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Integrating Obesity and Eating Disorder Prevention: A Pilot and Feasibility Trial of INSPIRE

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INTEGRATING OBESITY AND EATING DISORDER PREVENTION: A PILOT AND FEASIBILITY TRIAL OF INSPIRE

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

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Abstract

INTEGRATING OBESITY AND EATING DISORDER PREVENTION: A PILOT AND FEASIBILITY TRIAL OF INSPIRE

By: Courtney C. Simpson, M. S.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

Virginia Commonwealth University, 2018

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Obesity and eating disorders are pervasive concerns among young adult women, and profoundly impact physical and psychological functioning. Weight-related disorders are typically chronic conditions; their treatment is often complex and frequently ineffective. Moreover, Black and Latina women have disproportionately high rates of obesity, and experience rates of eating disorders comparable to those of their White peers; yet, they are less likely to be referred to appropriate treatment. Given the intractability of weight-related concerns and their detrimental consequences, attempts to prevent unhealthy eating attitudes and behaviors are essential. To date, few prevention programs have significantly reduced both obesity risk and eating disorder symptoms. The purpose of the current study was to develop and pilot an intervention designed to prevent obesity and eating disorders among young adult women (age 18-25). In the first phase of the study, focus groups were conducted with 30 young adult women to explore disparate racial and ethnic appearance ideals and assess cultural acceptability of the proposed intervention. Additionally, an innovative manualized intervention informed by the qualitative data and grounded in social psychological principles and dialectical behavior therapy was developed. In
the second phase of the study, 29 young adult women were recruited to participate in the intervention. Participants completed a battery of questionnaires at pretest (baseline), posttest (8-weeks), and 4-week follow-up. Findings reveal vast differences in beauty standards among disparate racial/ethnic women and demonstrate the need to enhance the cultural sensitivity of current intervention approaches. Results suggest the feasibility and acceptability of a culturally sensitive prevention program intended to reduce the risk of both unhealthy weight gain and eating pathology.
Integrating Obesity and Eating Disorder Prevention: A Pilot and Feasibility Trial of INSPIRE

Obesity and eating disorders are serious conditions, and the prevalence of each is rising in the United States. Both obesity and eating disorders are associated with significant impairment, distress, morbidity, and mortality (Hoek & van Hoeken, 2003; Hudson, Hiripi, Pope, & Kessler, 2007; Luppino et al., 2010; Wang & Beydoun, 2007). Although traditionally viewed as disparate public health concerns, research suggests that obesity and eating disorders are strongly related (Flegal, Kit, Orpana, & Graubard, 2013; Hudson et al., 2007; Irving & Neumark-Sztainer, 2002; Klump, Bulik, Kaye, Treasure, & Tyson, 2009; Luppino et al., 2010; Rancourt & McCullough, 2015). The established overlap between obesity and eating disorders indicates that these conditions are part of a continuum of weight-related disorders, highlighting the rationale for integrated approaches to their treatment and prevention (Irving & Neumark-Sztainer, 2002; Rancourt & McCullough, 2015).

Weight-related disorders are typically chronic, and treatment is complex and often ineffective (Acosta, Abu Dayyeh, Port, & Camilleri, 2014; Fairburn, 2005). The transition to college is a particularly high-risk time for the development of eating disorders and excessive weight gain in young women (Delinsky & Wilson, 2008; Field, Haines, Rosner, & Willett, 2010). Indeed, eating habits worsen and physical activity levels decline throughout college, a developmental stage in which long-term weight-related health patterns are established (Butler, Black, Blue, & Gretebeck, 2004; Delinsky & Wilson, 2008; Driskell, Kim, & Goebel, 2005; Grace, 1997). Therefore, the transition to college is an important time for intervention to promote healthy weight management. Yet, few prevention efforts focus on young adulthood, a critical
developmental stage in the establishment of life-long eating and exercise behaviors (Nelson, Story, Larson, Neumark-Sztainer, & Lytle, 2008).

Given the intractability of weight-related disorders, and their high personal and economic costs, attempts to change unhealthy eating attitudes and behaviors at an early stage are essential. Current prevention efforts are designed to target either obesity or eating disorders (Rancourt & McCullough, 2015). Nonetheless, data from many of these programs suggest their ability to prevent both conditions (Rancourt & McCullough, 2015; Stice, Marti, Spoor, Presnell, & Shaw, 2008). Interventions that produce effects for more than one physical or psychiatric problem have greater public health utility and cost effectiveness than those addressing only one problem. Therefore, a prevention program targeting both obesity and eating disorders would improve health care affordability and efficiency.

To date, few prevention programs have significantly reduced both body weight and eating disorder symptoms in a randomized controlled trial (Rancourt & McCullough, 2015; Stice, Rohde, Shaw, & Marti, 2013). Dissonance-Based Interventions (DBIs) are specifically designed to decrease a primary risk factor for eating pathology: thin-ideal internalization (Stice, Shaw, Becker, & Rohde, 2008). In DBIs, participants engage in verbal, written, and behavioral exercises in which they critique the ‘thin ideal’ (Stice, Marti, et al., 2008; Stice, Rohde, Butryn, Shaw, & Marti, 2015). In the obesity field, the Healthy Weight Intervention (HWI) is commonly used to promote lasting improvements to dietary intake and exercise (Stice, Rohde, et al., 2013). Participants in the HWI are encouraged to pursue the ‘healthy ideal’ through small, gradual changes in diet and exercise (Stice, Marti, et al., 2008; Stice, Rohde, et al., 2013). Notably, both DBI and HWIs reduce risk for eating pathology and obesity onset, although each was intentionally designed to target only one of those outcomes.
Developing empirically sound prevention interventions for obesity and eating disorders is a public health priority. The current study investigated whether a DBI intervention and the HWI could be integrated to optimize their effects on weight-related disorders. Critique of the ‘thin ideal’ was replaced with critique of ‘beauty ideals’ to enhance the relevance of the intervention for ethnic/racial minority women (Warren, Gleaves, Cepeda-Benito, Fernandez, & Rodriguez-Ruiz, 2005). Further, the intervention incorporated distress tolerance and emotion regulation skills training to target the maladaptive coping mechanisms used to manage negative affect in weight-related disorders (Luppino et al., 2010; Stice, Marti, & Durant, 2011; Whiteside et al., 2007). The prevention program (INSPIRE – Inspiring Nutritious Selections and Positive Intentions Regarding Eating and Exercise) was designed for young adult women (age 18-25 years), a group at high risk for weight gain, eating pathology and obesity (Hudson et al., 2007; Klump et al., 2009; Sparling, 2007; Stice, Marti, et al., 2008). This study integrated and expanded on two interventions that have yielded promising results in young adult women with elevated risk for these conditions. Results suggest the potential to develop an affordable and acceptable prevention approach that reduces the risk of both unhealthy weight gain and eating disorders.

**Obesity and Eating Disorders are Significant Problems.**

**Obesity.** Obesity is a medical condition characterized by an amount of body fat that adversely affects health (World Health Organization, 2000). The prevalence of obesity has increased dramatically over the last two decades among individuals of all racial and ethnic groups. In 2013, the Center for Disease Control and Prevention reported that 55.4% of young women (ages 20-34 years) in the U.S. meet criteria for overweight or obesity, representing a
18.4% increase between the years of 1988 and 2010 (National Center for Health Statistics, 2013). The escalating prevalence of obesity is worrisome given its associated comorbidities.

Numerous health problems are comorbid with overweight status and obesity, including cardiovascular disease, asthma, hypertension, stroke, diabetes, gallbladder disease, and several types of cancer (Fabricatore & Wadden, 2006; Luppino et al., 2010; World Health Organization, 2000). Further, there are several non-fatal but debilitating physical consequences related to obesity, including osteoarthritis, respiratory difficulties, chronic musculoskeletal problems, skin problems, and infertility (World Health Organization, 2000). Obesity is also associated with psychological comorbidities. Specifically, individuals with obesity are more likely than their peers to report poor perceived health, impaired social functioning, low self-esteem, body dissatisfaction, and depression (National Obesity Observatory, 2011; Puhl & Heuer, 2010). A recent meta-analysis found that individuals with obesity had a 55% greater risk of developing depression compared with normal-weight individuals (Luppino et al., 2010). Another cross-sectional study found a positive linear relation between negative affect and body mass index (BMI; Pasco, Williams, Jacka, Brennan, & Berk, 2013). Further, many individuals with obesity experience weight stigmatization and discrimination in educational, employment, and health care contexts (National Obesity Observatory, 2011; Puhl & Heuer, 2010). The experience of weight stigma exacerbates the risk of depression, low self-esteem, and body dissatisfaction (National Obesity Observatory, 2011; Puhl & Heuer, 2010). Compared with overweight men, overweight women report more incidents of weight-related stigmatization, and more adverse mental health consequences as a result of their weight status (National Obesity Observatory, 2011). Indeed, some studies have found that the relation between obesity and emotional disruption is stronger for women (Scott et al., 2008).
The myriad health repercussions of obesity increase risk of premature death in individuals with the condition. A systematic review of the mortality risks accompanying individuals of varying weights demonstrated that obesity was associated with significantly higher all-cause mortality relative to individuals of normal weight (Flegal et al., 2013). The estimated annual health care costs of obesity-related illness is $209.7 billion, representing 20.6% of annual medical spending in the U.S (Cawley & Meyerhoefer, 2012). Thus, the physical and psychological consequences of obesity are severe, are associated with significant financial burden, and represent a major public health issue.

**Eating disorders.** Eating disorders are mental illnesses that involve disturbances in emotions, attitudes, and behaviors surrounding food and weight (American Psychiatric Association, 2013). The incidence of eating disorders has increased significantly in the past few decades, and they are becoming more widespread in ethnically and racially diverse individuals from a range of socioeconomic groups (Hudson, Hiripi, Pope, & Kessler, 2007; Shaw, Ramirez, Trost, Randall, & Stice, 2004). Prevalence estimates suggest that approximately 13.1% of young women in the U.S. experience an eating disorder in their lifetime, including anorexia nervosa, bulimia nervosa, binge eating disorder, and other specified feeding or eating disorder (Stice, Marti, & Rohde, 2013). Many more young women manifest subthreshold eating disorders, which are often precursors to the threshold form (Croll, Neumark-Sztainer, Story, & Ireland, 2002; Vander Wal, 2012). The growing prevalence of eating disorders is troubling, especially given the extensive medical and psychological comorbidities associated with these conditions.

Eating disorders are associated with the most extensive medical complications of any psychiatric disorder. The physical complications of eating disorders can include cardiac arrhythmia, loss of brain mass, osteoporosis, diabetes, infertility, asthma, bowel paralysis,
electrolyte imbalance, gastric rupture, anemia, liver failure, kidney dysfunction, and heart failure (Klump et al., 2009). Hospitalization for the medical complications of eating disorders is not uncommon, and in the past decade the number of these hospitalizations increased by 24% (Zhao & Encinosa, 2011). Additionally, psychiatric comorbidities are common among individuals with eating disorders. In the National Comorbidity Survey replication, 56.2% of individuals with anorexia, 95.5% with bulimia nervosa, and 78.9% with binge eating disorder met criteria for at least one additional DSM-IV disorder (Hudson et al., 2007). Specifically, eating disorders were associated with mood, anxiety, impulse control, and substance use disorders (Hudson et al., 2007). Further, eating disorders are accompanied by body dissatisfaction, low self-esteem, and poor social functioning (Stice, Marti, et al., 2013). The adverse emotional consequences of eating disorders impede daily functioning; 53.1%-78.0% of individuals with these conditions report at least some role impairment in their home, work, personal, or social lives (Hudson et al., 2007).

Mortality rates associated with eating disorders are higher than those linked to any other psychiatric condition (Arcelus, Mitchell, & Wales, 2011; Fichter & Quadflieg, 2016; Keel & Herzog, 2004). In particular, eating disorders are associated with elevated suicide rates (Arcelus et al., 2011; Keel & Herzog, 2004). Approximately 20% of individuals suffering from an eating disorder will die from their condition, with 20-30% of these deaths the result of suicide (Keel et al., 2003). The estimated financial costs of eating disorders are higher than those of depression and anxiety combined (Deloitte Access Economics, 2012). Indeed, eating disorders create substantial costs, ranging from $1,288 to $8,042 annually per individual patient (Stuhldreher et al., 2012). Therefore, eating disorder-related impairments significantly interfere with quality of life, induce a financial burden, and represent a serious public health concern.

**These Serious Public Health Concerns often Co-Occur**
Obesity and eating disorders have traditionally been viewed as disparate problems, with separate trajectories and methods of treatment and prevention (Irving & Neumark-Sztainer, 2002). However, research suggests that obesity and eating disorders share etiological processes and psychological and medical comorbidities (Rancourt & McCullough, 2015). Rather than being mutually exclusive, obesity and eating disorders frequently co-occur (Boutelle, Neumark-Sztainer, Story, & Resnick, 2002; Darby et al., 2009; Hudson et al., 2007). There is a positive relation between overweight status and binge eating (Wilson, 1994). Approximately 30% of individuals with bulimia, and 40% of individuals with binge eating disorder, also have obesity (Hudson et al., 2007). Additionally, a recent examination of university students revealed that more than half (58%) of individuals with overweight/obesity were at high risk for an eating disorder or warranted a clinical referral, compared to 34% and 25% of individuals with normal weight and underweight, respectively, meeting these criteria (Kass et al., 2015).

In a cross-sectional study assessing the prevalence of obesity and eating disorders between 1995 and 2005, the co-occurrence of the conditions increased more than either obesity or eating disorders alone (Darby et al., 2009). Specifically, by 2005, participants were 4.5 times more likely to report both obesity and eating disordered behaviors. It was estimated that one in every five individuals with obesity has engaged in disordered eating behaviors (Darby et al., 2009). Further, population-based data demonstrate that 76% of women with obesity and 55% of men with obesity use unhealthy weight control behaviors; including fasting, eating little food, using a food substitute like powder or a special drink, skipping meals, and smoking cigarettes. In the same study, 17.9% of women and 6.3% of men reported engaging in more extreme weight control behaviors, such as using diet pills, laxatives, diuretics, or vomiting (Neumark-Sztainer, Story, Hannan, Perry, & Irving, 2002).
Moreover, some individuals cross over from one condition to another. Longitudinal data indicates that individuals engaging in both unhealthy weight control behaviors and “healthy” dieting were three more times likely to be overweight compared with individuals who did not use any weight modification practices. At five-year follow-up, none of the weight control behaviors were associated with decreases in BMI or overweight status (Neumark-Sztainer et al., 2006). Thus, obesity is a risk factor for eating disorders, and engaging in unhealthy weight control behaviors is linked to weight gain over time (Neumark-Sztainer et al., 2006; Sim, Lebow, & Billings, 2013). There is strong evidence for the conceptualization of obesity and eating disorders as part of a spectrum of weight-related disorders, highlighting the rationale for an integrated approach to treatment and prevention (Irving & Neumark-Sztainer, 2002; Neumark-Sztainer, 2003; Rancourt & McCullough, 2015).

Predictors of obesity and eating disorders. Obesity and eating disorders are influenced by several of the same risk and protective factors. Irving and Neumark-Sztainer (2002) proposed a model of the factors that contribute to the onset of these two conditions. Their model is grounded in Social Cognitive Theory, asserting that behavior change is the result of alteration in both the socio-environmental and personal domains (Bandura, 2001). Constructs in the model are discussed in the following paragraphs.

Socio-environmental factors. Weight-related disorders are considered products of an increasingly “toxic” food and weight environment (Battle & Brownell, 1996). The current cultural context delivers mixed messages by glorifying thinness, stigmatizing fatness, promoting the consumption of high fat foods, and promising easy weight loss solutions (Battle & Brownell, 1996). Constant advertisements for fast foods, soda, sugared cereals, candy, and other “junk” foods are readily available, modeling and reinforcing the intake of energy-dense foods (Robinson,
Conversely, the media promotes the thin beauty ideal (Irving & Neumark-Sztainer, 2002). Mainstream media images reflect and shape the public’s perceptions and standards of beauty, enhancing the desirability of thinness (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Individuals might use extreme measures to emulate the thin ideal. In a meta-analysis of 25 studies examining the effects of experimental manipulation of the thin ideal, body image satisfaction significantly decreased after exposure to thin media images (Groesz, Levine, & Murnen, 2002). Pressure to be thin theoretically contributes to an internalization of thin ideal and an overvaluation of appearance, and is believed to be an important contributor to body dissatisfaction and eating disturbance, particularly for women (Stice, 2002).

Relationships with family and peers also influence how individuals relate to food and weight (Irving & Neumark-Sztainer, 2002). Specifically, weight-teasing and stigmatization can trigger unhealthy weight control behaviors (Haines, Neumark-Sztainer, Eisenberg, & Hannan, 2006; Neumark-Sztainer et al., 2006). Cross-sectional research demonstrates that both overweight and underweight individuals recounted higher levels of teasing than individuals of average weight. Experiences of weight ridicule were significantly associated with unhealthy weight control behaviors, and individuals with a history of teasing were twice as likely to engage in binge eating than individuals without a history of teasing, placing them at an increased risk for weight gain (Neumark-Sztainer et al., 2006). Overall, research suggests the experience of weight-related teasing and parental weight-related concerns are strongly associated with the incidence of overweight in young adulthood (Virginia Quick, Wall, Larson, Haines, & Neumark-Sztainer, 2013).

Personal factors. Negative body image and preoccupation with weight and shape are well established predictors of eating disorders (Stice, 2002; Thompson et al., 1999). Body image
discontent often prompts individuals to engage in weight modification practices to lose weight; these practices can include extreme and ineffective measures (Stice, 2002). Indeed, body dissatisfaction is the strongest and most consistent predictor of eating disorder symptoms (Button, Sonuga-Barke, Davies, & Thompson, 1996; Thompson et al., 1999). Moreover, longitudinal research demonstrates that body dissatisfaction is associated with greater weight gain over time (van den Berg & Neumark-Sztainer, 2007). Individuals with low body satisfaction might engage in unhealthy weight control behaviors in an attempt to manage their weight, yet these behaviors have the opposite effect, triggering overeating and resulting in weight gain (Virginia Quick et al., 2013; van den Berg & Neumark-Sztainer, 2007).

