely monitored, and text reminders were used after several email reminders were provided without any response. At the end of these follow-up questionnaires, the previously described study questionnaires, and during Body Project sessions, participants were provided mental health resources, including the contact information for the campus counseling center, if they wish to further address any related concerns.

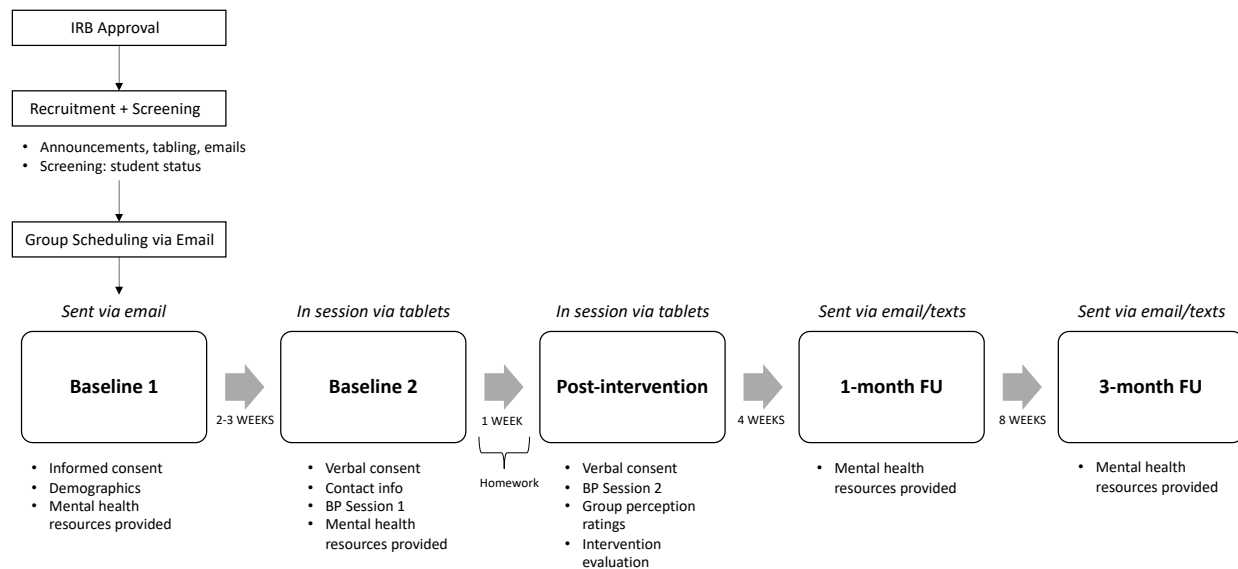


Figure 2. An overview of the study procedures. BP = Body Project and FU = Follow-up.

CHAPTER III

RESULTS

Data Management

The current study used a repeated measures design to assess change in outcome measures, social network, body dissatisfaction, disordered eating, appearance-ideal internalization, appearance-comparison tendency, body checking, and negative body talk, across five timepoints, Baseline 1, Baseline 2, Post-intervention, 1-month Follow-up, 3-month Follow-up. Prior to conducting the primary study analyses, the data were analyzed for missing patterns. For Baseline 1, an initial missing values analysis revealed increasing levels of missingness from the start to end of the survey, ranging from 9-13% missingness. A missing values analysis involving a series of t-test and chi-square tests used to examine missingness on variables to values of other variables did not reveal any missing patterns. Expectation Maximization (EM) was used to address missing data for continuous variables for participants who provided at least one response on the given scale. EM imputation was chosen because of its iterative process to determine appropriate values that preserves the associations between variables and its compatibility with the HLM software used to examine group-level differences in outcome measures.

Lower rates of missingness were found in the remaining four datasets. In Baseline 2, only one participant missed a single item on the EPSI. In the Post-intervention survey, one missing value was found for two items on different scales, the EPSI and SATAQ, for two different participants. The specific EPSI items were checked because the scale assesses stigmatized disordered eating behaviors, some of which with a single item. Neither of the EPSI items that were missed were single-item measures for disordered eating behaviors. Following missing

values analyses, these missing values were addressed with EM. In the 1-month Follow-up, one case was entirely incomplete and was removed from the dataset. In another case, only two scales were completed. When controlling for the missingness of this one case, no other missingness was found in the dataset. In the 3-month follow-up, zero missingness was found.

After missingness was addressed, composite scores were created, and assumptions were checked. Univariate outliers were assessed for each variable in each dataset with boxplots and winsorized. In Baseline 1, the EPSI had four outliers (values 108, 108, 114, and 116 were winsorized to 94, 94, 95, and 96), the FTQ had two outliers (values 49 and 52 were winsorized to 47 and 48), the social network disordered eating proportion score had three outliers (values 1.80, 1.80, and 2.00 were winsorized to 1.75, 1.75, and 1.80), and the social network body dissatisfaction total score had two outliers (values 4.67 and 5.00 were winsorized to 4.45 and 4.50). In Baseline 2, the EPSI had one outlier (value 103 was winsorized to 99) and the social network body dissatisfaction total score had four outliers (values 1.80, 4.80, 4.83, and 4.90 were winsorized to 2.20, 4.10, 4.13, and 4.20 respectively). In Post-intervention, the BSQ had two outliers (values 80 and 84 were winsorized to 74 and 75), the EPSI had three outliers (values 92, 95, and 97 were winsorized to 76, 77, and 78), the PACS-R had three outliers (all were values of 44 that were winsorized to 39), the BCQ had one outlier (value 49 winsorized to 42), the FTQ had two outliers (two values of 45 were winsorized to 44), the social network body dissatisfaction total score had two outliers (values 4.90 and 1.60 were winsorized to 4.50 and 2.10 respectively), and the group closeness total score had one outlier (value 2 was winsorized to 2.75). In the 1-month Follow-up, the FTQ had one outlier (value 56 was winsorized to 37), the social network body dissatisfaction total score had one outlier (value 5 was winsorized to 4.50). In the 3-month Follow-up, the FTQ had two outliers (values 33 and 38 were winsorized to 30

and 31) and the social network body dissatisfaction total score had two outliers (values 5 and 1.67 were winsorized to 4.55 and 1.75 respectively).

Multivariate outliers were assessed in each dataset using leverage, discrepancy, and influence measures provided in SPSS's regression command. The results of the measures were all within normal limits, aside from one participant's standardized DFFIT value of 35.34 in the 1-month Follow-up. The standardized DFFIT is a measure of influence, the amount a case affects the regression line. In examining this case further, the participant's EPSI, SATAQ, and BCQ values were also corrected univariate outliers. After doing additional winsorizing of these univariate outliers, the participant's standardized DFFIT value reduced to 14.95. This reduction paired with the case's acceptable Cook's D value, another measure of influence, led to the decision to maintain this case in analyses.

Normality was assessed by running histograms and evaluating skewness and kurtosis values (see skewness and kurtosis values in Table 2). All variables were normally distributed, except for the inclusive-ideal rating that participants were asked to complete following the intervention on whether they thought the intervention was inclusive of their appearance ideal, in whatever way they have defined and pursued it. This variable was negatively skewed with a range of 2 on a scale of 0-6 (0 = *not at all*, 6 = *very much*). Because of this skewness, a dummy coded variable was created to assess differences between participants who reported high inclusivity (responses = 6, $n = 26$ [83.9%]) and those reported lower inclusivity (responses < 6, $n = 5$ [16.1%]). This dummy coded variable was used in the analysis examining inclusivity as a moderator on intervention outcomes.

Linearity was assessed using scatterplots and Lowess lines. No violations, such as curvilinear trends, were found.

Table 2

Descriptive Statistics of Study Measures

Measure	<i>N</i>	<i>M (SD)</i>	Range [Min, Max]	Skewness (<i>SE</i>)	Kurtosis (<i>SE</i>)
<i>Baseline 1</i>					
Body Dissatisfaction	72	55.61 (18.30)	73 [18, 91]	0.08 (0.28)	-1.07 (0.56)
Disordered Eating	71	54.05 (21.24)	89 [7, 96]	0.06 (0.29)	-0.22 (0.56)
Ideal Internalization	71	97.03 (19.97)	97 [45, 142]	-0.03 (0.29)	-0.42 (0.56)
Comparison Tendency	70	28.10 (11.37)	41 [3, 44]	-0.30 (0.29)	-0.83 (0.56)
Body Checking	70	31.09 (9.76)	40 [10, 50]	0.04 (0.29)	-0.54 (0.56)
Negative Body Talk	70	17.22 (13.35)	48 [0, 48]	0.78 (0.29)	-0.24 (0.56)
SN Size	79	8.46 (2.99)	10 [0, 10]	-1.98 (0.27)	2.79 (0.54)
SN Body Dissatisfaction	68	3.10 (0.63)	2.83 [1.67, 4.50]	0.14 (0.29)	-0.04 (0.57)
SN Disordered Eating	67	0.73 (0.49)	1.80 [0, 1.80]	0.62 (0.29)	-0.40 (0.57)
SN Negative Body Talk	68	0.49 (0.29)	1 [0, 1]	0.00 (0.29)	-0.91 (0.57)
SN Social Media	68	0.39 (0.31)	1 [0, 1]	0.56 (0.29)	-0.64 (0.57)
<i>Baseline 2</i>					
Body Dissatisfaction	39	55.38 (17.04)	60 [29, 89]	0.39 (0.38)	-0.90 (0.74)
Disordered Eating	39	53.90 (20.75)	80 [19, 99]	0.68 (0.38)	-0.15 (0.74)
Ideal Internalization	39	97.92 (22.16)	81 [54, 135]	-0.11 (0.38)	-0.79 (0.74)
Comparison Tendency	39	29.31 (10.93)	41 [3, 44]	-0.48 (0.38)	-0.33 (0.74)
Body Checking	39	33.03 (7.63)	32 [15, 47]	0.13 (0.38)	-0.60 (0.74)
Negative Body Talk	39	18.69 (11.24)	44 [0, 44]	0.14 (0.38)	-0.60 (0.74)

Table 2 Continued

Measure	<i>N</i>	<i>M</i> (<i>SD</i>)	Range [Min, Max]	Skewness (<i>SE</i>)	Kurtosis (<i>SE</i>)
SN Size	39	8.41 (2.97)	10 [0, 10]	-1.71 (0.38)	1.81 (0.74)
SN Body Dissatisfaction	37	3.19 (0.50)	2 [2.20, 4.20]	0.40 (0.39)	-0.27 (0.76)
SN Disordered Eating	37	0.76 (0.48)	2 [0, 2]	0.45 (0.39)	-0.39 (0.76)
SN Negative Body Talk	37	0.53 (0.25)	1 [0, 1]	-0.10 (0.39)	-0.66 (0.76)
SN Social Media	37	0.48 (0.30)	1 [0, 1]	0.36 (0.39)	-0.92 (0.76)
SN Change Score	35	5.40 (3.41)	14 [0, 14]	0.33 (0.40)	-0.42 (0.78)
<i>Post-intervention</i>					
Body Dissatisfaction	31	39.97 (16.17)	54 [21, 75]	1.03 (0.42)	0.08 (0.82)
Disordered Eating	31	35.92 (22.19)	70 [8, 78]	0.69 (0.42)	-0.70 (0.82)
Ideal Internalization	31	88.25 (21.71)	88.23 [51.77, 140]	0.17 (0.42)	-0.42 (0.82)
Comparison Tendency	31	18.81 (11.23)	37 [2, 39]	0.37 (0.42)	-0.74 (0.82)
Body Checking	31	25.23 (8.15)	30 [12, 42]	0.42 (0.42)	-0.47 (0.82)
Negative Body Talk	31	13.35 (13.23)	44 [0, 44]	1.10 (0.42)	0.47 (0.82)
SN Size	31	7.94 (3.32)	1 [0, 1]	-1.25 (0.42)	-0.01 (0.82)
SN Body Dissatisfaction	30	3.31 (0.62)	2.40 [2.10, 4.50]	-0.05 (0.43)	-0.43 (0.83)
SN Disordered Eating	30	0.68 (0.53)	2 [0, 2]	0.47 (0.43)	-0.39 (0.83)
SN Negative Body Talk	30	0.54 (0.28)	1 [0, 1]	-0.14 (0.43)	-0.61 (0.83)
SN Social Media	30	0.43 (0.32)	1 [0, 1]	0.22 (0.43)	-1.18 (0.83)
SN Change Score	30	4.77 (3.95)	14 [0, 14]	0.70 (0.43)	-0.56 (0.83)
Group Closeness Rating	31	4.00 (0.78)	2 [3, 5]	-0.46 (0.42)	0.07 (0.82)

Table 2 Continued

Measure	<i>N</i>	<i>M</i> (<i>SD</i>)	Range [Min, Max]	Skewness (<i>SE</i>)	Kurtosis (<i>SE</i>)
Group Similarity Rating	31	5.25 (0.73)	2 [4, 6]	-0.45 (0.42)	-0.94 (0.82)
Helpful Rating	31	5.71 (0.53)	2 [4, 6]	-1.67 (0.42)	2.14 (0.82)
Inclusive Ideal Rating	31	5.91 (0.48)	2 [4, 6]	-2.56 (0.42)	6.37 (0.82)
Homework Completion	31	2.39 (0.72)	2 [1, 3]	-0.74 (0.42)	-0.63 (0.82)
<i>1-month Follow-up</i>					
Body Dissatisfaction	27	42.85 (19.32)	59 [22, 81]	0.89 (0.45)	-0.55 (0.87)
Disordered Eating	26	34.12 (21.21)	20 [5, 75]	0.46 (0.46)	-1.05 (0.89)
Ideal Internalization	26	88.84 (19.86)	78 [47, 125]	-0.12 (0.46)	-0.71 (0.89)
Comparison Tendency	26	20.27 (12.67)	42 [2, 44]	0.56 (0.46)	-0.78 (0.89)
Body Checking	26	25.23 (8.14)	27 [14, 41]	0.43 (0.46)	-0.96 (0.89)
Negative Body Talk	26	11.19 (11.23)	37, [0, 37]	0.91 (0.46)	-0.00 (0.89)
SN Size	27	7.44 (3.58)	1 [0, 1]	-0.88 (0.45)	-0.93 (0.87)
SN Body Dissatisfaction	26	3.26 (0.48)	2.10 [2.40, 4.50]	0.38 (0.46)	0.69 (0.89)
SN Disordered Eating	26	0.65 (0.52)	2 [0, 2]	0.55 (0.46)	-0.34 (0.89)
SN Negative Body Talk	26	0.52 (0.32)	1 [0, 1]	-0.19 (0.46)	-0.98 (0.89)
SN Social Media	26	0.49 (0.38)	1 [0, 1]	0.11 (0.46)	-1.47 (0.89)
SN Change Score	23	4.52 (3.49)	10 [0, 10]	0.27 (0.48)	-1.32 (0.94)
<i>3-month Follow-up</i>					
Body Dissatisfaction	26	43.23 (13.83)	52, [20, 72]	0.21 (0.46)	-0.78 (0.89)
Disordered Eating	26	43.73 (23.30)	78 [11, 89]	0.45 (0.46)	-0.94 (0.89)

Table 2 Continued

Measure	<i>N</i>	<i>M</i> (<i>SD</i>)	Range [Min, Max]	Skewness (<i>SE</i>)	Kurtosis (<i>SE</i>)
Ideal Internalization	26	89.62 (21.27)	84 [43, 127]	-0.13 (0.46)	-0.72 (0.89)
Comparison Tendency	26	17.73 (12.14)	42, [0, 42]	0.31 (0.46)	-1.12 (0.89)
Body Checking	26	26.19 (9.13)	32 [11, 43]	0.27 (0.46)	-0.81 (0.89)
Negative Body Talk	26	9.42 (10.37)	31 [0, 31]	1.12 (0.46)	-0.01 (0.89)
SN Size	26	7.23 (3.50)	1 [0, 1]	-0.86 (0.46)	-0.67 (0.89)
SN Body Dissatisfaction	24	3.15 (0.72)	3, [2, 5]	-0.10 (0.47)	0.05 (0.92)
SN Disordered Eating	24	0.78 (0.58)	2 [0, 2]	0.54 (0.47)	-0.31 (0.92)
SN Negative Body Talk	24	0.54 (0.32)	1 [0, 1]	0.05 (0.47)	-0.98 (0.92)
SN Social Media	24	0.51 (0.35)	1 [0, 1]	-0.12 (0.47)	-1.32 (0.92)
SN Change Score	20	4.35 (3.27)	14 [0, 14]	1.46 (0.51)	2.70 (0.99)

Note. SN = Social network.

Descriptive Statistics

Attrition. As noted earlier and illustrated in Figure 3, there was higher than expected study attrition. Of the 79 students who completed Baseline 1, 32% did not attend the first Body Project session ($n = 18$ did not attend their scheduled session, $n = 22$ were scheduled for groups that were cancelled following pandemic closures). Of the 39 who attended the first Body Project session, eight (21%) did not attend their second group session and did not arrange an individual session. These eight participants who missed their second Body Project session and did not arrange an individual session were originally perceived as dropping out of the study and were not sent the 1-month Follow-up. Upon further reflection and guidance, it was decided that there was

value in collecting additional follow-up data from these participants, if they were willing to complete an additional survey. Therefore, all participants who attended the first Body Project session ($n = 39$, compared to the 31 who received the 1-month follow-up) received the 3-month follow-up survey, and four of the eight who did not attend their second group session or an individual session completed it. This resulted in 28 participants completing each follow-up survey, but with differing eligibility rates (73.7% of the 31 sent the 1-month Follow-up, 87.5% of the 39 sent the 3-month Follow-up) in Figure 3.

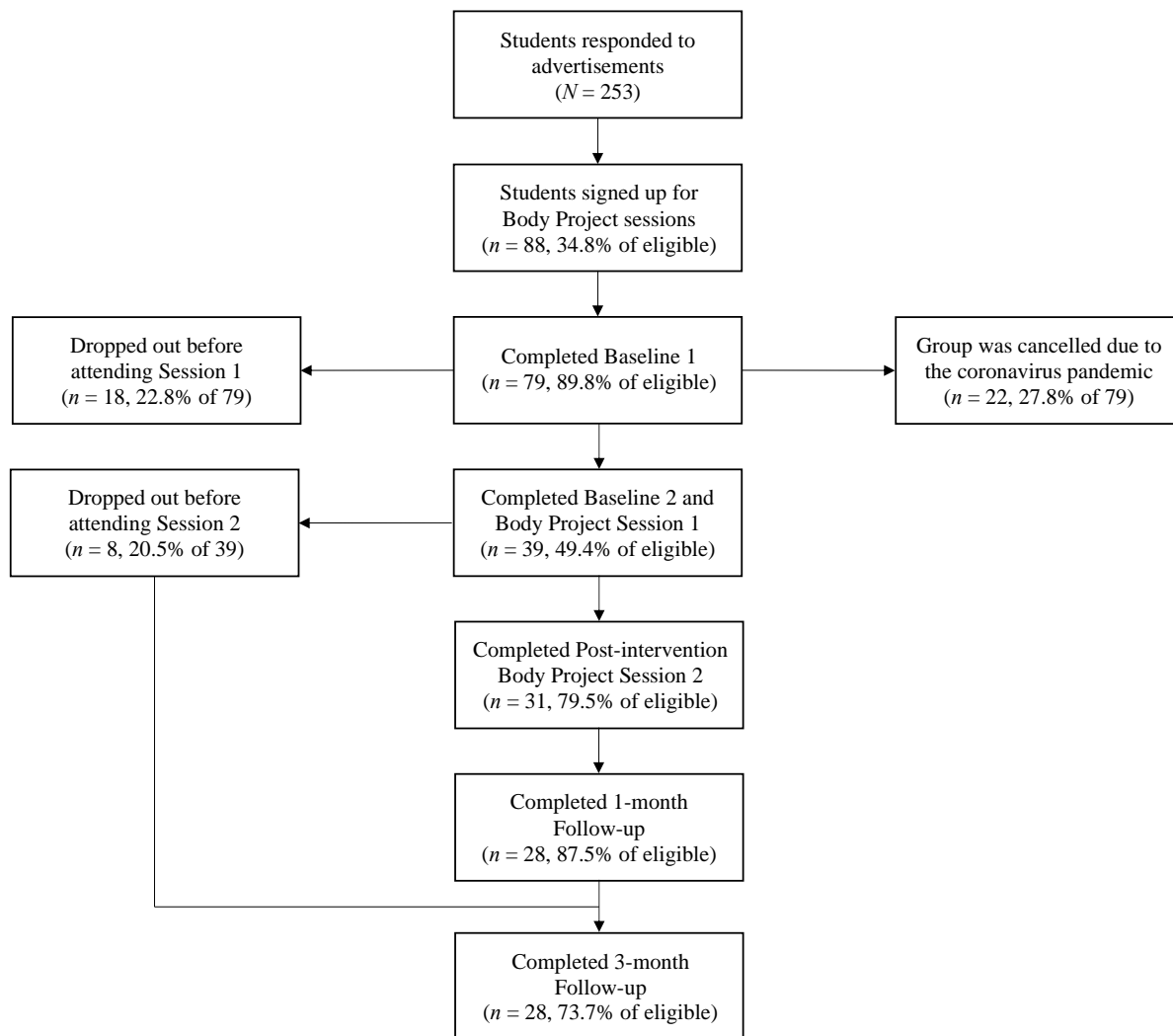


Figure 3. Participant recruitment and attrition across study timepoints.

Demographics. The intended study sample was undergraduate women. However, because of the small sample collected, graduate students and students of other gender identities aside from ciswoman were included in analyses, and both graduate student status and gender were examined as potential covariates in study analyses (see the Sensitivity Analyses section below for additional details). Descriptive statistics on the demographic data for participants included in the analyses are presented in Table 3. Because of the high attrition between Baseline

1 and Baseline 2, both the demographics of the 79 that completed Baseline 1 and those who completed Baseline 2 at the first Body Project session, 39 participants, are presented in the table. No significant differences were found in demographics between these two timepoints. The mean age of the total 79 study participants was 23.65 years ($SD = 6.38$) and mean BMI was 29.57 ($SD = 7.26$). The majority identified as Ciswoman ($n = 76, 96.2\%$); one participant (1.3%) identified as Transman and two (2.5%) identified as Gender Queer. The majority were Black ($n = 35, 44.3\%$) or White ($n = 31, 39.3\%$) with several others identifying as Asian ($n = 4, 5.1\%$), Multiracial ($n = 5, 6.3\%$), or an Other race ($n = 4, 5.1\%$). Five (6.3%) identified as Hispanic. Participants were relatively dispersed amongst the four years of school, first year ($n = 11, 13.9\%$), second year ($n = 20, 25.3\%$), third year ($n = 16, 20.3\%$), fourth year ($n = 24, 30.4\%$). Eight (10.1%) were graduate students. The majority identified as heterosexual ($n = 56, 70.9\%$) while others identifying as Lesbian or Gay ($n = 9, 11.4\%$), Bisexual ($n = 10, 12.7\%$), or Pansexual, ($n = 2, 2.5\%$), or selected Prefer not the answer ($n = 2, 2.5\%$).