Negative affect, anxiety, and emotion dysregulation are additional personal factors that influence food and weight-related behaviors (Alvarenga et al., 2014; Keskin, Engin, & Dulgerler, 2010). In a meta-analysis of prospective and experimental studies investigating risk factors for eating pathology, negative affect emerged as a significant risk factor for eating pathology and a maintenance factor for binge eating (Stice, 2002). Further, anxiety disorders occur more frequently in individuals with eating disorders than in the general population (Swinbourne & Touyz, 2007). In most cases, anxiety precedes eating disorders, indicating that early onset anxiety might be a risk factor for the development of an eating disorder (Bulik, 2003). Moreover, research demonstrates that individuals who are overweight and highly anxious are more likely than less anxious individuals to lose control over their eating behavior (Goossens, Braet, Van Vlierberghe, & Mels, 2009). According to the affect regulation model, individuals engage in binge eating behavior in an attempt to seek comfort and distraction from painful negative emotions (Hawkins & Clement, 1984). Compensatory behaviors such as self-induced vomiting,
laxative abuse, and excessive exercise might be used to reduce anxiety surrounding impending weight gain after overeating.

Gender is another important risk factor for weight-related disorders, as considerable research demonstrates that women are more likely than men to be diagnosed with an eating disorder, and more likely to engage in unhealthy and extreme weight control behaviors (Boutelle et al., 2002; Hoek & van Hoeken, 2003; Hudson et al., 2007; Dianne Neumark-Sztainer et al., 2002). A comprehensive literature review exploring the prevalence and incidence of eating disorders revealed that although eating disorders are rare in the general population, they are relatively common among adolescent girls and young women (Hoek & van Hoeken, 2003). Further, more than half of women engage in unhealthful weight-control behaviors, compared with one third of men (Sim et al., 2013). Certainly, gender appears to play an important role in risk for weight-related disorders.

**Young Women are at High Risk for Obesity and Eating Disorders**

College enrollment represents a critical developmental transition, characterized by the shift from adolescence to adulthood; almost half (45%) of young adult women are enrolled in postsecondary education (National Center for Education Statistics, 2015). This life stage is a high risk period for the development of weight-related disorders, as students must independently manage their eating and exercise behaviors (Nelson et al., 2008). Students report encountering unanticipated challenges to maintaining a healthy lifestyle (Cluskey & Grobe, 2009). Many of these challenges are posed by the college environment, including “all-you-can-eat” dining facilities, readily available energy-dense foods, and high alcohol consumption (National Center for Education Statistics, 2015). Moreover, young adults often leave home with limited nutritional knowledge, as frequency of family meals and home food preparation has declined in recent
decades (Jabs & Devine, 2006). Compared with other age groups, fast food consumption and soft
drink intake are highest in young adults; the majority of individuals in this age group consume
<1 serving/day of fruit and vegetables (Cook & Friday, 2005; Nielsen & Popkin, 2004;
Paeratakul, Ferdinand, Champagne, Ryan, & Bray, 2003).

This period is also marked by a decline in physical activity, especially for women
(Gordon-Larsen, Nelson, & Popkin, 2004; Huang et al., 2010; Nelson, Neumark-Stzainer,
Hannan, Sirard, & Story, 2006). In a longitudinal study examining physical activity and
sedentary behavior from mid-adolescence (age range: 14-18 years) to young adulthood (age
range: 18-23 years), substantial changes in physical activity patterns emerged. During this
transition, moderate to vigorous physical activity decreased from 5.1 to 3.5 hours per week, and
computer use significantly increased (Nelson et al., 2006). Similar research suggests that
physical activity decreases throughout young adulthood, and that college students are not
meeting national guidelines for regular exercise (Gordon-Larsen et al., 2004; Huang et al., 2010).

Rates of obesity are increasing dramatically among young adults, and these increases are
particularly on the rise among college students (Mokdad et al., 1999). Leaving home to attend
college is associated with significant increases in body weight, especially for women (Butler et
al., 2004; Lloyd-Richardson, Bailey, Fava, & Wing, 2009). Cross-sectional data from the
National Health and Nutrition Examination Surveys between the years 1991 and 1998
demonstrated that the greatest increase in obesity was found in young adults 18-29 years of age
(7.1% to 12.1% increase) and individuals with some college education (10.6% to 17.8%
increase; Mokdad et al., 1999). Recent data indicate that 22.0% of young adult women (ages 18-
24) are currently obese, and 16.3% are obese (Mulye et al., 2009).
The striking upward trend in obesity during the transition to college is accompanied by a marked increase in body image disturbance, dieting, weight control practices, and disordered eating (Delinsky & Wilson, 2008; Field et al., 2010). This is particularly evident among young adult women (age 18-25 years) who, more than any other age and gender group, exhibit unhealthy eating behaviors, diet pill and laxative abuse, binge eating, and self-induced vomiting (Eisenberg, Nicklett, Roeder, & Kirz, 2013; Nelson et al., 2008; Stice, Marti, Spoor, Presnell, & Shaw, 2008; White, Reynolds-Malear, & Cordero, 2011). In a longitudinal prospective study examining the prevalence and incidence rates of DSM-5 eating disorders, the peak ages of onset were 19-20 for anorexia nervosa, 16-20 for bulimia and 18-20 for binge eating disorder and eating disorder not elsewhere classified (Stice, Marti, et al., 2013).

Belief in the “Freshman 15,” the idea that college freshman gain 15lbs during their first year on campus, motivates women to engage in unhealthy weight control behaviors to avoid weight gain (Delinsky & Wilson, 2008). Interestingly, whether or not women actually meet criteria for overweight or obesity after their first year in college, they are significantly more likely to describe themselves as overweight. This is likely the result of increases in dietary restraint and shape concern that often occur among college freshman (Delinsky & Wilson, 2008). Indeed, college women typically endorse underweight ideal body types, and peer reinforcement of this standard leads to thin-ideal internalization (MacNeill & Best, 2015; Thompson & Stice, 2001). This societal pressure to be thin is an important contributor to body dissatisfaction, dieting, negative affect, and eating pathology in women (Stice, 2002). Moreover, students report experiencing stress associated with attempts to adapt to the college environment, greater independence, and academic pressures (Nelson, Kocos, Lytle, & Perry, 2009; Voelker, 2004). High stress is associated with eating disorders and excessive weight gain (Freeman & Gil, 2004;
Thus, young women might be especially likely to consume non-nutritious food to cope with negative emotions during this period, and engage in compensatory behaviors to reduce anxiety surrounding weight gain (Hawkins & Clement, 1984). Indeed, disordered eating and body image disturbance significantly increase among women during the first year of college, and eating disorders are the most prevalent and persistent mental health problem on college campuses (Delinsky & Wilson, 2008; Zivin, Eisenberg, Gollust, & Golberstein, 2009). This is worrisome, as students with eating disorder symptoms are far more likely to experience co-occurring depression, anxiety, suicidal ideation, nonsuicidal self-injury, and substance abuse (Eisenberg et al., 2013).

A qualitative investigation conducted in the same university setting as the current study explored college students’ knowledge and attitudes about nutrition and health behaviors (Palmberg et al., 2016). Participants reported that their transition to college was stressful, and negatively impacted their eating behaviors. Females described gaining weight and experiencing heightened body dissatisfaction during their first year, leading them to be hyper-vigilant about their diets. Students emphasized the need for nutrition education to prevent weight gain and the development of unhealthy dieting behaviors. Indeed, findings demonstrate college students’ eagerness for education about healthy eating strategies, particularly within the university environment (Palmberg et al., 2016).

Overall, eating habits worsen and physical activity levels decline during college (Butler et al., 2004; Delinsky & Wilson, 2008; Grace, 1997). Yet, long-term weight-related health patterns are established during this period (Driskell et al., 2005). As such, the transition to college is a critical time for interventions that optimize students’ food and activity-related behaviors (Nelson et al., 2009).
Obesity and Eating Disorders are Difficult to Treat

**Obesity treatment.** Current guidelines to treat obesity emphasize lifestyle interventions characterized by dietary restriction, increased physical activity, and behavior modification (Acosta et al., 2014). Although the average weight loss produced in these programs is clinically significant, variability is high and changes are poorly maintained in a majority of patients (Anderson, Konz, Frederick, & Wood, 2001). Possible reasons for these disappointing outcomes might include the fact that individuals with obesity typically manifest higher levels of disinhibited eating and susceptibility to hunger, both of which confound weight loss attempts and are associated with weight fluctuation (Carmody, Brunner, & St Jeor, 1995; Provencher, Drapeau, Tremblay, Despres, & Lemieux, 2003). Further, following weight loss, physiological adaptations in energy expenditure and hunger-controlling hormones encourage weight regain and make weight loss difficult to sustain (Proietto, 2011). Moreover, young adults are underrepresented in behavioral weight loss programs, and those who do enroll are less likely to attend sessions, or benefit from treatment (i.e., lose weight), relative to older adults (>35 years; Gokee-LaRose et al., 2009). Pharmacological treatments for obesity are also recommended, generally leading to 5-10% weight loss. Yet, drug treatment is associated with unanticipated adverse effects (Dietz et al., 2015). Currently, bariatric-metabolic surgery is the only treatment for obesity that is effective in the long term (Acosta et al., 2014). Despite its efficacy, <1% of individuals with obesity who qualify for the surgery undergo this treatment (Buchwald & Oien, 2013). The high costs and medical complications of bariatric surgery often deter individuals from seeking this intervention (Acosta et al., 2014). Eligibility guidelines limit surgery to those individuals who have already experienced multiple weight loss failures, and are extremely obese (BMI ≥ 40 kg/m²) or obese (BMI ≥ 35 kg/m²) with one or more severe comorbidities (Mechanick et al., 2013). Further,
physicians frequently endorse explicit and implicit negative weight biases (Schwartz, Chambliss, Brownell, Blair, & Billington, 2003). These biases impair the quality of health-care delivery, restrict health care utilization, and contribute to the avoidance of health care by individuals with obesity. The stigma associated with excessive weight delays diagnosis and treatment of obesity-related conditions, exacerbating negative consequences of these health issues, and further impeding quality of life (Dietz et al., 2015). In sum, there are still no low-cost, safe, effective and widely available treatments for obesity (Acosta et al., 2014), highlighting the urgent need for improved prevention approaches.

**Eating disorder treatment.** Various treatments are available for eating disorders (interpersonal psychotherapy, cognitive behavioral therapy, family-based treatment) in a range of therapeutic settings (inpatient, day patient, outpatient). Yet, limited evidence supports their efficacy (Wilson, Grilo, & Vitousek, 2007). Cognitive behavioral therapy (CBT) is recognized as the “treatment of choice” for adults with eating disorders (Shapiro et al., 2007; Wilson et al., 2007; Yager et al., 2006). CBT targets the negative cognitions concerned with body shape and weight thought to maintain dysfunctional weight-control behaviors (Wilson et al., 2007). However, the majority of clinicians do not use CBT as their primary psychological treatment (Mussell et al., 2000). Dialectical behavior therapy (DBT) is another promising approach for eating disorder treatment (Lenz, Taylor, Fleming, & Serman, 2014). This approach emphasizes distress tolerance and emotion regulation skills training to target the maladaptive coping mechanisms used to manage negative affect (M. M. Linehan, 1993; Telch, Agras, & Linehan, 2001). DBT is consistent with the affect regulation model, attributing binge eating and bulimic behaviors to deficits in emotion regulation skills and tolerating negative emotions (Hawkins & Clement, 1984). Nevertheless, even the most successful interventions fail to help a substantial
proportion of individuals (Wilson et al., 2007). Remission from eating disorders is often temporary, and relapse is common (Milos, Spindler, Schnyder, & Fairburn, 2005; Wilson et al., 2007). Moreover, there is considerable flux among the types of eating disorders, and approximately half of patients switch between diagnostic subtypes during treatment (Milos et al., 2005). Follow-up studies estimate that even with treatment, only 50% of individuals make a full recovery, 20-30% exhibit residual symptoms, 10-20% remain severely ill, and 5-10% die from their illness (Steinhausen, 2002). Further, treatment seeking for eating disorders is low (Javaras et al., 2008). Barriers to treatment seeking include fear of stigma, perceived discrimination from health care professionals, and high costs (Evans et al., 2011). College students report feeling like their symptoms are not important or urgent, and believe that they will remit over time (Eisenberg et al., 2013). Additionally, there is a lack of recognition that women from ethnic minority groups suffer from eating disorders, which appears linked to the fact that minority women are significantly less likely than White women to receive treatment (F. M. Cachelin, Rebeck, Veisel, & Striegel-Moore, 2001; Pike, Dohm, Striegel-Moore, Wilfley, & Fairburn, 2001). Indeed, the majority of young adult women with significant eating disorder-related pathology are not treated (Eisenberg et al., 2013). Eating disorder treatment is complex and often ineffective; thus, there is a serious need for interventions to reduce the onset of weight-related disorders to prevent disease and maximize health and function over the lifespan (Fairburn, 2005).

**Interventions to Prevent Obesity and Eating Disorders in Young Women**

Weight-related disorders are characterized by persistence and relapse. Given the intractability of these conditions, and their high personal and economic costs, attempts to prevent unhealthy eating attitudes and behaviors are essential. Interestingly, however, prevention efforts
have not been a high priority (Austin, 2015). Therefore, novel interventions to prevent disorder eating behaviors and excessive weight gain are needed.

**Obesity prevention.** Numerous types of weight gain prevention interventions have been conducted; yet, only 5% of these programs yielded results that were maintained over a follow-up period of 3 months or more (Stice, Shaw, & Marti, 2006). The majority of interventions generated prevention effects from baseline to posttest, however almost all of these effects disappeared by 3-year follow-up. Obesity prevention programs take many forms; they are frequently marketed as cardiovascular disease prevention, eating disorder prevention, and interventions to increase physical activity, in addition to programs focused solely of the prevention of excess weight gain (Stice et al., 2006). Currently, most obesity prevention efforts take place in school-based settings. However, meta-analytic research demonstrates that school-based interventions have not produced significant results for BMI or skinfold thickness (Hung et al., 2015). Indeed, obesity prevention efforts have been the most successful when implemented with older participants (Stice et al., 2006). Young adults are better able to understand intervention concepts and exercise control over their dietary and physical activity behaviors. Moreover, this life stage is marked by an increase in autonomy and the development of self-regulatory skills, rendering the content of obesity prevention programs more relevant (Stice et al., 2006). Yet, little research has implemented obesity prevention interventions in young adults (Laska, Pelletier, Larson, & Story, 2012).

The largest, longest obesity prevention programs for adults have yielded poor results (Jeffery & French, 1999; Levine et al., 2008). For example, the Pound of Prevention program explored whether a low-intensity intervention could prevent weight gain with age (Jeffery & French, 1999). Participants (men and women, aged 20-45) were randomized to one of three
groups. The first group received education through monthly newsletters; the second received educational materials plus incentives for participation, and the third was a no-contact control. Individuals in the intervention groups demonstrated positive behavior change, yet participants in all groups manifested similar amounts of weight gain at 3-year follow-up (Jeffery & French, 1999). Another randomized controlled trial evaluated the efficacy of a clinic-based intervention and a correspondence course relative to an information-only control condition in preventing weight gain among women 25 to 44 years of age (Levine et al., 2008). Again, weight change did not differ significantly between conditions at 3-year follow-up. Indeed, current primary prevention efforts have been disappointing, and few interventions have been specifically designed to prevent weight gain in young adults.

A systematic review of young adult weight gain prevention programs identified 10 studies that assessed weight, BMI, and/or body composition as a primary outcome (Laska et al., 2012). Six of these studies were university based (i.e., university-based courses or noncredit seminars); four utilized other intervention strategies. The university-based interventions yielded some positive findings; five of the six studies produced statistically significant differences among intervention versus control groups, yet effect sizes were small. The other interventions, which targeted self-regulation, generated significant effects on weight-related outcomes in three of the four studies. Although the few weight gain prevention programs designed for young adults demonstrated promising results as pilots, data are lacking from fully powered trials (Laska et al., 2012).

More recently, the Early Adult Reduction of weight through LifestYle intervention (EARLY) study investigated seven different approaches to weight management for young adults (ages 18-35; Lytle et al., 2014). Of the six primary outcome papers available for these trials, only
one demonstrated significant reductions in weight gain that were sustained long term (i.e., 24 months; Godino et al., 2016; Jakicic et al., 2016; Johnson et al., 2017; Lytle et al., 2017; Svetkey et al., 2015; Wing et al., 2016). Specifically, the Study of Novel Approaches to Weight Gain Prevention (SNAP) randomized clinical trial reduced weight gain over three years via self-regulation (Wing et al., 2016). The Innovative approaches to Diet, Exercise, and Activity (IDEA) study also produced decreases in weight (Jakicic et al., 2015); yet, benefits achieved at six months were not fully sustained at 24 months (Jakicic et al., 2016). Moreover, the IDEA study did not include a control group, limiting the ability to understand intervention outcomes (Jakicic et al., 2015). Other EARLY trials that included control groups revealed that although BMI was significantly lower in the intervention groups at six months, significant differences in weight gain did not emerge at long-term follow-up (Godino et al., 2016; Svetkey et al., 2015). Thus, although results from the EARLY study further the claim that self-regulation approaches have significant beneficial effects for risk of obesity, few positive long-term results in obesity prevention interventions have emerged. There is still a need to develop and evaluate novel weight gain prevention strategies, specifically for young adult women.

**Eating disorder prevention.** Various types of eating disorder prevention programs have been developed; yet, only 5% have yielded lasting reductions in current or future eating disorder symptoms (Stice, Shaw, & Marti, 2007). The first wave of prevention interventions were primarily psychoeducational, and did not yield significant reductions in eating disorder risk factors, symptoms, or onset. Instead, evidence demonstrates that psychoeducational programs can have iatrogenic effects. By providing information about eating disorders, the programs might inadvertently introduce or normalize unhealthy eating behaviors and increase participants’ disordered symptoms (Mann et al., 1997). The second wave of prevention programs, still largely
didactic, targeted established risk factors for disordered eating. These programs produced a reduction in risk factors, but did not impact symptoms or disorder onset. The third wave of prevention interventions continued to target established risk factors, but incorporated interactive content and social psychological principles (Stice, Becker, & Yokum, 2013). To date, only two prevention interventions (from the third wave) have repeatedly produced significant effects for eating pathology in multiple labs: dissonance-based interventions (DBIs) and the healthy weight intervention (HWI; Stice, Shaw, Becker, & Rohde, 2008).

Dissonance based interventions. DBIs were developed based on research demonstrating that dissonance-induction is beneficial for changing attitudes and behaviors (Stice, Mazotti, Weibel, & Agras, 2000). This approach is grounded in cognitive dissonance theory, which proposes that experiencing conflicting cognitions creates psychological discomfort that motivates individuals to alter their beliefs to achieve internal consistency (Festinger, 1962). DBIs target an established risk factor for eating pathology and body dissatisfaction: thin-ideal internalization (Stice, 2002). Thus, DBIs targeting eating disorders have participants engage in verbal, written, and behavioral exercises in which they take a counterattitudinal stance towards the Western cultural thin ideal. The incongruence between what individuals believe and what they say in the intervention creates discomfort, or cognitive dissonance, and participants are motivated to shift their attitudes to reduce this inconsistency. Further, participants discuss the counterattitudinal stance in front of others, generating greater dissonance-induction and attitudinal change. Evidence demonstrates that this attitudinal shift motivates individuals to change their future behavior (Stice, Shaw, et al., 2008). Indeed, the dual pathway model of eating pathology asserts that a decrease in thin-ideal internalization should create a reduction in ineffective dieting, disordered eating symptoms, body dissatisfaction, and negative affect (Stice,
Additionally, DBIs incorporate motivational enhancement exercises, group activities to foster social support and group cohesion, and between-session homework to increase the amount of time spent doing dissonance-inducing activities (Stice, Shaw, et al., 2008).

The original eating disorder DBI consisted of 3 in-person 1-hour group sessions; it has since been modified to other lengths and formats to ease disseminability (Stice, Shaw, et al., 2008). DBIs for eating disorders have been extensively evaluated in six independent labs. Outcomes of multiple DBI programs implemented among young (primarily White) women produced reductions in eating disorder risk factors and symptoms when delivered by both endogenous providers and trained research staff (Stice, Marti, Spoor, Presnell, & Shaw, 2008; Stice, Shaw, et al., 2008). These trials have demonstrated that DBIs significantly outperform assessment-only control conditions and alternative interventions (Stice, Marti, et al., 2008). Meta-analytic results indicate that DBIs generate significantly stronger effects than other types of eating disorder prevention (Stice, Shaw, et al., 2008). In a randomized efficacy trial investigating the long-term effects of DBIs, results demonstrated significant reductions in thin-ideal internalization, body dissatisfaction, negative affect, initial eating disorder symptoms, and psychosocial impairment by 2- to 3-year follow-up. Moreover, participants showed a 60% reduction in risk for eating pathology through 3-year follow-up (Stice, Marti, et al., 2008). To date, DBIs are the only eating disorder prevention program that has received extensive evaluation to warrant the designation of an efficacious intervention (Stice, Becker, & Yokum, 2013). Importantly, DBIs also demonstrate unintentional prophylactic effects, reducing obesity risk and increasing mental health care utilization (Stice, Marti, et al., 2008; Stice, Rohde, Shaw, & Marti, 2013).
Some have criticized the DBI approach, however, as young women from ethnic minority backgrounds report less pursuit of the thin ideal (Grabe & Hyde, 2006; Warren et al., 2005). Compared with European American, Latina, and Asian American women, African American women score significantly lower on measures of thin-ideal internalization (Rakhkovskaya & Warren, 2014). Moreover, research demonstrates that for Mexican American and Spanish women, ethnicity serves as a protective factor for internalization of the thin ideal (Warren et al., 2005). Indeed, the desirability of thinness is associated with Western cultural values, and ethnic groups with a non-Western culture of origin might not idealize an ultrathin body type (Warren et al., 2005). Therefore, the DBI approach might be less effective for minority women that report less endorsement of the thin ideal. Yet, rates of eating disorders among White women and minority women are comparable, highlighting the need for a more culturally sensitive approach to DBI prevention that accounts for beauty norms that consider multiple aspects of appearance (e.g., hair, curvaceous body shape, style) rather than focusing on the thin ideal (Rakhkovskaya & Warren, 2014; Crago et al., 1996).

*Healthy weight intervention.* The HWI originally served as a placebo control condition when evaluating eating disorder DBIs (Stice, Chase, Stormer, & Appel, 2001). This program provides education addressing weight management via *small, gradual* changes in diet and exercise. The HWI draws upon behavioral weight control programs and incorporates social psychological principles to generate positive health behavior change. Individuals engage in various motivational enhancement activities to promote change and make voluntary, public commitments to a healthy lifestyle (Shaw, Stice, & Becker, 2010; Stice, Rohde, Shaw, & Marti, 2013). Food and exercise diaries are used to identify target behaviors for change, and behavioral modification principles are used to create individual lifestyle change plans to reduce fat and
sugar intake and increase exercise. Participants are encouraged to pursue the ‘healthy ideal’ (not the thin-ideal) through changes that promote energy homeostasis (not transient dieting). This program aims to promote lasting improvements to dietary intake and exercise as a way of achieving body satisfaction, which putatively reduces risks for unhealthy weight control behaviors (Stice, Rohde, Shaw, & Marti, 2012).

The initial HWI consisted of 3 in-person 1-hour group sessions (Stice et al., 2001). In an attempt to increase its potency, another session was introduced to incorporate nutrition principles (Stice, Rohde, Shaw, & Marti, 2012). However, the inclusion of nutrition science and physical activity principles weakened intervention efficacy. The lack of explicit guidelines in the original intervention might have placed more responsibility for change on the participants, thereby increasing personal investment and motivation to engage in positive behavior change. Moreover, dietary and exercise principles might have complicated the simple message, which focused on small, incremental changes (Stice, Rohde, et al., 2013). Thus, the initial HWI appears to yield more beneficial prevention effects. In a randomized efficacy trial investigating the long-term effects of the initial HWI, results indicated reductions in thin-ideal internalization, body dissatisfaction, negative affect, and initial eating disorder symptoms by 2- to 3-year follow up. Further, the intervention demonstrated unintentional prophylactic effects, decreasing BMI and reducing risk for future weight gain. Participants showed a 61% reduction risk for eating pathology and a 55% reduction in risk for obesity through 3-year follow-up (Stice, Marti, et al., 2008). At this point, the HWI has also received enough empirical support to be considered efficacious (Stice, Shaw, et al., 2008).

The fact that both eating disorder DBIs and the HWI reduced risk for obesity onset and eating pathology in young adult women is noteworthy, as no other intervention has decreased
long-term risk for both of these important public health problems that disproportionately affect this population (Shaw et al., 2010). In a randomized efficacy trial comparing these interventions at a long-term follow-up, the DBI yielded stronger effects for psychosocial impairment, eating pathology, and eating disorder risk factors, whereas the HWI produced stronger weight gain prevention effects. The DBI was more effective in reducing functional impairment, and the HWI was more effective at slowing the rate of weight gain (Stice, Marti, et al., 2008). Given the promising results of both interventions and the significant differences in intervention content, the integration of the eating disorder DBIs and the HWI might yield even stronger intervention effects for obesity prevention and eating pathology.

**Successful prevention interventions.** Meta-analytic research documents components of successful weight-related prevention interventions. Stice and colleagues (2006) reviewed obesity prevention programs, and Shaw and colleagues (2010) examined eating disorder prevention programs. Both studies revealed that participants’ age (over 15 years) emerged as a critical component of successful prevention programs. Indeed, interventions implemented during the peak risk period for eating pathology yielded largest effects (Shaw et al., 2010). Moreover, prevention trials that used a self-selected recruitment method, compared to population-based recruitment, were more effective (Stice et al., 2006). Interactive interventions produced greater effects than didactic psychoeducational interventions, demonstrating that engaging material helps internalize intervention concepts and promotes change (Shaw et al., 2010). However, program style was not significantly related to outcomes of obesity prevention (Stice et al., 2006). Yet, most programs that produced significant BMI effects were interactive. Further, intervention content (i.e., encouraged improvements in diet and exercise, sedentary behavior reduction) was not associated with larger effects for obesity programs, yet was related to intervention success.
for eating disorder programs (Shaw et al., 2010; Stice et al., 2006). Body acceptance programs showed the most promising results (Shaw et al., 2010). Body dissatisfaction is related to a host of health-compromising behaviors (i.e., unhealthy dieting, negative affect), and thus, increasing body acceptance can also decrease these disturbances (Sonneville, 2015). Interestingly, most interventions that yielded significant weight gain prevention results were not conceptualized as obesity prevention programs, but rather, were marketed as general health education interventions, physical activity interventions, or eating disorder prevention (Stice et al., 2006). Thus, obesity prevention can be achieved through various avenues.

Shaw and colleagues (2010) reported that selected interventions targeting high-risk individuals tend to produce larger intervention effects than universal prevention programs for most outcomes. Yet, dissonance-based programs yielded similar results for low and high-risk individuals. This approach goes beyond the individual and challenges the broader sociocultural environment that contributes to weight-related conditions, therefore producing more advantageous results. Researchers that have implemented dissonance-based programs reported that organizations favored a universal approach, stating that such interventions should be available for all members of a population (Shaw et al., 2010). Moreover, selected prevention neglects individuals not seemingly at risk for weight-related disorders, who still might engage in unhealthy behaviors and/or experience weight gain to the extent that their health and daily functioning are compromised. Indeed, there is great value in designing universal prevention programs to prevent the early development of risk factors (Levine & Smolak, 2008). Overall, DBI interventions, along with the HWI, were the most successful programs to emerge from the meta-analysis investigating eating disorder prevention programs. These interventions are highly interactive and engaging, and are designed to decrease attitudinal risk factors and promote
healthy weight control behaviors (Shaw et al., 2010). They are the only two prevention programs that have significantly reduced risk for future obesity and eating disorder onset, and outperformed alternative prevention programs and placebo interventions (Stice, Shaw, et al., 2008).

Although body acceptance content surfaced as a beneficial component of prevention interventions, one critique of existing programs is the narrow focus on a single risk factor (i.e., body dissatisfaction; Stice et al., 2013). Scholars posit that incorporating techniques to target additional risk factors might further improve intervention outcomes (Becker & Stice, 2017; Stice et al., 2013). Negative affect is a significant risk factor for obesity and eating disorders, and theoretical conceptualizations of eating disorders have posited that individuals with these conditions use food to cope with overwhelming emotions (Heatherton & Baumeister, 1991; Stice, 2002). Thus, including emotion regulation techniques in weight-related prevention programs can encourage individuals to respond to emotional needs in more effective ways. Moreover, targeting risk factors shared with other public health problems has the potential to reduce risk for multiple conditions. Specifically, negative affect is also a risk factor for depression and substance abuse (Carpenter & Hasin, 1999; McLaughlin, Hatzenbuehler, Mennin, & Nolen-Hoeksema, 2011). Therefore, incorporating methods to target negative affect might provide secondary benefits (Stice, Becker, et al., 2013).

Integrated approach to prevention. Viewing obesity and eating disorders on a spectrum of weight-related conditions provides a conceptual rationale for an integrated approach to prevention (Rancourt & McCullough, 2015). Further, practical reasons substantiate the benefits of integrative intervention programs (Irving & Neumark-Sztainer, 2002). For one, it is more cost-effective to develop and implement an intervention that targets two public health problems.
Additionally, it is more affordable to prevent eating and weight-related problems than it is to treat them. Treatment is expensive, and financial concerns often deter individuals from receiving the help they need. Further, programs targeting obesity and eating disorders separately tend to offer different messages that might contradict one another and confuse individuals. For example, obesity prevention programs often encourage participants to restrict their fat intake and monitor their body weight; eating disorder prevention programs often encourage participants to avoid restrictive dieting and accept their body shape and size. Moreover, there is concern that strategies to prevent obesity might unintentionally promote the body dissatisfaction and disordered eating habits associated with eating disorders (Irving & Neumark-Sztainer, 2002). Indeed, popular obesity prevention campaigns emphasize diet and weight control, increasing thin-ideal internalization and stigmatization of individuals with obesity (Simpson, Griffin, & Mazzeo, 2016). Thus, integrative prevention interventions should focus on health and behavior change, not weight, and promote positive body image and body size diversity to reduce stigmatization and remain sensitive to weight-related issues. Overall, the development of a prevention program that reduces onset for two public health problems will increase health care affordability, efficiency, and quality.

To date, most prevention trials have focused on either preventing obesity or preventing eating disorders by addressing risk factors such as overeating, low levels of physical activity, and high levels of sedentary behavior (Neumark-Sztainer, 2003). Yet, preliminary data from these programs suggest their ability to prevent both unhealthy weight gain and eating disorders (Rancourt & McCullough, 2015). Despite the potential to provide transdiagnostic prevention, no program has been intentionally designed or evaluated for such use in young adult women (Rancourt & McCullough, 2015; Stice, Marti, et al., 2008).
Summary and Purpose of the Current Study

Obesity and eating disorders are pervasive concerns among young adult women, and profoundly impact physical and psychological functioning. Yet, young adulthood is often overlooked as a time for establishing and addressing long-term health behaviors. Limited research has developed, implemented, and evaluated interventions targeting nutrition and physical activity in university settings (Nelson et al., 2008). However, health and wellness play vital roles in students' success and positive life outcomes (Gallup-Purdue Index, 2014; Nelson et al., 2008). Thus, the purpose of the current study was to adapt evidence-based prevention programs to promote positive health behaviors among young adult women. This study was one of the first to intentionally execute a prevention program targeting well-established risk factors for both obesity and eating disorders in this high-risk population. Intervention content focused on promoting body size diversity and emphasizing positive health and behavior change to reduce stigmatization and remain sensitive to weight-related issues (Sánchez-Carracedo, Neumark-Sztainer, & López-Guimerà, 2012). Two successful existing prevention programs were integrated to evaluate the feasibility, acceptability, and preliminary effectiveness of the combined approach in reducing risk for obesity onset and eating pathology. Further, other intervention features extended previous prevention efforts (Stice, Marti, et al., 2008). In particular, critiques of broadly defined beauty appearance ideals were used to enhance the intervention's relevance for ethnic and racial minority women, and distress tolerance and emotion regulation skills training were incorporated to target the maladaptive coping mechanisms young adults use to manage the stress associated with transitioning to college. In sum, this project involved the innovative integration of two distinct, evidence-based prevention programs and the
addition of novel intervention components to broaden reach and improve effectiveness for diverse young adult women.

Specific Aims

**Aim I.** The first aim of this study was to develop and standardize a manualized 8-week intervention (INSPIRE) to prevent obesity and eating disorders in young adult women. The manual integrated DBIs and the HWI, and incorporated distress tolerance and emotion regulation skills training. In the first phase of the study, focus groups with young adult women explored associations among race, ethnicity, and appearance ideals. The INSPIRE manual was informed by these qualitative data and modified based on expert feedback. Completion of Aim I resulted in a version of the manualized prevention program that was evaluated in a small feasibility trial.

**Aim II.** The second aim of this study was to pilot INSPIRE to determine its feasibility and acceptability. In this second phase of the study, 29 young adult women were recruited to participate in the intervention. It was hypothesized that the intervention would be deemed feasible by therapists and acceptable by participants. This was explored through engagement (defined as the percentage of sessions completed), retention at posttest and follow-up, and feedback from participants and therapists on post-intervention process surveys.

**Aim III.** The third aim of this study was to evaluate the preliminary effectiveness of INSPIRE on physical and psychological variables. A comprehensive assessment battery was administered at pretest (baseline), posttest (8-weeks), and 4-week follow-up. The primary hypothesis was that women who participate in INSPIRE would demonstrate reductions in disordered eating behaviors and obesity risk (as measured by change in BMI). The secondary hypothesis was that INSPIRE participants would exhibit reductions in body dissatisfaction, appearance dissatisfaction, disinhibition, dietary restraint, eating expectancies, negative affect,
thin-ideal internalization, and emotion regulation difficulties, and increases in healthy eating and physical activity.

Method

Phase I

Formative research and manual development. The goals of the first phase of the project were: (1) to gather and assess qualitative information addressing disparate racial and ethnic appearance ideals and the culturally acceptability of the proposed intervention, and (2) to develop a manualized intervention (INSPIRE – Inspiring Nutritious Selections and Positive Intentions Regarding Eating and Exercise) to prevent obesity and eating disorders in young adult women. Qualitative data from focus groups informed manual development. The manual underwent numerous iterations based on extant literature and feedback from experts in the field.

Participants and recruitment. Recruitment occurred via the Virginia Commonwealth University (VCU) Psychology Department Subject Pool, VCU Office of Multicultural Student Affairs, and Latino Student Association. Recruitment flyers were distributed for display at the aforementioned organizations (Appendix A). The study was advertised as an opportunity to participate in a focus group exploring the relations among culture, body ideals, and living a healthy lifestyle in college. Interested participants were directed to the study website where they completed a demographic survey and an eating disorder diagnostic screener (Stice, Telch, & Rizvi, 2000). To be eligible for the study, participants needed to be women ages 18-25 years and currently enrolled in postsecondary education. Individuals were excluded and referred to appropriate treatment if they met criteria for obesity (BMI ≥ 30 kg/m²) and/or eating disorder threshold risk (as measured by established criteria for eating disorders diagnoses on the Eating Disorder Diagnostic Screener), as they were not appropriate for a prevention project. Further,
men were ineligible as the derived prevention program was designed to enhance its relevance to women (Eisenberg et al., 2013; Hudson et al., 2007). Past research also demonstrates that mixed-gender versions of DBIs limit effectiveness for women (Kilpela et al., 2016). Finally, pregnant women were excluded, as pregnancy leads to weight gain and affects dietary intake. Participants recruited from the Psychology Department Subject Poll received a total of two hours of course credit for their study involvement.

Priority was given to recruiting White, Black, and Latina women. Thirty women were recruited. The following race/ethnicities were represented in the sample: 46.7% \( (n = 14) \) Black/African-American, 33.3% \( (n = 10) \) White, and 20.0% \( (n = 6) \) Hispanic/Latinx. Participants’ mean age was 19.33 \( (SD = 1.21) \). Their mean BMI was 23.25 \( (SD = 3.09) \) with a range from normal weight (BMI = 19.16) to overweight (BMI = 29.75). With respect to year in school, 56.7% \( (n = 17) \) were first-year students, 26.7% \( (n = 8) \) sophomore, 6.7% \( (n = 2) \) juniors, and 10.0% \( (n = 3) \) seniors. Participant demographics by racial/ethnic groups are displayed in Table 1.

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<th>Mean (SD)</th>
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<td>n</td>
<td>BMI</td>
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<tr>
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<td>White/Caucasian</td>
<td>10</td>
<td>24.03 (3.52)</td>
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<tr>
<td>Hispanic/Latinx</td>
<td>6</td>
<td>21.95 (1.08)</td>
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**Focus groups.** Focus groups are a vital component of manual development, as they facilitate exploration and hypothesis generation with the target group (Krueger, 1993). Seven two-hour focus groups were conducted; each included between two and seven participants. These groups: (1) explored current appearance ideals and perceived influences; (2) investigated differences in appearance ideals among different ethnic and racial groups; (3) reviewed the rationale for the proposed intervention; (4) assessed the cultural acceptability of the proposed
intervention; (5) elicited barriers and facilitators to prevention programming for obesity and EDs; and (6) generated strategies for creating cohesive intervention cohorts. This questionnaire is described in more detail below in the Measures section.