Table 3

Demographic Characteristics of Sample

Characteristic	Baseline 1	Baseline 2
<i>Age</i>	23.65 (6.38)	23.29 (5.96)
<i>BMI</i>	29.57 (7.26)	29.08 (5.92)
<i>Gender</i>		
Ciswoman	76 (96.2%)	37 (94.9%)
Transman	1 (1.3%)	0 (0%)
Gender Queer	2 (2.5%)	2 (5.1%)

Table 3 Continued

Characteristic	Baseline 1	Baseline 2
<i>Race/Ethnicity</i>		
Black	35 (44.3%)	16 (41.0%)
White	31 (39.2%)	13 (33.3%)
Asian	4 (5.1%)	2 (5.1%)
Multiracial	5 (6.3%)	5 (12.8%)
Other	4 (5.1%)	3 (7.7%)
Hispanic	5 (6.3%)	3 (7.7%)
<i>Year in School</i>		
First	11 (13.9%)	7 (17.9%)
Second	20 (25.3%)	8 (20.5%)
Third	16 (20.3%)	8 (20.5%)
Fourth	24 (30.4%)	11 (28.2%)
Graduate Student	8 (10.1%)	5 (12.8%)
<i>Semester at University</i>		
First	23 (29.1%)	11 (28.2%)
Last	6 (8.9%)	3 (7.7%)
<i>On-Campus Housing</i>		
Yes	26 (32.9%)	14 (35%)
No	45 (67.1%)	35 (64.1%)
<i>Sexual Orientation</i>		
Lesbian or Gay	9 (11.4%)	3 (7.7%)

Table 3 Continued

Characteristic	Baseline 1	Baseline 2
Heterosexual	56 (70.9%)	26 (66.7%)
Bisexual	10 (12.7%)	7 (17.9%)
Pansexual	2 (2.5%)	1 (2.6%)
Prefer not to answer	2 (2.5%)	2 (5.1%)
<i>Relationship Status</i>		
Single	41 (51.9%)	19 (48.7%)
Dating one partner	18 (22.8%)	11 (28.2%)
Dating multiple partners	2 (2.5%)	2 (5.1%)
Monogamous relationship	10 (12.7%)	4 (10.3%)
Engaged or married	8 (10.1%)	3 (7.7%)

Group descriptives. Ten Body Project groups were completed between October 2019 and March 2020, before groups were cancelled due to the coronavirus pandemic; an overview of these groups can be found in Table 4. Of the ten, group session sizes ranged from 1-7 participants excluding group facilitators ($M_{size} = 3.37$, $SD = 1.92$), and 3-10 including group facilitators ($M_{size} = 5.74$, $SD = 2.38$). The average attrition rate between Session 1 and Session 2 was 28% ($SD = 0.31$). Most notably, one group only had one participant due to cancellations and participants confirming but not showing up, and this group member was unable to attend a second session because of scheduling conflicts related to semester final exams and projects. Six (19.4%) of the participants who completed the intervention attended individual or small group sessions with one other participant due to scheduling conflicts during the time of their scheduled

Session 2. Of the 19 formally scheduled group sessions, eight mostly comprised of BIPOC (Black, Indigenous, and people of color) members, eight mostly comprised of White members, and three sessions had an equal number of White and BIPOC members. Based on the group racial makeup, each individual's race was compared to their group's race identifier at Session 1 to determine whether they were a racial minority within the context of the group they were in. Eleven (28.2%) were racial minorities within the context of their group and 28 (71.8%) were among the group's racial majority. The majority of group members identified as ciswomen. In two groups, there was each one facilitator and one participant who identified as either a transman or gender queer.

Table 4

Group Descriptives

Group	Fac.	Part.	Total	Attr.	Ind. Sess.	Group Maj.	Gender Diff.	Fidelity
<i>Group 1</i>								
Session 1	3	6	9			White	2	90%
Session 2	3	2	5	33%	2	White	1	100%
<i>Group 2</i>								
Session 1	3	7	10			BIPOC	0	100%
Session 2	3	7	10	0%	0	BIPOC	0	99%
<i>Group 3</i>								
Session 1	2	3	5			BIPOC	0	100%
Session 2	1	2	3	0%	1	White	0	99%
<i>Group 4</i>								
Session 1	3	5	8			Even	2	99%

Table 4 Continued

Group	Fac.	Part.	Total	Attr.	Ind. Sess.	Group Maj.	Gender Diff.	Fidelity
Session 2	3	3	6	0%	2	Even	2	99%
<i>Group 5</i>								
Session 1	3	6	9			BIPOC	0	89%
Session 2	3	4	7	33%	0	BIPOC	0	89%
<i>Group 6</i>								
Session 1	2	2	4			White	0	95%
Session 2	2	1	3	50%	0	White	0	83%
<i>Group 7</i>								
Session 1	2	3	5			White	0	95%
Session 2	2	2	4	33%	0	White	0	95%
<i>Group 8</i>								
Session 1	2	1	3			BIPOC	0	100%
Session 2	--	--	--	100%	0	--		--
<i>Group 9</i>								
Session 1	2	3	5			White	0	100%
Session 2	2	2	4	33%	0	Even	0	95%
<i>Group 10</i>								
Session 1	2	3	5			BIPOC	0	98%
Session 2	2	2	4	0%	1	BIPOC	0	100%

Note. Fac. = number of facilitators, Part. = number of participants, Total = total number of group members including both facilitators and participants. Attr. = group attrition rate excluding those who attended individual or small group sessions. Ind. Sess. = number of participants who attended individual or small group sessions due to missing their Session 2. Group Maj. = the group racial majority. BIPOC = Black, Indigenous, and people of color. Gender Diff. = number of participants who had a different gender identity than ciswoman, including transman and gender queer. Fidelity = fidelity rate.

Study measures. Descriptive statistics on the outcome and moderator measures at each timepoint are presented in Table 2. The means of the outcome measures across timepoints are also presented in Table 5. The means and ranges of the study moderators indicate that the majority of participants perceived the intervention to be helpful ($M = 5.71$, $SD = 0.53$, Range = 2 [4, 6]) and inclusive of their appearance ideal in whatever way they defined and pursued it ($M = 4.02$, $SD = 0.48$, Range = 2 [4, 6]). The average rating of perceiving similarities between oneself and other group members was 5.25 ($SD = 0.73$, Range = 2 [4, 6]) and the average rating of perceiving to be close with other group members was 4.00 ($SD = 0.78$, Range = 3 [2, 5]). All group members completed at least one homework exercise ($M = 2.39$, $SD = 0.72$, Range = 2 [1, 3]), four (12.9%) completed one, 11 (35.5%) completed two, and 16 (51.6%) completed three or all of the homework exercises. Twenty-four (77.4%) participants completed the Letter to a Young Girl exercise, 28 (90.3%) completed the Mirror Exercise, and 22 (71.0%) completed the Behavioral Challenge exercise. On average, those who completed these exercises found them to be both helpful and challenging, Letter to a Young Girl helpfulness ($M = 6.25$, $SD = 1.03$, Range = 3 [4, 7]), challenging ($M = 5.21$, $SD = 1.67$, Range = 6 [1, 7]), Mirror Exercise helpfulness ($M = 6.43$, $SD = 0.88$, Range = 3 [4, 7]), challenging ($M = 5.82$, $SD = 1.34$, Range = 4 [3, 7]), Behavioral Challenge helpfulness ($M = 6.41$, $SD = 1.10$, Range = 4 [3, 7]), challenging ($M = 5.82$, $SD = 1.33$, Range = 4 [3, 7]).

Given the study's five timepoints and the group nature of the intervention, the data were at three levels, including the time-level, person-level, and group-level. As mentioned earlier, to determine the best-suited statistical approach for the data, the degree of variability in each outcome measure at each level was calculated with intraclass correlation coefficients (ICCs). ICC calculations were conducted using variance statistics retrieved from random effects

ANOVAs in HLM software and the formula provided in Raudenbush & Bryk (2002). The ICCs for the outcome measures in the present study are reported in Table 1. Group-level variability in outcome measures ranged from 0% to 12% suggesting that there were small degrees of group-level variability across measures.

Table 5

Means and Standard Deviations of Outcome Measures Across Timepoints

Measure	Baseline 1	Baseline 2	Post	1-month	3-month
Body Dissatisfaction	55.61 (18.30)	55.38 (17.04)	39.97 (16.17)	42.85 (19.32)	43.23 (13.83)
Disordered Eating	54.05 (21.24)	53.90 (20.75)	35.92 (22.19)	34.12 (21.21)	43.73 (23.30)
Ideal Internalization	97.03 (19.97)	97.92 (22.16)	88.25 (21.71)	88.84 (19.86)	89.62 (21.27)
Comparison Tendency	28.10 (11.37)	29.31 (10.93)	18.81 (11.23)	20.27 (12.67)	17.73 (12.14)
Body Checking	31.09 (9.76)	33.03 (7.63)	25.23 (8.15)	25.23 (8.14)	26.19 (9.13)
Negative Body Talk	17.22 (13.35)	18.69 (11.24)	13.35 (13.23)	11.19 (11.23)	9.42 (10.37)
SN Body Dis.	3.10 (0.63)	3.19 (0.50)	3.31 (0.62)	3.26 (0.48)	3.15 (0.72)
SN Disordered Eating	0.73 (0.49)	0.76 (0.48)	0.68 (0.53)	0.65 (0.52)	0.78 (0.58)
SN Neg. Body Talk	0.49 (0.29)	0.53 (0.25)	0.54 (0.28)	0.52 (0.32)	0.54 (0.32)
SN Social Media	0.39 (0.31)	0.48 (0.30)	0.43 (0.32)	0.49 (0.38)	0.51 (0.35)
SN Change Score		5.40 (3.41)	4.77 (3.95)	4.52 (3.49)	4.35 (3.27)

Note. SN = Social network, pos. = positive, neg. = negative. SN Body Dis. = Social network body dissatisfaction.

Intervention Fidelity

Two fidelity checks were used to evaluate each group's adherence to the program manual. First, doctoral students completed an intervention fidelity form following each group

session. Second, the author completed intervention fidelity forms while reviewing the audio recordings of five (50%) groups that were selected to ensure variety in their initial fidelity ratings at the first fidelity check and facilitators. The groups selected were: 3, 5, 6, 7, 10. Only small modifications were made to the initial fidelity ratings based on the author's review: Group 5 Session fidelity rate increased from 88% to 89%, Group 7 Session 1 fidelity rating increased from 93% to 95%, Group 7 Session 2 fidelity rating increased from 94% to 95%, and Group 10 Session 1 fidelity rating increased from 96% to 98%. The fidelity ratings in Table 4 reflect these changes. On average, the program fidelity rate was 96% ($SD = 0.05$, Range = 17 [83%, 100%]) suggesting high program adherence.

Data Analytic Strategy

Because only small group-level variability was found in outcome measures, study analyses were conducted using latent growth modeling that does not account for group-level differences but provides the advantage of examining multiple growth trajectories, such as intervention effects and maintenance effects, through slope estimations. The latent growth models used for each analysis examined an intercept and three piecewise-growth slopes for each outcome measure (e.g., body dissatisfaction, disordered eating, appearance-ideal internalization, appearance comparison tendency, body checking, negative body talk). The three slopes were used to examine changes in outcome measures associated with assessment effects (Slope 1), intervention effects (Slope 2) and intervention maintenance effects (Slope 3, see Figure 1 for the model). With this design, 14 non-zero loadings were specified to define the slopes in each model with each loading representing weeks of assessment (i.e., one week equals a factor loading of one; see Figure 1 for proposed factor loadings). Because of the small sample size, this initial

model examined in Mplus was under-identified for the majority of analyses. To facilitate model identification, model variances were examined and small, trivial variances were constrained.

Preliminary Examinations

Prior to hypothesis testing, sensitivity analyses were conducted in SPSS to assess the need for covariates in study analyses and differences between study completers and dropouts. Differences in outcome measures by demographic characteristics were examined with correlations and ANOVAs. The following demographic characteristics were examined: age, gender, BMI, race, year in school, undergraduate vs. graduate student status, first semester at the university, last semester at the university. Participants with higher BMIs reported higher levels of body dissatisfaction ($B = 1.20, F(1, 69) = 20.93, p = .000$), appearance-ideal internalization ($B = 0.78, F(1, 68) = 6.33, p = .014$), and negative body talk ($B = 0.55, F(1, 67) = 7.12, p = .010$). Aside from these BMI findings, outcome measures did not significantly vary by any other demographic characteristic.

Following the covariate analyses, differences in demographics and outcomes between participants who completed the study compared to those who dropped out at select timepoints (between Baseline 1 and Baseline 2, between Baseline 2 and Post-intervention) were examined using t-tests and chi-square tests. Because there were participants who dropped out and others who were not able to complete later timepoints because of pandemic-related closures, these analyses were conducted on the 57 participants who were able to participate in all timepoints as well as the total sample of 79 used for study analyses. No differences were found in demographic and outcome measures between those who completed Baseline 2 and those who did not or between those who completed Post-intervention and those who did not in both samples.

Hypothesis Testing

The research aims for the present study and specific hypotheses presented previously are repeated below followed by the results for each. Latent growth models were used for all analyses except for those conducted for Aim 3 that used Baseline 1 only. Given the slope estimates were the focus of the aims, the model fit statistics are not reported for each model, but model fit was adequate for the majority of models. For example, model fit statistics for Aim 1 were in the following ranges: χ^2 (8-13) = 4.70-50.66, CFI = .70-1, TLI = .50-1, RMSEA = 0-.27, and SRMR = .03-.32.

Based on the results of the sensitivity analyses, all analyses conducted using the BSQ, SATAQ, and FTQ were conducted with and without BMI as a covariate. No significant differences were found between these sets of analyses. However, the results reported are from the models with BMI included.

Aim 1. To evaluate the effectiveness of the Body Project on a large, state-supported, Southeastern campus that is attended by primarily White (47%) and Black (30%) students.

Hypothesis 1a. As demonstrated in previous research on different campuses, women who complete the Body Project will experience significant decreases in measures of body dissatisfaction, disordered eating, and appearance-ideal internalization following the intervention and will maintain reductions for three months.

Total scores were computed for participants' body dissatisfaction, disordered eating, and appearance-ideal internalization at each of the five time points (Baseline 1, Baseline 2, Post-intervention, 1-month Follow-up, and 3-month Follow-up). The latent growth model described previously (Figure 1) was used to examine changes in each of the three total scores across timepoints. The results of these models can be found in Table 6. In Table 6, the intercept mean

estimate is the average outcome value at Baseline 1 and the slope mean estimates are the average difference scores. The confidence intervals are used to determine whether Slopes 2 (intervention effects) and 3 (maintenance effects) are significant by excluding zero and whether their range is beyond the effect of time (measured by Slope 1) by not having overlapping values with the intervals of Slope 1. Because of the small sample, both 95% and 90% confidence intervals were examined.

Based on the results presented in Table 6, for body dissatisfaction, the confidence interval of Slope 2, 95% CI [-19.70, -8.51], indicates that participants experienced a reduction in their body dissatisfaction following the intervention beyond what would be expected from time alone (measured by Slope 1), 95% CI [-3.72, 4.17]. On average, BSQ total scores decreased by 14.10; see Figure 4 for a graph of the average body dissatisfaction total scores by timepoint. Participants also experienced a reduction in disordered eating following the intervention, Slope 2 95% CI [-25.48, -9.84], beyond what would be expected from time alone, Slope 1 95% CI [-3.17, 2.04]. On average, EPSI scores decreased by 17.66; see Figure 5 for a graph of the average disordered eating total scores by timepoint. At the 90% confidence level, participants experienced a reduction in appearance-ideal internalization following the intervention, Slope 2 90% CI [-16.85, -4.82], in comparison to assessment effects, Slope 1 90% CI [-3.41, 4.70]. On average, SATAQ total scores decreased by 10.83; see Figure 6 for a graph of the average appearance-ideal total scores by timepoint. For all three, body dissatisfaction, disordered eating, and appearance-ideal internalization, there were no additional score reductions or increases at follow-ups as demonstrated by Slope 3 in each model that measures maintenance effects, body dissatisfaction Slope 3 95% CI [-0.36, 1.13], disordered eating Slope 3 95% CI [-0.58, 1.78], and appearance-ideal internalization Slope 3 90% CI [-0.71, 0.77].

Table 6

Aim 1 Results

Outcome	Mean Estimate	95% CI		90% CI	
		Lower	Upper	Lower	Upper
<i>Body Dissatisfaction</i>					
Intercept	19.64	-0.53	39.80	4.30	34.98
Slope 1 (time effects)	0.23	-3.72	4.17	-2.78	3.23
Slope 2 (intervention effects)	-14.10	-19.70	-8.51	-18.36	-9.85
Slope 3 (maintenance effects)	0.39	-0.36	1.13	-0.18	0.95
<i>Disordered Eating</i>					
Intercept	54.27	47.87	60.68	49.40	59.15
Slope 1 (time effects)	-0.56	-3.17	2.04	-2.55	1.42
Slope 2 (intervention effects)	-17.66	-25.48	-9.84	-23.61	-11.71
Slope 3 (maintenance effects)	0.60	-0.58	1.78	-0.29	1.50
<i>Ideal Internalization</i>					
Intercept	74.88	50.47	99.29	56.30	93.46
Slope 1 (time effects)	0.65	-4.68	5.97	-3.41	4.70
Slope 2 (intervention effects)	-10.83	-18.74	-2.93	-16.85	-4.82
Slope 3 (maintenance effects)	0.03	-0.94	1.00	-0.71	0.77
<i>Comparison Tendency</i>					
Intercept	28.21	24.77	31.64	25.59	30.82
Slope 1 (time effects)	0.41	-1.46	2.28	-1.02	1.83
Slope 2 (intervention effects)	-8.69	-12.68	-4.70	-11.72	-5.65
Slope 3 (maintenance effects)	-0.23	-0.77	0.31	-0.64	0.18
<i>Body Checking</i>					
Intercept	31.17	28.25	34.09	28.95	33.39
Slope 1 (time effects)	0.24	-0.81	1.29	-0.55	1.04
Slope 2 (intervention effects)	-6.47	-10.09	-2.84	-9.23	-3.71
Slope 3 (maintenance effects)	0.06	-0.36	0.48	-0.26	0.38

Table 6 Continued

Outcome	Mean Estimate	95% CI		90% CI	
		Lower	Upper	Lower	Upper
<i>Negative Body Talk</i>					
Intercept	-0.22	-16.45	16.00	-12.57	12.12
Slope 1 (time effects)	0.92	-1.98	3.81	-1.29	3.12
Slope 2 (intervention effects)	-4.81	-9.24	-0.38	-8.18	-1.44
Slope 3 (maintenance effects)	-0.43	-1.00	0.14	-0.86	0.14

Note. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate. For these models, the intercept is the mean outcome measure at baseline when BMI is 0. For Disordered Eating, Appearance Comparisons, and Body Checking models, the intercept is the mean outcome value at Baseline 1. For all models, the slope mean estimates are the average difference scores. The confidence intervals are used to determine whether Slopes 2 (intervention effects) and 3 (maintenance effects) are significant by excluding zero and whether their range is beyond the effects of time (measured by Slope 1) by not having overlapping values with the intervals of Slope 1. Because of the small sample, both 95% and 90% confidence intervals were examined.

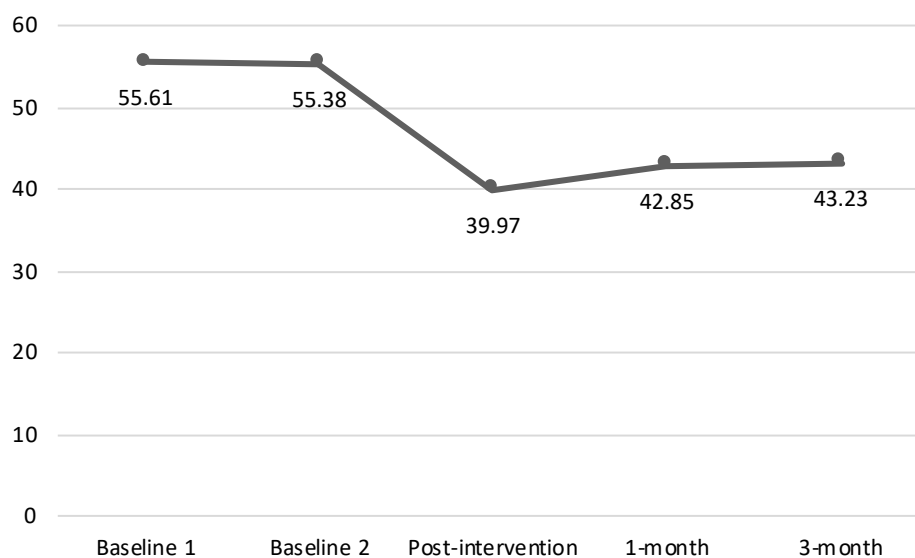


Figure 4. Average body dissatisfaction total scores by timepoint.

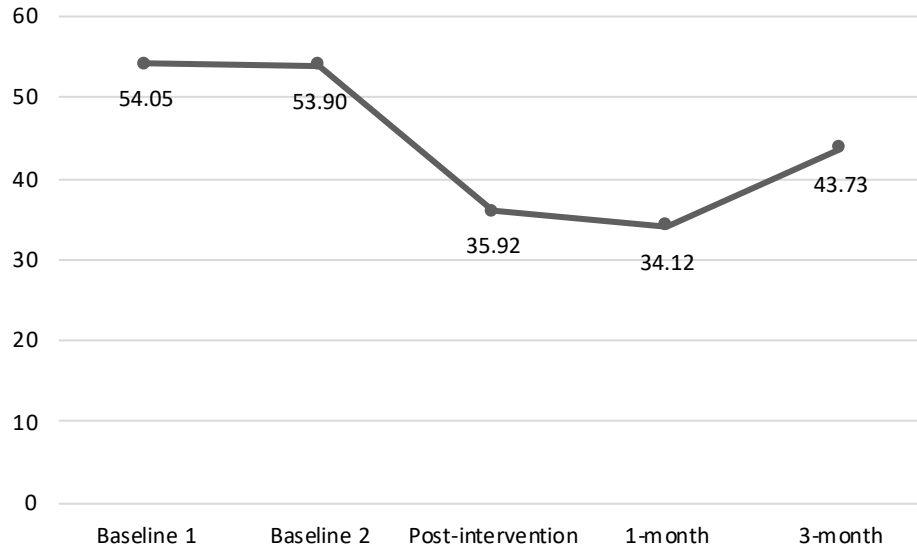


Figure 5. Average disordered eating total scores by timepoint.

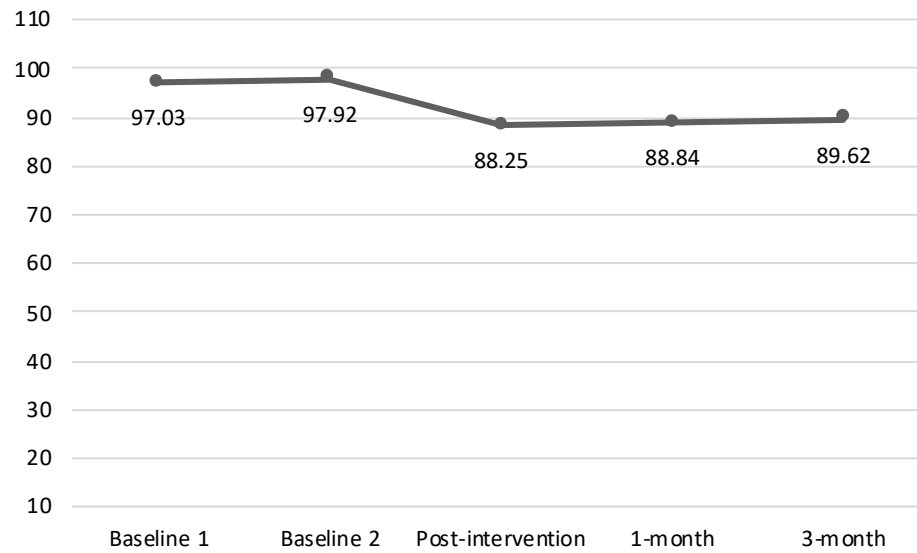


Figure 6. Average appearance-ideal internalization total scores by timepoint.

Hypothesis 1b. In addition to the observed changes in outcome measures in previous research, women who complete the Body Project will also experience decreases in body dissatisfaction maintenance behaviors (e.g., appearance comparisons, body checking, negative body talk).

A similar analytic approach for Hypothesis 1a was used for Hypothesis 1b. Total scores were calculated for appearance comparison tendency, body checking, and negative body talk. The same latent growth model was used as for Hypothesis 1a but using these three outcome measures. The results of these models can also be found in Table 6. Following the intervention, participants experienced a significant reduction in their appearance comparison tendency ($M = -8.69$, Slope 2 95% CI [-12.68, -4.70]) and body checking ($M = -6.47$, Slope 2 95% CI [-10.09, -2.84]) compared to the effect of time (appearance comparison tendency Slope 1 95% CI [-1.46, 2.28], body checking Slope 1 95% CI [-0.81, 1.29]). At the 90% confidence level, they also experienced a significant reduction in their negative body talk, $M = -4.81$, Slope 2 90% CI [-8.18, -1.44], compared to the effect of time, tendency Slope 1 90% CI [-1.29, 3.12]. There were no additional reductions or increases at follow-ups for any of the three outcomes, appearance comparison tendency Slope 3 95% CI [-0.77, 0.31], body checking Slope 3 95% CI [-0.36, 0.48], negative body talk Slope 3 90% CI [-0.86, 0.14]; see Figure 7 (appearance comparison tendency), Figure 8 (body checking), and Figure 9 (negative body talk) for graphs of the average total scores by timepoint.

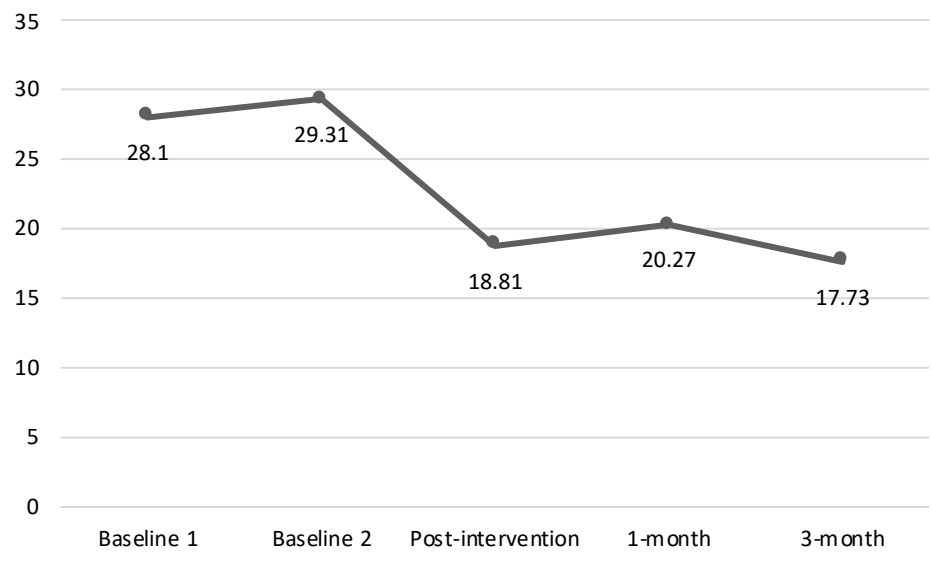


Figure 7. Average appearance comparison tendency total scores by timepoint.

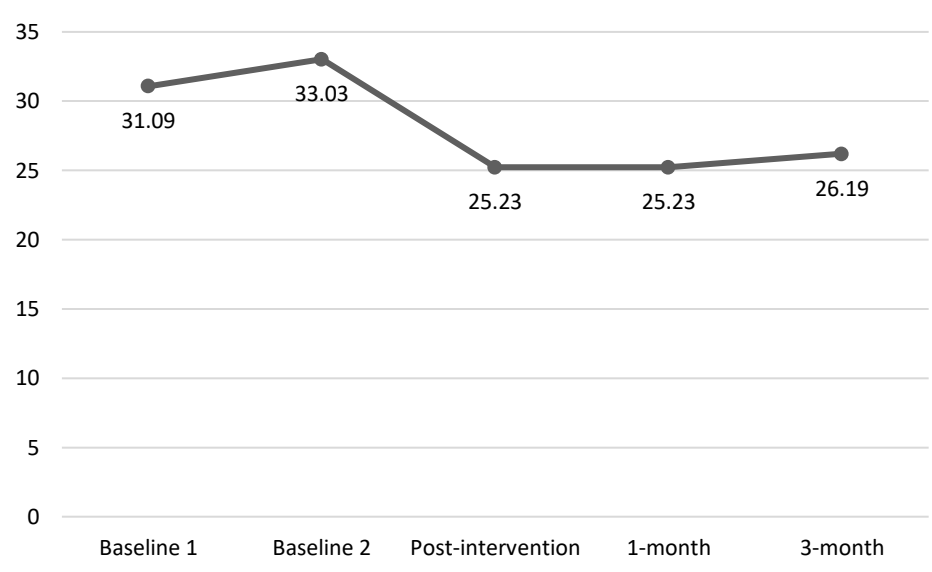


Figure 8. Average body checking total scores by timepoint.

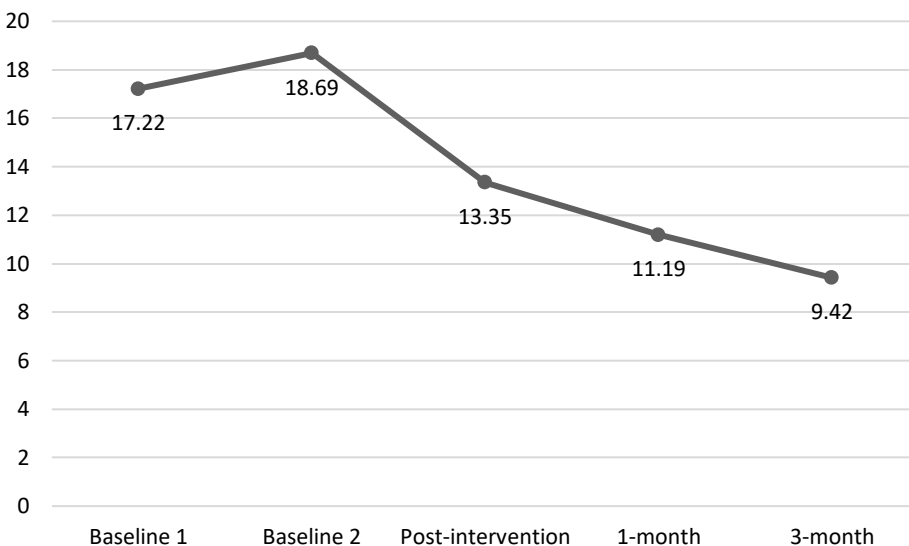


Figure 9. Average negative body talk total scores by timepoint.

Aim 2. To explore the degree to which Body Project group dynamics (perceived group similarity and closeness) predict decreases in outcome measures described in Aim 1.

Hypothesis 2a. Women who report higher perceived similarity with their Body Project group will experience greater reductions in outcome measures following the intervention and at 1- and 3-month follow-ups.

Perceived similarity was only collected in the post-intervention survey. The perceived similarity score was entered as a predictor in the latent growth models used for Aim 1 to examine whether perceived similarity predicts any significant change in intervention effects and maintenance effects (see Figure 10). The results of these models can be found in Table 7. The only slope that perceived similarity significantly moderated was Slope 3 for appearance comparison tendency. Participants who perceived greater similarities between themselves and other group members experienced a significant decrease in their appearance comparison tendency scores at the 1-month and 3-month follow-ups, $B = -0.69$, $p = .014$.

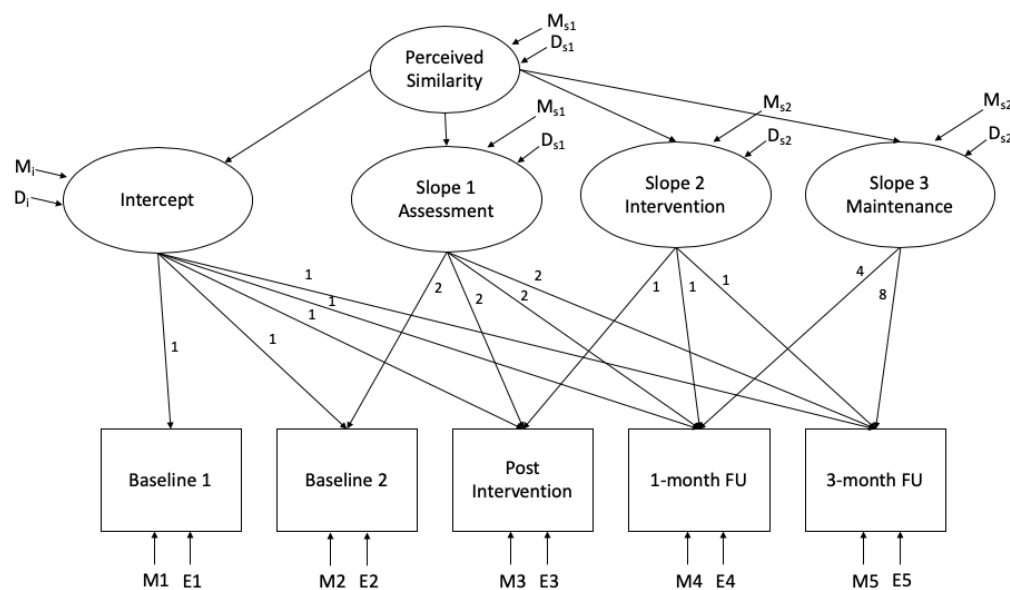


Figure 10. The primary model used in study analyses with a moderator (e.g., Perceived Similarity examined in Aim 3).

Table 7

Perceived Group Similarity on Intervention Outcomes

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Body Dissatisfaction</i>				
Intercept	0.24	0.19	1.24	.214
Slope 1 (time effects)	-0.19	0.22	-0.85	.393
Slope 2 (intervention effects)	-0.21	0.18	-1.20	.229
Slope 3 (maintenance effects)	-0.20	0.25	-1.20	.229
<i>Disordered Eating</i>				
Intercept	-2.23	6.27	-0.36	.722
Slope 1 (time effects)	0.01	1.83	0.01	.994
Slope 2 (intervention effects)	2.58	4.49	-0.57	.566

Table 7 Continued

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Slope 3 (maintenance effects)	-0.58	0.61	-0.95	.343
<i>Ideal Internalization</i>				
Intercept	-2.56	5.77	-0.44	.658
Slope 1 (time effects)	-0.98	1.45	-0.68	.500
Slope 2 (intervention effects)	5.32	5.07	1.05	.294
Slope 3 (maintenance effects)	-0.50	0.61	-0.83	.406
<i>Comparison Tendency</i>				
Intercept	3.41	2.77	1.23	.217
Slope 1 (time effects)	-2.32	1.22	-1.91	.057
Slope 2 (intervention effects)	2.85	2.30	1.24	.215
Slope 3 (maintenance effects)	-0.69	0.28	-2.45	.014
<i>Body Checking</i>				
Intercept	1.88	3.13	0.60	.549
Slope 1 (time effects)	-0.86	0.85	-1.01	.311
Slope 2 (intervention effects)	0.64	2.22	0.29	.771
Slope 3 (maintenance effects)	-0.28	0.20	-1.42	.157
<i>Negative Body Talk</i>				
Intercept	3.36	3.43	0.95	.343
Slope 1 (time effects)	-0.89	1.29	-0.69	.493
Slope 2 (intervention effects)	-0.79	2.28	-0.33	.741
Slope 3 (maintenance effects)	-0.46	0.31	-1.48	.138

Note. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate.

Hypothesis 2b. Women who report higher perceived closeness with their Body Project group will experience greater reductions in outcome measures following the intervention and at 1- and 3-month follow-ups.

The same analytic approach used for perceived similarity was used for perceived closeness, which was also only collected in the post-intervention survey. The results of these models can be found in Table 8. Participants who perceived greater closeness with their group, experienced a significant decrease in their disordered eating and body checking following the intervention as measured by Slope 2, disordered eating ($B = -8.71, p = .039$), body checking ($B = -3.75, p = .049$). They also experienced a significant decrease in their body dissatisfaction and negative body talk at 1-month and 3-month follow-ups as measured by Slope 3, body dissatisfaction ($B = -0.54, p = .016$) and negative body talk ($B = -0.76, p = .010$). All other results were non-significant.

Table 8

Perceived Group Closeness on Intervention Outcomes

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Body Dissatisfaction</i>				
Intercept	-0.30	0.19	1.58	.115
Slope 1 (time effects)	0.31	0.25	1.23	.217
Slope 2 (intervention effects)	-0.02	0.19	-0.10	.922
Slope 3 (maintenance effects)	-0.54	0.23	-2.40	.016
<i>Disordered Eating</i>				
Intercept	6.12	5.85	1.05	.295
Slope 1 (time effects)	3.13	1.54	2.03	.042

Table 8 Continued

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Slope 2 (intervention effects)	-8.71	4.22	-2.07	.039
Slope 3 (maintenance effects)	-0.33	0.62	-0.53	.597
<i>Ideal Internalization</i>				
Intercept	1.88	5.70	0.33	.742
Slope 1 (time effects)	-0.08	1.38	-0.06	.955
Slope 2 (intervention effects)	-0.61	5.33	-0.11	.909
Slope 3 (maintenance effects)	-0.38	0.62	-0.62	.537
<i>Comparison Tendency</i>				
Intercept	-0.53	2.94	-0.18	.858
Slope 1 (time effects)	1.80	1.25	1.44	.149
Slope 2 (intervention effects)	-1.56	2.32	-0.67	.503
Slope 3 (maintenance effects)	-0.44	0.29	-1.53	.125
<i>Body Checking</i>				
Intercept	3.71	2.71	1.37	.170
Slope 1 (time effects)	0.74	0.75	0.99	.373
Slope 2 (intervention effects)	-3.75	1.90	-1.97	.049
Slope 3 (maintenance effects)	-0.24	0.20	-1.17	.243
<i>Negative Body Talk</i>				
Intercept	3.11	3.21	0.97	.332
Slope 1 (time effects)	0.131	1.20	0.11	.913
Slope 2 (intervention effects)	-1.36	2.32	-0.59	.557
Slope 3 (maintenance effects)	-0.76	0.29	-2.58	.010

Note. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate.

Aim 3. To examine the association between perceived social network body dissatisfaction and related behaviors and college women's body dissatisfaction and disordered eating behaviors.

Hypothesis 3a. Women's perceived social network body dissatisfaction and related behaviors will significantly predict their body dissatisfaction and disordered eating.

The perceived social network body dissatisfaction total score was computed by averaging the body dissatisfaction values reported across each participant's social network in the first baseline assessment. The perceived social network disordered eating behaviors total score was computed by taking the proportion of participants' social networks who engage in any disordered eating behaviors according to the first baseline assessment. Participants' perceived social network body dissatisfaction and disordered eating total scores were each regressed onto participants' respective measures at Baseline 1. Participants' perceived social network body dissatisfaction was not significantly associated with their own body dissatisfaction, $B = -6.99$, $F(1, 63) = 3.65$, $p = .061$. Participants who perceived their social network engaging in more disordered eating behaviors also reported greater disordered eating, $B = 13.75$, $F(1, 63) = 6.81$, $p = .011$. Follow-up analyses examining the proportions of participants' social networks who engage in specific disordered eating behaviors revealed that participants who perceived their social network engaging in more dietary restriction also reported greater disordered eating, $B = 25.15$, $F(1, 63) = 5.02$, $p = .029$. No other perceived social network disordered eating behaviors, including over-exercising, $F(1, 63) = 2.46$, $p = .122$, overeating, $F(1, 63) = 3.73$, $p = .058$, self-induced vomiting, $F(1, 63) = 0.84$, $p = .362$, and laxative or diuretic use, $F(1, 63) = 3.31$, $p = .074$, were significantly associated with participants' disordered eating total scores.

Additional related behaviors, including perceived social network's negative body talk and appearance-focused social media behavior, were examined in association with participants' body dissatisfaction and disordered eating. Similar to the social network disordered eating total scores, negative body talk and appearance-focused social media behavior total scores were also the proportions of participants' social networks who they reported engage in these behaviors. Participants who perceived a higher proportion of their social network engaging in negative body talk also reported greater body dissatisfaction, $B = 19.44$, $F(1, 63) = 6.23$, $p = .015$. Participants' social network negative body talk reports were not associated with their disordered eating, $F(1, 63) = 3.27$, $p = .075$. In contrast, perceived social network appearance-focused social media behaviors was significantly associated with participants' disordered eating, $B = 21.24$, $F(1, 63) = 6.36$, $p = .014$, but not body dissatisfaction, $F(1, 63) = 1.32$, $p = .256$.

Aim 4. To evaluate the changes in women's social networks (e.g., perceived body dissatisfaction and related behaviors, identified close friends) from the start of the intervention to 1 and 3 months following the intervention.

Hypothesis 4a. Following the intervention, women's perceived social network body dissatisfaction and related behaviors will decrease with time.

The total score calculations for perceived social network body dissatisfaction and related behaviors used in Aim 3 but for all five timepoints were used in these latent growth models. The primary latent growth model used in Aims 1 and 2 was used again to assess intervention and maintenance effects on these total scores. The results of these models can be found in Table 9. None of the perceived social network behaviors changed during or following the intervention beyond what was expected due to time alone.

Table 9

Social Network Outcomes Across Timepoints

Outcome	Mean Estimate	95% CI		90% CI	
		Lower	Upper	Lower	Upper
<i>Social Network Body Dissatisfaction</i>					
Intercept	3.10	2.92	3.28	2.96	3.24
Slope 1 (time effects)	0.02	-0.08	0.11	-0.06	0.09
Slope 2 (intervention effects)	0.17	-0.02	0.36	0.02	0.32
Slope 3 (maintenance effects)	-0.03	-0.06	0.01	-0.05	0.00
<i>Social Network Disordered Eating</i>					
Intercept	0.73	0.58	0.89	0.62	0.85
Slope 1 (time effects)	0.01	-0.08	0.11	-0.06	0.09
Slope 2 (intervention effects)	-0.04	-0.21	0.13	-0.17	0.09
Slope 3 (maintenance effects)	0.01	-0.02	0.04	-0.02	0.03
<i>Social Network Negative Body Talk</i>					
Intercept	0.50	0.41	0.58	0.43	0.56
Slope 1 (time effects)	0.02	-0.03	0.07	-0.02	0.06
Slope 2 (intervention effects)	0.01	-0.09	0.11	-0.06	0.08
Slope 3 (maintenance effects)	0.00	-0.01	0.02	-0.01	0.01
<i>Social Network Appearance Social Media</i>					
Intercept	0.39	0.30	0.48	0.32	0.46
Slope 1 (time effects)	0.03	-0.02	0.09	-0.01	0.07
Slope 2 (intervention effects)	-0.07	-0.23	0.09	-0.19	0.05
Slope 3 (maintenance effects)	0.01	-0.01	0.03	-0.00	0.02

Hypothesis 4b. Following the intervention, women's identified social network will change (i.e., friends will be added or removed) in accordance with Hypothesis 4a; friends high in body dissatisfaction and related behaviors will be removed and friends low in body dissatisfaction and related behaviors will be added.

The total number of changes in participants' social networks (e.g., total friends added plus total friends removed) were calculated at each time point and used as a social network change total score. The social network change total score was created and examined to measure the degree of change in participants' social network composition across timepoints. Because this total score is a change score and latent growth modeling is not needed, a within-person MANOVA was performed with social network change total score as the dependent variable and assessment time as the independent variable (Baseline 2, Post-intervention, 1-month Follow-up, 3-month Follow-up). Using Wilks' lambda criterion ($\lambda = .99$), the multivariate omnibus test was not significant, $F(3, 17) = 0.25, p = .861$.

Descriptives on the outcome measures used in Hypothesis 4a for friends added and removed were conducted to further examine patterns in social network change. These were computed by averaging the outcome measures for friends added as well as for friends removed between two timepoints. Because data for friends removed were reported in the former timepoint and data for friends added were reported in the latter timepoint, these averages were computed at these respective timepoints. Once averages were computed for each participants' set of friends added and removed, a global mean was taken for each outcome measure for friends added and removed across participants. Then, independent samples t-tests were conducted to examine differences in outcome means between friends added and removed during the course of the study (from post-intervention though 3-month follow up). These descriptives and t-test results are

reported in Table 10. It is notable that for many of the outcome measures, the average values for friends removed were lower than the averages for the friends added from post-intervention through 3-month follow-up. However, only one difference was marginally significant; the disordered eating total score for friends removed was marginally significantly lower ($M = 2.01$, $SD = 3.14$) than the value for friends added ($M = 0.58$, $SD = 0.62$) at 1-month Follow-up, $t(35) = -1.59$, $p = .054$. To examine this further, descriptives on disordered eating behaviors for friends added and removed were examined further. In addition to their disordered eating total score, marginally significant differences were also found for dietary restriction and exercise for the purpose of weight control at 1-month Follow-up. More friends added than removed engaged in dietary restriction, $t(35) = -1.83$, $p = .076$, and exercise for the purpose of weight control, $t(35) = -2.01$, $p = .052$. No other significant or marginally significant differences were found in disordered eating behaviors or other outcome measures.

Table 10

Social Network Outcome Descriptives

Timepoint	<i>n</i>	Added	<i>n</i>	Removed	<i>M Diff.</i>	<i>t</i>	<i>p</i>
<i>Baseline 1: Baseline 2</i>							
Body Dissatisfaction	30	3.27 (0.87)	30	3.30 (0.75)	0.03	0.14	.887
Disordered Eating	30	0.82 (0.66)	30	0.51 (0.66)	0.31	1.82	.074
Dietary Restriction	30	0.27 (0.29)	29	0.21 (0.29)	0.06	0.79	.430
Exercise	30	0.29 (0.38)	30	0.15 (0.26)	0.14	1.67	.102
Overeat	30	0.20 (0.31)	30	0.14 (0.21)	0.06	0.88	.384
Self-induced Vomit	30	0.03 (0.11)	30	0.01 (0.05)	0.02	0.91	.370
Laxatives/Diuretics	29	0.02 (0.06)	30	0.02 (0.07)	0.00	.00	1.00

Table 10 Continued

Timepoint	<i>n</i>	Added	<i>n</i>	Removed	<i>M Diff.</i>	<i>t</i>	<i>p</i>
Negative Body Talk	30	0.50 (0.37)	30	0.37 (0.35)	0.13	1.40	.167
App. Social Media	30	0.50 (0.38)	30	0.40 (0.35)	0.10	1.06	.293
<i>Baseline 2: Post-intervention</i>							
Body Dissatisfaction	21	3.50 (0.85)	25	3.17 (0.90)	0.33	1.27	.211
Disordered Eating	21	0.45 (0.72)	25	1.29 (2.22)	0.83	-1.64	.108
Dietary Restriction	21	0.15 (0.26)	24	0.31 (0.49)	0.16	-1.34	.188
Exercise	21	0.12 (0.24)	25	0.34 (0.53)	0.22	-1.76	.086
Overeat	21	0.13 (0.28)	25	0.27 (0.49)	0.14	-1.21	.253
Self-induced Vomit	21	0.02 (0.11)	25	0.17 (0.45)	0.15	-1.49	.144
Laxatives/Diuretics	21	0.02 (0.11)	24	0.18 (0.46)	0.16	-1.55	.128
Negative Body Talk	21	0.48 (0.43)	25	0.66 (0.57)	0.18	-1.19	.241
App. Social Media	21	0.38 (0.43)	25	0.64 (0.58)	0.26	-1.70	.097
<i>Post-intervention: 1-month</i>							
Body Dissatisfaction	20	3.48 (0.74)	17	3.48 (0.84)	0.00	0.00	1.00
Disordered Eating	20	0.58 (0.62)	17	2.01 (3.14)	1.43	-2.00	.054
Dietary Restriction	20	0.22 (0.33)	17	0.53 (0.67)	0.31	-1.83	.076
Exercise	20	0.13 (0.25)	17	0.43 (0.61)	0.30	-2.01	.052
Overeat	20	0.22 (0.41)	17	0.43 (0.76)	0.21	-1.07	.293
Self-induced Vomit	20	0.01 (0.05)	17	0.30 (0.62)	0.29	-0.02	.984
Laxative/Diuretic	20	0.00 (0.00)	17	0.33 (0.62)	0.30	-0.02	.983
Disordered Eating	20	0.58 (0.62)	17	2.01 (3.14)	1.43	-2.00	.054
Negative Body Talk	20	0.46 (0.44)	17	0.74 (0.63)	0.28	-1.59	.122
App. Social Media	20	0.55 (0.46)	17	0.64 (0.70)	0.09	-0.47	.642

Table 10 Continued

Timepoint	<i>n</i>	Added	<i>n</i>	Removed	<i>M Diff.</i>	<i>t</i>	<i>p</i>
<i>1-month: 3-month</i>							
Body Dissatisfaction	19	3.36 (0.71)	19	3.60 (0.68)	0.24	-1.06	.294
Disordered Eating	19	0.66 (0.80)	19	0.81 (0.96)	0.15	-0.52	.604
Dietary Restriction	19	0.22 (0.37)	18	0.36 (0.42)	0.20	-1.13	.268
Exercise	19	0.20 (0.38)	19	0.26 (0.36)	0.06	-0.50	.620
Overeat	19	0.18 (0.34)	19	0.16 (0.32)	0.02	0.19	.853
Self-induced Vomit	19	0.00 (0.00)	19	0.03 (0.11)	0.03	-1.18	.244
Laxatives/Diuretics	19	0.05 (0.23)	19	0.03 (0.11)	0.02	0.34	.734
Negative Body Talk	19	0.44 (0.47)	19	0.38 (0.41)	0.06	0.42	.677
App. Social Media	19	0.56 (0.44)	19	0.52 (0.43)	0.04	0.28	.778

Note. Each section is labeled with two timepoints because data were gathered from two timepoints, friends added were gathered from the second timepoint listed and friends removed were gathered from the first timepoint listed. The values reported in the Added and Removed columns are the means (standard deviations) of measures for each participant. The *n* values indicate the number of participants from which data was collected. *M diff.* = the difference between the means of added and removed. App. Social Media = appearance social media.

Aim 5. Given the campus from which participants will be recruited almost evenly comprises of White (47%) and Black (30%) students and few studies on the Body Project have examined race differences in outcome measures, the fifth research aim is to examine whether there are participant race differences and group minority/majority race differences in Aim 1.