Focus groups were composed of individuals who identified with the same racial/ethnic group. This approach was used because homogenous samples are thought to provide access to the direct experience and language of the populations of interest (Hughes & DuMont, 1993). This also allowed women of similar racial/ethnic identities to discuss and generate appearance standards within their particular group without fear of judgment from out-group members. Two groups of White women, three groups of Black/African-American women, and two groups of Hispanic/Latina women were formed. Doctoral level graduate students representative of each racial/ethnic group were trained to lead the focus groups. Undergraduate research assistants also representative of each racial/ethnic group took detailed notes and recorded their observations. This facilitated an environment of safety and correspondence that allowed for elaboration on themes and issues relevant to a particular population (Hughes & DuMont, 1993).

**Measures.**

*Demographic Questionnaire.* Participants reported their age, year in school, sex, and race/ethnicity (Appendix B). Participants were also asked their current height and weight so that BMI could be calculated.

*Focus Group Questions.* A set of structured questions pertaining to the themes above was established prior to the focus groups (Appendix C). Facilitators asked clarifying questions, restated responses, and encouraged elaboration on responses that were unclear to enhance validity. Topics discussed in the focus groups informed and refined the INSPIRE manual.
Eating Disorder Diagnostic Screener (EDDS). Eating pathology was assessed with the EDDS (Appendix D; Stice, Fisher, & Martinez, 2004), a 22-item self-report scale for diagnosing anorexia nervosa, bulimia nervosa, and binge eating disorder. It was adapted from validated psychiatric interviews: the Eating Disorder Examination (EDE) and the eating disorder module of the Structured Clinical Interview for DSM-IV (Cooper & Fairburn, 1987). Sample items include: “Has your weight or shape influenced how you judge yourself as a person?” and “How many times per month on average over the past 3 months have you eaten an unusually large amount of food and experienced a loss of control?” Prior research revealed lack of specificity regarding item 18, “How many times per week on average over the past 3 months have you engaged in excessive exercise specifically to counteract the effects of overeating episodes?” (Serdar et al., 2014). Thus, additional items were added to assess for continued exercise when injured or sick, avoidance of social functions to exercise, and anxiety or distress when forced to miss an exercise session (Cunningham, Pearman, & Brewerton, 2016). The EDDS was used as a screening tool, administered online, to exclude women with possible eating disorder diagnoses.

Scores on the EDDS have demonstrated high agreement ($k = .78-.83$) with diagnoses offered by the EDE Interview and other scales of eating pathology. The measure yields internal consistency (mean $\alpha = .89$) and test-rest reliability ($r = .87$), and shows predictive validity for the onset of eating disorder symptoms (Stice et al., 2000; Stice, Fisher, & Martinez, 2004). Cronbach’s alpha in the current study was .75.

Data analysis and analytic strategy. Focus group analysis was accompanied by an audit trail. Study activities, discussions, procedures, and decisions were documented to establish credibility of findings (Creswell & Miller, 2010; Rodgers & Cowles, 1993; Wolf, 2002). Focus groups were audio-recorded and transcribed by undergraduate research assistants. Transcribers
documented nonverbal information (e.g., laughter, pauses, group agreement/disagreement) in brackets. Process observers’ notes were typed to facilitate data triangulation and enrich the transcripts (Creswell & Miller, 2010). Facilitators of each group verified transcripts for accuracy. Finalized transcriptions were entered into ATLAS.ti, a qualitative software program with a text base manager system, code-and-retrieve capabilities, and capacity to import and integrate quantitative data from other databases.

Thematic analysis, a flexible process that identifies patterns and themes within data, was used to analyze focus group content (Braun & Clarke, 2006). An inductive coding approach was used to ensure the results were data-driven. The PI and research team (two doctoral students in Psychology and one Professor of Psychology) carefully read each verified transcript and took detailed notes on major emergent themes (Braun & Clarke, 2006). Once all transcripts were reviewed, the research team met to discuss identified patterns and create a preliminary list of codes. The PI then established a codebook, giving each code a concise, descriptive name followed by a more detailed description (Braun & Clarke, 2006). The research team reviewed the initial codebook and provided feedback.

The PI first coded three transcripts. Members of the research team then reviewed these transcripts and made comprehensive notes regarding the codes applied. The researchers met to discuss the coding and talk through discrepancies. Discussions from this meeting resulted in further refinement of the codebook. The PI returned to the initial subset of transcripts and revised the coding in line with the newest version of the codebook.

After the first three transcripts were coded, the PI coded the remaining four transcripts using the revised codebook. The research team reviewed these transcripts and made comprehensive notes regarding the codes applied. The researchers met again to discuss
questionable utterances and modify the codebook. The PI then recoded the transcripts to remain consistent with the revisions.

Upon coding completion, the PI grouped the codes into themes and subthemes (i.e., broader concepts related to the research question) to highlight patterns across transcripts (Braun & Clarke, 2006). The research team discussed and refined the list of themes and subthemes. Review of themes and subthemes ensured internal homogeneity (data within themes cohere meaningfully) and external homogeneity (differences among themes are distinct; Patton, 2003). Once established, the research team identified themes and subthemes present in each transcript. Discrepancies were minimal and consensus was met.

Qualitative data informed modifications to the four-session, clinician-lead, DBI-based Body Project manual (Stice, Shaw, & Rohde, n.d.). Materials from the Body Project were integrated with the four-session Healthy Weight manual (Stice, Shaw, & Rohde, n.d.). DBT techniques were incorporated to include emotion regulation and distress tolerance skills training (Linehan, 2015). This process yielded an eight-week pilot intervention informed by existing research and clinical expertise.

Experts outside of the research team were recruited to review the manual, including three licensed clinical psychologists and one registered dietician, all of whom had extensive clinical experience in the treatment and prevention of eating and weight-related disorders. Integrating information from the target populations, research, and clinical work bridges the disconnect between researchers and clinicians by increasing feasibility, applicability to diverse populations, and acceptability by clinicians with various backgrounds (Carroll & Nuro, 2002). This pilot intervention (INSPIRE) was evaluated in Phase II.

Phase II
Pilot feasibility trial. The objectives of the second phase of the study were to pilot INSPIRE to determine its feasibility and acceptability, and to evaluate its preliminary effectiveness in reducing risk factors for obesity and eating disorders. A one-group pretest-posttest design was used (Campbell & Stanley, 1963). All participants completed comprehensive assessments at pretest, posttest, and 4-week follow-up. This design allowed for the tracking of individual treatment trajectories (Campbell & Stanley, 1963).

Participants and recruitment. Recruitment occurred via the VCU student daily email, University Counseling Services, University Student Health Services, The Wellness Resource Center, Recreational Sports, and other university sources. Efforts were made to diversify the sample by advertising to relevant student organizations, including the VCU Office of Multicultural Student Affairs, Latino Student Association, and Black Student Association. Recruitment flyers were distributed for display at each organization (Appendix E). INSPIRE was described as a healthy living and body acceptance program to facilitate recruitment and avoid stigmatization. Pre-screening for Phase II, as well as inclusion and exclusion criteria, paralleled Phase 1. Participants were compensated for completion of assessments. They received $15 for pretest, $20 for posttest, and $30 for 4-week follow-up.

Participants were 29 women enrolled at VCU. Their mean BMI at baseline was 23.98 (SD = 2.78) with a range from normal weight (BMI = 19.26) to overweight (BMI = 29.51). Participants’ demographics are presented in Table 2.
Table 2

**INSPIRE participant demographics**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>n</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black/African American</td>
<td>6</td>
<td>20.7%</td>
</tr>
<tr>
<td>White</td>
<td>15</td>
<td>51.7%</td>
</tr>
<tr>
<td>Asian/Asian-American</td>
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<td>24.1%</td>
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<tr>
<td>Hispanic/Latinx</td>
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<td>3.4%</td>
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</table>

<table>
<thead>
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<th>Year in School</th>
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<tbody>
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<tr>
<td>Sophomore</td>
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</tr>
<tr>
<td>Junior</td>
<td>3</td>
<td>10.3%</td>
</tr>
<tr>
<td>Senior</td>
<td>3</td>
<td>10.3%</td>
</tr>
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</table>

<table>
<thead>
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<th>Age</th>
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</thead>
<tbody>
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<td>20</td>
<td>69.0%</td>
</tr>
<tr>
<td>19</td>
<td>2</td>
<td>6.9%</td>
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<tr>
<td>20</td>
<td>5</td>
<td>6.9%</td>
</tr>
<tr>
<td>21</td>
<td>2</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

**Intervention overview.** The intervention, *INSPIRE*, integrated eating disorder DBIs, the HWI, and DBT skills training. Further, counterattitudinal stances towards broadly defined beauty ideals replaced critiques of the thin ideal to enhance the intervention's relevance for racial/ethnic minority women. *INSPIRE* was interactive and engaging, thus promoting stronger effects for attitudinal and behavioral change (Shaw et al., 2010). The intervention consisted of eight in-person sessions, occurring weekly; each session was 1.5 hours in length. Participants were divided into three groups based on availability; groups were comprised of 7-10 participants each. Six trained graduate students, all of whom had experience in multicultural counseling and the evidence-based treatment of obesity and eating disorders, facilitated the intervention. Two therapists were assigned to each group. Facilitator training involved group meetings to introduce and review intervention content and rationale. Meetings included a discussion of intervention content, review of the qualitative findings from Phase I of the study, consideration of potential challenges and their solutions, and role-playing of intervention activities. Additionally, each
facilitator was supervised delivering mock sessions. Tapes of each session were reviewed, and weekly supervision with facilitators was held throughout implementation.
Table 3

**INSPIRE Overview**

<table>
<thead>
<tr>
<th>Session</th>
<th>Main Goal</th>
<th>Content Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Critically evaluate beauty ideals</td>
<td>Introduction and group guidelines; define and critically discuss beauty ideals; identify costs of pursuing ideals; verbal challenge to combat beauty ideals</td>
</tr>
<tr>
<td>2</td>
<td>Review behavioral challenges to improve appearance acceptance; role play to discourage pursuit of beauty ideals; prepare for future pressures to modify appearance</td>
<td>Review progress towards goals; discuss and combat barriers to change; introduce strategies to facilitate positive dietary modifications; discuss benefits of exercise</td>
</tr>
<tr>
<td>3</td>
<td>Promote sustainable healthy change to dietary intake and physical activity</td>
<td>Role play to counter beauty ideal statements; introduction to the healthy ideal; discuss importance of balancing input and output; set individual exercise and nutrition goals</td>
</tr>
<tr>
<td>4</td>
<td>Introduce strategies for managing negative affect</td>
<td>Discuss maintenance of dietary and exercise changes; introduce emotion regulation skills training: identifying, labeling, and experiencing emotions</td>
</tr>
<tr>
<td>5</td>
<td>Relapse prevention</td>
<td>Discuss opposite action; introduce distress tolerance skills training: self-soothing, distracting, and radical acceptance</td>
</tr>
<tr>
<td>6</td>
<td>Review progress towards goals; discuss and combat barriers to change; introduce link b/w eating and emotions; discuss alternate forms of exercise</td>
<td>Review past content; plan for the future and prepare for challenges; share benefits of being in the group</td>
</tr>
</tbody>
</table>

**Fidelity monitoring.** Intervention sessions were audio recorded to evaluate treatment fidelity. Twenty-five percent of the sessions were randomly selected for review, and a fidelity checklist assessed adherence to major intervention criteria. Procedural consistency, including feasibility of completing the material in the time allotted and supervision of session implementation, was tracked. Monitoring assessed adherence to inclusion/exclusion criteria, verification of valid informed consent, completion of measures at each assessment point, and training for all research personnel. Further, therapists completed a fidelity checklist after each session, documenting critical components and noting any omissions or additions.
**Measures.** All measures were administered as pretest, posttest, and 4-week follow-up unless otherwise noted.

*Demographic Questionnaire.* Participants reported age, year in school, sex, and race/ethnicity at pretest (Appendix F). Participants were also asked their highest and lowest weight as an adult.

*Family History Questionnaire (FHQ).* Participants reported family history of obesity, eating disorders, and other psychological diagnoses at pretest (Appendix G; LaRose, 2006).

*Height and Weight.* Weight was measured (by trained staff) to the nearest ¼ kg using a digital scale and height was measured to the nearest cm using a stadiometer. Measurements were used to calculate BMI (kg/m²).

*Eating Disorder Examination Questionnaire with Instruction (EDE-Q-I).* Disordered eating behaviors were assessed with the EDE-Q-I (Appendix H; Fairburn & Beglin, 2008; Fairburn & Beglin, 1994; Goldfein, Devlin, & Kamenetz, 2005), a 28-item self-report questionnaire adapted from the Eating Disorders Examination, which includes written instructions with definitions and examples of binge eating (Cooper & Fairburn, 1987). The addition of instructions enhances the ability of the EDE-Q to evaluate objective binge episodes in patients with binge eating disorder (Goldfein, Delvin, & Kamenetz, 2005). The EDE-Q-I assesses the occurrence of symptoms in the past 28 days, and responses are quantified on a 7-point rating scale (ranging from 0 = no days/not at all to 6 = every day/markedly). Examples of items from the EDE-Q-I include: “How often have you been deliberately trying to limit the amount of food you eat to influence your shape or weight?” and “How dissatisfied have you felt about your weight?” This measure includes four subscales: Eating Concern, Shape Concern, Weight Concern, and Dietary Restraint. Research on the psychometric properties of the EDE-Q
suggests combining eight items on the Shape Concern and Weight Concern subscales to represent a Shape/Weight Concern factor that captures body dissatisfaction; these items were used to calculate body dissatisfaction in the current study (Barnes, Prescott, & Muncer, 2012; Peterson et al., 2007). The mean of all subscale items represent a Global score indicative of overall eating pathology.

The EDE-Q demonstrates two week test-retest reliability, ranging from 0.81 – 0.92 for all subscales (Luce & Crowther, 1999). Strong positive correlations have been observed between the EDE-Q and EDE subscales, demonstrating good convergent and criterion validity (Mond, Hay, Rodgers, & Owen, 2006). The EDEQ has established norms for young adult women and yields internally consistent scores in young adult samples (α = 0.78 to 0.93; Luce & Crowther, 1999; Luce, Crowther, & Pole, 2008; Mond, Hay, Rodgers, & Owen, 2006). Cronbach’s alpha in the current study was .97 for the Global score and .95 for Shape/Weight Concern.

***Block Food Screener (BFS).*** Fat and fiber intake were assessed using the BFS (Appendix I; Block, Gillespie, Rosenbaum, & Jenson, 2000), a 27-item self-report questionnaire that surveys the leading sources of fat, fiber, fruits, and vegetables in the diets of North Americans. Individuals are asked how often they consume each type of food on a 6-point scale (ranging from 0 = less than once a week to 5 = 2 or more times a day; Block et al., 2000).

The BFS was developed as a shorter alternative to the well-validated Block Food Frequency Questionnaire (FFQ; Block, Woods, Potosky, & Clifford, 1990). The BFS was validated against the “gold standard” 100-item FFQ and provides estimates similar to those obtained from the full-length nutrition questionnaire. Correlations between the BFS and FFQ were 0.69 for total fat (grams/day) and 0.71 for total fruit/vegetable (servings/day; Block et al., 2000). Cronbach’s alphas in the current study were .94 for fat intake and .80 for fiber intake.
Ideal-Body Stereotype Scale – Revised (IBSS-R). Thin-ideal internalization was assessed with the IBSS-R (Appendix J; Stice, Ziemba, Margolis, & Flick, 1996), an 6-item self-report scale that evaluates individuals’ adherence to the feminine beauty thin ideal. Individuals indicate their level of agreement with statements concerning what attractive women look like on a 5-point scale (ranging from 1 = strongly disagree and 5 = strongly agree). Sample items include: “Slender women are more attractive,” and “Women with long legs are more attractive.” The IBSS-R demonstrates internal consistency (α = 0.91), test-retest reliability (r = 0.80), and predictive validity for ED onset in young adult women (Stice, Shaw, Burton, & Wade, 2006). Cronbach’s alpha in the current study was .96.

Dutch Restrained Eating Scale (DRES). Dietary restraint was measured with the DRES (Appendix K; Van Strien, Frijters, Van Staveren, Defares, & Deurenberg, 1986), a 10-item self-report scale that measures high cognitive effort to restrict food intake for weight loss purposes (Schaumberg, Anderson, Anderson, Reilly, & Gorrell, 2016). Responses are quantified on a 5-point scale (ranging from 1 = never to 5 = always), and individuals are instructed to select the answer that best describes their behavior over the past month. Example items include: “Did you try to eat less at mealtimes than you would like to eat?” and “When you ate too much, did you eat less than usual the next day?” The DRES yields internally consistent and stable scores (α = 0.95), shows adequate two week test-retest reliability (r = .82), demonstrates convergent validity with self-reported caloric intake in young adult women, and has predictive validity for the onset of bulimic symptomatology (Stice et al., 2004; Van Strien et al., 1986). Cronbach’s alpha in the current study was .96.

Difficulties in Emotion Regulation Scale (DERS). Difficulty regulating emotions and tolerating distress was assessed with the DERS (Appendix L; Gratz & Roemer, 2004), a 36-item
self-report scale that measures clinically relevant problems with emotion regulation. It consists of 6 subscales that reflect the multifaceted definition of emotion regulation: Nonacceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behavior, Impulse Control Difficulties, Lack of Emotional Awareness, Limited Access to Emotion Regulation Strategies, and Lack of Emotional Clarity. The overall total score on the DERS was used as a measure of emotion dysregulation. Individuals are instructed to indicate how often scale items apply to them on a 5-point scale (1 = almost never to 5 = almost always). Higher scores indicate greater difficulties in emotion regulation. Example items include: “When I’m upset, I feel ashamed at myself for feeling that way,” and “I experience my emotions as overwhelming and out of control.” The DRES yields high internal consistency (α = 0.93), good test-retest reliability (r = .88), and adequate construct validity with a commonly used measure of emotion regulation. Further, it demonstrates predictive validity for frequency of deliberate self-harm and intimate partner abuse and in young adults (Gratz & Roemer, 2004). Cronbach’s alpha in the current study was .97 for the total score.