Consistent with the campus racial make-up, the study sample was predominantly Black (44.3%) and White (39.2%). Because of this and the small representation of other races in the sample, a dummy-coded variable identifying Black and White race status was created and entered into the model used in Aim 1 as a moderator just as perceived similarity and perceived

closeness were examined in Aim 3 (see Figure 10 for the model used to examine the moderating effects of perceived similarity). The results of these models can be found in Table 11. The Black/White variable did not significantly moderate any of the intervention (Slope 2) or maintenance (Slope 3) effects. However, the moderation effect on body dissatisfaction at Slope 2, $B = -8.47$, $p = .053$, and on body checking at Slope 3, $B = -0.53$, $p = .070$, were marginally significant (see Figure 11a and Figure 11b for illustrations of these race differences), possibly suggesting a trend towards Black participants experiencing a greater reduction in body dissatisfaction and body checking than White participants. Though these differences are only marginally significant, Figure 11a shows the difference between Baseline 2 and Post-intervention for Black participants to be greater than it is for White participants. In contrast, Figure 11b demonstrates a greater reduction between Baseline 2 and Post-intervention in body checking for White participants than Black participants, but then the slope changes directions for White participants. White participants appear to experience a slight increase in body checking at 3-month follow-up whereas Black participants continue to see reductions in body checking at 3-month follow-up. The Black/White variable also significantly moderated the assessment effects (Slope 1) for appearance-ideal internalization, $B = -4.08$, $p = .034$, suggesting that Black participants experienced greater reductions in internalization than White participants due to time (see Figure 11b).

Participants' individual race was also examined in the context of the group they were in. Based on the racial makeup of each group, including the race of the facilitators, each group was assigned a group race identifier, either majority White or majority BIPOC. Then, each individual's race was compared to their group's race identifier to determine whether they were a racial minority within the context of the group they were in. Of the 10 Body Project groups, three

were mostly comprised of White participants, four were mostly comprised of BIPOC participants, one had an even number of BIPOC and White participants, and two had differing race compositions between the first and second sessions. The group that had an even number of BIPOC and White members was coded as having a White majority given the historical oppression of BIPOC individuals in the U.S. and the additional power this provides White individuals. The groups with differing race compositions by session were defaulted to the racial majority at the first session. This led to five groups that were coded as having a BIPOC majority and five groups that were coded as having a White majority.

The dummy-coded group race identifier significantly moderated the intervention effects (Slope 2) and maintenance effects (Slope 3) for body dissatisfaction. Participants in groups comprised of mostly BIPOC members experienced a greater reduction in their body dissatisfaction following the intervention than participants in groups that comprised mostly of White members, $B = -9.23$, $p = .047$. However, they experienced an increase in their body dissatisfaction compared to participants in groups of mostly White members at 1-month and 3-month follow-ups, $B = 1.30$, $p = .047$. Figure 12 shows average body dissatisfaction scores by group race identifier. All other results for the group race identifier were non-significant; the results of these models can be found in Table 12. The dummy-coded minority variable did not significantly moderate any of the model slopes; the results of these models can be found in Table 13.

Table 11

Black/White Identity on Intervention Outcomes

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Body Dissatisfaction</i>				
Intercept	-7.19	2.84	-1.87	.061
Slope 1 (time effects)	2.23	1.76	1.27	.204
Slope 2 (intervention effects)	-8.47	4.38	-1.94	.053
Slope 3 (maintenance effects)	-0.04	0.62	-0.06	.955
<i>Disordered Eating</i>				
Intercept	-5.80	5.38	-1.08	.281
Slope 1 (time effects)	1.63	2.33	0.70	.483
Slope 2 (intervention effects)	-3.48	8.55	-0.41	.684
Slope 3 (maintenance effects)	0.05	1.15	0.04	.969
<i>Ideal Internalization</i>				
Intercept	0.90	4.97	0.18	.857
Slope 1 (time effects)	-4.08	1.92	-2.13	.034
Slope 2 (intervention effects)	1.86	7.54	0.25	.805
Slope 3 (maintenance effects)	0.15	0.85	0.17	.862
<i>Comparison Tendency</i>				
Intercept	-3.35	2.92	-1.14	.253
Slope 1 (time effects)	0.90	1.67	0.54	.592
Slope 2 (intervention effects)	0.83	2.78	0.22	.826
Slope 3 (maintenance effects)	-0.57	0.49	-1.15	.249
<i>Body Checking</i>				
Intercept	-0.59	2.44	-0.24	.809

Table 11 Continued

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Slope 1 (time effects)	0.41	0.94	0.44	.658
Slope 2 (intervention effects)	-0.21	3.38	-0.06	.950
Slope 3 (maintenance effects)	-0.53	0.30	-1.81	.070
<i>Negative Body Talk</i>				
Intercept	1.75	2.50	0.50	.618
Slope 1 (time effects)	-0.53	1.79	-0.30	.767
Slope 2 (intervention effects)	-1.25	4.73	-0.26	.792
Slope 3 (maintenance effects)	0.41	0.51	0.81	.418

Note. A dummy-coded Black/White race variable was created, where 0 = White and 1 = Black, and used as a moderator for study analyses. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate.

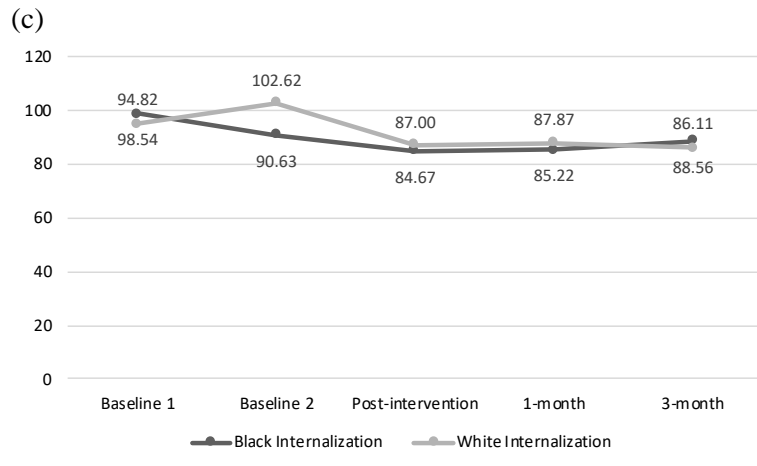
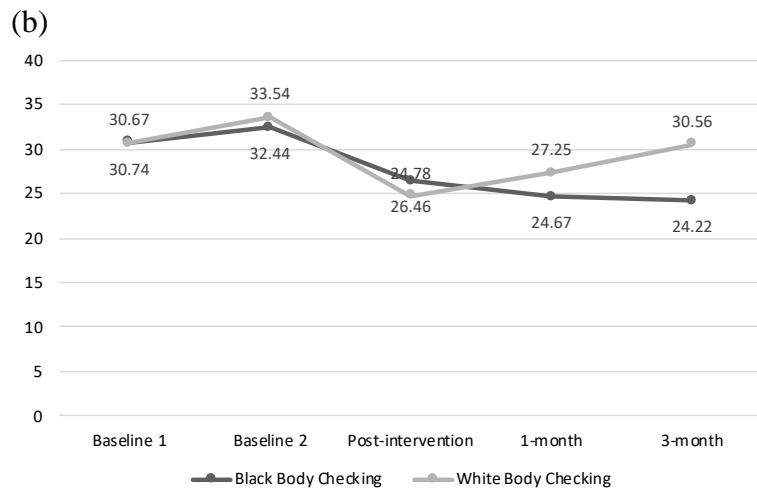
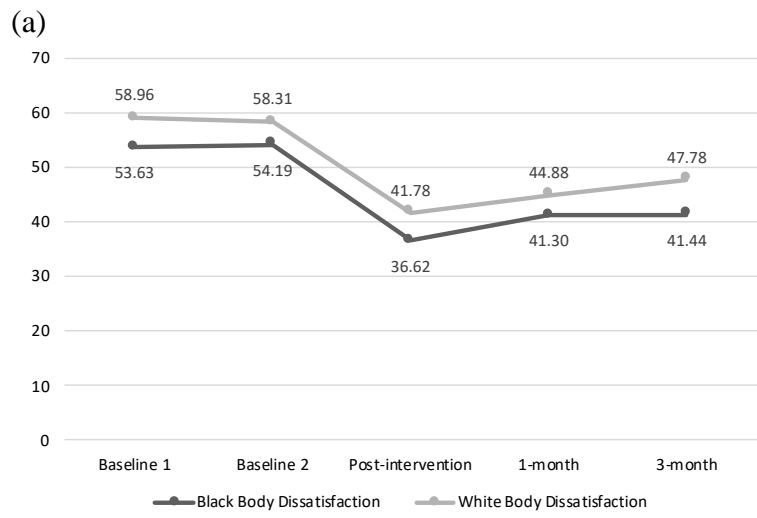


Figure 11. Average body dissatisfaction (a), body checking (b), and appearance-ideal internalization (c) total scores by Black/White identity.

Table 12

Group Racial Majority on Intervention Outcomes

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Body Dissatisfaction</i>				
Intercept	-2.34	6.03	-0.39	.698
Slope 1 (time effects)	-1.37	1.75	-0.78	.434
Slope 2 (intervention effects)	-9.23	4.65	-1.99	.047
Slope 3 (maintenance effects)	1.30	0.65	1.99	.047
<i>Disordered Eating</i>				
Intercept	1.25	8.25	0.15	.879
Slope 1 (time effects)	-2.31	2.17	-1.07	.287
Slope 2 (intervention effects)	-2.60	6.72	-0.39	.699
Slope 3 (maintenance effects)	0.89	0.96	0.93	.351
<i>Ideal Internalization</i>				
Intercept	0.58	7.12	0.08	.935
Slope 1 (time effects)	1.73	1.87	0.92	.355
Slope 2 (intervention effects)	-3.08	7.10	-0.43	.664
Slope 3 (maintenance effects)	0.53	0.84	0.63	.529
<i>Comparison Tendency</i>				
Intercept	-2.57	3.76	-0.68	.494
Slope 1 (time effects)	-0.32	1.59	-0.20	.839
Slope 2 (intervention effects)	-1.91	3.37	-0.56	.572
Slope 3 (maintenance effects)	0.08	0.47	0.17	.866
<i>Body Checking</i>				
Intercept	-4.70	3.68	-1.28	.201

Table 12 Continued

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Slope 1 (time effects)	0.38	0.92	0.41	.681
Slope 2 (intervention effects)	0.34	3.12	0.11	.913
Slope 3 (maintenance effects)	-0.11	0.32	-0.34	.731
<i>Negative Body Talk</i>				
Intercept	-3.57	4.30	-0.83	.406
Slope 1 (time effects)	1.95	1.55	1.26	.209
Slope 2 (intervention effects)	-5.83	3.47	-1.68	.093
Slope 3 (maintenance effects)	0.76	0.55	1.38	.166

Note. A dummy-coded group race variable was created, where 0 = majority White and 1 = majority BIPOC, and used as a moderator for study analyses. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate.

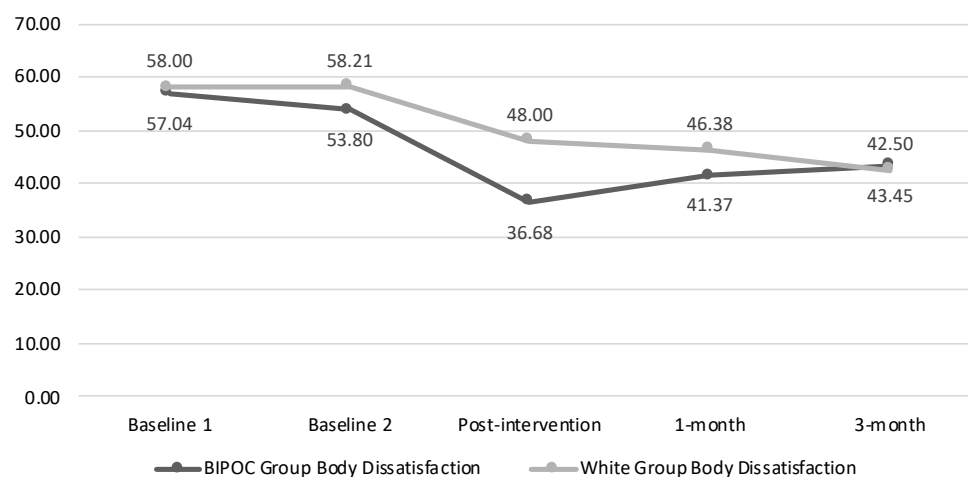


Figure 12. Average body dissatisfaction by group race identifier. BIPOC Group Body Dissatisfaction = Average body dissatisfaction total scores for participants in groups with more BIPOC members than White members. White Group Body Dissatisfaction = Average body dissatisfaction total scores for participants in groups with more White members than BIPOC members.

Table 13

Racial Minority Status Within Group on Intervention Outcomes

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Body Dissatisfaction</i>				
Intercept	3.47	6.29	0.55	.581
Slope 1 (time effects)	-2.08	1.78	-1.17	.242
Slope 2 (intervention effects)	4.48	5.21	0.86	.390
Slope 3 (maintenance effects)	-0.09	0.68	-0.13	.900
<i>Disordered Eating</i>				
Intercept	8.01	8.30	0.97	.335
Slope 1 (time effects)	-1.31	2.23	-0.59	.557
Slope 2 (intervention effects)	9.00	7.01	1.29	.199
Slope 3 (maintenance effects)	-0.47	0.92	-0.51	.608
<i>Ideal Internalization</i>				
Intercept	6.58	7.30	0.90	.368
Slope 1 (time effects)	0.86	1.95	0.44	.660
Slope 2 (intervention effects)	1.95	7.49	0.26	.795
Slope 3 (maintenance effects)	-0.49	0.84	-0.59	.558
<i>Comparison Tendency</i>				
Intercept	6.62	3.70	1.79	.073
Slope 1 (time effects)	-1.10	1.63	-0.68	.498
Slope 2 (intervention effects)	-1.20	3.61	-0.33	.739
Slope 3 (maintenance effects)	0.36	0.45	0.81	.416
<i>Body Checking</i>				
Intercept	-1.45	4.21	-0.34	.731

Table 13 Continued

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Slope 1 (time effects)	-0.06	0.96	-0.06	.953
Slope 2 (intervention effects)	4.81	2.20	1.50	.133
Slope 3 (maintenance effects)	0.07	0.31	0.24	.810
<i>Negative Body Talk</i>				
Intercept	5.12	4.42	1.16	.246
Slope 1 (time effects)	-1.27	1.61	-0.79	.431
Slope 2 (intervention effects)	-0.79	2.87	-0.20	.838
Slope 3 (maintenance effects)	-0.67	0.49	-1.37	.171

Note. A dummy-coded group race variable was created, where 0 = race aligns with group race majority and 1 = race differs from group race majority, and used as a moderator for study analyses. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate.

Aim 6. To explore whether descriptive qualities of the intervention moderate intervention outcomes examined in Aim 1.

Total scores were calculated for participants' perceptions of the helpful and inclusive nature of the intervention. An additional total score was used to assess participants' homework completion. Because all of the participants completed at least one homework exercise, the total score specified whether participants completed one, two, or three/all exercises. Each total score was entered into the models used in Aim 1 as a moderator just as perceived similarity, perceived closeness, and race variables were examined in previous aims (see Figure 10 for the model used to examine the moderating effects of perceived similarity). The results of these models can be found in Tables 14 (Helpfulness), 15 (Inclusivity), and 16 (Homework Completion). Neither participants' perceptions of intervention helpfulness nor inclusivity of their appearance ideal significantly moderated any model slopes. Participants' homework completion significantly

moderated both participants' comparison tendency intervention effects (Slope 2) and maintenance effects (Slope 3) as well as body checking maintenance effects (Slope 3).

Participants who completed more of the homework exercises, experienced an increase in their comparison tendency following the intervention, $B = 4.74$, $p = .039$, but experienced a decrease in their comparison tendency, $B = -0.61$, $p = .011$, and body checking, $B = -0.38$, $p = .038$, at 1-month and 3-month follow-ups. The effect of homework completion on body checking at Slope 2 was marginally significant, $B = 4.07$, $p = .058$, possibly indicating a similar trend as comparison tendency. Homework completion did not significantly moderate any other model slopes.

Table 14

Perceived Intervention Helpfulness on Intervention Outcomes

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Body Dissatisfaction</i>				
Intercept	-13.72	5.09	-2.70	.007
Slope 1 (time effects)	3.10	1.90	1.63	.103
Slope 2 (intervention effects)	-1.73	4.33	-0.40	.690
Slope 3 (maintenance effects)	-0.22	0.76	0.29	.775
<i>Disordered Eating</i>				
Intercept	-14.24	7.48	-1.90	.057
Slope 1 (time effects)	2.37	2.64	0.90	.370
Slope 2 (intervention effects)	0.29	6.31	0.05	.963
Slope 3 (maintenance effects)	-0.34	1.17	-0.29	.773

Table 14 Continued

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Ideal Internalization</i>				
Intercept	-13.22	6.86	-1.93	.054
Slope 1 (time effects)	0.87	2.19	0.40	.691
Slope 2 (intervention effects)	9.09	6.52	1.40	.163
Slope 3 (maintenance effects)	-0.63	0.88	-0.71	.476
<i>Comparison Tendency</i>				
Intercept	-6.96	3.92	-1.77	.076
Slope 1 (time effects)	2.03	1.98	1.03	.306
Slope 2 (intervention effects)	-1.35	3.26	-0.41	.679
Slope 3 (maintenance effects)	-0.35	0.46	-0.77	.440
<i>Body Checking</i>				
Intercept	-7.86	3.05	-2.58	.010
Slope 1 (time effects)	2.50	0.98	2.54	.011
Slope 2 (intervention effects)	1.37	2.96	0.46	.644
Slope 3 (maintenance effects)	-0.49	0.31	-1.54	.123
<i>Negative Body Talk</i>				
Intercept	-3.78	5.47	-0.69	.490
Slope 1 (time effects)	1.16	2.16	0.54	.592
Slope 2 (intervention effects)	-3.30	3.24	-1.02	.308
Slope 3 (maintenance effects)	0.09	0.57	0.15	.879

Note. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate.

Table 15

Perceived Intervention Inclusivity on Intervention Outcomes

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Body Dissatisfaction</i>				
Intercept	-0.52	0.15	-3.54	.000
Slope 1 (time effects)	0.34	0.20	1.20	.089
Slope 2 (intervention effects)	0.162	0.17	0.93	.352
Slope 3 (maintenance effects)	0.35	0.20	1.80	.071
<i>Disordered Eating</i>				
Intercept	-28.75	8.36	-3.44	.001
Slope 1 (time effects)	1.00	2.23	0.31	.756
Slope 2 (intervention effects)	6.14	8.75	0.70	.483
Slope 3 (maintenance effects)	0.44	1.17	0.38	.705
<i>Ideal Internalization</i>				
Intercept	-16.24	11.71	-1.39	.166
Slope 1 (time effects)	1.29	2.62	0.49	.621
Slope 2 (intervention effects)	10.38	9.46	1.10	.273
Slope 3 (maintenance effects)	0.17	1.13	0.15	.879
<i>Comparison Tendency</i>				
Intercept	-11.65	4.77	-2.44	.015
Slope 1 (time effects)	2.96	2.39	1.24	.215
Slope 2 (intervention effects)	-2.93	4.61	-0.64	.525
Slope 3 (maintenance effects)	0.25	0.54	0.45	.650
<i>Body Checking</i>				
Intercept	-7.75	4.87	-1.59	.112

Table 15 Continued

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Slope 1 (time effects)	3.19	1.22	2.61	.009
Slope 2 (intervention effects)	-3.11	4.27	-0.73	.468
Slope 3 (maintenance effects)	0.23	0.38	0.61	.541
<i>Negative Body Talk</i>				
Intercept	-17.83	5.90	-3.03	.002
Slope 1 (time effects)	1.55	2.19	0.71	.478
Slope 2 (intervention effects)	1.96	4.60	0.43	.670
Slope 3 (maintenance effects)	0.43	0.63	0.69	.489

Note. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate.

Table 16

Homework Completion on Intervention Outcomes

Outcomes	<i>B</i>	<i>SE</i>	<i>Est./SE</i>	<i>p</i>
<i>Body Dissatisfaction</i>				
Intercept	-0.01	0.21	-0.06	.956
Slope 1 (time effects)	-0.14	0.22	-0.66	.511
Slope 2 (intervention effects)	0.14	0.19	0.75	.453
Slope 3 (maintenance effects)	-0.26	0.21	-1.26	.210
<i>Disordered Eating</i>				
Intercept	-5.28	5.82	-0.91	.364
Slope 1 (time effects)	-0.48	1.65	-0.29	.770
Slope 2 (intervention effects)	1.49	4.59	0.33	.745
Slope 3 (maintenance effects)	-0.49	0.57	-0.85	.393

Table 16 Continued

Outcomes	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
<i>Ideal Internalization</i>				
Intercept	-3.09	5.62	-0.55	.582
Slope 1 (time effects)	-0.35	1.37	-0.26	.798
Slope 2 (intervention effects)	2.92	5.36	0.55	.586
Slope 3 (maintenance effects)	-0.36	0.60	-0.59	.553
<i>Comparison Tendency</i>				
Intercept	0.05	2.92	0.02	.988
Slope 1 (time effects)	-2.47	1.16	-2.12	.034
Slope 2 (intervention effects)	4.74	2.29	2.07	.039
Slope 3 (maintenance effects)	-0.61	0.24	-2.54	.011
<i>Body Checking</i>				
Intercept	-6.02	2.08	-2.89	.004
Slope 1 (time effects)	0.91	0.68	1.34	.182
Slope 2 (intervention effects)	4.07	2.15	1.90	.058
Slope 3 (maintenance effects)	-0.38	0.18	-2.08	.038
<i>Negative Body Talk</i>				
Intercept	2.00	3.38	0.59	.555
Slope 1 (time effects)	-0.84	1.21	-0.70	.486
Slope 2 (intervention effects)	2.56	2.39	1.07	.284
Slope 3 (maintenance effects)	-0.50	0.29	-1.72	.086

Note. Body Dissatisfaction, Ideal Internalization, and Negative Body Talk models included BMI as a covariate.

CHAPTER IV

DISCUSSION

The Body Project is a well-established body image intervention for college women with substantial research support demonstrating its success in reducing women's body dissatisfaction and disordered eating (Stice et al., 2017). Yet there has been limited research on the social and behavioral processes that contribute to the intervention's effectiveness. The purpose of the present study was to close gaps in the Body Project literature by examining social processes and behavioral changes related to the intervention's effectiveness, including changes in participants' maladaptive body dissatisfaction maintenance behaviors (e.g., appearance comparison tendency, body checking, and negative body talk) and social networks.

Body Project Effectiveness

The purpose of Aim 1 was to examine the effectiveness of the Body Project on a large, state-supported campus that comprises of primarily White and Black students. Consistent with Hypothesis 1a and previous research (Halliwell et al., 2015; Stice et al., 2013; Stice et al., 2017; Stice et al., 2012), the findings of Aim 1 demonstrated that participants experienced significant decreases in their body dissatisfaction, disordered eating, and appearance-ideal internalization following the intervention and maintained these reductions at 1- and 3-month follow-ups. The intervention effects on body dissatisfaction and disordered eating were detected at 95% confidence whereas the intervention effect on appearance-ideal internalization was only detected at 90% confidence. This suggests that the magnitude of intervention effects on these outcomes may differ, with the effect on appearance-ideal likely being the smallest of the three, which may not have been detectable at 95% given the small study sample. This is consistent with the findings of McMillian et al. (2011) that experimentally manipulated the intervention's

dissonance level. They found that women in the high-dissonance condition experienced greater reductions in their disordered eating symptomatology, but not greater reductions in their thin-ideal internalization. It is possible that just a small reduction in appearance-ideal internalization is necessary to facilitate changes in cognitive and behavioral processes aligned with the appearance ideal.

The second part of Aim 1 extended the findings of previous research by exploring the intervention's effectiveness in reducing behavioral outcomes that are directly targeted in the intervention and have been shown to facilitate and maintain body dissatisfaction: appearance comparison tendency, body checking, and negative body talk. Consistent with Hypothesis 1a, participants experienced reductions in all three of these outcomes following the intervention and maintained these reductions at 1- and 3-month follow-ups. This is also consistent with previous research that demonstrates appearance comparisons, body checking, and negative body talk being modes by which sociocultural appearance messages are transmitted and promoted among women (Fitzsimmons-Craft, 2011; Mills & Fuller-Tyszkiewicz, 2017; Stefano et al., 2016), and may help explain the reductions in body dissatisfaction and disordered eating participants experienced.

Similar to appearance-ideal internalization, the intervention effect on negative body talk was only detected at the 90% confidence level suggesting the effect was smaller in magnitude in comparison to the intervention's effect on other outcome measures. Conceptually, negative body talk differs from appearance comparison tendency and body checking by actively involving others. Though appearance comparisons involve others that may serve as comparison targets, their involvement is passive and often without their awareness. In contrast, in circumstances with negative body talk, others often play an active role and may even initiate negative body talk

making it potentially harder for someone to reduce this behavior at the same magnitude. Additionally, negative body talk has been shown to occur less often than appearance comparisons. Previous research has shown that college women can engage in appearance comparisons as often as 50 times across a five-day period (Ridolfi et al., 2011). Research on negative body talk shows that women engage in negative body talk less often, 10 times over five days on average (Jones et al., 2014). It is possible that the intervention's effects on participants' negative body talk occurs over a longer period of time, beyond 3-months following the second session. Figure 9 shows a gradual decline in participants' negative body talk scores across study timepoints. Though the reductions following the post-intervention timepoint in the figure are not significant, this observable trend is consistent with the theory that negative body talk scores may decline across a longer period of time.

Group Mechanisms of Change

In addition to extending our understanding of the intervention's outcomes, the present study also aimed to better understand the impact of group factors on these changes (Aim 2). Previous research that compared the group intervention to an internet version of the intervention found that participants who received the group intervention experienced greater reductions in outcome measures compared to those who received the internet version (Stice et al., 2017). One possible explanation to these findings is that the additional group factors those who received the group intervention experienced, such as perceived similarity and closeness with their group members, may have contributed to greater change in their cognitive and behavioral processes.

In the present study, participants provided high ratings for both perceived similarity ($M = 5.25$, $SD = 0.73$, Range = 2 [4, 6]) and closeness ($M = 4.00$, $SD = 0.78$, 3 [2, 5]) between themselves and their group members. The slightly higher average and shorter range for perceived

similarity than perceived closeness suggests that, on average, participants perceived to be more similar than close to their group members. Perceived similarity only moderated one slope out of 12 possible slopes (six outcome measures each with Slopes 2 and 3) in contrast to perceived closeness that significantly moderated 4 slopes. It is possible that the condensed range in perceived similarity in the present study made it challenging to adequately detect differences, if additional differences exist.

The one slope perceived similarity significantly moderated was the maintenance slope, the slope between the 1-month and 3-month follow-ups (measured by Slope 3), for appearance comparison tendency. This finding suggests that participants who perceived greater similarity between themselves and their group members experienced a greater reduction in their appearance comparison tendency following the intervention. This finding may be explained by the conceptualization of body dissatisfaction (Thompson & Gray, 1995) and the self-compassion principle of common humanity by Neff (2011). Body dissatisfaction is postulated to arise when there is a discrepancy between a person's actual body and ideal body and a common way in which women assess where their body stands in comparison to their ideal is by mode of appearance comparisons (Fitzsimmons-Craft, 2011). The most common type of appearance comparisons, upward appearance comparisons, involve self-evaluations relative to others who they perceive to be closer to their ideal (Fitzsimmons-Craft, 2011). It is possible that by perceiving their group members as similar to themselves, participants may have projected this similarity to others beyond the group and reduced the discrepancy they perceived between their bodies and others' bodies, which, in turn, reduced the number of comparisons they made. Perceiving others in the group as similar to themselves may have also increased their awareness of common humanity and the universal experience of suffering described by Neff (2011). By

learning that others, who may outwardly look different from themselves, experience similar struggles with body dissatisfaction, participants may have reduced their desire to compare themselves to others and, thereby, reduced their comparison behavior.

In contrast to perceived similarity, perceived closeness significantly moderated slopes for four different outcome measures. Participants who perceived greater closeness with their group members, experienced a greater reduction in their disordered eating and body checking following the intervention (measured by Slope 2) and body dissatisfaction and negative body talk at 1-month and 3-month follow-ups (measured by Slope 3). Given the number of outcome measures impacted, it is likely that participants who perceived greater closeness with their groups were more engaged and vulnerable in the sessions and were able to receive more benefits from the intervention that facilitated these additional reductions.

Together, the perceived similarity and perceived closeness findings suggest that group factors are likely important in the Body Project's mechanisms of change. These factors measure participants' perceived connectedness and shared experiences with their fellow group members, which in turn were associated with greater reductions in all but one outcome measure, appearance-ideal internalization.

Social Networks on Body Dissatisfaction and Related Behaviors

In addition to the role of social mechanisms within Body Project groups, social processes in college women's everyday life are theorized to play an important role in the formation of their body image and experiences with body dissatisfaction and disordered eating. Previous research has found positive associations between college women's ratings of drive from thinness (Allison & Park, 2004; Meyer & Waller, 2001) and disordered eating behaviors (Zalta & Keel, 2006) and those of their friends, particularly between friends that are self-selected like chosen roommates

(Meyer & Waller, 2001; Zalta & Keel, 2006). However, previous research in this area is limited and has mainly focused on select relationships, such as associations between roommates, rather than examining the potential impact of women's complete social networks on their body-related attitudes and behaviors. An additional aim of the present study was to examine a more complete picture of these associations among social networks by extending the size of the network examined to ten closest friends.

The findings of Aim 3 revealed that participants who reported a higher proportion of their social networks who engage in disordered eating and appearance-focused social media behavior also reported higher levels of disordered eating. A closer examination of disordered eating behaviors revealed that one behavior in particular among their social networks, dietary restriction, positively predicted their own disordered eating. This is consistent with previous research that found similarities between self-selected roommates disordered eating behaviors (Meyer & Waller, 2001; Zalta & Keel, 2006). Dietary restriction differs from other disordered eating behaviors by being less stigmatized and often performed overtly, rather than in private like self-induced vomiting and laxative use. Social networks in which dietary restriction is more common may indirectly communicate unrealistic appearance standards through these behaviors and perpetuate these behaviors through modeling and observational learning.

Contrary to the hypotheses and previous research, the present study did not find an association between women's social network's body dissatisfaction and disordered eating and their own levels of body dissatisfaction. This is inconsistent with previous research that found that perceived pressure from friends to be thin and exposure to their weight-control behaviors were associated with increased body dissatisfaction in adolescent girls (Webb & Zimmer-Gembeck, 2014). Though it is possible that there was not enough power in this study to detect

these effects, if they exist, this may also be related to the differences between examining select close relationships and assessing larger social networks in an egocentric manner. When reporting on their larger social network, women may include friends who vary by body dissatisfaction or friends whose body dissatisfaction is unclear to them. In contrast to observable behaviors, body dissatisfaction can be covert and not be easily detected by friends. Even if observed, women's perceptions of their friends' body dissatisfaction might be biased by way of the fundamental attribution error, which suggests that people are more likely to over-attribute others' behaviors to their internal traits (Jordan et al., 2011). In this case, women may perceive the outward appearance of their friends and their observable behaviors as reflecting lower body dissatisfaction than their friends' experiences in actuality.

In addition to the overt nature of behaviors, the disordered eating and appearance-focused social media findings may also be related to the egosyntonic relationship many women have with their disordered eating (Gregertsen et al., 2017). For instance, many disordered eating behaviors like dietary restriction are often developed as a form of coping that is also in line with one's desire to lose weight or change their body shape. Women who observe disordered eating among their friends may perceive disordered eating as normal, not harmful, and congruent with their appearance goals, and when they engage in it, they may receive positive reinforcement in the form of compliments and feelings of social connectedness with their social network. These aspects of disordered eating lead many women to perceive their disordered eating as beneficial to them rather than distressing (Gregertsen et al., 2017). By not perceiving it as distressing, women may be less likely to connect it to their experiences with body dissatisfaction. Regardless of their perceptions of their behaviors, these findings suggest that their friends' perceptions of their behaviors may negatively impact their friend's physical and mental well-being.

Additional findings from Aim 3 suggest that engaging in negative body talk may impact one's friends in a different way. In the present study, participants who reported a higher proportion of their friends engaging in negative body talk (but not higher levels of body dissatisfaction) also reported experiencing higher levels of body dissatisfaction. Negative body talk, unlike disordered eating and appearance-focused social media behavior, involves explicit remarks about one's body. It is possible that these remarks from friends may encourage them to engage in their own negative body talk and increase their attention to their bodies that, in turn, leads them to experience increased body dissatisfaction. It is also possible that women who are dissatisfied with their bodies may seek and maintain friendships with women who engage in negative body talk. This is consistent with previous research that has found a bi-directional relationship with negative body talk and body dissatisfaction; women with higher levels of body dissatisfaction engage in negative body talk and negative body talk is associated with increases in body dissatisfaction and appearance-ideal internalization (Arroyo & Harwood, 2012; Salk & Engeln-Maddox, 2011; Mills & Fuller-Tyszkiewicz, 2017). The present study extends these findings by demonstrating that more perceived negative body talk among social networks is associated with greater body dissatisfaction.

Social networks and intervention effectiveness. Given these patterns of body-related behaviors among social networks, it is possible that one's involvement in a body image intervention may alter these patterns by either extending one's counter-attitudinal shift towards the appearance ideal to their friends or by changing the friends that comprise their social network. Though they were only marginally significant, the findings of the present study provide initial support for the latter theory that participants may change the friends that comprise their social network. The friends participants removed from their social networks at 1-month follow-

up engaged in more disordered eating behaviors, and dietary restriction and maladaptive exercise in particular, than the friends they added to their social networks at the timepoint. Though these findings are only marginally significant, they may suggest that participants consciously or unconsciously remove friends from their social networks who engage in disordered eating, and perhaps overtly in terms of their dietary restriction and exercise behaviors, following the intervention. If this hypothesis is true, it may indicate that social networks may be potential barriers for participants to maintain the changes they obtain from the intervention and, instead of extending these changes to their networks, participants may be more likely to distance themselves from those in their networks that overtly engage in disordered eating. However, no other differences were found in comparing friends added and removed on other outcomes, such as appearance-focused social media or negative body talk.

Additionally, the other two assessments of social network change, change in overall social network outcomes and composition, did not detect any differences across timepoints. This may suggest that participants did not experience change in these ways or within the three-month time period assessed. Participants may experience significant change in their social networks' body dissatisfaction and related behaviors after several months, or even years, following their involvement in the Body Project. And rather than overall change in their social network composition, participants may be more likely to make targeted changes, such as removing friends who engage in more disordered eating, or make changes in the amount or quality of time spent with select friends. It is also possible that additional changes did occur among participants' social networks, but their perceptions of their friends stayed fixated and may stay fixated until a certain degree of change is witnessed. A less desirable possibility is also that participants' social

networks experience seldom change and, as noted previously, instead may make it challenging for participants' to maintain the benefits from the intervention.

There are many different possible explanations as to why only marginal changes were observed in participants' social networks and how participants' social networks may have responded to their reductions in body dissatisfaction, disordered eating, appearance comparisons, and body checking. The present study was one of the first to examine these constructs in women's social networks, and further discussion of this assessment approach can be found in Strengths & Limitations and Future Directions.

Individual and Group Race Differences

Given the campus' racial makeup and associated study sample that comprised of mostly Black (41%) and White (33%) participants, it was an exploratory aim to examine individual and group race differences on intervention outcomes (Aim 5). The findings of Aim 5 demonstrated that Black participants experienced significantly more change in appearance-ideal internalization than White participants due to time alone as measured by the assessment effects model slope. This may suggest that Black participants' appearance-ideal internalization fluctuated over the course of study independent of the intervention. This may be explained by reactivity in completing the assessment of appearance-ideal internalization several times. It may also be explained by theory that suggests that Black women may be less likely to internalize appearance standards that are often perpetuated by media that predominantly displays White women. By not identifying with White women who communicate appearance standards in the media, Black women may be less likely to identify with these standards and internalize them (Crago & Shisslak, 2003; Wildes et al., 2001).

Another important consideration when comparing appearance-ideal internalization in Black and White participants is the measure used to assess this construct. Research suggests that Black women are more likely to ascribe to a curvy body ideal and consider other attributes, such as skin color, in their conceptualization of appearance standards, than White women (Falconer & Neville, 2000; Hunter et al., 2017). The measure of appearance-ideal internalization used in the present study primarily assesses one's desire to be thin and muscular and does not assess desire to be curvy or have other appearance attributes, which may have hindered this study's ability to adequately capture Black women's experiences with appearance-ideal internalization and compare them with those of White women. Future research would benefit from the use of an appearance-ideal internalization measure that is inclusive of Black women's experiences.

The other marginally significant individual race differences also indicated that Black women may experience greater reductions in their body dissatisfaction following the intervention and body checking at 1- and 3-month follow-ups than White participants. The trend illustrated in Figure 11b suggests that Black women may experience reductions in body checking over a longer period of time than White women and may even maintain reductions over a longer period of time as demonstrated by the continued decrease in body checking scores at 3-month follow-up. These findings together may suggest that the intervention may be more effective in some ways for Black women than White women. However, future research with greater statistical power as well as longer follow-up periods is needed to evaluate these differences and possible explanations for these differences.

Whether or not participants were a racial minority within the context of the group they were in did not significantly moderate any intervention outcomes. This may be because the impact of one's individual race and associated power or oppression on these constructs and their

interactions with others supersedes the racial composition in these groups. However, race differences within the context of the groups at the group-level may impact the effectiveness of the intervention. The findings of the group race identifier indicate that participants who were in groups that comprised mostly of BIPOC members experienced greater reductions in their body dissatisfaction following the intervention than participants in groups that comprised mostly of White members. But the opposite occurred at follow-ups, participants who were in BIPOC majority groups experienced an increase in the body dissatisfaction at 1- and 3-month follow-ups. Figure 12 demonstrates an increase in body dissatisfaction for participants in groups of mostly BIPOC members at follow-up, however the averages are in line with those in groups with mostly White members. Though there is little information in the present study to explain this finding, one possible theory is that more diverse and inclusive groups, and possibly safer for BIPOC members in particular, facilitated greater reductions in body dissatisfaction following the intervention. However, as all participants returned to the world outside of the group that is filled with appearance-ideal messages, they experienced challenges to maintain their intervention gains and their body dissatisfaction increased slightly. For participants in groups of mostly BIPOC members, they were not only returning to a world filled with appearance-ideal messages but also one that is less representative of diverse experiences or safe for BIPOC members, which may have contributed to a sharper, and perhaps additional, increase in body dissatisfaction during this follow-up period.

Future research that examines variations in group racial compositions would help better understand these potential dynamics. In the present study, there was not a single group that comprised of only BIPOC members or only White members. Though White women are able to easily find other like individuals with body dissatisfaction and safe environments to discuss their

struggles with body concerns, this is less often the case for BIWOC (Black, Indigenous, women of color). Future groups that comprise of only Black women or only non-Black WOC, would help increase representation and safety, and may also help explain these individual and group race differences.

Intervention Descriptives on Outcomes

The final aim of the present study examined intervention descriptives, including participants' perception of the helpfulness of the intervention, the degree to which the intervention was inclusive of their appearance ideal in whichever way they defined and pursued it, and the number of homework exercises they completed, on outcome measures examined in Aim 1. Participant helpfulness and inclusivity ratings were on average high (helpfulness, $M = 5.71$, $SD = 0.53$, Range = 2 [4, 6]; inclusivity, $M = 4.02$, $SD = 0.48$, Range = 2 [4, 6]), and neither moderated any study findings. It is possible that ceiling effects in these measures occurred that reduced the ability to detect differences in intervention outcomes, if any exist.

Participants' homework completion significantly moderated their change in comparison tendency and body checking following the intervention. Participants who completed more of the homework exercises, experienced an increase in their comparison tendency following the intervention but experienced a decrease in their comparison tendency at 1-month and 3-month follow-ups. A similar pattern was found for body checking, but the moderation on intervention effects (measured by Slope 2) was marginally significant. These patterns might be related to the purpose and content of the homework exercises. According to previous research, one aim of the homework exercises is to increase participants' experience with dissonance by engaging in behaviors that do not align with the appearance-ideal (Stice, Butryn et al., 2013). These exercises promoted initial behavior change that likely peaked participants' dissonance experiences, which

may have, in turn, led them to cope with automatic appearance-ideal reactions, such as increased body checking and appearance comparisons.

The Mirror Exercise, that involves looking at oneself in the mirror and listing attributes they like about themselves, may have had long term benefits on participants' body checking behavior by providing them skills in looking at the mirror in a compassionate rather than critical way, but during their first attempt between sessions may have increased their mirror-based body checking. Similarly, the Behavioral Challenge is a task of participants' choice that typically challenges their appearance-driven avoidance behavior, such as going to the gym if they previously avoided the gym because of body concerns. It is likely that Behavioral Challenges such as these help facilitate participants' reductions in appearance comparisons, body checking, and other intervention outcomes after a longer period of time. However, participants' initial Behavioral Challenges likely momentarily increased their discomfort and their drive to engage in appearance comparisons (such as to others at the gym if that was their Behavioral Challenge) and may have led to the increase in appearance comparison tendency at post-intervention, but then a reduction in the construct at follow-ups. Despite these momentary increases post-intervention, these findings suggest that these exercises are important in facilitating longer term reductions in body checking and appearance comparisons.

Theoretical & Research Implications

The findings of the present study have several implications on Body Project theory and research. First, the findings extend our understanding of the ways in which the intervention facilitates change in participants' behaviors. Not only does the intervention reduce women's body dissatisfaction, disordered eating, and appearance-ideal internalization, but it may also reduce their appearance comparisons, body checking, and negative body talk.

The additions of these outcome measures may suggest alternative paths by which intervention change occurs. From the original Body Project theory (Stice et al., 2008), reductions in appearance-ideal internalization may facilitate change in all five of the other remaining outcomes, body dissatisfaction, disordered eating, appearance comparison tendency, body checking, and negative body, through direct pathways. However, based on research that suggests that appearance comparison tendency, body checking, and negative body talk may be mediators between sociocultural appearance pressures and body dissatisfaction (Fitzsimmons-Craft et al., 2015; Mills & Fuller-Tyszkiewicz, 2017), it is also possible that appearance-ideal internalization facilitates change in body dissatisfaction and disordered eating indirectly by way of reductions in appearance comparison tendency, body checking, and negative body talk. A third possibility is that other mechanisms of change in addition to appearance-ideal internalization facilitate change in appearance comparison tendency, body checking, and negative body talk, such as the psychoeducation and skills-based components of the intervention that target these outcomes. The findings that homework completion significantly moderate appearance comparison tendency and body checking reductions further support this third possibility. Future research that examines these different mediational models in structural equation modeling would provide insight into the ways in which these constructs interact with one another and may inform future cost-effective intervention modifications.

The third possibility described above is also consistent with the findings of the social components within the group intervention, perceived similarity and closeness. With their findings combined, these group factors significantly moderated the reductions in all of the outcome measures aside from appearance-ideal internalization. This suggests that perceived closeness and similarity gained from the group setting of the intervention also helps facilitate

reductions in outcomes, and that appearance-ideal internalization may not be involved in this change process. These findings also support the use of measures of perceived similarity and closeness in future administrations of the Body Project and new adaptations of the program, such as online translations. For instance, these measures might be useful to evaluate the online version's ability to foster participants' perceived similarity and closeness with others.

Though there was only one set of marginal changes in participants' social networks following their involvement in the intervention, the present study revealed several ways in which social networks may perpetuate body dissatisfaction and related behaviors. This was one of the first studies to examine women's social networks' body dissatisfaction, disordered eating, and related constructs with an egocentric design to examine the associations between women's perceptions of their social networks on these constructs and those of their own experiences. The findings revealed that women who perceived more of their social networks to engage in disordered eating, and dietary restriction in particular, and appearance-focused social media behaviors experienced greater disordered eating; and those that perceived more of their social network to engage in negative body talk experienced greater body dissatisfaction. These findings suggest that these observable behaviors that perpetuate appearance ideal messages may be particularly salient and transmittable in groups of women.

Future research may want to examine these behaviors within social networks in further detail and the methods by which these behaviors may be transmitted (e.g., observational learning). Additional designs, such as tiered social networks where respondents place friends within tiers related to their degree of closeness or sociocentric designs that gather responses from each member of a closed social network, might be considered when examining the associations

between body dissatisfaction and other cognitive-affective experiences that are not as easily assessed by distant observers, like acquaintances.

The marginally significant social network change findings may also have theoretical implications on social network response patterns to a body image intervention. These findings suggest that participants of the Body Project may remove friends from their social network who engage in disordered eating behaviors following their completion of the intervention. This would indicate a selection process whereby participants consciously or unconsciously select their friends based on their newly adopted body-related attitudes and behaviors, such as those low in disordered eating. This is in contrast to a socialization process that, instead of facilitating change in the social network composition, would facilitate change in their pre-intervention social network's body-related attitudes and behaviors. However, selection and socialization processes are often connected. Though the selection of new friends may be the initial response to a body image intervention, if this theory is true, socialization is likely to occur within these newly formed social networks and facilitate additional changes in body-related attitudes and behaviors, and ideally help participants maintain their intervention gains. Future research on the Body Project that examines social network processes with greater statistical power and across a longer period of time may not only detect additional ways in which social networks change following the intervention but may also add to our understanding of these selection and socialization processes that can support or impede participants' attitudinal and behavioral changes.

Clinical Implications

The present study added to the body of research that demonstrates the effectiveness of the Body Project as a tool to reduce college women's body dissatisfaction and disordered eating. Though its effectiveness provides significant support for its continued dissemination on college

campuses, descriptive findings in the present study may inform future administrations of the program. In addition to its effectiveness, participants' high ratings of perceived similarity and closeness with their group members suggest that the group also serves as a positive peer social experience for college women. Additionally, those who attended the second session completed at least one homework exercise and 52% completed all of them, demonstrating a commitment to and engagement in the program. Further, participants who completed the program perceived the program as helpful and inclusive of their appearance ideal as demonstrated by the high averages and short ranges of the post-intervention measures of helpfulness and inclusivity. However, in addition to these many positive consequences, the present study also experienced high attrition rates; 32% who signed up for the Body Project did not attend any group sessions (excluding those impacted by pandemic closures) and, of those who attended their first group session, 21% did not attend their second session or return for an individual session. Though the prior findings suggest that those who attend the program benefit from and engage in the program, those who disseminate the program on their campus should anticipate high attrition rates and plan accordingly when planning the frequency of their groups and the number of participants scheduled per group.

In addition to informing the dissemination of the program, the findings of the present study also highlight considerations for clinicians in their treatment of body dissatisfaction and disordered eating via individual therapy or other modalities. The findings indicate attention to appearance comparisons, body checking, negative body talk, and social network behaviors, such as dietary restriction, appearance-focused social media, and negative body talk, may be important in women's experiences with body dissatisfaction and disordered eating and their change process. Habitual and automatic behaviors, like appearance comparisons and body

checking, and the behaviors of others, like negative body talk, may serve as barriers for clients aiming to improve their body dissatisfaction and disordered eating. Additional assessments of these experiences and targeted interventions may be beneficial in helping them improve their relationships with their bodies as well as with food and others around them.

Strengths & Limitations

The present study had a number of strengths and limitations. The most notable strengths were the research design and statistical approach used. A repeated measures design with two baseline timepoints was used in order control for the effects of time in study analyses, and two follow-up timepoints were used to examine change following the intervention, up to three months. Latent growth modeling was used for the majority of study analyses and provided the advantage of examining assessment effects, intervention effects, and maintenance effects through the use of three piecewise slopes. Additional strengths included the amount of training group facilitators received, which resulted in high intervention fidelity rates as well as the almost equal number of Black and White participants, which allowed for comparisons in intervention effects between these two races.

In addition to these strengths, the present study also included several limitations. The most significant limitation was the small study sample that led to reduced power for study analyses. The small sample size was in large part due to the COVID-19 pandemic occurring during the intervention delivery and data collection process, which required stopping all in-person groups indefinitely. There were also limitations related to the measures used in the present study. The measure used to assess participants' social networks was adapted from the Brief Important People Interview (Zwiyak & Longabaugh, 2002), but were never used before. Given the novelty in assessing social networks' body dissatisfaction, disordered eating, and

related behaviors this was a limitation that was unavoidable but should be considered in the interpretation of study findings. The study also used an appearance-ideal internalization measure that centers around thin and muscular body ideals and may not be inclusive of other body ideals, such as the curvy body ideal, or other appearance attributes, such as skin color, that have been found to contribute to body dissatisfaction in Black women (Falconer & Neville, 2000; Hunter et al., 2017). Though the measure selected is commonly used in this field of study and has been used to examine appearance-ideal internalization in Black women samples (Falconer & Neville, 2000), future research may want to consider using measures that assess these constructs more broadly or include assessments of other body ideals and appearance standards that are responsive to race differences. Additionally, the measures used in the present study assessed participants' trait-level experiences, such as participants' tendency to engage in appearance comparisons, rather than the actual frequency of their appearance comparisons. This introduces potential recall bias as a limitation in the present study. Future research that asks participants to complete daily diary or ecological momentary assessments for a period following the intervention would reduce this limitation, increase the ecological validity of the findings, and provide greater insight into the changes participants' experience in their everyday life.