Positive and Negative Affect Scale – Revised (PANAS-X). Negative affect was assessed using the sadness, guilt, hostility, and fear/anxiety subscales of the PANAS-X (Appendix M; Watson & Clark, 1992). These subscales consist of 20 self-report items that instruct individuals to indicate the extent to which they have felt a variety of negative emotional states over the past few weeks. Responses are quantified on a 5-point scale (ranging from 1 = not at all to 5 = extremely). The PANAS-X has shown internal consistency (α = 0.95), three week test-retest reliability (r = 0.78), and predictive validity of bulimic symptom onset in young adult women (Stice et al., 2006; Watson & Clark, 1992). Further, it demonstrates convergent validity with
measures of depression, anxiety, and hostility (Watson & Clark, 1992). Cronbach’s alpha in the current study was .97 for the negative affect subscales.

*Body-Image Ideals Questionnaire (BIQ).* Appearance ideals were evaluated with the BIQ (Appendix N; Cash & Szymanski, 1995), an 22-item self-report questionnaire that quantifies an individual’s perceived discrepancy from and the importance of internalized ideals for multiple physical attributes. The BIQ incorporates physical attributes beyond weight-related body parts and includes attributes that are important for women of racial/ethnic minorities (e.g., skin complexion and hair texture). For each physical characteristic, individuals are instructed to indicate how much they resemble their personal physical ideal on a 4-point scale (ranging from -1 = *exactly as I am* to 3 = *very unlike me*), and how important their ideal is to them on a 4-point scale (ranging from 0 = *not important* to 3 = *very important*). This measure contains two subscales: Discrepancy from personal ideals, and Importance of these ideals. These subscales can be multiplicatively combined to derive a reliable Weighted Discrepancy composite score. The BIQ yields internally consistent scores in young adult women (α = 0.75 to 0.82) and demonstrates convergent validity with other measures of body image (Cash & Szymanski, 1995). Cronbach’s alpha in the current study was .96 for all items.

*Multigroup Ethnic Identity Measure – Revised (MEIM-R).* Ethnic identity was assessed with the MEIM-R (Appendix O; Phinney & Ong, 2007), a 6-item self-report measure of ethnic attitudes and behaviors. Responses are measured on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Higher scores indicate stronger ethnic identity. Sample items include: “I have a strong sense of belonging to my own ethnic group,” and “I have often done things that will help me understand my ethnic background better.” The MEIM-R yields excellent internal consistency in European American (α = 0.89) and minority (α = 0.88) undergraduates and convergent validity.
with other measures of ethnic identity (Yoon, 2011). Cronbach’s alpha in the current study was .98.

*Three Factor Eating Questionnaire (TFEQ).* The tendency to lose control over eating was measured with the Disinhibition subscale of the TFEQ (Appendix P; Stunkard & Messick, 1985). This subscale includes two factors: internal disinhibition, or the overconsumption of food in response to negative cognitive or emotional cues, and external disinhibition, or the overconsumption of food in response to environmental cues (Niemeier, Phelan, Fava, & Wing, 2007). It consists of 16 self-report items measured on a 4-point scale (1 = *never* to 4 = *always*). Higher scores are representative of disinhibited eating. The Disinhibition subscale yields adequate internal consistency in young adult women (α = 0.75; Laessle, Tuschl, Kotthaus, & Pirke, 1989; Stunkard & Messick, 1985). Cronbach’s alpha in the current study was .96.

*Eating Expectancy Inventory (EEI).* Eating expectations was measured with the EEI (Appendix Q; Hohlstein, Smith, & Atlas, 1998). The EEI is a 34-item self-report questionnaire that measures cognitive expectancies regarding the benefits of eating. It includes five subscales: Eating Helps Manage Negative Affect, Eating Alleviates Boredom, Eating Is Pleasurable and Useful as a Reward, Eating Enhances Cognitive Competence, and Eating Leads to Feeling Out of Control. Individuals indicate how much they agree with each expectation on a 7-point scale (ranging from 1 = *completely disagree* and 7 = *completely agree*). Sample items include: “Eating can help me bury my emotions when I don’t want to feel them,” and “Eating helps me work better.” The EEI yields adequate internal consistency in samples of undergraduate women (α = .78 to .94; Hohlstein et al., 1998). Further, it correlates with measures of eating disorder symptomatology and distinguishes individuals with eating disorders, indicating construct validity (Hohlstein et al., 1998). Cronbach’s alpha in the current study was .98 for the total score.
Seven-Day Physical Activity Recall (PAR). Physical activity during the past seven days was assessed with the PAR (Appendix R; Sallis et al., 1985). The PAR measures the frequency and duration of each physical activity performed throughout the day. Each exercise is recorded in increments of 15 minutes, and information about the intensity of the activity is documented (i.e., moderate, hard, or very hard). The PAR yields reliable scores, and demonstrates concurrent validity with physical activity records in college student samples ($r = 0.81 – 0.83$; Dishman & Steinhardt, 1988).

Recruitment and Retention Feasibility. Detailed tracking records were kept regarding the number of women who: (1) were screened; (2) eligible for the study; (3) scheduled a pretest assessment; (4) completed pretest; and (5) attended sessions. Reasons for ineligibility and attrition were recorded. Efforts were made to contact participants following a “no-show” to assess desire/ability to participate and to reschedule as appropriate.

Acceptability and Exit Questionnaire. Acceptability was assessed via satisfaction surveys completed by participants at each session (Appendix S). Surveys evaluated: (1) reactions to the topics presented; (2) opinions of the materials used; (3) perceived benefit of the intervention; (4) comfort with the therapist; and (5) overall satisfaction. Individuals who withdrew were contacted and asked open-ended questions regarding reasons for termination. Participants completed an acceptability exit questionnaire at posttest to assess topics such as length and number of sessions, helpful and unhelpful aspects of the intervention, perceived benefits, overall satisfaction, and suggestions for improvement (Appendix T).

Therapists’ Perceptions of Feasibility. Therapists completed a feasibility questionnaire at the end of each session addressing: (1) feasibility of completing manual content in allotted time;
(2) topic appropriateness; (3) perceived participant responses; and (4) suggestions for improvement (Appendix U).

**Data analysis.** All data were double entered in REDCap (Harris et al., 2009). SPSS 22.0 was used for data analyses. All tests were two-sided at the $\alpha = .05$ level of significance. Data were cleaned and descriptive statistics, including means, standard deviations, and frequencies were calculated to verify that data met the assumptions of the planned analyses. As the more conservative correction, Greenhouse-Geisser epsilon values were used when the assumption of sphericity was violated (Abdi, 2010). Because the sample was small ($n < 50$), variables met the assumption of univariate normality if skewness and kurtosis were $< 1.96$ (Kim, 2013). Two variables (EDE-Q Global at posttest and DRES at posttest) included univariate outliers and violated the assumption of normality. Square root transformations were performed on both variables. The EDE-Q Global score met the assumption of univariate normality after the square root transformation; the DRES score was still positively skewed. Thus, a log transformation was necessary for the DRES score to meet the assumption of normality. The transformed variables were used in repeated measures analyses.

**Analytic strategy specific Aim 2:** Analyses evaluated the proportion of individuals who: (1) participated in screening and were eligible for the study; (2) were eligible but declined participation; (3) scheduled pretesting but did not attend the baseline assessment; (4) completed pretesting but dropped out of the intervention. Further, the number of sessions attended was examined, as well as attrition. Recruitment sources were tracked to identify the most fruitful strategies. Feasibility and acceptability of the intervention were assessed via descriptive analyses of the ordinal-level items on the weekly participant satisfaction surveys, exit questionnaire, and
therapist feasibility and acceptability ratings. Both participants’ and therapists’ responses to the open-ended questions were analyzed for major themes and ideas.

*Analytic strategy specific Aim 3*: Repeated measures analyses of variance (ANOVA) examined changes in outcomes over time (posttest, 4-week follow-up). ANOVA is a useful statistical technique, as it enhances statistical power by reducing error variance (Huck & McLean, 1975). The primary hypothesis was that women participating in *INSPIRE* would demonstrate reductions in both eating disorder behaviors (EDE-Q-I) and BMI, relative to their pre-test scores. The secondary hypothesis was that *INSPIRE* participants would manifest reductions in body dissatisfaction (EDE-Q-I), appearance dissatisfaction (BIQ), disinhibition (TFEQ), eating expectancies (EEI), dietary restraint (DRES), negative affect (PANAS-X), thin-ideal internalization (IBSS-R), and emotion regulation difficulties (DERS), and increases in healthy eating (BFS) and physical activity (PAR).

Additionally, the relation between outcome variables and ethnic identity (MEIM-R), and outcome variables and family history (FHQ), was assessed. There was not sufficient power to run separate analyses for each group; however, correlations were used to examine potential differences.

**Results**

**Phase I**

**Focus groups.** Data analysis revealed several key themes, including: (1) beauty standards among disparate racial/ethnic groups; (2) awareness of beauty standards and the influence of racial/ethnic differences; (3) origins of beauty standards; (4) impact of beauty standards; (5) frequent appearance comments; (6) resources available for eating disorders and obesity; (7) risk factors for eating disorders and obesity; (8) barriers to creating inclusive interventions, and (9)
facilitators of creating inclusive interventions. Themes are explored in depth below. See Table 4 for a representation of themes across groups.
Table 4

Representation of qualitative themes by group.

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<th>W1</th>
<th>W2</th>
<th>B1</th>
<th>B2</th>
<th>B3</th>
<th>L1</th>
<th>L2</th>
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<td></td>
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*Note. Groups are named with the prefix of W, B, or L to indicate race/ethnicity. 1=theme present within the focus group; 0=theme not present.*
Beauty standards among disparate racial/ethnic groups. Focus groups began with participants describing beauty ideals prevalent in their sociocultural environment. Participants were queried about what aspects of appearance they considered beautiful. Beauty ideals specific to participants’ racial/ethnic background were explored. Discussion was also generated regarding perceived differences among racial/ethnic groups. Beauty standards among disparate racial/ethnic groups generated three subthemes: (1) standards for White women (7/7 groups); (2) standards for Black women (7/7 groups); and (3) standards for Latina women (3/7 groups).

Standards for White women. White women overwhelmingly commented on thinness, exemplified by a small frame, thin waist, and overall slender body shape, as the standard for beauty within the White race (79 references). When asked about appearance standards prevalent within their racial group, participants commonly highlighted “just being thin” [W1a] and “less flabby” [W2a]. Participants specifically described a “flat stomach,” [W1a], the absence of a “muffin top”, [W2e], “prominent collarbones,” [W1c], a “thigh gap,” [W1b], and no “triceps flabs” [W1e] as representative of thinness. Additionally, the importance of low numbers (related to weight and clothing size) emerged as meaningful to thinness. Women reported, “People are so focused on the number [weight]...they like the small number” [W1a]. They agreed, “Nobody wants to share how much they weigh,” [W1d], and, “The worst thing that a guy can ask is like, ‘How much do you weigh?’” [W1c]. Many participants also emphasized small clothing sizes, noting desirability of the “ideal size,” which they defined as a size 2 [W1b]. There was general consensus that for White women, “If you are bigger, you’re not as attractive” [W1c].

White women demonstrated awareness regarding the differences between their racial group's beauty standards and those of other groups, and reported, “If you are White, then like, you have to be more [sic] thinner,” [W1e], “It’s all about being thin in the White culture,” [W1b],
and, “The Caucasian ideal is probably slimmer” [W2d]. All participants were in agreement that the beauty standard of extreme thinness was unique to White beauty standards. Idealization of thinness emerged disproportionally in White groups compared with Black (6 references) and Latina (4 references) groups. The irrelevance of the thin ideal surfaced in all Black and Latina groups (compared with none of the White groups); the majority of Black and Latina participants denied experiencing pressure to achieve the thin ideal. Latina participants indicated that their culture does not idealize thinness, and they denied viewing the thin ideal as beautiful. They stated that the White ideal of thinness is “too skinny,” and reported that in Latin culture, “There’s a skinny limit. Like you don’t have to be too too skinny, you know like how they kind of persuade here that you have to be like this just really skinny person” [L2a]. Black participants appeared perplexed by the focus on thinness, referring to the thin ideal as a “thin, White girl like thing,” and stating that they “just never understood like why they thought it was so beautiful” [B2a]. One participant reported, “It’s just always funny to me, when like a White girl that’s like skinnier than me, she’ll be like, ‘Oh I’m so fat,’ and I’m like, ‘No you’re not,’ like if I’m not fat you’re not fat” [B2f]. Instead, Black participants frequently indicated, “Pretty much every thin Black girl I know it like, ‘Oh I wish I could gain weight,’” [B2f], and, “I’ve honestly never encountered anybody that’s not White say that they need to be skinny” [B3b].

Alternatively, one Black participant [B3a] responded, “I guess” to the question regarding whether she felt pressure to be thin. Notably, she did not articulate experiencing this pressure herself, and instead described how her peers encounter this pressure. Additionally, one Latina participant [L2c] endorsed feeling pressure to be thin; interestingly, she reported experiencing pressure to obtain thinness from traditional media sources (i.e., magazines, advertisements) as opposed to cultural or interpersonal influences.
White women also endorsed an athletic body type as aesthetically pleasing (22 references). Participants indicated that the “athletic look,” [W1d], represented by “muscular legs,” [W1b], “abs,” [W2a], and being “more toned all around,” [W1a], has recently emerged as a popular ideal for White women. Importantly, they reported the desirability of the athletic look coinciding with the thin ideal, commenting on the attractiveness of being both “very thin and athletic” [W1c]. Women noted that there is a limit to the level of muscularity appropriate for women, stating, “You can only have a certain amount of abs; they can’t look like guy abs” [W1e]. One participant recounted her experience pursuing the athletic ideal, recalling:

“I started working out a lot, and I don’t know, I feel like I have really big traps or whatever, and like muscles, and I feel like that looks really weird on a girl, so I have gotten really self-conscious about that” [W1d].

White participants agreed that although an athletic body is trending, there are limits regarding the ideal amount of muscles women are "allowed" to have and muscularity needs to appear in the context of thinness.

Some White women reported noticing the emergence of curviness as beautiful (8 references). They mentioned that standards are shifting from “traditionally attractive” ideals of beauty and “expanding a little bit from, like, the all-thin tan girl” [W2b]. Specifically, women indicated that having an “hour glass figure,” [W1d], or “big hips, very small waist, and like a bigger chest,” [W1c], is seen as attractive. Notably, participants expressed that curves are coveted in the context of thinness, stating, “You have to be thin, but have curves” [W1b].

Standards for Black women. Skin tone emerged as the most prominent factor influencing attractiveness within the Black focus groups (46 references). Consensus suggested that within Black culture, beauty is mandated by the tone of one’s skin, and lighter skin tone is seen as more attractive. Participants indicated that, “tone is a big thing,” [B3d], and “light skin is the best skin”
Black women agreed that, “The lighter you are, the more beautiful you supposedly are” [B1b]. They reported heightened awareness surrounding skin tone, commenting, “If you’re darker, that tends to stick out a bit more compared to if you’re a bit lighter,” [B3a], and stating, “Some people aren’t pretty because they’re dark skinned. Or, like, some people are prettier just because they’re light skinned” [B3d]. Participants expressed frustration with the “light skin verses dark skin thing,” [B1b], and referred to this as “racism in our own culture” [B3a]. Multiple participants reported the frequent derogatory remark that, “She’s pretty to be a dark skin girl,” [B2f], and questioned the need for their skin tone to impact their beauty.

These women also described the double standard within the Black culture between men and women, in which darker skinned men are seen as handsome and desirable, yet darker skinned women are seen as less attractive. Black women commented that darker men are perceived as “so handsome and…so dark and tan,” while, at the same time, a Black woman will “be just as dark as the dude” and not seen as beautiful [B2c]. Additionally, participants noted the presence of a double standard between Africans and Black Americans regarding the perception of dark skin and beauty. Black women reported, “Being Black in America, and being of a darker skin tone from another country, it’s like two different things” [B3b]. Participants noted that darker skinned individuals from a foreign country are viewed as more attractive compared to darker skinned individuals from the United States.

Both White and Latina women acknowledged the importance of skin tone in Black culture, recognizing that Black women “have to have like lighter skin to be more attractive” [W1c]. All participants commented on the disparate appearance standards regarding skin tone. Black women recognized that, in contrast to Black beauty ideals, “some races get tans” [B2c].
Indeed, White women commented that in “White European American culture, the idea is to be more tan, but…a lot of African Americans believe you are supposed to bleach your skin” [W1e].

Hair also emerged as both a significant factor influencing beauty within the Black race, and an important aspect of individual expression (44 references). Participants agreed that Black women “definitely focus on hair more than some other races” [B2a]. Women commented on “good hair verses bad hair” as important to attractiveness within Black culture [B1b]. They described good hair as hair that is “just mainly straight” [B1a]. Alternatively, participants indicated that curly hair might be seen as beautiful, as long as it is not kinky or nappy. Indeed, women agreed that, “If it’s nappy, it’s considered ugly” [B1a]. In the context of Black hair texture, this often means that, “having your hair done,” or, “having your hair put together,” is necessary to appear attractive [B2c]. Participants described the extensive time and effort that goes into styling Black hair. Yet, they noted the recent trend of Black women wearing their hair natural. They indicated, “back in the day,” natural hair was unacceptable; yet, they reported, “now the community is more accepting of it,” and indicated that natural hair, “is considered more beautiful than it was in the past” [B3b]. Most Black participants stated they appreciate the trend towards natural hair, and commented, “The versatility is beautiful. Like no matter, you can go from straight to natural, like any style you want. The versatility makes it so different between other races” [B3a]. However, Black women also commented on the double standard present within society regarding hairstyles. Participants indicated experiencing discrimination if they style their hair in ways that are not natural. For example, one women stated, “It’s just crazy like, we can have green hair and that’s an issue, that’s ghetto, but if someone who’s of another race, whether she’s Caucasian, Asian, or what, if they have green hair, it’s like oh that’s so cool, that’s so trendy” [B2f]. Women expressed frustration over the fact that Black women are held to a
higher standard than individuals of other races/ethnicities, especially given the fact that hair is a major way that they express themselves.

Further, a more curvaceous figure indicative of a higher weight (in comparison to the standard for White women) surfaced as another important element of Black beauty (39 references). Black women described hourglass figures exemplified by a low hip to waist ratio, large butts, big breasts, and curvy hips as idealized within Black culture; they agreed, “If you’re curvy that’s, like, considered beautiful” [B1a]. Participants stated, “The standard is having a big butt…you’re gonna be beautiful if you have a big butt, right now that’s number one” [B2e]. Women noted, “We’re supposed to be thick,” [B3b], and frequently commented, “Thick girls are kind of like praised now” [B2b]. They noted the importance of having the “right” curves and being “well proportioned” [B1b]. One participant stated, “It’s usually the girls like with the hourglass figures that tend to get the most attention, than you know, people [that] are just thin and slim” [B1a]. Indeed, Black women denied idealizing thinness, and reported that peers within their racial group often make comments like, “I’m so skinny, I wanna gain weight; I wish I had a big butt” [B2f]. Participants described higher weight as a standard of beauty for Black women, noting that, “Being on the bigger side is better, or average” [B3d]. Yet, participants also expressed the desire for a flat stomach in the context of curves. Black women commented on the difference, however, between the White thin ideal and the Black ideal of beauty, expressing, “We’re not trying to be skinny, or like thin. We’re trying to, like, get our waist snatched real quick” [B3b]. One participant summed up the differences between the White thin ideal and the Black curvy ideal, stating:

“I think there’s a difference between, like, okay, so I want to be skinnier, but I don’t want to lose my hips or my butt. So, like, for me thinking about being thin, and like, when you say the White women ideal, I think of somebody who is completely flat and that’s not what I want. But I do want my stomach to be smaller, so I feel like if you’re speaking in
regards to that, then, I think, definitely, because having a flat stomach is what most people strive to achieve. But, it’s like, to be thin is different than to have a flat stomach. I guess the way that I see it, they’re different things.” [B3d]

There was consensus among the Black participants that thinness has a negative connotation within their culture, stating, “Being skinny isn’t even a thing for us. Like, that’s a bad thing” [B3b].

White participants also discussed the different body weight/shape standards for Black and White women. White participants often noticed that for Black women, “the ideal is more like thick-bodied; bigger butt, bigger boobs, curves” [W2d]. They indicated that, from their perspective, Black women were “more encouraged, to be like curvy, and not to be like overweight, but being curvy is more important than like your weight in their culture” [W1e]. Some participants even indicated that due to the differences in beauty standards, “they [Black women] kind of have it easier in some way” [W1c].

Additionally, Eurocentric features emerged as idealized in Black culture (21 references). Participants indicated that White attributes are seen as the ideal and set the standard to which Black women are held. Black participants repeatedly commented on women of their race “trying to look more like White women” [B2a]. They indicated that Black women typically have bigger noses and lips, and reported that they are “shamed” for these features and encouraged to make these aspects of their appearance smaller [B2d]. Further, participants reported that colored eyes (e.g., hazel eyes or blue/gray eyes) are considered desirable. One Black woman mentioned that she has colored eyes and recalled that she receives comments like, “You have such pretty eyes” [B1a]. She indicated debating whether to take these statements as compliments, noting that people are commenting on an aspect of her appearance that is outside of the norm for Black individuals. Participants expressed that natural Black features are viewed negatively, and
expressed feeling the need to “overcompensate for what we quote unquote don’t have” [B2f]. They noted feeling pressure to obtain Eurocentric features in order to be seen as attractive.

Finally, Black women commented on non-physical aspects of beauty, or attitude, which impact one’s overall appearance (14 references). They reported that “how you carry yourself” plays an important role in perceived attractiveness [B2b]. Women highlighted the importance of attitude “so people know, like not only do you look the part, but you act the part” [B2c]. All participants agreed, “Black people are confident,” [B3a], and described Black women as having a more “carefree” [B3b] attitude towards their appearance compared to women of other races/ethnicities.

*Standards for Latina women.* Displaying a presentable appearance emerged as the most prominent factor influencing attractiveness within Latin culture (29 references). All Latina participants agreed that “being always put together” was their primary appearance ideal [L1a]. They repeatedly commented on the need to “keep ourselves together,” [L1b], and commented on hearing regular messages to “wash your face, comb your hair, you know, make sure you look presentable every day” [L1c]. Participants discussed the idea that Latina women tend to wear modest clothing, and reported primarily being concerned with an individual’s “outside appearance…that you’re dressed good, that you look okay, like presentable” [L2b]. Latina women commented on the differences between their culture's focus on looking presentable, and the way White women adorn themselves. One participant indicated, “They don’t care if they’re, like, well dressed. Like, I see people in like pajamas like come out. And in Columbia you will never see that” [L2b]. Others indicated feeling that White individuals “just don’t care about their appearance” [L2c]. Latina women reported a sense of cultural pride that they hoped to display by presenting themselves in an appropriate manner.
Hair also emerged as an important aspect of appearance within Latin culture (20 references). The consensus among the Latina women was that long, dark hair is desirable; for example, one participant reported, “Hispanics…normally like longer hair” [L1a]. Multiple participants recounted experiences in which they cut their hair and received negative reactions from family members, recalling that people “freak,” [L1b], or, “think you’re crazy,” [L1a], for wanting a change. Moreover, Latina women reported feeling like they have more body hair than their peers of different racial/ethnic backgrounds. They expressed dissatisfaction with their body hair, as well as the desire for less of it. They commented that they spend a lot of time removing unwanted hair.

Further, Latina women identified skin tone and complexion as significant aspects of beauty (18 references). Participants reported a desire for tan skin, noting that they “like to be kind of tannish” [L2b]. One woman described her strong desire for dark skin and stated, “God, I can’t look pale!” [L1a]. Latina women also commented on the importance of clear skin. They discussed that they were older than their peers from other racial/ethnic backgrounds before they were allowed to wear make-up, and were told that this restriction on makeup was intended to reduce skin damage and help them maintain a clear complexion.

Additionally, a curvaceous figure, exemplified by large breasts and buttocks surfaced as the idealized body type for Latina women (16 references). Participants described this appearance ideal as “proportional,” [L2a], and “more voluptuous, curvy” [L1a]. They indicated that Latina women “are going for the curves and to be more voluptuous” [L1b]. Latina women noted thinness was not considered attractive in their family and culture, stating, “It’s not okay; like, you just can’t be too skinny” [L2b].
Notably, Latina women established health as a more important standard than actual body weight or shape (23 references). All participants denied experiencing pressure from Latin culture to modify their body to achieve a certain ideal. Instead, they reported that the goal for Latinx individuals is “just for you to be healthy” [L2b]. Participants recounted that higher weights are actually expected in Latin culture, as this demonstrates that a person is healthy, well fed by their family, and had a “good upbringing” [L1a]. Latina women indicated that when individuals are larger, “that is viewed as, like, healthy for them” [L1b]. Participants also discussed that if an individual pursues behavioral changes, the goal is health and longevity, as opposed to meeting some beauty standard. For example, one participant described that some individuals might pursue weight loss because, “they’re afraid that they might not live long enough to see their kids on their wedding day” and discussed the benefits of exercise, “because when you get older you’ll be able to move more or you’ll be able to do this and that more, not exercise because you have to be skinny” [L2a]. Latina women were confident in their assertion that health is prioritized over a specific body weight or shape in Latin culture.

*Standards for all women.* White, Black, and Latina women all described wearing makeup as contributing to attractiveness (28 references). They noted, “makeup is a big part of [idealized beauty],” [W1b], and agreed that if an individual does not wear makeup, they are seen as “not trying” [W1c]. Participants of all races/ethnicities specifically commented on the current trend of applying makeup to eyebrows, stating, “People fill in their eyebrows to make them, like, thicker” [L2a]. Women described the similarities across races/ethnicities regarding makeup application. One participant articulated:

“[Makeup] is like a big thing, and within like, within all cultures, not just like Black cultures, but just like women in general. Make-up is really starting to be like, if you don’t know how to do your make-up, like something is wrong… I think one thing that, like if we had to pick one thing where like everybody was like basically like trying to achieve
the same goal, like make-up like within all races. That is one thing that everybody is trying to do for the most part” [B2c].

**Awareness of beauty standards and the influence of racial/ethnic differences.**

Participants often referenced knowledge of unrealistic beauty standards and articulated the varied impact of this recognition. Awareness of beauty standards and the influence of racial/ethnic differences yielded four subthemes: (1) awareness (7/7 groups); (2) limit comparison (7/7 groups); and (4) appropriation (5/7 groups).

**Awareness.** Participants in all groups acknowledged the unrealistic nature of beauty standards (69 references). They recognized that the majority of appearance ideals are not only unobtainable for the average person, but also are “not natural” and “not how our bodies are made” [B2f]. Women indicated that only a very small percentage of individuals could meet these standards, and thus, designated them “artificial.” [B3b], and representing “an unrealistic picture; we are creating, like, a fake human” [W1c]. They discussed the impact of photo editing on sociocultural depictions of beauty, recognizing that idealized images are carefully constructed and, for example, how, “the filters change the way your skin looks, the way everything just looks; so, it’s fake” [W1e]. Women also discussed body diversity, noting “Everyone has a different body shape, so not everyone is going to be the picture of that [beauty ideal]” [W1d].

Most women expressed that even with this awareness, however, they were not protected from the pressure to modify their appearance. Participants indicated that viewing idealizing beauty content prompts them to consider engaging in behaviors aimed at modifying their appearance. They expressed that it requires effort to resist these messages, stating, “There are moments I know that I will get caught and like, you know, have to take a step back” [L1b]. One woman indicated that possessing knowledge about unrealistic images does not protect her from “internal conflicts with [herself], especially about looks, how [she is], just how [she] should
Other women agreed that knowledge is not power in a culture inundated with toxic messages regarding beauty.

*Limit comparison.* Participants expressed awareness regarding racial/ethnic differences in appearance (31 references). They acknowledged that Black, Latina, and White women typically have different body shapes, skin colors, and hair textures. Women reported that recognition of these differences reduces social comparisons between individuals from racially and ethnically disparate backgrounds. They most frequently endorsed comparing themselves to similar others. Participants agreed, “Within one culture, they’re just not gonna obtain, like, something that another culture has” [B2c]. Participants articulated that they did not feel compelled to compare themselves to individuals of other races/ethnicities:

“I feel no pressure, because, well, we’re never gonna look that same. I have no chance of looking like you, in any sense of the word. Especially if it’s like, so one of my closest friends, she’s a traditional like White, blonde, long hair, you know, like I will never look like you. And that’s it. Like, I don’t feel pressure around her, I don’t feel the need to compare myself, because it’s no chance of achieving that” [B3b].

“If you were to compare, like, all of my good friends are African American and, you know, their butt to me, like, I have butt, but my butt to theirs is not going to be the same you know. So it is a different build, it is a different background, and hair, we have totally different textures of hair” [L2a].

“I have a lot of friends that are Black and thicker, and I’m just not going to look like you. My hair, this is my natural hair, it’s pin straight, it’s never gonna have those beautiful curls that you have and the big butt that Jada has” [W2a].

Black and Latina participants, specifically, commented on the ubiquitous Eurocentric beauty standard to which they are often compared; yet, recognized that biology limits their ability to obtain this ideal, stating, “I am not like that; I don’t want that; I will never have that” [L1a]. Indeed, Black and Latina women expressed pride regarding their cultural backgrounds and the body shapes associated with them. They expressed, “I’m proud of what I have…my butt is
better than yours,” [L1a], and, “I’m very comfortable with being Black because it brought a lot of beautiful features to me that some races don’t have” [B3a].

**Appropriation.** All Black and White focus groups discussed cultural appropriation (23 references). Black women frequently noted the recent trend of women of other races/ethnicities desiring and emulating Black features, reporting, “Other races are trying to, like, get our body shape now that it’s more in” [B2e]. The Kardashian/Jenner sisters were discussed in almost every Black and White focus group as an example of women appropriating and misrepresenting Black beauty. Participants indicated, “They kind of try to make [Kim Kardashian] a standard as to like, this is what a perfect Black woman looks like. But it’s like, she’s not Black” [B2f]. Black women expressed that the idealization of Black features on White individuals devalues the distinct features of Blackness. One participant noted:

“I think Black features are just more glorified on people who aren’t Black, though. Like, who cares if I have a big ass and big lips, look at Kylie Jenner. Oh my god, she’s so unique. But, since it is common on us, it’s like they don’t care anymore. They get used to it.” [B3f]

White women were also aware of the glorification of Black features on White individuals, noting, “White women tend to take things from other cultures that aren’t appropriate to take” [W1e]. For example, they relayed that when “White women have dreadlocks they get told they are beautiful; like that it’s a beautiful new look. But then if an African American woman has dreadlocks, they are like, ‘she looks dirty’” [W1b]. Consensus suggests that traditionally Black features are seen as novel, and more beautiful, on White individuals, devaluing the inherent qualities Black individuals possess.

**Origins of beauty standards.** The various sources influencing the development of current beauty standards were discussed. These conversations yielded four subthemes: (1) interpersonal
(7/7 groups); (2) media (7/7 groups); (3) environment (6/7 groups); and (4) history of oppression (3/7 groups).

Interpersonal. Participants in all groups recounted interpersonal influences on their perceptions of beauty (97 references). Family members were mentioned most frequently. Women expressed learning about beauty ideals “from [their] parents and [their] household,” [L2c], and emphasized the influence of home life on appearance expectations. Many women recalled the influence of their mothers and/or sisters, specifically, in the development of their beauty ideals. Once participant recounted:

“I watched my mom, you know, like get dressed or do her make-up or her hair, like whatever the case may be, or like my older sister and like God-sisters and things like that, so like for me it was more like I wanna follow after my sister or like look like my mother [B2c].

Black women frequently mentioned learning the importance of having their hair “look nice” from their mothers [B3d]. They discussed familial influences on their understanding of the significance of hair to Black beauty. One participant noted that her grandmother mother refers to hair as a woman’s “crown” and stated her grandmother’s belief that leaving the house without styled hair is “shameful” [B3b]. White women discussed the impact of their own mother’s concerns about body weight/shape and idealization of thinness. They recalled their mothers being “very concerned about [their] weight,” and mentioned noticing the ways in which their mothers negatively appraised their bodies [W2a]. Participants articulated that observing their mothers glorify thinness influenced their understanding of attractiveness. Fathers were also mentioned as impacting the development of beauty ideals, and women recounted memories of their fathers making harsh statements regarding their bodies. One participant recalled a memory from when she was in middle school: “My dad and I went bathing suit shopping, and it was the
worst thing ever…he told me I wasn’t allowed to get a two piece bathing suit because I was too fat” [W1a].

Importantly, focus group participants also highlighted family members’ positive influences on their beauty ideals and appearance satisfaction. Many women indicated that family presented “mostly positive” influences, and some described parents as protective from outside sources [B1b]. For example, one participant recalled that her family was supportive of her changing body, stating, “My family, even when I went through my chubby stage, they were always like, ‘no, you are fine; you are perfectly fine” [W1b].

Additionally, Black and White women discussed male preferences and the desire to be perceived as attractive to romantic partners as significantly impacting their beauty standards. Participants recounted feeling the need to look a certain way in order to obtain romantic relationships, expressing, “Boys only want one thing and if you can’t give them that body…they’re just gonna leave you alone” [B3c]. They reported that more conventionally attractive women receive more attention from romantic interests, recalling, “All these guys are hollering at my friends; they don’t want to talk to me, they don’t care about me. So, it’s like if I looked like them, they’d be hollering at me” [B3f]. One participant summed up the rationale for potential romantic partners’ influence on beauty ideals:

“Boys put so much emphasis on, well not even boys, whoever you’re attracted to, they put, I feel like they put so much emphasis on like physical appearance. Because pretty much that’s what you see first. Like, I see how you look first before I can really get to know you. So there are several times where like, yeah, you’re cute, but no and just because of how you look. And so, I mean, that doesn’t help, and I think that’s where it comes from more for me, are boys” [B3b]

Women acknowledged desiring specific beauty standards that men prefer. Black women reported male preferences for curvy bodies and light skin, indicating, “We’re gonna want a thicker body because men like that,” [B2a], and, “Black boys were saying if you weren’t light skinned they
wouldn’t date you” [B2b]. Participants commented on White males preferring slimmer bodies, reporting, “With the White race, I guess, the guys like smaller girls” [B2a]. Women discussed instances in which past partners expressed dissatisfaction with their appearance that prompted them to change in some way. White women specifically mentioned pressure to limit their intake in order to appear slender for males. For example, one participant stated:

“I have a lot of friends say like, ‘oh I’m gonna skip some meals today because I am going on a date.’ And no one says, ‘that’s fucked up,’ they are just like, ‘yeah, that is cool, like you need to do that, you need to keep that stomach flat for when he first sees you’” [W1e].

For Black and White women, consensus suggested that romantic partners’ preferences are critical determinants of beauty ideals.

Finally, all participants acknowledged the influence of peers on the development and maintenance of beauty ideals. Women indicated peers “have a high influence on you,” and are critical to learning and understanding attractiveness [B3a]. Many specifically mentioned schools, “like middle school, high school,” as the environment in which individuals ascertain what constitutes beauty [L1c]. One participant noted the impact of the school community on developing specific appearance standards:

“We learn in school, by what our peers say about our appearance, tell us what’s beautiful. Everything around you kind of shapes what your idea of beauty and experience, um, if someone you know, you see a girl at school she got her new hair, she dyed it a certain color and everyone reacts to that in a positive way, then that may become something that is seen as more beautiful as when beforehand, before the certain person did that thing, it was not considered beautiful on other people” [W2b].

Participants agreed, “the people you learn to, like, surround yourself with” significantly impact an individual’s perception of beauty [L2b].

*Media.* All focus groups discussed the media’s impact on perceptions of beauty (60 references). Participants indicated, “the media influences you,” [L2a], and noted that the
extensive impact of the media on appearance ideals results from the fact that “everybody pays attention” [B1a] to these sources. They discussed the pervasiveness of media, mentioning the effects of the various forms of media present and the enormous amount of time individuals spend engaging with media on a daily basis. One woman highlighted the media’s effect on her perception of beauty:

“I feel like Disney did a lot of it for me when I was little. Because I liked all the princesses, and the princesses are always really pretty, and the evil women are not pretty or clean and not considered beautiful. And I feel like that had a lot of effect. Also I don’t know, maybe this is mean, but also when I looked at Barbie, I thought when I am going to hit puberty I am going to have a figure like Barbie” [W1e].

Latina women specifically commented on how, for immigrants, Westernized media sources promulgate the thin ideal, indicating:

“I feel like coming here, like migrating to the United States, does pressure others, like I can see how it can. ‘Cause like over there you don’t like if they look like how skinny the magazines here are, like everyone there would be like, ‘ew, like gross no,’ but here it’s more like ‘oh wow it’s pretty’ and then girls wanna be like that” [L2b].

Latina participants described pressure to achieve the thin ideal as not present within their culture; rather, they indicated that Latina women experience pressure to be thin from Westernized media sources.