Though it is a notable strength that the study examined Black/White race differences in intervention outcomes as well as examined race within the context of the group setting, the sample did not include many participants of other races which limits the generalizability of these findings to individuals with other racial identities. Additionally, the study did not examine any specific racial compositions of groups on study outcomes, such as Black only, non-Black POC only, or BIPOC only groups, that may create safer spaces and even greater reductions in body

dissatisfaction and related constructs. Future research may want to examine intervention outcomes with these group race compositions and others.

An additional concern related to the study's generalizability is the age and student status of the study sample. The average age of the sample was 23.65 years, slightly older than the traditional college age, and all participants were current undergraduate or graduate students. The findings of the study cannot be generalized to older participants or non-students of similar ages.

Lastly, it is also a notable limitation that the study did not include a control group. Instead of a control, participants completed two baseline measures to serve as their own comparisons for time effects. This allowed for conclusions to be made that change occurred in outcome measures beyond the effects of time. However, other threats of validity were not removed, such as history effects, which means that causation cannot be truly derived from these analyses. The present study served as an initial study to examine novel associations, and now provides support for future research to examine these constructs with a larger sample that allows for comparison groups.

Future Directions

Given the novelty of the present study that examined new behavioral outcomes in the Body Project (e.g., appearance comparison tendency, body checking) and assessed women's social networks' body dissatisfaction and related behaviors, there are several future directions in each of these lines of research. Regarding the behavioral outcomes, the present study revealed that participants experience a reduction in their appearance comparisons, body checking, and negative body talk. However, it does not provide insight into how long these reductions are maintained beyond three months or their role in the intervention's mechanisms of change. Future research that involves longer follow-up periods beyond three months post-intervention, a

comparison group, as well as mediation analyses is needed to observe these reductions over a longer period and draw more conclusions on the mechanisms of change. Additionally, future Body Project dismantling studies would provide additional insights into the components of the intervention that are linked with intervention outcomes, and which intervention outcomes in particular (i.e., negative body talk activities but not appearance ideal exercises may help reduce participants' negative body talk). This would aid in determining which components are essential to intervention effectiveness and could be adapted to be delivered in other modalities that are more accessible to more people (e.g., online translations).

Regarding social network assessments and analyses, the next step in this line of research is to critically evaluate the novel measure used to assess social networks' body dissatisfaction, disordered eating, and related behaviors and the approaches used in assessing social network changes. This initial use of the measure revealed that participants can identify and report on these constructs for ten of their closest friends, and also revealed important patterns within social networks at Baseline 1. However, when examining social network change, two of the three approaches used to assess change did not demonstrate any significant, or marginally significant, differences across timepoints. This suggests that these two approaches, examining change in overall social network outcomes and degree of change in social network composition, may not be sensitive to change that occurs within a three-month time period. It is possible that it takes longer, more months or even years, for change to occur in participants' complete social networks' outcomes and/or composition. Future research that includes longer assessment periods and additional assessments of social network change, such as time spent with friends or perceived closeness with friends, would provide greater insight into whether and in what ways social network change occurs.

The third assessment of social network change in the present study, comparing outcomes of friends added and removed, suggests that participants may consciously or unconsciously remove friends who engage in disordered eating from their social networks. This may be because their behaviors are aversive to participants following the intervention and/or may pose as a barrier for participants to maintain their intervention changes. Future research may consider expanding the social network measure used to assess participants' awareness of their social network changes and, if they are aware of changes, whether they can provide reasons for their changes.

Additionally, beyond the social network change process itself, research using this measure would also benefit from a study that examines the processes by which respondents determine their ten closest friends and report on their body dissatisfaction and related behaviors. This study would help determine the sensitivity of the measure to social network changes and inform necessary modifications. This is particularly necessary in the context of assessing social network body dissatisfaction. It is notable that the majority of the social network findings involved disordered eating and other behaviors, with only one involving body dissatisfaction. As described earlier, participants may have difficulty reporting on the body dissatisfaction of acquaintances than of close friends. Future research that assesses participants' experiences when reporting on their friends' body dissatisfaction would provide insight on modifications needed to assess body dissatisfaction and other cognitive-affective constructs.

CHAPTER V

CONCLUSIONS

The present study was one of the first to examine intervention-related changes in Body Project participants' appearance comparison tendency, body checking, and negative body talk, constructs that are targeted in the intervention and have been shown to be important in the development and maintenance of body dissatisfaction and disordered eating. The study found that in addition to reductions in body dissatisfaction, disordered eating, and appearance-ideal internalization, participants also experience significant reductions in these three constructs and maintain these reductions for at least three months following the intervention.

The present study was also the first to evaluate the associations between women's perceived social networks' body dissatisfaction and related behaviors and those of their own and examine changes in participants' social networks related to their involvement in the intervention. Participants who reported that more of their friends engage in disordered eating and appearance-focused social media also reported greater disordered eating themselves. Additionally, participants who indicated that more of their friends engage in negative body talk, reported greater body dissatisfaction themselves. This suggests that these behaviors may be easily transmittable among social networks and have a negative impact on one another's physical and mental health. Though only marginally significant social network changes were found, they may suggest a pattern by which participants remove friends who engage in more disordered eating from their social networks following the intervention, and also provide insights for future research on social network changes with these constructs.

In addition to these implications for women's social networks, the present study also has several implications for Body Project research and theory. These additional constructs may

suggest additional intervention mechanisms of change than the original authors intended. Not only may skills and knowledge gained from the present study facilitate change in appearance comparisons, body checking, and negative body talk, but the present study also found that perceived similarity and closeness as well as homework completion predict intervention-related changes. These initial findings provide support for components of the intervention that should be maintained in future iterations of the intervention, including more accessible and cost-effective modifications. Future research that examines these constructs over longer follow-up periods, includes a comparison group, and uses mediation analyses is needed to observe these reductions over a longer period and draw more conclusions on the mechanisms of change.

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APPENDIX A**Peer-Leader, Universal, 2 Session Version Script****Carolyn Black Becker, Eric Stice, Paul Rohde & Heather Shaw****(Edits by Alan Duffy)**

Note: This script was designed for implementation in a universal population, although it can be implemented with selective populations if a university campus wants to use one manual in multiple situations that range from universal to selective. Peers are the planned leaders and they act as coping models in this version of the Body Project. For this version, we recommend three peer leaders lead the group. Please do not implement with peer leaders if you have not received training in how to train peer leaders.

THE OFFICIAL BODY PROJECT MANUAL (STICE, ROHDE, & SHAW, 2012) IS PUBLISHED BY OXFORD UNIVERSITY PRESS. ALL SUPPLEMENTAL MATERIALS SHOULD BE OBTAINED BY PURCHASING THE OFFICIAL MANUAL. MANUALS CAN BE PURCHASED AT AMAZON.COM, OUP.COM OR OTHER ONLINE BOOK SELLERS.



SESSION 1

Prep: Email/call/text each participant before this session to remind them about the time and location of the first group.

Materials: Flip chart (or whiteboard)
Markers
Audio-recorder
Handouts for
a) Costs Activity
b) Verbal Challenge Form
c) Negative Body Talk Handout
d) Behavioral Challenge Form
e) Letter to a Younger Girl
f) Mirror Exercise

Topic Areas:

- I. Introduction
- II. Voluntary Commitment and Overview
- III. Definition of the Appearance Ideal
- IV. Costs Associated with the Appearance Ideal
- V. Engage participants in the Verbal Challenge
- VI. Explore Negative Body Talk
- VII. Behavioral Challenge
- VIII. Home Exercises

Session Overview: The focus of Session 1 is to provide an overview and introduce participants to the rules and expectations of the group. The session is largely interactive with discussions of the definition and origins of the appearance ideal, and costs associated with pursuing the appearance ideal. The importance of attendance and completing the home exercises is also stressed.

I. INTRODUCTION AND ICEBREAKER (10 MINS)

On point leader: _____

Thanks for coming. We thought we would start by introducing ourselves and letting you know who we are and why we signed on as peer leaders to lead this program. I'll start by introducing myself, and the other peer leaders will then introduce themselves. [Peer leaders pause and introduce themselves here; participants introduce themselves a little later]



Research shows that when women/girls talk about the “appearance ideal” shown in the mass media, and how to challenge pressures to conform to these ideals, it makes them feel better about their bodies. This has been found to be the best program for improving body image

We would like to audio record both sessions for quality assurance purposes. Is this OK?

Turn on audio recorder at this point.

The group leader begins by introducing herself/himself to the group. Introductions include name, professional status, and personal information (e.g., something interesting or unique about themselves). The group leader asks the co-leader (if available) and group members to introduce themselves.

Let’s start by getting to know each other better. Can each of you tell us your name and something unique or interesting about you? Who would like to start?

Group leaders should spend a few moments with each participant to elicit specific information and show interest (e.g., How long have you been horseback riding? What kind of paintings do you do?).

On point leader: _____

Okay, let’s warm up to our topic using an icebreaker that we have. It is called “My Biggest Body Image Pet Peeve.” In this icebreaker, each of us will describe our biggest pet peeve with either the media or the fashion industry, both of which influence one’s body image. For example, someone might say that her biggest pet peeve is the way that clothing sizes for women vary so much according to brand. Or someone else might say that her biggest pet peeve is the way editors touch up photos in magazines so that we never get to see a real person.

I will start and then we will go around the room. My biggest pet peeve is....



II. VOLUNTARY COMMITMENT AND OVERVIEW (2 MINS)

Soliciting voluntary commitment to participating in the class

People get the most out of these groups if they attend both meetings, participate verbally, and complete all the between-meeting exercises. It is important to clearly note that participation is voluntary. Is each of you willing to volunteer to actively participate in the group? Let's go around the group. I will start....

Go around the room and have each participant say they are willing to actively participate. Make sure to be upbeat and playful with this.

During the two sessions we will:

1. *Define the appearance ideal and explore its origin*
2. *Examine the costs of pursuing this ideal*
3. *Explore ways to resist pressures to conform to an appearance ideal*
4. *Discuss how to challenge our personal body-related concerns*
5. *Learn new ways to talk more positively about our bodies, and*
6. *Talk about how we can best respond to future pressures to conform to an appearance ideal*

Attendance

It is important that everyone attends both meetings. If you need to miss next session, please let one of us know as soon as you know that you are going to be gone. We will schedule a make-up session with you so you will be caught up with everyone else.

Group leaders should **call/e-mail/text participants** the day before each session to remind participants of the session and to bring any assignments they should have completed. If a participant must miss a session for any reason, please schedule a brief (15 minute) individual make-up session to discuss key points from the session and get the participant “caught up”. Ask them to complete the home exercises too.



III. DEFINITION AND ORIGIN OF THE APPEARANCE IDEAL (20 MINS)

On point leader: _____

Scribe: _____

Now we are going to define the appearance ideal for women to understand exactly what we are discussing. What are we told that the “perfect woman” looks like? Our scribe will create our perfect woman list on the board.

Have participants “shout out” aspects of the “perfect woman.” Scribe writes “Perfect Woman” on the board.

Thin and attractive, have a perfect body, toned, large-chested, tall, look like a supermodel. Focus the discussion on the physical appearance part of the appearance ideal. Note seemingly incompatible features, such as ultra-slenderness and large breasts.

Add any new features to the list on the whiteboard.

So, the perfect woman is

Read back the list on the board playfully highlighting the incompatible features.

We call this “look” – this woman with the features that you’ve listed... – “the appearance ideal.”

Cross out phrase “Perfect Woman” and write “Appearance Ideal” on the board.

On point leader: _____

Now, before we discuss the appearance ideal further, it is important to contrast this appearance ideal with the healthy ideal because they are not the same thing. With the appearance ideal, people go to extreme measures to look like a supermodel, including some very unhealthy weight control behaviors and excessive exercise. The goal of the appearance ideal is to attain a physique that is neither realistic nor healthy. The healthy ideal is the way your unique body looks when you are doing the necessary things to appropriately maximize your physical health, mental health, and overall quality of life. With the healthy ideal, the goal is health, fitness, functionality, and longevity. A healthy body has both muscles and adequate



fat tissue. The healthy ideal involves feeling good about how our body both feels and works, and looks different from person to person.

*Has this “appearance ideal” always been the ideal for feminine attractiveness?
Has there ever been a time in history when the “perfect woman” looked different?*

No, differs with differing times.

Solicit examples of different beauty standards over time (e.g., Marilyn Monroe, figures in the Renaissance period, Twiggy, supermodels of today).

Where did appearance ideals come from?

Media, fashion industry, diet/weight loss industry

How is the appearance ideal promoted to us?

Media: television shows, magazines, diet/weight loss industry

On point leader: _____

Have any of you ever received a negative comment about your weight or shape from your friends, family, or dating partners?

How did that make you feel?

Discuss participants’ personal experiences in these areas and the impact on their emotions and self-worth.

*How do appearance ideal messages from the media (traditional or social) impact the way you feel about your body? Let’s go around the group on this question.
Who would like to start?*

Feeling inadequate because they do not look like a model, dislike of their own bodies, negative mood

What type of touching-up or airbrushing is done in media in order to make their cover photos reflect and perpetuate the appearance ideal?

Discuss with the group the various ways fashion and celebrity photos can be retouched



(e.g., eyes can be made wider, bags under the eyes can be removed, necks can be made longer, thighs can be made slimmer or more muscular, getting rid of wrinkles, increasing definition of muscles, increasing symmetry, etc.).

Also explain that sometimes photos are retouched to make very thin models who also look sickly (e.g., lank hair, dull eyes and skin, jutting bones) look healthier. This creates a misleading impression of health for some models who are not healthy.

Let's talk a little more about that. How does it make you feel to know that the "most beautiful women in the world" are touched up and, in other words, not attractive enough?

Now think for a moment about the photo editors who do the touching up and decide what the ideal is. Do you think they personally meet this standard?

What does our culture tell us will happen if we are able to look like the appearance ideal?

We will be accepted, loved, happy, successful, wealthy.

Differentiate the appearance ideal from the healthy ideal if they say you are healthier if you conform to the appearance ideal.

Will coming closer to this ideal really make these things happen? Another way to think about this is to ask: do celebrities, who often come the closest to the appearance ideal, have perfect lives?

No, they will likely have little impact and have a plethora of other problems like substance addiction, no real friends, etc.

Please do not describe (or allow participants to discuss) the benefits of thinness in general or give the impression that the appearance ideal is close to the healthy ideal (i.e., it is possible to be well within the healthy weight range, but not meet the cultural standards for the appearance ideal).



IV. COSTS ASSOCIATED WITH PURSUING THE APPEARANCE IDEAL (25 MINS)

On point leader: _____

We've discussed the appearance ideal and where it comes from – now let's think about the costs of this ideal. We would like you to take 7-8 minutes to come up with a list of the costs of pursuing the appearance ideal. Please think first about costs to individual women who try to pursue the appearance ideal. Then, when you can't think of any more ideas, think about the collective costs to our campus if we try to pursue the appearance ideal. What are the costs to us as a group? Please try to think of as many costs as you can and use all the time we give you to brainstorm.

Hand out **Costs of the Appearance Ideal** form. Allow approximately 7-8 minutes for this exercise. When participants have completed their lists, go around the group and ask group members to share their thoughts. Scribe will write these on the board under each section below (**individual costs, costs to our campus, society costs**).

*The blank space in the above question should be filled in with the most salient collective group for the group members. E.g. university; residence hall; sorority.

Scribe: _____

What are the costs of trying to look like the appearance ideal for the individual person? Let's go around the group once so everyone can share 2 things from your list. Our scribe will put these up on the board for us.

Put list up on board. Decreased self-worth; expensive; physically and mentally exhausting; can hurt themselves, health problems, often negatively encourages unhealthy weight management techniques, depression, anxiety.

What costs do you have for us collectively as a group of women at [Insert University or College Name] _____ . [Leaders can "popcorn" and just get a few responses from participants for this question, and the following question]

Fill in the blank line with a collective to which the participants all belong such as "at our university" "in our sorority" "in our residence hall." Put list up on board.

If so many women are dealing with these issues, then what are the costs for society?



Put list up on board. Increased mental health care costs, promotes a culture of discontent. Impairs women's and girls' ability to contribute to our society as much as possible and prevents them from fully leading their lives.

On point leader: _____

Who benefits from the appearance ideal? In other words, who makes a lot of money from the appearance ideal?

Diet industry; fitness business; mass media; fashion industry.

Are you the founder of a diet program, a media executive, a supermodel?

Given all these costs, does it make sense to aggressively pursue the appearance ideal?

No!

Let's go around the room so that each of us can provide one statement about why pursuing the appearance ideal doesn't make sense. This can be as simple as saying "it's impossible to achieve" or "the costs are too high" or whatever part of our discussion fits best with why you think pursuing the appearance ideal (versus the healthy ideal) is problematic.

Make sure that each participant makes a public statement against the appearance ideal at this stage (and anywhere else possible).

V. VERBAL CHALLENGE EXERCISE (15 MINUTES)

On point leader: _____

Now we would like to ask you to do a different type of exercise. Come up with three examples from your real life concerning pressures to conform to an appearance ideal that you have encountered. Think about how you responded to the pressure at that time, and then think of some verbal challenges to these pressures, or in other words, ways you could have responded to that pressure to indicate that you do not agree with the appearance ideal.

First, let's run through an example together verbally as a group, before we start writing on our own.



For example, your mom might comment on how a friend has really let herself go because she gained weight. Your friend is thinner than you and this made you think you need to lose weight as well.

How could you respond to this comment to show you do not agree with the appearance ideal and think these sorts of comments are unhealthy?

Get general responses.

We want to emphasize that while we want you to share how you responded in the past, the verbal challenges do not reflect how you actually responded to the pressures in the past, but rather how you ideally would respond now.

Hand out **Verbal Challenge** form.

Please take a few minutes to write down your own personal examples from a time when you felt pressured to pursue the appearance ideal. Then, write down the way you would respond to them now, given what we have discussed today.

On point leader: _____

Okay. Now we are going to go around the group so that each of us can share one of our examples. You may find it easiest to tell us what happened and then say, “In hindsight what I would say now in that situation is.....” I’ll start us off as an example.

VI. CHALLENGING NEGATIVE BODY TALK (15 MINS)

On point leader: _____

We’ve spent a lot of time discussing the obvious pressures to conform to an appearance ideal that we encounter on a regular basis from the media, friends, and family. However, sometimes we put ourselves or others under pressure to try to attain this appearance ideal. We often do not notice some of the more subtle ways the appearance ideal keeps going.

Can any of you think of some ways that you or others might promote an appearance ideal without even knowing it?



Possible responses include complimenting others' weight loss, commenting on what or how much you are eating, complaining about your body, and talking about celebrities who are either very thin or look as though they have gained weight.

Here is a handout of statements women commonly make. These statements are all forms of negative body talk. Please take a moment to read these statements to yourself.

Hand out **Negative Body Talk** form.

Negative Body Talk

1. I wish I could look like you!
2. Do I look fat in this?
3. You look amazing! How much weight have you lost?
4. No one will date me if I don't have a firm butt.
5. You're so brave for coming to school with no makeup on. I wouldn't be caught dead without a full face of makeup.
6. Did you see the girl he is dating? She's such a whale.
7. Those pants are not very flattering on her butt!
8. I look disgusting..
9. I'm so ugly.
10. She has so much more cellulite than last summer.
11. I want to get lip injections so I can have a better pout.
12. I think I'm going to try that new diet. Do it with me; you could afford to drop a few.
13. Buy it a size smaller, it'll be good motivation for you.
14. My thighs are so big.
15. I don't have the body to wear a swimsuit.
16. I hate my flat chest.

[Allow time for responses to each of the individual questions below]

How do these statements keep the appearance ideal going?

How would your feelings towards your own body change if you were to stop talking this way?

If you stopped saying statements on this list, how would it affect others around you?



Now we are going to play a mini-role-play game to practice responses to negative body talk. I'll say a negative body talk statement to each of you, and you will respond to show me you don't agree with my negative body talk. We'll go around the group twice. Okay, here we go...

VII. BEHAVIORAL CHALLENGE (10 MINS)

On point leader: _____

Now we'll do another type of exercise.

Can you think of things you do not do because of body image concerns? For instance, when I did this program originally, I was reluctant to _____ . Let's now go around the room so all of us can share one thing that we avoid doing (or feel we have to do) because of body image concerns. Who would like to start?

Examples include wearing certain clothes, going specific places, etc. Peer leaders can give an example from when they first did the program or can say – Although it is a lot better now, I still find it a bit challenging to do _____.

Are you willing to do an experiment to help you feel better about your bodies?

Get head nods; general yes.

We would like to challenge you to do something that you currently do not do because of body image concerns. Doing this should disprove your body image fears and increase your confidence.

Let me give you some more examples to consider....

Leaders can skip reading examples that were raised in the discussion above.

- Wearing shorts to school*
- Going to the pool in a swimsuit*
- Wear shorts or a swimsuit in public and sit down and let your thighs spread (yes, it is normal for them to do that).*
- Exercising in public or when wearing form fitting exercise clothes*
- Wearing a form-fitting shirt or a tank top to dinner or the library*



- Wearing your hair up*
- Wearing a sports bra without a top over it during workouts*
- Not wearing make-up, particularly when going somewhere when you would usually wear make-up.*
- Going to the gym*
- Revealing a part of your body, such as your feet or somewhere with a scar or birthmark, that you tend to cover up*
- Stop mirror or body checking. If you constantly check the mirror to make sure you are okay, don't do it. Or if you frequently check some part of your body – like making sure your stomach is sucked in – stop.*

Can you promise to do one item on this list or one example from the group sharing at least twice in the next week?

Get at least a head nod from everyone.

On point leader: _____

Great. We would like each of you to do this as a challenge and then let us know during the next session how it went. Please take a moment to think of something you would like to do but haven't done yet and write it down on your handout.

Hand out the **Behavioral Exercise** form.

Now, let's go around the room and quickly share our plans so that we can be supportive to one another this week. I'm going to do the same activity I did last time, because I think it is helpful to keep doing these things since appearance ideal messages constantly surround us. So, I'll start...

Note that the purpose of this exercise is not to simply have participants do something they would not normally do (e.g., wear a tight shirt because it just isn't their style preference), but that it needs to be something they would otherwise do if they did not have body image concerns (e.g., would *like* to wear a tight shirt, but do not because they think it makes their stomach look fat).

Have each participant come up with a behavioral challenge that they will do at least twice in the next week.

Peer-leaders will help participants select challenges that are appropriate and that they will be able to do in the next week (e.g., do not select “wear a swimsuit to an outdoor pool” if it's winter).



V. HOME EXERCISES AND WRAP UP (10 MINS)

Group participants are told about the home-exercises for next session:

Now that we have begun discussing costs of the appearance ideal, would you be willing to write a letter to a younger girl who is struggling with her body image about the costs associated with trying to look like an appearance ideal?

Get general head nods.

Think of as many costs as you can, and feel free to work with others to come up with ideas.

Please bring this letter to our next meeting so you can read it and we can discuss your feelings about writing it. I really encourage you to do this exercise because (make a statement about why you found this helpful). In fact, because we've found this so helpful before, each of us as group leaders will also be writing letters this week to share with the group.

Hand out the **Letter to a Younger Girl** form.

On point leader: _____

Second, we would like to ask you to stand in front of a mirror with as little clothing as possible and write down at least 15 positive qualities. This includes physical, emotional, intellectual, and social qualities. For instance, you may like the shape of your arms, the strength of your legs, your long dark hair, the sound of your laugh, or the fact that you are a good friend.

We know it can be hard, but please make sure to include at least some physical attributes on your list. Don't forget that sometimes we like body parts because of the ways we look, but other times we like them because of what they allow us to do.

For example, you may say, "I really like the shape of my hips," or "I love to dance and I appreciate that my legs help me dance well." You might also like your sense of humor or the way you care about other people or your positive attitude towards life.

It may be difficult at first, but we really want you to do this because it is important to recognize each of these areas about yourself. Past participants have found this exercise to be very helpful and empowering. Also, we recommend that you wear



something as revealing as possible while doing this so that you can actually see your body.

Again, please do complete this exercise because it is really helpful. When I did this exercise for the first time, I really enjoyed it because (make a testimonial statement here to encourage participants to complete this exercise). We are also going to do this exercise again this week, because it is such a good exercise.

Please bring your list of positive qualities to group next week so you can share them with the group.

Hand out the **Mirror Exercise** form.

OK, can someone tell me what the home exercises are for this week in their own words?

Write letter to younger girl about costs of pursuing the appearance ideal; do the self-affirmation mirror exercise.