All women elaborated specifically on the impact of social media. They acknowledged social media as a newer determinant of beauty ideals, reporting, “Social media especially is like a thing for our age. It’s like we are growing up on the internet and stuff so that is definitely a big influence” [L1b]. Women expressed feeling impacted by, “how social media presents itself,” [B3c], and endorsed, “picking up,” [L1c], and “learning,” [B3a], information regarding attractiveness on social media networks. They discussed the rise of “Instagram models,” whose role is to depict beauty ideals and sell products [W1b]. Participants reported encountering frequent advertisements on social media for makeup, cosmetic surgeries, various diets, “flat
tummy teas,” and waist trainers [B3b]. They commented that advertisements “make an art of being attractive,” and present idealized beauty images that are appealing and hard to resist [W2e]. Women indicated the strong effects of social media marketing, noting, “We’re bound to try anything if it’s on Facebook” [B3b]. One woman recounted the impact of these advertisements, stating:

“I think the scary part is that it wouldn’t be a big deal if like it’s something like some people do, but like every three of four posts, I see a promoter for one of those things, and so it is like is something a lot of people are doing? Am I, like, not aware of it?” [W1b]

White women specifically often mentioned advertisements for fitness-related products, and noted the recent rise in fitness-related content. They discussed the “fitness ads” promoting women with “flawless” bodies that they have never actually seen in real life [W1a]. Participants noted that even if they do not seek out fitness-related content, it appears on their social media feeds and impacts their perceptions of beauty. For example, one woman reported:

“Even just like scrolling through my Instagram feed and I don’t even follow like, athletic pages. But just what people are making themselves look like, it’s almost like second degree peer pressure. It’s gone through a whole thing and it has slightly adapted to people closer to my inner circle and then it’s like ‘wow, everyone is doing this now’” [W2b].

Indeed, the majority of participants commented on the pressure they experience to modify their bodies in some way as a result of social media exposure.

Further, participants commented on the role of celebrities in the cultivation of beauty ideals. They expressed how people “idolize” certain singers, actors, and the like, and are influenced by the ways in which celebrities present, modify, and enhance their bodies to meet appearance standards [B2b]. Women acknowledged feeling pressure to emulate celebrities to appear attractive. Participants also discussed the impact of negative commentary regarding celebrities’ appearance. For example, one woman recalled the commentary surrounding Lady’s Gaga’s Super Bowl performance, stating:
“How terrible the internet and social media was for attacking Lady Gaga for having her stomach hanging out a little from her costume. And everybody was like that girl is flawless, and she has the slightest bit of stomach fat and somebody points that out, and everybody talks about it, and that is what makes women hate themselves. She is going to see all these posts of people talking about how she is fat or how she needs to go to the gym, and that’s like, that makes women not want to go out” [W1b].

Black women commented on Black celebrities and their representation of Black beauty. Participants discussed how Black women prominent in media typically possess Eurocentric features and light skin. They noted that this representation of Black women influences appearance standards for Black women, encouraging the idea that White attributes are the standard against which Black women are compared, thereby devaluing traditionally Black features. The following conversation highlights this sentiment:

E: It’s like even when Black girls are famous, the lighter skin ones are always the ones that are raised higher. Like where’s Kelly Rowland and where’s Beyoncé, you know? Where’s Rihanna? It’s like, you know, kinda, you can just see it. Just turn on your TV. It’s not explicitly stated, but it’s just so obvious.

F: And then they don’t show the Black features the most, like you recognize…

E: And it’s like, even Lupita Nyong’o, like European features, but with dark skinned.

B: Right.

E: She doesn’t have, like, a wide nose and wide lips, and she’s, she’s just dark.

B: Or, like, even when a darker person is, magically, comes on the carpet and she’s, like, beautiful, they’re surprised. Like ‘oh my god, like I wasn’t prepared for this.’ And I’m like ‘she probably was there all the time and nobody noticed.’

A: It’s kinda like give them credit where credit is due. [B1]

Environment. Environmental factors emerged as impacting appearance ideals (80 references). Participants discussed differences in beauty standards among disparate racial/ethnic groups, and articulated the impact of the sociocultural context. Women expressed the importance of “social environmental influences,” [B3e], and, the “environment or culture you grew up in,”
[L1a], on establishing an individual’s perception of beauty. They recognized the different standards of beauty present in different cultures, agreeing, “The culture influence kind of dictates what is culturally acceptable for you to portray” [W2d]. Participants born outside of the United States commented on the “several cultural differences…especially with beauty standards” that they noticed between U.S. culture and that of their country of origin [B3a]. One woman stated, “The culture that I am coming from, it is very different, and my beauty ideals are different” [L1c]. Women commented that length of time living in the U.S. might impact the extent to which an individual idealizes White beauty ideals (i.e., thinness).

Women also mentioned the influence of historical time period on appearance standards. Participants indicated, “the time and the trend” [B1a] dictates standards of beauty. They noticed that now, “thick girls are like in” [B2c]. The following quotations demonstrate this:

“I feel like other races are trying to like get our body shape now that it’s more in. At first we were trying to be like them, be all skinny, and I think that now everybody wants to be curvy and like us basically” [B2e].

“Before, White girls were like ‘Oh my god, do these pants make my butt look big?’ But now it’s like a good thing, like, ‘Do these make my butt look big?’ like in a good way. So, I think it’s just changing over time. Like, Blacks used to get ridiculed about having a big butt and things, but now it’s like a good thing” [B3f].

As mentioned previously, White women also endorsed awareness regarding the emergence of curviness as beautiful. They noted the recent shift towards changing beauty standards in the past few years, commenting:

“There are definitely variants [to the traditional stereotype of beauty] especially in the past like couple of years we’re really allowing to slip into mainstream. I mean definitely not to the extent that it should be, like it should be okay for you not to look like a Barbie doll, but I think we’re definitely like closer than we were fifteen years ago” [W2b].

Further, participants discussed the influence of finances on beauty ideals. Women highlighted the monetary costs associated with pursuing cultural standards of beauty (e.g.,
paying for a personal trainer, purchasing fruits and vegetables), and mentioned finances as presenting challenges to the achievement of these beauty standards. They reported that appearance ideals are often cultivated by individuals with access to excess financial resources, and thus, “have the money to change their bodies if they wanted to” [B1b]. White women expressed that socioeconomic status is often inferred by body weight, stating, “People that are skinnier though are looked at like they do have more money” [W1a]. Black women recalled, “The majority of Black individuals aren’t use to having nicer things,” and therefore expressed desire for financial resources to purchase nicer things in order to appear attractive [B2f].

*Minority oppression.* Black and Latina women described minority oppression (historically and currently) as critical to their understanding of appearance (13 references). Black women noted the historical implications of lighter skin, stating, “In the past, if you’re a light skin you’re trying to pass as White, and then I guess those traits were more desirable” [B3b]. They linked this historical ideal to the current desirability of lighter skin with the Black race. One Black woman further explained why historical oppression infiltrates current appearance ideals:

> “I feel like you gotta almost be like a step ahead of other races, and I mean that in the most respectful way because of like, you know, what our ancestors went through and like what we’ve been through, like not even a hundred years ago. Like you know, I feel like we always have to, you know, almost be like the bigger people…I guess like to other cultures who, like you know, don’t even necessarily think we deserve to like feel beautiful. Like at one point in time, we weren’t even considered like a full human, like how disgusting is that? So to now, like you know, be in this world where like we are quote/unquote supposed to get the same opportunities as the person next to us who may have like a fairer skin color, or whose parents may have more opportunities to like give them, like we have to always be a step above to say like ‘hey we are beautiful’ and it’s because we said so not because y’all said so” [B2c].

Indeed, both Black and Latina women expressed current feelings of inferiority to White individuals and reported that as minorities, “There is like this stigma like placed upon you because of like, what you are” [L1a]. However, participants also expressed, “Any minority wants
to be accepted from that person and show them you are not any different, or if you are different, I am going to be just as good as you are” [L1b]. As such, women endorsed feeling pressure to overcompensate for their minority status with their appearance. Participants endorsed a desire to represent themselves, as well as their racial/ethnic background, in an appropriate way in order to receive similar treatment to those in the majority.

**Impact of beauty standards.** The discussion of beauty ideals generated exploration regarding their effects. Two subthemes emerged regarding the impact of beauty standards: (1) harmful (7/7 groups); and (2) beneficial (6/7 groups).

*Harmful.* Participants mentioned experiencing detrimental consequences related to these beauty ideals (171 references). Emotional harm was discussed most frequently. Women expressed that feeling discrepant from appearance standards led to negative self-judgments and appearance dissatisfaction. They commented, “it hurts” [W1b] when they don’t emulate beauty ideals and expressed, “feeling like a failure” [W1c] when they don’t look like the women idealized in the media. Participants further endorsed that deviation from current beauty ideals “definitely [negatively] effects your self-esteem,” [B2e], promotes feeling, “bad about [ourselves] with the way [we] look,” [B1a], and generates feelings of “inferiority” [B3d]. They commented, “Most of us probably aren’t as confident as we should be,” [B3b], and stated, “People are, like, harder on themselves” [B2c] as a result of appearance standards.

Women specifically documented the influence of social media on their emotional state. White women commented on the impact of frequent fitness advertisements portraying thin-yet-fit women, indicating that fitness content is “frustrating,” [W1b], and, “discouraging” [W1d]. All participants discussed social media as a breeding ground for upward appearance comparisons that foster insecurity. Women agreed on the tendency to “pick certain things” they like most
about the appearances of others and yearn for these features [W1a]. They recalled that on social
media, “You just look at people and be, like, ‘Why can’t I look like you?’ and that’s what brings
you down the most” [B3c]. One participant articulated the impact of social media, stating:

“I kinda regret making an Instagram, because I’m not, I always second guessing myself.
I second guess myself with how I’m supposed to look, how I’m supposed to dress,
especially since I got to college. I feel like I should be a totally different person than I am”
[B3a].

White women also mentioned clothing sizes as inducing emotional harm. They reported
feeling “discouraged” [W1c] when they are unable to find clothes that fit and agreed shopping
“makes [them] feel like [they] need to be skinnier” [W1d]. Participants commented:

“I loathe jean shopping…when I’m looking for jeans, seeing that number on the jeans,
that kills your self-esteem, and you are like oh I’m a size ten, you’re like oh my gosh,
how did I get to this size? I need to stop eating cheeseburgers and I need to cut everything
out, and just eat lettuce” [W1b].

“I know for me fitting into a pair of jeans, I will like literally squeeze into a pair of jeans
so I don’t have to go up a size, and be like oh yeah, they still fit, I’ll do anything to fit in
those pair of jeans rather than going out and buying like a bigger pair. I’ll be like oh yea I
am still the same size, even though it took me five minutes to put on my jeans” [W1a].

Further, Black women described the Eurocentric beauty ideal as harmful. They noted
experiencing continuous comparisons to the White standard of beauty, resulting in Black women
feeling unworthy. Participants mentioned growing up around White women who were “always
so pretty” and observing that White individuals received more attention from romantic interests
[B3a]. They described this comparison to White women as “crushing” to their self-esteem [B3f].
One participant remembered:

“My old best friend, she’s really pretty, but we’re completely opposites. Like she has
European ancestors and all that stuff, so hair, basically, is just straight on its own and
then she’s all light and pretty and all that stuff, that’s fine. But, you know, not to take that
away from her, but I realized being with her all the time, made me feel worse about
myself. And, it’s not that I thought I was any less pretty, she was just a different type of
pretty than I was. But if we’re comparing her to what people expect people to look like,
she was the higher standard of beauty. So, I mean, we’re not friends for other reasons, but
like when we weren’t friends anymore it kind of built my self-esteem because I no longer had that constant reminder of ‘I don’t look like this.’ So, in that way, it can be negative because, like, it was, she was my best friend, we were always together, so it was a constant reminder of ‘I don’t look like you, so I’m not as pretty.’ And then it just spiraled into this, like, negative, like, I just wasn’t worth all of this” [B3b].

Black women recounted experiencing “insecurities” regarding the fact that their appearance deviates from the Eurocentric ideal, and endorsed feeling the need to compensate for their differences in order to appear beautiful [B2f]. Participants also endorsed physical harm as a result of beauty ideals. They expressed engaging in extreme dietary habits, or noticing other women do so, in attempts to alter their appearance. One woman described the effects of dietary manipulation:

“I know women that, who skip meals. Like they are like, ‘I’ll eat like one meal a day because I am trying to skip out on calories.’ But then again, you are losing energy, you are losing all these things that are essential to being a person; you need carbs; you need energy in your life and so it’s hard to find, like a way to eat; like women think they can just skip meals and they will lose weight. And that can definitely affect you physically, because you do lose all that energy so you are not, you don’t feel as good, and so you are not going to want to go anywhere and you are not going to feel like doing as much” [W1b].

Another woman endorsed a history of purging behaviors, recalling, “When I was younger and in high school, I was forcing myself to puke” [W2e]. Other participants commented on observing compensatory behaviors (i.e., excessive exercise, restriction, and self-induced vomiting) in peers following periods of overconsumption or guilt surrounding dietary intake. Black women mentioned observing White women “going on diets nearly starving themselves;’” yet, they perceived this behavior as “very strange” [B1a]. Instead, some Black women recalled increasing their caloric intake in an effort to gain weight.

Participants described the impact of current trends intended to help women achieve appearance ideals. They mentioned the prevalence of waist trainers that “crush your organs” [W1b] and described an individual who used a “flat tummy tea” that “put her in the hospital”
Women mentioned the downsides of plastic surgeries to modify appearance and commented on “lip pumps” that cause blood vessels to bursts and leaves severe bruising. Black women also discussed the trend of “bleaching your skin” among darker-skinned women. One participant recalled, “I used to pour bleach in my water, in my bath water, because I just really felt like something was wrong.”

Additionally, White women described avoiding the gym due to perceived discrepancies between their appearance and the ideal. Participants mentioned that some women avoid exercising at the gym because they feel “intimidated by the way people look around them. They don’t feel like they are good enough to be in there.” They recalled exercise as an important component to health and wellbeing; yet, they agreed with one woman who stated, “I just don’t feel like I have the right body to be going to the gym.”

Finally, participants discussed encountering interpersonal pain related to appearance standards. Women recounted experiencing objectification and receiving negative attention based on their appearance. They described instances of men only remembering them for a certain part of their body and indicated that men often “just wanted to have sex” with them based on some aspect of their appearance. Latina participants, in particular, mentioned encountering objectification as an adolescent as a result of early development. They reported others calling them “easy” and indicated these comments were hurtful. Many women recalled hurtful remarks individuals made about their appearance, including being called fat. Women described experiencing painful pressure from family members to modify their appearance, and recalled being teased as a child because of their body shape. One participant recounted:

“When I was growing up, I was on the bigger side… it really hurt because at that age, well all are made fun of in middle school, but I always feared going to my family’s house
because they were the ones that were hurting me the most. So, they would ask me if I wanted something to eat, and one day my aunt just brought me a big plate of lettuce and I’m just like, ‘so you think I’m supposed to sit right here and eat this just to make you happy?’ She would be like, ‘just get yourself beautiful; you’re the most beautiful person in the world, these girls aren’t prettier than you.’ But she used to be the one that hurt me.” [B3e].

White participants explained how discrepancies with appearance standards cause disengagement with social activities. They recalled that unkind comments from others about their appearance “makes [them] not want to go anywhere” [W1c]. One participant described how beauty ideals impact social relationships:

“I have friends that it’s just, like, they don’t fit that beauty standard, so like, they just don’t go out as much, because I know a lot of girls that don’t fit the beauty standards and they don’t go to VCU parties, because they are just like I am going to be judged by a ton of other people who like, do fit these beauty standards, or at least I think that they do. So like, it makes the social life a lot harder for someone who doesn’t fit the standards” [W1e].

White women noted that they feel they can only engage in certain activities, “like, going to the beach,” [W1b], if they look a certain way. They discussed declining social invitations out of embarrassment regarding their appearance and fear of being negatively judged.

Beneficial. Black and White participants discussed the perceived benefits of obtaining appearance ideals (23 quotations). They stated that people make assumptions about others based on appearance, and indicated that those assumptions are typically positive if an individual adheres to beauty standards. Women reported that people who meet appearance ideals are viewed as having a “better personality,” [W1c], and as “nicer, cooler,” [W1e], than individuals who do not meet these ideals. Participants agreed that more attractive women are treated better, and indicated that appearance “can be, like, the determining factor, like, of your future” [B2c]. They noted that individuals “might have more opportunities if you meet the standards,” including
more career options [B2a]. Notably, Black women reported that they would have more opportunities if they possessed Eurocentric features.

Some participants discussed the potential for appearance standards to influence positive health outcomes. Women indicated, “Fitness is becoming, like, a thing in different cultures,” and might motivate individuals to pursue exercise [B2b]. They noted that, in this way, beauty ideals could encourage individuals to lose weight, improve their self-esteem, and advance their overall health.

**Frequent appearance comments.** Statements women commonly make when they talk negatively about their appearance or that of others were explored. References to frequent appearance comments fell into three subthemes: (1) body weight/shape (7/7 groups); (2) specific dislike (5/7 groups); and (3) overall presentation (4/7 groups).

**Body weight/shape.** All participants noted appearance comments related to dislike of body weight or shape (56 references). Negative statements pertaining to higher weights were most prevalent. Women discussed the normality of comments, such as “how much they’ve gained weight,” [L2a], “I’m so fat,” [W2a, B3c, & L1b], “I need to lose so much weight,” [W1e], “That’s a really big girl,” [B1a], and “She’s gotten really fat” [L2a]. They discussed negative labels regarding excess fat on specific body parts, such as “kangaroo pouches” [B2f] referring to stomach fat and “bingo wings” referring to arm fat “because [of] when old ladies raise their arms to play bingo” [W1a]. Women described higher weight individuals in bikinis as “whales on the beach” [W1e]. Participants were in agreement that if “you’re obese you’re more judged; they’re like, ‘You’re fat, you need to lose weight’” [B1b].
Black women also reported experiencing and observing critical feedback regarding lower weights. One participant described often hearing, “Oh my god, you’re too small” [B3b]. Women discussed that comments about either weight extreme were hurtful. One woman articulated:

“I hear more so about like girls who are bigger like in weight size, tend to get a lot of comments, like negative comments, more so than I guess if you’re thinner. Although there’s the other side of the spectrum where if you’re really thin, kind of like banana shaped, you kind of get called like flat-chested or things like that. So it’s kind of like if you’re on either side of the spectrum, like you still get made fun of or talked down about” [B1a].