We will discuss exercises next session. We will be collecting all home exercises.

Experience shows that students get the most out of this program when they do the exercises the best they can. Does everyone feel that they can do this?

Get some form of public commitment from each participant.

We want these exercises to be fun as well as thought provoking, so please feel free to talk about them with others between group sessions.

Time permitting**:

***We like to end sessions by giving everyone a chance to say one last thing. Can everyone tell me something that “worked for you” in this session, “hit home” or even something that you just liked**?*

End by saying:

That’s all for today. Thanks for coming. We are looking forward to seeing you next week!



SESSION 2

Prep: Email/call/text each participant before this session to remind them about the time/location of session and to complete the home exercises.

Materials: Video or audio recorder
Digital camera/cell phone
Handouts for

- a) Body Activism Form
- b) Future Body Activism Form
- c) Self-Affirmation Exercise Form
- d) Letter to a Younger Girl Form

Topic Areas:

- I. Reinforcing Voluntary Commitment
- II. Letter to a Younger Girl Exercise Debriefing
- III. Mirror Exercise Debriefing
- IV. Behavioral Challenge Debriefing
- V. Role Play: Discourage Pursuit of the Appearance ideal
- VI. Body Activism
- VII. Future Pressures to Conform to an Appearance ideal
- VIII. Quick Comebacks
- IX. Discussion of Benefits of Group
- X. Self-Affirmation Exercise
- XI. Home Exercises
- XII. Closure

Session Overview: The focus of Session 2 is to review the materials discussed in the previous session and discuss reactions to the two home assignments. Additionally, this session involves role-plays to elicit verbal statements against the appearance ideal.

I. REINFORCING VOLUNTARY COMMITMENT (2 MINS)

On point leader: _____

Thanks for coming to Session 2. Is each of you willing to actively participate in today's session? Let's go around the group again – I'll start....

Go around the room and get a verbal affirmation that they are willing to actively participate.



II. LETTER RECORDING AND DEBRIEFING (20 MINS)

Last week we asked if you would be willing to write a letter to a younger girl about the costs of trying to look like the appearance ideal. We are now going to go around the group so that each of us can share our letter with the rest of the group. Who would like to start?

Have each participant read her letter. For those who are interested, record with a group leader's cell phone or participant cell phones so you can generate short individual video clips for participants. It can be fun for individual campuses to create a page for these videos. NOTE: For confidentiality purposes, it is important to make sure that the participant reading the letter is the ONLY person in the video.

Everyone clearly spent a lot of time writing these letters and did a great job on them. Please hand them in - be sure your name and signature are on them! If you want to keep your letter, take a quick photo of it with your phone.

Collect **Letter to a Younger Girl** form. Make sure each participant has written and signed their name on the form.

We have been impressed by the letters written by participants and feel that they could help other young women struggling with body image concerns, so we encourage you to post a copy of your letter on Facebook or another social media site.

Record the name of anyone who does not want their letter or video posted. Post the rest after the session.

III. MIRROR EXERCISE DEBRIEFING (10 MINS)

On point leader: _____

The other exercise we asked you to do was to look in a mirror and list some of your positive qualities.

How did you feel when you did this exercise? Let's go around the group on this.
Go around the room for responses.

Why do so many of us find it difficult to compliment ourselves?



How can we teach young girls that there is a difference between confidence and arrogance, and that being confident is good?

Now we are going to go around the group so that each of us can state one aspect of ourselves that we are satisfied with. If you can, please try to pick harder aspects versus easier ones. For example, if you like your smile and your hips, say “I like my hips.” We’ll all get more out of this activity if we push ourselves to challenge social norms about not liking these body parts. I’ll start, I like my...

Go around the group.

Okay, now let’s do that again. If you gave a physical quality last time, give an emotional quality this time. And if you gave an emotional quality last time, give a physical one this time. Who wants to start this round?

Have each participant share positive qualities they listed. Discourage “qualified” statements (e.g., “I guess my stomach is not too horrible”). If you get “qualified” statements, accept them and ask the participant for an additional statement that is completely positive (e.g., “Okay, can you give me one more statement you had that is completely positive?”).

Collect **Mirror Exercise** form. Make sure each participant has written and signed their name on the form.

Please hand in your homework sheets and make sure to sign them.

Hopefully, you recognize the positive things about yourselves and will remember them, particularly as the pressure of the appearance ideal surrounds you.

Okay, let’s now practice more ways to resist the appearance ideal.

IV. BEHAVIORAL CHALLENGE DEBRIEFING (10 MINS)

On point leader: _____

Last week we asked you to do something that you do not normally do because of concerns about your body.

Let’s go around the room and describe what each of you did and how it turned out. Who would like to start?



Did you find this exercise useful?

What did you learn? Let's go around the group so we can all share.

Have each participant discuss her experiences.

If they did not do the exercise, ask them how they can succeed the next time they try. Is there something they can do that might be easier to try out first? Encourage participants to continue to challenge their body-related concerns.

We appreciate that you were willing to try something new. Hopefully you will continue to challenge yourselves and your body image concerns in the future in a similar way. Please make sure you turn in your signed behavioral challenge forms.

Collect **Behavioral Challenge Exercise** form. Make sure each participant has written and signed her name on the form.

V. ROLE PLAY TO DISCOURAGE PURSUIT OF THE APPEARANCE IDEAL (15 MINS)

Leaders take the role of someone intensely pursuing the appearance ideal for each participant. Let each participant spend about 3-4 minutes attempting to dissuade one of your characters from pursuing the appearance ideal. If leaders have more than 2 people in their mini groups they should use more than one of the characters so that it doesn't become too easy for the 3rd participant. Parrot, or echo back, any pro-appearance ideal comments previously made by participants while you are playing an appearance ideal role. Focus on the unrealistic benefits of the appearance ideal ("I'll be happy all of the time if I'm thin," "Everyone will like me," "I'll have the perfect partner," "All my problems will be solved.") Make sure each participant tries to talk you out of pursuing the appearance ideal. Be difficult to persuade, but it is OK to be playful with this exercise. Feel free to go over the top a bit with the participants.

On point leader: _____

Now we would like to go through some role-plays, and practice how one could respond to an individual pursuing the appearance ideal. Each of us peer leaders will play a person who is obsessed with the appearance ideal and your job will be to convince one of us that we shouldn't be. Each role play will last several minutes. Feel free to use any of the costs of pursuing the appearance ideal that we identified in our earlier discussions.



Now let's break into 3 smaller groups, so that each of you can individually practice talking us out of pursuing the appearance ideal. The people closest to me should come with me and the same for the other peer leaders.

Each peer leader should take 1/3 of the group into a smaller group. Then select in turn, each group member to participate, making sure each participant individually has a turn. Start with the most gregarious participant. Peer leaders can pick which character they want to use, but should not use a single character with more than 2 participants.

Character One

I am going to play a friend who is obsessed about how my body will look for spring break. I'm dying to have a flat stomach, so I have put myself on a vegetarian diet because meat contains an outrageous amount of fat, which will make me huge and disgusting. In order to lose as much weight as possible, I also refuse to eat high carb foods. I did this last year to lose weight for spring break but started too late to get the effects I wanted. So, this time, I started 5 months ago. I'm dieting because I know I will have to wear a bikini on the beach. Whenever my friends and I mention spring break all I can think about is how I can't wear a swim suit in front of everyone if I don't have an amazingly flat stomach.

Character Two

I am going to play a freshman who is trying to get into a sorority. I'm very concerned about gaining the freshman fifteen because I know if I do, no one will want to be my friend or give me a bid. I weigh myself at least four times every day to make sure that I'm losing weight, or at least not gaining any. If my weight is higher than it was the last time, I skip my next meal and hope for better results at the next weight in. Sometimes I'm late for class because I have to get back to my dorm room between classes to weigh myself or I won't be able to focus on anything else. If I don't start losing weight faster, then I will start skipping two meals every time my weight doesn't go down by at least 1/4 of a pound.



Character Three

I am going to play a friend who is exercising three times a day because I am trying to get a thigh gap to make me more attractive to the person I'm dating. I run 3 miles after breakfast, lunch, and dinner every day because if I don't, I feel super gross. It's like I can feel the food in my stomach moving straight to my thighs and accumulating there. I run even if I'm sick or injured because I know I will get fat thighs if I skip even one work out. The person I'm dating says they won't date girls with fat legs and in the past they have teased me for gaining weight. I stopped losing weight last week, so I think I need to amp up the mileage.

Leaders should generate additional statements as needed and may tailor the statements to be appropriate for their group members. Leaders should keep the role play going for several minutes with the first participant and then move onto the next one. After everyone has gone, the group should come back together.

Role play debriefing

On point leader: _____

How did it feel to do these role plays?

Let participants reflect on how it felt to argue against someone who is fixated on pursuing the appearance ideal. Peer leaders should also share how it felt to play the characters.

What might be the benefit of challenging people when they make appearance ideal statements?

Promote discussion on why it is helpful to speak out against pressure to conform to the appearance ideal. Please let participants come up with the arguments.

VI. BODY ACTIVISM (20 MINS)

On point leader: _____

Because this part of the session requires use of the flipchart, one group leader should be assigned as the "scribe."

We have talked about some ways to resist these commonplace statements about our body and the bodies of others around us. Now, let's add to these ideas by shifting our discussion back to the appearance ideal promoted by our society. We would like you to generate a list of things we can do both as individuals and as a group



on campus to resist the appearance ideal. Think back to the first session, and remember what we discussed regarding the appearance ideal and the ways we feel pressured to pursue this appearance ideal in our society today. What can you avoid, say, do or learn to battle this beauty ideal? Please record your list on the “Body Activism” form. We will give you 5 minutes to complete this list.

Hand out the **Body Activism** form. Give participants 5 minutes to write.

Scribe: _____

Can each of you share two items on your list? We will go around the group. Who would like to start us off?

Scribe will write “Body Activism” on the board, and then record each participant’s two items.

On point leader: _____

We would like each of you to do at least two acts of body activism over the next week and then let us know how they go. Would you all be willing to do that?

For example, in addition to the items on our list on the board, you could:

- 1. Put post-its saying “don’t diet; love your body how you are” into weight loss books at a bookstore.*
- 2. Put up a poster encouraging people to take care of their bodies, in the restrooms at school.*
- 3. Hang body acceptance fliers around campus.*
- 4. Put out a pail with sidewalk chalk on campus and a sign instructing people to write down something they like about their bodies on the sidewalk.*
- 5. Put “love your body” fliers on cars.*
- 6. Use car window paint to write “accept your body” on your own car window.*
- 7. Make and give away “fit for function” buttons or stickers.*
- 8. Share an anti-appearance ideal video on social media.*
- 9. You could make a “stuff people say” about body image concerns video, and put it on social media.*
- 10. Write to a magazine or advertising company about a particular ad that is pro-appearance ideal and explain why you have a problem with this. Or you could compliment a positive campaign.*



12. Go to the Proud2BMe website (www.proud2bme.org) and get active there. This website is sponsored by the National Eating Disorders Association and is a positive body image online community.

13. Keep a jar in your room and have everyone contribute a dollar if they make a negative body statement. Then donate this money to a relevant charity, such as the Eating Recovery Foundation or the National Eating Disorders Association

Does anyone have any other ideas?

Let's now go around the group so each of us can say what two activities we intend to do over the next week. You can choose items from the list I just read; from the list we made on the board; or one you have thought of just now. Who would like to start?

Have each participant choose 2 items from their list or the list above to do during the next week.

Hand out the **Future Body Activism** form.

Please turn in your Body Activism form and make sure you signed your name. If you want to keep a copy of it, feel free to quickly take a photo of it with your phone.

Collect **Body Activism** form. Make sure each participant has written and signed her name on the form.

VII. FUTURE PRESSURES TO CONFORM TO AN APPEARANCE IDEAL (10 MINS)

On point leader: _____

It is often helpful to think of how to respond to future pressures to conform to a certain look or appearance before they happen. (For example, spring break, weddings, having your body change as you age). Now each of us is going to identify two examples of future pressures to conform to an appearance ideal that seem personally relevant, along with one way to respond to each of the two pressures. We will go around the room to hear your anticipated pressures to conform to an appearance ideal and how you might respond. I will start with my two examples...

Have participants identify 2 future pressures to conform to an appearance ideal that are personally relevant, and state one way to respond to each of those future pressures.



VIII. QUICK COMEBACKS TO APPEARANCE IDEAL STATEMENTS ROLE PLAY (10 MINS)

On point leader: _____

Last week we practiced making comebacks to straightforward negative body statements. Because this is challenging to do out in the real world, we think we could all use a bit more practice challenging these “pro-appearance ideal” statements with a quick comeback. Your goal is simply to derail the negative body talk. You might do this by pointing out a cost of pursuing the “appearance ideal”, or you might just end the negative body talk all together.

For example, if I say: “Does this shirt make my love handles too visible?” You could say: “I think it best if we don’t focus on appearance issues like that.”

I will say a statement to each of you and your job is to come up with a response statement. Then I’ll give you a second chance to try this out with a new practice statement. We’ll go around the group twice so everyone gets four different “pro-appearance ideal” statements. Who is up for going first?

Role-play using counter-appearance ideal statements to resist pressure from peers. Ask each participant to generate a counter-appearance ideal statement in response to two statements that leaders generate. Go around the circle twice. Sample statements:

- Becca has really put on the pounds over the holidays.*
- Spring break is coming up so I’m going on a diet, do you want to join me.*
- Beyoncé has really let herself go since she had kids.*
- Delete that picture of us on Instagram; I look disgusting.*
- If I don’t work out more before my next volleyball game, everyone will be staring at my thighs.*
- I hate my body so much—I wish I could just wake up in a different one.*
- Only skinny girls get partners.*
- She really doesn’t have the body to be wearing those short shorts.*
- She looks ridiculous wearing a low-cut shirt without cleavage.*
- I really wish I had the body of a Victoria’s Secret model.*
- Did you see how flat her butt is? Squats anyone??*
- I can’t come out the next few weekends, because I’m saving money for my breast implants.*
- I am thinking of giving up carbs because I hear it helps you lose weight.*
- You are so thin, how do you do it?*
- I can’t take yoga because my butt looks terrible in yoga pants.*



- You shouldn't wear a skirt like that if you don't have toned legs.*
- Being that bony just isn't attractive. Eat a burger already.*
- There is no way I am wearing that dress. My arms aren't toned enough for the sleeveless look.*
- I fear judgment if I eat fast food in public.*
- Do you want to come tanning with me? You look a little pale.*

Role play debriefing

How do you plan to challenge your friends and family in the future if they make appearance ideal statements?

Encourage discussion.

IX. SELF-AFFIRMATION EXERCISE (3 MINS)

On point leader: _____

As we come to the end of our sessions, we would like to encourage you to continue to challenge some of your body-related concerns. Part of doing this is talking about our bodies in a positive, rather than a negative way. Here are some ideas to get you started:

- 1. Choose a friend or family member and discuss three things that you like about yourselves.*
- 2. Keep a journal of all the good things your body allows you to do (e.g., go on a long hike, play tennis well etc.).*
- 3. Pick a friend to make a pact with to avoid negative body talk. When you catch your friend talking negatively about their body, remind them of the pact.*
- 4. Make a pledge to end complaints about your body, such as "I'm so flat chested" or "I hate my legs." When you catch yourself doing this, make a*



correction by saying something positive about that body part, such as, “I’m so glad my legs got me through soccer practice today.”

5. *The next time someone gives you a compliment, rather than objecting (“No, I’m so fat”), practice taking a deep breath and saying, “Thank you.”*
6. *Make a pledge to do the mirror exercise once per week.*

Can each of you choose one of these ideas (or one of your own) and do it sometime next week and e-mail us about how it goes?

Get head nods.

Hand out the **Self-Affirmation Exercise** form.

Consider this an “exit exercise.” Doing these kinds of things makes it more likely that you will talk about yourself in a more positive way. Think of which specific exercise you can do. I’d like to go around the room and ask each of you to share what exercise you are going to do.

Have each participant state which affirmation exercise they are willing to do during the next week.

X. HOME EXERCISES (5 MINS)

On point leader: _____

Second, we would like you to do another exit exercise. Would you be willing to write another letter to a younger girl telling her how to avoid developing body image concerns? This can be to a younger sibling, cousin, or friend.

Please use the information you have learned in these sessions about the costs of pursuing the appearance ideal and the activities you have learned to help develop positive body image. The goal is to help her understand the different things she can do, say, avoid, or learn that will help her develop or maintain a positive body image. Send this letter, via regular or email, to the actual person if you are willing.

Hand out the **Letter to a Younger Girl** form.



Lastly, we also wanted to see if you all would be willing to recruit 3 friends to take part in a future Body Project group. We'd like you to send us their names and contact information once you have convinced them to participate. You can send your names to me at my email address, which is _____.

So, to summarize, we would like each of you to do the self-affirmation positive body exercise during the next week and email the group telling us how it went. Second, we would like you to write an email letter to a younger girl telling her how to avoid developing body image concerns and send the letter to us and her, if you like.

Third, we would like you to recruit three friends who agree to join a future Body Project group and to send us their contact information so we can get them scheduled.

XI. DISCUSSION OF BENEFITS OF THE GROUP AND CLOSURE (10 MINS)

On point leader: _____

Given that this is our last group, I wanted to talk about things you may have learned from participating in this group.

Can you tell me some of the benefits of body acceptance?

Did any particular activity really stand out as helpful to you?

How has this experience changed the way you think and feel about your own body?

On point leader: _____

How has your participation in The Body Project changed what you do, or will do in the future, to promote your own body acceptance?



How has this group changed how you interact, or how you will interact with friends, romantic partners or any other people in your life?

What else have you gotten out of this program? Let's go around the group one last time so everyone can state at least one thing they have learned or liked in this group.

Try to get all participants to reflect on any growth they have shown or insights they have learned. The idea is for them to consolidate what they have learned.

Once again, thanks for deciding to be a part of this group. We have been very impressed with your thoughtful comments and participation—they are much appreciated!

We would also like to encourage you to tell your friends about the group.



Name:

Signature:

Session One Verbal Challenge Form

Please provide at least three examples from your real life concerning pressures to conform to an appearance ideal that you have encountered and then come up with verbal challenges, like we did in the role-play.

Here are some examples of appearance ideal statements:

- A partner might say that they think the ideal dress size is a two.
1. Your mom might comment on how another mom has really let herself go because she gained some weight.
 2. A friend could say that she wished she looked like a particular supermodel when looking over a fashion magazine.

How could you respond to these comments to indicate that you do not agree with the appearance ideal and think these sorts of comments are unhealthy?

Please come up with at least five examples from your life. These examples probably won't be how you actually responded to the pressure. Instead, they should be how you might respond *now* based on what you know about the appearance ideal.

1) *Situation and how you responded back then:*

NEW Verbal Response:

2) *Situation:*



Verbal Response:

3) *Situation:*

Verbal Response:

Name:

Signature:

Session One Negative Body Talk List

1. I wish I could look like you!
2. Do I look fat in this?
3. You look amazing! How much weight have you lost?
4. No one will date me if I don't have a firm butt.
5. You're so brave for coming to school with no makeup on. I wouldn't be caught dead without a full face of makeup.
6. Did you see the girl he is dating? She's such a whale.
7. Those pants are not very flattering on her butt!
8. I look disgusting.
9. I'm so ugly
10. She has so much more cellulite than last summer.
11. I want to get lip injections so I can have a better pout.
12. I think I'm going to try that new diet. Do it with me; you could afford to drop a few.
13. Buy it a size smaller, it'll be good motivation for you.
14. My thighs are so big.
15. I don't have the body to wear a swimsuit.
16. I hate my flat chest.



Name:

Signature:

Session One Behavioral Exercise Form

We would like to challenge each of you to do something that you currently do not do because of body image concerns in order to increase your confidence. For example, wearing shorts to school, going to the pool in a swimsuit, exercising in public. We would like each of you to do two behavioral challenges and then let us know during the next session how it turned out. Please practice each challenge at least once in the next week. Please take a moment to think of something you would like to do but haven't done yet. Please write your behavioral goal on this page to remind yourself of it, and please bring this to the next group.



Name:

Signature:

Session One Mirror Exercise Form

Please stand in front of a mirror and look at yourself and write down all your positive qualities. Please list at least 15. Include physical, emotional, intellectual, and social qualities. For instance, you may like the shape of your arms, the strength of your legs, your long dark hair, the sound of your laugh, or the fact that you are a good friend. Please make sure to include at least some physical attributes on your list.



Name:

Signature:

Session Two Body Activism Form

Please generate a list of things girls/women can do to resist the appearance ideal. What can you avoid, say, do, or learn to battle this beauty ideal? Please write your list. This might be referred to as "body activism."

1)

2)

3)

4)

5)

6)

7)

8)

9)

10)

Name:

Signature:

Session Two

Future Body Activism Form

The exercise in session two asked you to list body activism that girls/women could do to resist the appearance ideal—what you can avoid, say, do, or learn to combat this social pressure. Please choose two behaviors from your list to do during the next week. Please write your body activism goal on this sheet to remind yourself of it. Please send us an email of how it went.

My two body activism plans:

How it went:

Name:

Signature:

Session Two

Self-Affirmation Exercise Form

Part of challenging body-related concerns involves talking about our bodies in a positive, rather than negative, way. We discussed some examples of this in the group, for instance, making a pledge to end complaints about your body or accepting compliments rather than objecting to them. Please choose one of these ideas that we talked about, or one of your own, to practice over the next week, and let us know how it goes via e-mail.

APPENDIX B

Demographics Questionnaire

1. What is your birth date? Month ____ / Day ____ / Year ____
2. What is your height? _____ feet _____ inches
3. What is your weight? _____ lbs
4. Which sex were you assigned at birth? (i.e., what appears on your birth certificate?)
 - (1) Male
 - (2) Female
5. How would you describe yourself?
 - (1) Male
 - (2) Female
 - (3) Male to female transgender
 - (4) Female to male transgender
 - (5) Gender queer/non-conforming
 - (6) Other (please specify): _____
6. Do you consider yourself Latino/a or Hispanic? (1) Yes (2) No
7. What is your race? (select as many as apply)

<input type="checkbox"/> Black or African American	<input type="checkbox"/> American Indian or Alaska Native
<input type="checkbox"/> White or Caucasian	<input type="checkbox"/> Native Hawaiian or Other Pacific Islander
<input type="checkbox"/> Asian or Asian American	<input type="checkbox"/> Other _____
8. What is your current enrollment status?
 - (1) Full-time
 - (2) Part-time
9. Based on your academic standing, what is your current year in school?
 - (1) Freshman (2) Sophomore (3) Junior (4) Senior (5) Graduate Student

If Freshman, is this your first semester at ODU? (1) Yes (2) No

If senior, is this your last semester at ODU? (1) Yes (2) No
10. What is your current college GPA? _____
 If do not have college GPA: What was your high school GPA? _____ out of _____
11. Are you currently a member of a social sorority or fraternity? (1) Yes (2) No
12. Where do you live? (1) On campus (2) Off campus
13. Who do you live with? (Select one.)
 - (1) Live alone
 - (2) Female roommate(s)
 - (3) Male roommate(s)
 - (4) Both female and male roommate(s)
 - (5) Family member(s)
 - (6) Partner/significant other
14. Which of the following options best describes your current relationship status? (Select one.)
 - (1) Single (not dating)
 - (2) Dating one partner
 - (3) Dating several partners
 - (4) In a monogamous relationship
 - (5) Engaged to be married or married

12b. If not single: Are you currently in a relationship with or dating:

 - (1) A woman
 - (2) A man

- (3) Both a woman and a man
15. Which of the following best represents how you think of yourself?
- (1) Only homosexual, lesbian, or gay
 - (2) Mostly homosexual, lesbian, or gay
 - (3) Bisexual
 - (4) Mostly heterosexual or mostly straight
 - (5) Only heterosexual or only straight
 - (6) Other (specify): _____
 - (7) Prefer not to answer
16. Do you have any children (biological, adopted, or step)? (1) Yes (2) No
If yes, how many? _____
17. What is your height? _____ feet, _____ inches
18. What is your best guess of your weight? _____ pounds
19. Are you CURRENTLY receiving any of the following types of mental health treatment?
- a. Psychotherapy or counseling? (1) Yes (2) No
 - b. Pharmacotherapy or medications? (1) Yes (2) No
 - c. Other mental health treatment (e.g., chemical dependency)? (1)Yes (2)No
20. In the PAST have you received any of the following types of mental health treatment?
- a. Psychotherapy or counseling? (1) Yes (2)No
 - b. Pharmacotherapy or medications? (1)Yes (2) No
 - c. Other mental health treatment (e.g., chemical dependency)? (1)Yes (2)No
21. Where did you hear about this project?
- (1) email announcement
 - (2) flyer on campus, building _____
 - (3) electronic announcement (ex. social media post, online flyer)
 - (4) in a class
 - (5) in a club/organization meeting
 - (6) at an event
 - (7) at a table in or near the Webb Center
 - (8) from a friend

APPENDIX C

Social Network Questionnaire- Adapted with Body Image Questions

Please provide a list of ten (10) people you consider part of your social network. Consider friends that have been important to you and with whom you have had regular contact during the past 30 days.

When listing your friends, please provide their first name and last initial (ex. Jane S.). The purpose of listing your friends' names is so that you remember who you are referring to when completing the rest of the questionnaire. We will not contact any of your friends and will follow the same secure data storage procedures that we will use for the other sections of this survey.

First name, last initial

Person 1

Person 2

Person 3

Person 4

Person 5

Person 6

Person 7

Person 8

Person 9

Person 10

Person [1] (first name, last initial)

What is your friend's age? _____

What is your friend's gender?

- (1) Male
- (2) Female
- (3) Other

Does your friend consider themselves Latino/a or Hispanic? Yes No

What race does is your friend? (circle as many as apply)

- (1) Black or African American
- (2) White or Caucasian
- (3) Asian or Asian American
- (4) American Indian or Alaska Native
- (5) Native Hawaiian or Other Pacific Islander
- (6) Other _____

Is your friend a student at ODU?

- (1) Yes
- (2) No

What is [first name, last initial]'s relationship with you?

- (1) Friend
- (2) Roommate

- (3) Romantic Partner
- (4) Family member
- (5) Other _____

How many years have you known [first name, last initial]? _____

How many hours do you spend together (in person) in a typical week? _____

How many hours do you talk (not in person) in a typical week? _____

How dissatisfied do you think [first name, last initial] is with their body?

- 1- Very dissatisfied
- 2
- 3- Neither dissatisfied nor satisfied
- 4
- 5- Very satisfied with body

Do you think [first name, last initial] restricts the amount of food they eat to control their weight or shape?

- (1) Yes
- (2) No

Do you think [first name, last initial] exercises hard to control their weight or shape?

- (1) Yes
- (2) No

Do you think [first name, last initial], eats an unusually large amount of food at times?

- (1) Yes
- (2) No

Do you think [first name, last initial] makes themselves sick (vomit) in order to control their weight or shape?

- (1) Yes
- (2) No

Do you think [first name, last initial] uses laxatives or diuretics as a means of controlling their weight?

- (1) Yes
- (2) No

When thinking about conversations you have had with [first name, last initial], do you think [first name, last initial] says positive things about their body?

- (1) Yes
- (2) No

When thinking about conversations you have had with [first name, last initial], do you think [first name, last initial] says negative things about their body?

- (1) Yes
- (2) No

Do you think [first name, last initial] engages in appearance-focused social media? In other words, do you think they follow, like, post, and/or share social media content related to fashion, make-up, weight-loss, or fitness?

- (1) Yes
- (2) No

Is [first name, last initial] in a fraternity or sorority?

- (1) Yes
- (2) No

If yes, are they in your sorority or fraternity? [yes/no/I'm not in a sorority/fraternity]

How close/trusting/intimate do you feel to [first name, last initial]?

- 1- Not very close
- 2
- 3
- 4
- 5- Very close

Do you know whether [first name, last initial] has been a part of a Body Project group?

- (1) Yes, they have been part of a group
- (2) Yes, they attended this group with me
- (3) No, they have not been part of a group
- (4) I do not know

APPENDIX D

Body Shape Questionnaire (BSQ-16)

We would like to know how you have been feeling about your appearance over the **PAST TWO WEEKS**. Please read each question and circle the appropriate number to the right. Please answer all the questions.

	Never		Rarely		Sometimes		Often		Very often		Always
OVER THE PAST <u>TWO WEEKS</u>:											
1. Have you been so worried about your shape that you have been feeling you ought to diet?.....	1	2	3	4	5	6					
2. Have you been afraid that you might become fat (or fatter)?.....	1	2	3	4	5	6					
3. Has feeling full (e.g. after eating a large meal) made you feel fat?.....	1	2	3	4	5	6					
4. Have you noticed the shape of other women and felt that your own shape compared unfavorably?.....	1	2	3	4	5	6					
5. Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)?.....	1	2	3	4	5	6					
6. Has being naked, such as when taking a bath, made you feel fat?.....	1	2	3	4	5	6					
7. Have you imagined cutting off fleshy areas of your body?.....	1	2	3	4	5	6					
8. Have you not gone out to social occasions (e.g. parties) because you have felt bad about your shape?.....	1	2	3	4	5	6					
9. Have you felt excessively large and rounded?.....	1	2	3	4	5	6					
10. Have you thought that you are in the shape you are because you lack self-control?.....	1	2	3	4	5	6					
11. Have you worried about other people seeing rolls of fat around your waist or stomach?.....	1	2	3	4	5	6					
12. When in company have your worried about taking up too much room (e.g. sitting on a sofa, or a bus seat)?.....	1	2	3	4	5	6					

13. Has seeing your reflection (e.g. in a mirror or shop window) made you feel bad about your shape?..... 1 2 3 4 5 6
14. Have you pinched areas of your body to see how much fat there is?..... 1 2 3 4 5 6
15. Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)?..... 1 2 3 4 5 6
16. Have you been particularly self-conscious about your shape when in the company of other people?..... 1 2 3 4 5 6

APPENDIX E

Eating Pathology Symptom Inventory (EPSI)

Below is a list of experiences and problems that people sometimes have. Read each item to determine how well it describes your recent experiences. Then select the option that best describes how frequently each statement applied to you **during the past two weeks, including today**.

Use this scale when answering:

0	1	2	3	4
Never	Rarely	Sometimes	Often	Very Often

- | | |
|---|-----------|
| 1. I did not like how clothes fit the shape of my body | 1. _____ |
| 2. I tried to exclude “unhealthy” foods from my diet | 2. _____ |
| 3. I ate when I was not hungry | 3. _____ |
| 4. People told me that I do not eat very much | 4. _____ |
| 5. I felt that I needed to exercise nearly every day | 5. _____ |
| 6. People would be surprised if they knew how little I ate | 6. _____ |
| 7. I used muscle building supplements | 7. _____ |
| 8. I pushed myself extremely hard when I exercised | 8. _____ |
| 9. I snacked throughout the evening without realizing it | 9. _____ |
| 10. I got full more easily than most people | 10. _____ |
| 11. I considered taking diuretics to lose weight | 11. _____ |
| 12. I tried on different outfits, because I did not like how I looked | 12. _____ |
| 13. I thought laxatives are a good way to lose weight | 13. _____ |
| 14. I thought that obese people lack self-control | 14. _____ |
| 15. I thought about taking steroids as a way to get more muscular | 15. _____ |
| 16. I used diet teas or cleansing teas to lose weight | 16. _____ |
| 17. I used diet pills | 17. _____ |
| 18. I did not like how my body looked | 18. _____ |
| 19. I ate until I was uncomfortably full | 19. _____ |
| 20. I felt that overweight people are lazy | 20. _____ |
| 21. I counted the calories of foods I ate | 21. _____ |
| 22. I planned my days around exercising | 22. _____ |
| 23. I thought my butt was too big | 23. _____ |

24. I did not like the size of my thighs 24. _____
25. I wished the shape of my body was different 25. _____
26. I was disgusted by the sight of an overweight person wearing tight clothes 26. _____
27. I made myself vomit in order to lose weight 27. _____
28. I did not notice how much I ate until after I had finished eating 28. _____
29. I considered taking a muscle building supplement 29. _____
30. I felt that overweight people are unattractive 30. _____
31. I engaged in strenuous exercise at least five days per week 31. _____
32. I thought my muscles were too small 32. _____
33. I got full after eating what most people would consider a small amount of food 33. _____
34. I was not satisfied with the size of my hips 34. _____
35. I used protein supplements 35. _____
36. People encouraged me to eat more 36. _____
37. If someone offered me food, I felt that I could not resist eating it 37. _____
38. I was disgusted by the sight of obese people 38. _____
39. I stuffed myself with food to the point of feeling sick 39. _____
40. I tried to avoid foods with high calorie content 40. _____
41. I exercised to the point of exhaustion 41. _____
42. I used diuretics in order to lose weight 42. _____
43. I skipped two meals in a row 43. _____
44. I ate as if I was on auto-pilot 44. _____
45. I ate a very large amount of food in a short period of time (e.g., within 2 hours) 45. _____
46. I used laxatives in order to lose weight 46. _____

APPENDIX F

Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-4R)

Please read each of the following items carefully and indicate the number that best reflects your agreement with the statement.

Definitely Disagree = 1

Mostly Disagree = 2

Neither Agree Nor Disagree = 3

Mostly Agree = 4

Definitely Agree = 5

1. It is important for me to look muscular.
2. It is important for me to look good in the clothes I wear.
3. I want my body to look very thin.
4. I think a lot about looking muscular.
5. I think a lot about my appearance.
6. I think a lot about looking thin.
7. I want to be good looking.
8. I want my body to look muscular.
9. I don't really think much about my appearance.*
10. I don't want my body to look muscular.*
11. I want my body to look very lean.
12. It is important to me to be attractive.
13. I think a lot about having very little body fat.
14. I don't think much about how I look.*
15. I would like to have a body that looks very muscular.

Answer the following questions with relevance to your Family (include: parents, brothers, sisters, relatives):

16. I feel pressure from family members to look thinner.
17. I feel pressure from family members to improve my appearance.
18. Family members encourage me to decrease my level of body fat.
19. Family members encourage me to get in better shape.

Answer the following questions with relevance to your Peers (include: close friends, classmates, other social contacts):

20. My peers encourage me to get thinner.
21. I feel pressure from my peers to improve my appearance.
22. I feel pressure from my peers to look in better shape.
23. I get pressure from my peers to decrease my level of body fat.

Answer the following questions with relevance to significant others (include: romantic partners, teachers, coaches):

24. Significant others encourage me to get thinner.

25. I feel pressure from significant others to improve my appearance.
26. I feel pressure from significant others to look in better shape.
27. I get pressure from significant others to decrease my level of body fat.

Answer the following questions with relevance to the Media (include: television, magazines, the Internet, movies, billboards, and advertisements):

28. I feel pressure from the media to look in better shape.
29. I feel pressure from the media to look thinner.
30. I feel pressure from the media to improve my appearance.
31. I feel pressure from the media to decrease my level of body fat.

*Items are reverse scored.

APPENDIX G

Physical Appearance Comparison Scale (PACS-R)

People sometimes compare their physical appearance to the physical appearance of others. This can be a comparison of their weight, body size, body shape, body fat, or overall appearance. Thinking about how you generally compare yourself to others, please use the following scale to rate how often you make these kinds of comparisons.

	Never		Seldom		Sometimes		Often		Always
1. When I'm in public, I compare my physical appearance to the appearance of others.	0	1	2	3	4				
2. When I meet a new person (same sex), I compare my body size to his/her body size.	0	1	2	3	4				
3. When I'm at work or school, I compare my body shape to the body shape of others.	0	1	2	3	4				
4. When I'm out in public, I compare my body fat to the body fat of others.	0	1	2	3	4				
5. When I'm shopping for clothes, I compare my weight to the weight of others.	0	1	2	3	4				
6. When I'm at a party, I compare my body shape to the body shape of others.	0	1	2	3	4				
7. When I'm with a group of friends, I compare my weight to the weight of others.	0	1	2	3	4				
8. When I'm at work or school, I compare my body size to the body size of others.	0	1	2	3	4				

9. When I'm with a group of friends, I compare my body shape to the body shape of others. 0 1 2 3 4
.....
10. When I'm eating in a restaurant, I compare my body fat to the body fat of others. 0 1 2 3 4
.....
11. When I'm at the gym, I compare my physical appearance to the appearance of others. 0 1 2 3 4
.....

APPENDIX H

Body Checking Questionnaire

Select the number which best describes how often you engage in these behaviors at the present time.

1 Never	2 Rarely	3 Sometimes	4 Often	5 Very often
------------	-------------	----------------	------------	-----------------

1. I check to see if my thighs spread when I'm sitting down.	1 2 3 4 5
2. I pinch my stomach to measure fatness.	1 2 3 4 5
3. I check my reflection in glass doors or car windows to see how I look.	1 2 3 4 5
4. I pinch my upper arms to measure fatness.	1 2 3 4 5
5. I touch underneath my chin to make sure I don't have a "double chin."	1 2 3 4 5
6. I check to see how my bottom looks in the mirror.	1 2 3 4 5
7. I check to see if my thighs rub together.	1 2 3 4 5
8. I check to see if my fat jiggles.	1 2 3 4 5
9. I suck in my gut to see what it is like when my stomach is completely flat.	1 2 3 4 5
10. I pull my clothes as tightly as possible around myself to see how I look.	1 2 3 4 5

APPENDIX I

Fat Talk Questionnaire

We are interested in the comments you say out loud when you are with one or several close female friend(s) who is/are of similar weight to yourself. Please answer honestly.

1. When I am with one or several close female friend(s), I complain that my arms are too flabby.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
2. When I am with one or several close female friend(s), I complain that my stomach is fat.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
3. When I am with one or several close female friend(s), I criticize my body compared to thin models in magazines.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
4. When I am with one or several close female friend(s), I complain that my body is out of proportion.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
5. When I am with one or several close female friend(s), I complain that I hate my whole body.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
6. When I am with one or several close female friend(s), I complain that I am fat.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
7. When I am with one or several close female friend(s), I complain that I should not be eating fattening foods.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
8. When I am with one or several close female friend(s), I complain that I've gained weight.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
9. When I am with one or several close female friend(s), I complain that my clothes are too tight.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------
10. When I am with one or several close female friend(s), I complain that I need to stop eating so much.

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------

11. When I am with one or several close female friend(s), I criticize my body compared to my friend's body.

Never Rarely Sometimes Often Always

12. When I am with one or several close female friend(s), I complain that I feel pressure to be thin.

Never Rarely Sometimes Often Always

13. When I am with one or several close female friend(s), I complain that my body is disgusting.

Never Rarely Sometimes Often Always

14. When I am with one or several close female friend(s), I complain that I am not in shape.

Never Rarely Sometimes Often Always

APPENDIX J

Group Connectedness Items

How close/trusting/intimate do you feel to the group?

- 1- Not very close
- 2
- 3
- 4
- 5- Very close

How similar do you feel to other members of the group?

- 1- Not very similar
- 2
- 3
- 4
- 5- Very similar

APPENDIX K

Participant Intervention Evaluation

[Post-intervention Survey]

Which of the home exercises did you complete before your second session? Please select all that you completed and answer honestly.

- Letter to a Younger Girl
- Mirror Exercise (even if you were unable to complete the list of 15 qualities, select this if you attempted the exercise)
- Behavioral Challenge

Follow-up questions for each exercise selected:

Did you find the [Letter to a Younger Girl] helpful?

- 0- Not at all
- 1
- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Was it challenging?

- 0- Not at all
- 1
- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Did you find the [Mirror Exercise] helpful?

- 0- Not at all
- 1
- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Was it challenging?

- 0- Not at all
- 1

- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Did you find the [Behavioral Challenge you chose] helpful?

- 0- Not at all
- 1
- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Was it challenging?

- 0- Not at all
- 1
- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Overall, how helpful was the program when thinking about all of sessions and exercises together?

- 0- Not at all
- 1
- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Would you recommend this group to others, such as friends and classmates?

- Yes
- No

If no, please explain why not: [fill in the blank]

Were the group leaders/facilitators listening and understanding what was being shared in the group?

- 0- Not at all
- 1
- 2

- 3 - Moderately
- 4
- 5
- 6- Very Much

Were the group leaders/facilitators enthusiastic about the material?

- 0- Not at all
- 1
- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Did you think the program was inclusive in addressing your appearance ideal in whichever way you have defined it and have pursued it?

- 0- Not at all
- 1
- 2
- 3 - Moderately
- 4
- 5
- 6- Very Much

Please describe what was your favorite part of the group sessions. [fill in the blank]

Please describe what was your least favorite part of the program. [fill in the blank]

Do you have any suggestions on how to make the program better? If so, please describe them here. [fill in the blank]

Is there any other feedback you would like to provide? Please provide it here. [fill in the blank]

[1-Month Follow-up Survey]

We want to gain an understanding of the activities and challenges you have continued since completing the program. We will ask you first about the home exercises (body activism, self-affirmation exercise, letter to a younger girl) you completed first and then general skills you have been implementing.

Before we ask you those questions, we also want to know about your relationships with the members of your body project group.

Have you stayed in contact with anyone you met through the Body Project? If you knew anyone before attending your first session, please do not consider them when answering this question.

- Yes
- No

If yes: How many people that you met through the Body Project have you stayed in contact with? [Fill in the blank]

At the end of the second session, we asked you to complete additional home exercises. Please check the home exercise you completed after the second session and answer honestly.

- A body activism activity (examples are: write to a company that is pro-appearance ideal, post post-its or flyers around campus)
- The self-affirmation exercise you shared you would do with the group (examples are: keep a journal about the good things about your body, reduce negative body talk)
- A self-affirmation exercise you learned from the group, but was not the one you shared when we went around the circle
- A **second** Letter to a Younger Girl
- Recruit friends to join a Body Project group

Follow-up question if body activism is selected:

Would you mind sharing the activity you did? If you do not mind, please describe it below. [Fill in the blank]

Follow-up question if self-affirmation exercise is selected:

Would you mind sharing the activity you did? If you do not mind, please describe it below. [Fill in the blank]

Since your last group session, have you implemented any skills or changes to your lifestyle that you learned from the program? Please check all that apply and answer honestly.

- Reduced the number of times you engage in negative body talk (either statements to self or conversations with others)
- Provided more non-appearance compliments to others
- Actively about your positive qualities either while looking in the mirror or during other occasions
- Dissuaded others from pursuing the appearance ideal, either in situations like the one's we role-played or during other occasions where people have expressed concerns about looking a certain way
- Talked about the Body Project with others
- Spent less time getting ready in the morning/ for activities or attending to your appearance
- Other [Fill in the blank]

Is there any other feedback you would like to provide us either related to ways the Body Project has impacted you or anything else? [Fill in the blank]

[3-month Follow-up Survey]

We want to gain an understanding of the activities and challenges you have continued since completing the program. Before we ask you those questions, we also want to know about your relationships with the members of your body project group.

Have you stayed in contact with anyone you met through the Body Project? If you knew anyone before attending your first session, please do not consider them when answering this question.

- Yes
- No

If yes: How many people that you met through the Body Project have you stayed in contact with? [Fill in the blank]

Since your last group session, have you implemented any skills or changes to your lifestyle that you learned from the program? Please check all that apply and answer honestly.

- Reduced the number of times you engage in negative body talk (either statements to self or conversations with others)
- Provided more non-appearance compliments to others
- Actively about your positive qualities either while looking in the mirror or during other occasions
- Dissuaded others from pursuing the appearance ideal, either in situations like the one's we role-played or during other occasions where people have expressed concerns about looking a certain way
- Talked about the Body Project with others
- Spent less time getting ready in the morning/ for activities or attending to your appearance
- Other [Fill in the blank]

Is there any other feedback you would like to provide us either related to ways the Body Project has impacted you or anything else? [Fill in the blank]

APPENDIX L

Intervention Fidelity Form

Session 1 Date/Time: _____ Group ID: _____
 Session 1 Length: _____ Rater: _____
 Number Attended: _____ Observation: ___ Live ___ Audiotape
 Session 2 Date/Time: _____ Facilitators: _____
 Session 2 Length: _____
 Number Attended: _____

10 = Perfect! Absolutely all material in the section was presented exactly as written (100%).
 9 = Excellent. All key concepts and almost all material in the section were presented (95%).
 8 = Very good. All key concepts were presented but some supporting material skipped (90%).
 7 = Good. Most key concepts of the section were presented (80%).
 6 = Fair. One key concept was not presented (70%).
 5 = Mediocre. The majority of key concepts were presented but significant gaps (60%).
 4 = Minimal adherence. The majority of key concepts were presented but poorly (50%).
 3 = Poor. The majority of the key concepts were not presented (<50%).
 2 = Very poor. Material of this section was mentioned only very briefly (10%).
 1 = No adherence. The section was skipped entirely.

Session 1 Adherence **Total Score:** _____

Rating	Segment/Content
10 9 8 7 6 5 4 3 2 1	1. Introduction (10 mins)
10 9 8 7 6 5 4 3 2 1	2. Voluntary commitment and overview (2 mins)
10 9 8 7 6 5 4 3 2 1	3. Definition and origin of the appearance ideal (20 mins)
10 9 8 7 6 5 4 3 2 1	4. Costs associated with the appearance ideal (25 mins)
10 9 8 7 6 5 4 3 2 1	5. Verbal challenge exercise (15 mins)
10 9 8 7 6 5 4 3 2 1	6. Challenging negative body talk (15 mins)
10 9 8 7 6 5 4 3 2 1	7. Behavioral challenge (10 mins)
10 9 8 7 6 5 4 3 2 1	8. Home exercises and wrap up (10 mins)

Notes: _____

- 10 = Perfect! Absolutely all material in the section was presented exactly as written (100%).
 9 = Excellent. All key concepts and almost all material in the section were presented (95%).
 8 = Very good. All key concepts were presented but some supporting material skipped (90%).
 7 = Good. Most key concepts of the section were presented (80%).
 6 = Fair. One key concept was not presented (70%).
 5 = Mediocre. The majority of key concepts were presented but significant gaps (60%).
 4 = Minimal adherence. The majority of key concepts were presented but poorly (50%).
 3 = Poor. The majority of the key concepts were not presented (<50%).
 2 = Very poor. Material of this section was mentioned only very briefly (10%).
 1 = No adherence. The section was skipped entirely.

Session 2 Adherence**Total Score:** _____

Rating	Segment/Content
10 9 8 7 6 5 4 3 2 1	1. Reinforcing voluntary commitment (2 mins)
10 9 8 7 6 5 4 3 2 1	2. Letter to Younger Girl exercise debriefing (20 mins)
10 9 8 7 6 5 4 3 2 1	3. Mirror Exercise debriefing (10 mins)
10 9 8 7 6 5 4 3 2 1	4. Behavioral Challenge debriefing (10 mins)
10 9 8 7 6 5 4 3 2 1	5. Role Play: Discourage ideal pursuit (15 mins)
10 9 8 7 6 5 4 3 2 1	6. Body activism (20 mins)
10 9 8 7 6 5 4 3 2 1	7. Future pressures to conform to ideal (10 mins)
10 9 8 7 6 5 4 3 2 1	8. Quick comebacks (10 mins)
10 9 8 7 6 5 4 3 2 1	9. Self-affirmation exercise (3 mins)
10 9 8 7 6 5 4 3 2 1	10. Home exercises (5 mins)
10 9 8 7 6 5 4 3 2 1	11. Benefits of group and closure (10 mins)

Notes: _____

VITA

Rachel I. MacIntyre

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Education

- Ph.D.** Clinical Psychology (*expected August 2021*)
Virginia Consortium Program in Clinical Psychology
Advisor: Kristin E. Heron, Ph.D.
- M.S.** Experimental Psychology (awarded December 2017)
Old Dominion University
Advisor: Kristin E. Heron, Ph.D.
- B.S.** Animal Behavior (awarded January 2013)
Bucknell University

Background

Rachel I. MacIntyre is a sixth-year graduate student at the Virginia Consortium Program in Clinical Psychology, which is composed of Old Dominion University, Norfolk State University, and Eastern Virginia Medical School. During her graduate studies, she has been a member of Dr. Kristin Heron's Health Behavior and Technology Lab at Old Dominion University, which helped foster her research interests in dynamic social influences on adaptive and maladaptive aspects of body image and related health behaviors (e.g., eating, exercise). Her research interests have motivated her clinical work in women's issues, behavioral health, and adolescent and young adult mental health, which, in turn, further inspires her research.

Selected Publications

- MacIntyre, R. I., Heron, K. E., Dawson, C. A., Filipkowski, K. B., & Arigo, D. (in press). Does assessment alter responses? An examination of measurement reactivity in an ecological momentary assessment of body comparisons. *Journal of Social and Clinical Psychology*.
- MacIntyre, R. I., Heron, K. E., Howard, L. M., & Downs, D. S. (2020). Gender and Black-White race differences in exercise dependence prevalence and disordered eating behaviors in college students. *Research Quarterly for Exercise and Sport*. Advanced online publication.
- MacIntyre, R. I., Heron, K. E., Braitman, A. L., & Arigo, D. (2020). An ecological momentary assessment of self-improvement and self-evaluation body comparisons: associations with college women's body dissatisfaction and exercise. *Body Image*, 33, 264-277.