*Specific dislikes.* Participants also endorsed negative appearance comments regarding other aspects of their appearance (17 references). White and Latina women mentioned skin complexion multiple times and expressed dislike of “acne” [L1b] and “terrible” skin [W2d]. Some participants articulated dissatisfaction with hair texture; Black women specifically noted distaste for “kinky hair” [B2a]. Women also described loathing stretch marks, big noses, and large feet.

*Overall presentation.* Some women recounted derogatory commentary regarding overall appearance (5 references). They described statements pertaining to an individual’s style or presentation. Women recalled hearing comments such as, “‘She’s letting herself go,” “She just looks a mess,” or, “You are not put together’” [L1a]. Participants also acknowledged hearing comments that someone is “ugly” [B2b].

*Resources available for eating disorders and obesity.* Participants offered their thoughts regarding the current state of culturally relevant resources to address eating and weight-related concerns. References to resources for eating disorders and obesity were categorized into four subthemes: (1) needed (7/7 groups); (2) not culturally sensitive (6/7 groups); (3) minimization of minority mental health (6/7 groups); and (4) separate programs for eating disorders and obesity (6/7 groups).
Needed. Participants indicated a need for more resources (i.e., education, prevention, treatment) to address eating disorders, obesity, and the spectrum of weight-related concerns (9 references). Women were in agreement that current resources are inadequate. Some recalled receiving nutrition and exercise information in high school health classes, but stated the content “was extremely ineffective” and “very inapplicable” [W1d]. Others indicated that eating disorders and obesity were “not addressed at all” [W2b]. Participants concurred that resources are “very much needed,” [L2b], and stated, “we should do something more” [W1e] to address weight-related concerns, “Especially now-a-days, because I feel like, it seems like younger and younger people tend to develop these problems either unknowingly, or in secret, without people finding out like many years later ‘til the damage is already done” [B1a].

Not culturally sensitive. Women expressed that the resources regarding weight-related conditions that do exist are not culturally sensitive (56 references). For example, participants were read excerpts from a role-play activity in the existing eating disorders DBI. Specifically, they were read a prompt describing an individual engaging in weight control behaviors in pursuit of thin ideal. Black and Latina participants reported difficulty relating to the individual described in the role-plays and indicated the activities were not relevant to women within their racial/ethnic group. They responded to the role-plays stating, “I don’t hear our race,” [B2b], and, “Is anyone Hispanic in that scenario?” [L1a]. One White woman even commented on the lack of representation, reporting:

“I didn’t even realize when you were reading these things that nowhere in these like role-plays is the girl described, like is her body described. Yet, when you told me about the behaviors I was picturing a White girl at a sorority and picturing like the blonde girl… I felt like I already knew what she looked like and I didn’t even have any description” [W2d].
Further, Black and Latina participants unanimously denied knowledge of culturally relevant resources for women within their racial/ethnic group. They indicated that eating-related resources exclude narratives of diverse women, highlighting the limited “resources we can identify with” and describing that resources “aren’t targeted towards us” [L1d]. Women expressed that this lack of representation leads to limited awareness regarding weight-related conditions impacting racial/ethnic minority individuals. The following quotations demonstrate this:

“Most of the time, when I hear about anorexia, it’s not about Black people, it’s more like White women, so it’s like even though I don’t deal with it you would think it would just affect that community.” [B1b]

“There tends to be more, I guess, eyes on [the majority] compared to like really when you think about whether Asian of Black or other groups of ethnicity because anytime I see or even hear about stories about dealing with anorexia or bulimia, it’s usually people in the majority and I’m like, 'what about everybody else? I’m pretty sure they deal with it too.'” [B1a]

“It’s like a taboo for a Black girl to have anorexia or bulimia. Like, I watch documentaries about anorexia and you don’t see the Black girls in the homes.” [B3f]

As a result of this lack of representation in the popular literature/media about eating disorders, Black and Latina women agreed that they do not think of women within their own racial/ethnic group when thinking of individuals with eating disorders. They reported believing eating disorders are “not a Black thing” [B2c] and “not much of a big thing that you would see in most Latin cultures” [L1c]. White individuals also endorsed the belief that they are more prone to developing eating concerns than Black and Latina women, and noted this opinion is based on the fact that current resources “just talk about [eating disorders] with White women” [W2a]. Participants expressed the importance of all women being “aware of what can happen to them, and not just like White people, everyone” [L2c].
Additionally, Latina women noted that current resources neglect the role of family in dealing with health-related concerns. They expressed the importance of family in Latin culture and the tendency for families to handle health issues “in their own way, rather than like possibly seeing it as something outside their culture or norm” [L1a]. Participants agreed:

“I think family plays a huge role in the Latin community and all, so they are the ones that are supposed to help you the most and are the ones that actually offer you more help than others. They are the ones that want you to go to them first before anyone else” [L1c].

As such, women reported that Latinx individuals might be “more reluctant” to explore resources outside of the family [L1b]. Therefore, they indicated that resources that exclude family members are not sensitive to Latin culture and present a barrier to help seeking. Participants agreed that making resources more “family-oriented” [L2b] would improve accessibility for Latinx individuals.

Minimization of minority mental health. Women discussed how the mental health needs of Black and Latinx individuals are minimized (42 references). Participants articulated that mental illnesses are “not considered real problems” [B2c] and “not really viewed as real” [L1b]. They described, “It’s not acceptable in our culture for us to have, like, those types of disorders,” and expressed that often, mental health problems are seen as “just a White thing” [B3e]. One participant articulated how mental health issues are approached in Black individuals:

“We just don’t talk about stuff like that. We don’t talk about things that make us uncomfortable, we don’t talk about things like that, like our issues. We just, the way our community is set up, it’s just always been, ‘pray about it, it’ll get better,’ or ‘girl, you fine. It’s okay, you’ll be all right.’ Like that’s just how our culture is; like, we just don’t take things like that seriously because most people feel like, Black people don’t do that” [B2f].

Women reported that when an individual does experience mental duress, the problem is often not acknowledged “because it is not really known” [L1a] and they “don’t know how to handle” [B2d] such difficulties. Further, Latina women expressed reluctance to seek help out of fear of

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generating “extra stigmas” or concern for poorly representing their culture [L1a]. They also reported that feeling the need to be “grateful for everything” based on what their ancestors went through, and stated that this interferes with help seeking behaviors [L1a]. One participant recounted:

“There is a lot of these minorities, it’s like their parents, their relatives, they faced a lot of hardships and everything, so it’s like you are living, breathing, like what else could be wrong with your life? You have; you are not in… Like people from here it’s like their parents are like ‘oh you’re not where we come from’ and ‘you don’t know the issues with the country,’ and it’s like ‘you’re fine, what else could be wrong with your life’ and that is another reason why people feel like it’s not a legitimate problem” [L1b].

White women also noticed the minimization of minority mental health concerns, stating, “In Black culture, mental health and that kind of stuff it’s just not taken seriously, it’s kind of a joke to them so having programs and help for them…it just doesn’t happen because they don’t take it as seriously” [W2a]. They recognized the influence of White privilege on the ability for mental health to be prioritized, indicating, “I think a lot of privilege plays into that…White women are more likely to be taken seriously when they come forward with a problem” [W2d].

*Separate programs for eating disorders and obesity.* Most groups expressed uncertainty regarding combining resources for eating disorders and obesity (11 references). Participants agreed that it “might be better to keep them separate because like each group has separate problems… in one hand, you are like, ‘Well, don’t eat all of that,’ but then the other is like, ‘You need to eat’” [W1a]. They indicated that individuals with eating disorders and obesity “have two different mentalities” [W1c] and are “polar opposites” [B1b]. Participants articulated that an intervention targeting eating disorder and obesity prevention “wouldn’t work, just because they are two different things” [L1c]. Women expressed confusion regarding combining resources for the conditions and stated, “If you are obese you might not necessarily have a[n] eating disorder, or like the other way around, if you have a eating disorder you might not necessarily be obese”
[B2c]. They also noted, “Some obese people, they don’t like being around a lot of smaller people” [B3e] and expressed concern that, “A lot of the things that you would use to combat obesity would be triggering to those who suffer from eating disorders” [W2d].

**Risk factors for eating disorders and obesity.** Perceived risk factors for the development of eating- and weight-related concerns, specifically in the context of disparate racial/ethnic groups, were considered. References to risk factors for eating disorders and obesity yielded four subthemes: (1) emotional eating (4/7 groups); (2) accessibility to resources (5/7 groups); (3) cultural values of food (4/7 groups); and (4) societal expectations (7/7 groups).

**Emotional eating.** Participants articulated eating in response to emotions as a risk factor for the development of an unhealthy relationship with food (10 references). They described “eating kind of emotionally” as a contributing factor to weight gain [W1e]. Participants endorsed eating emotionally themselves, reporting “stress eating hits you hard, especially in college” [B2e]. Women also recounted observing other women turning to food in response to their emotions. Some participants discussed watching their mothers eating in the absence of hunger to cope with uncomfortable feelings. Another articulated noticing a friend’s increasing weight due to the fact that she turned to food when she experienced “a lot of strain with her marriage” [L2a].

**Accessibility to resources.** Women described limited accessibility to both health information and healthy, nutrient dense foods as risk factors for eating-related concerns (15 references). Participants indicated that some individuals might not have access to caregivers that teach them “this is what you need to do in order to, like, be healthy” [B2c]. They further articulated the financial costs associated with buying healthy foods, stating that these options “are more expensive and are less accessible” [W1c]. Women described the price differences between hamburgers and salads, for example, and discussed that purchasing hamburgers is more
They recounted that finances impact food decisions in college, stating, “Buying food is like, it is a struggle, and finding something cheap that I can live off of… is not always the most healthy” [W1a]. Participants also recalled the impact of coming from a “good, stable financial home” [L1a] on the ability to purchase nutrient dense foods. Women commented, “Sometimes money is tight,” which might lead to over consumption of “a bad type of food” [L1a]. They recognized the “direct correlation between poverty and obesity” and described the impact of food deserts in lower income areas [W2b]. Women also commented that financial resources dictate an individual’s ability to participate in sports and “those activities that perpetuate a lifestyle that focuses on the body” [W2d].

*Cultural values of food.* Participants articulated that food preferences and cultural views about food also impact the development of weight-related conditions (27 references). Women described that the typical food consumed in Black households might be higher in salt and fat content than the typical food consumed in White households. White participants noted the frequent association between “fried food” and Black culture, and commented that this relation might explicate the presence of bigger body types in Black individuals [W1c]. Black participants substantiated this perception, stating, “We eat saltier foods. All of our foods have more seasoning, more grease, all of the things that the doctors say we don’t need to eat” [B2f]. One woman recounted, “I feel like in Black homes as well, we eat a lot of fried, Southern food, so that also plays a part… we’re gonna all eat you know this type of food, we’re not gonna, I don’t know, eat carrots” [B2b]. Black women agreed that Black culture promotes the consumption of foods often thought to contribute to weight gain.

Latina women articulated the view of food in Latin culture and described how the meaning of food might contribute to weight-related concerns. They indicated that food is used as
a way to show love for and take care of others. As a result, participants noted, “It is rude to reject food in Spanish culture,” [L1c], and stated denying food is seen as “disrespectful” [L2b]. One woman recalled how offering food is a sign of care, and its consumption demonstrates respect:

“My boyfriend is Black and when he came over, you know my mom always cooks for Christmas, she cooked lasagna, pasta all that, and so you know she is like ‘oh are you hungry?’ and he is like, ‘no I already ate’ and she still feeds him. And if he doesn’t want like a second piece of lasagna she gets really offended, she is like, ‘you didn’t like it; you didn’t like it? No you have to try it again.’ So I have seen it in other cultures, but in Hispanic they are like ‘are you hungry? You’re not hungry? What, are you sick?’” [L1a].

Indeed, Latina women recounted that family members “make you eat” [L1a] and endorsed experiencing pressure to “eat everything that is on your plate,” [L1b], or else, “you get in trouble” [L2c]. Participants agreed that pressure to be respectful and over consume food might unintentionally promote weight-related issues.

*Societal expectations.* Women across racial and ethnic groups reported the belief that pressure to achieve societal expectations of beauty influences the development of eating-related concerns (17 references). They described that “trying to achieve” appearance standards presented in the media impacts dietary decisions [B3b]. Participants recounted that exposure to social media networks triggers food modifications “because sometimes people may go on there and feel like they don’t weigh enough or they weigh too much” [B2b]. One participant recalled, “The media…that is what made my cousin have an eating disorder” [L2b]. Women also noted that experiencing “peer pressure…to be a certain way to be beautiful” affects dietary intake [B1a]. Further, participants indicated that pressure to achieve appearance expectations associated with particular sports impacts the development of weigh-related issues. For example, one participant described:

“I think girls that participate in sports, are more likely to have an eating disorder where you know, the center of their lives has a lot to do with their physical being. You know, you hear about eating disorders occurring a lot in sports like gymnastics and ballet, where
the size of the person really affects the ability for them to do the skill that they need to do” [W2d].

**Barriers to creating inclusive interventions.** Obstacles to developing and establishing culturally relevant programming were discussed. References to barriers to creating inclusive interventions fell into four subthemes: (1) stereotypes (6/7 groups); (2) vulnerability (6/7 groups); (3) diversity (7/7 groups); and (4) time (2/7 groups).

**Stereotypes.** Women noted that stereotypical assumptions and stigmatizing beliefs are incompatible with culturally relevant interventions (16 references). They commented, “You can’t play on stereotypes,” [W2b], and, “Don’t, like, stereotype” [L1a]. Participants of all race/ethnic backgrounds concurred that stereotypes are harmful and might “make some people uncomfortable” [W1b]. One woman recommended:

> “Try not to stereotype like, so hard, like to a point where it’s kind of offensive. Cause not a whole group of people like are defined as one thing, just how I was saying there may be all these people who are like Black/African American but they look different, you know. So it’s like, I feel like, maybe like, trying to like, use words where it’s not as like, offensive or stereotypical” [B2c].

Women agreed that statements such as, “All White people, they always do this,” [B2b], and, “All these Black girls are like that,” [B2f], focus on an individual’s background, opposed to her lived experience. They further recounted that comments such as, “All skinny people are mean, or all fat people are lazy,” [W1e], are inaccurate and hurtful. As such, they articulated that stereotypes induce stigmatizing attitudes, and stated that this might make individuals “ashamed to go to that resource” [B1b]. They stated, “We should not be shaming cultures,” [W1c], and indicated that programs should “take away the stigma,” [B1b], rather than reinforce it. Participants acknowledged that stereotypes would deter from cultivating inclusive programming.

**Vulnerability.** Participants noted that participating in an intervention and disclosing information heightened an individual’s sense of vulnerability, which could be a barrier to
inclusive programming (13 references). Women expressed concern regarding what others might think about their engagement in a program addressing eating disorders and obesity. They described a “certain vulnerability” that might accompany participation in such an intervention, as it demonstrates to others “that you are not okay with yourself” [W1d]. Participants also endorsed fear of “opening up,” [B2f], and stated feeling “worried about what others think” [B1a]. One participant commented, “People are afraid to share based on how they may think others may judge them…if they feel like other people don’t relate to them, they might be like, ‘Okay, well I’ll just not say anything about it’” [B2b]. Women agreed that needing to share, “personal emotional things with a lot of people,” [L2b], and, “talking about personal experiences that may be uncomfortable,” [L1c], would create discomfort and deter individuals from engaging in conversations surrounding eating and weight.

Diversity. All women noted cross-cultural differences as an obstacle to culturally sensitive programming (33 references). Specifically, they identified racial/ethnic differences in beauty standards as presenting a challenge, indicating, “If you specify one [definition of beauty], the other one will be like, ‘Oh, that is not how I see it,’” [L1c], and, “It’s going to be hard to mesh all of those [beauty standards] together; like with Black women being thicker, and White women being skinnier” [W1c]. More generally, participants highlighted challenges regarding the inability to relate to individuals from disparate backgrounds. Women recalled difficulties that might emerge when “not everybody can relate to that culture’s background, or cultural problems of that background” [Blb]. Participants agreed, “It’s easier to talk [when everybody is of the same racial/ethnic group] because you feel like you can relate more to the people around you” [B3d]. White women acknowledged difficulties racial/ethnic minority women might experience in a group of mostly White women, noting, “It would be much harder for them to not only relate
to the people in the group that they’re with, but to feel comfortable even sharing parts of themselves” [W2d].

Consistent with these comments, Black and Latina women reported that they would feel less comfortable in a group with “people from other cultures” [L2b]. They further noted that the presence of different others “influences how you portray what you’re saying” [B2b]. Black and Latina women discussed the experience of monitoring their speech in the presence of diverse individuals to avoid negative judgment. They stated, “With the whole race thing, like, it’s just hard to open up to people who don’t identify with you because it’s like you know, she’s gonna judge me, she’s gonna say this” [B2f]. Participants also indicated monitoring their speech in order not to “be offensive,” [B2e], or, “unintentionally, like, hurt someone” [L2b]. Women described their preference for groups consisting of similar others by reflecting on their participation in the focus groups. They stated, “I feel like I wouldn’t have been so open if there was a White person in here, just honestly,” [B3e], and, “I feel like this open discussion wouldn’t have been so open had other races been here” [B2f]. Participants agreed that in a group of individuals with similar backgrounds they “would be more open to opening up” and indicated this originates from feeling like they trust individuals within their racial/ethnic group more than outsiders [L1b].

*Time.* Latina women described lack of time as a barrier to regular engagement with an intervention (10 references). They expressed concern for the “amount of time,” [L1b], or, “dedication,” [L1c], required to participate. These women noted that they have more responsibilities than members of other racial or ethnic groups, stating, “We are a lot more responsible than other cultures, especially like, White culture” [L2b]. One participant recalled:

“I feel like in Latina culture, it is more like we’re working or studying or doing all this stuff, but there, in other cultures, it is very common that they don’t have a job and they
just go to school…Like all my Latina friends they all work and go to school, They don’t just sit at home and go to school and not do anything” [L1b].

**Facilitators of inclusive interventions.** Participants provided insightful feedback on ways to create cohesive intervention cohorts. Strategies facilitators could use to achieve this aim fell into five subthemes: (1) skilled facilitation (7/7 groups); (2) validation of individual differences (7/7 groups); (3) fostering connection (6/7 groups); (4) broad focus on appearance (5/7 groups); and (5) diversity (7/7 groups).

**Skilled facilitation.** Women described the presence of skilled facilitators as critical for culturally sensitive interventions (59 references). They noted that group leaders should be culturally aware, stating that to establish culturally sensitive programming, leaders “have to know what we’re talking about” regarding cross-cultural differences [L2b]. Women emphasized the importance of leaders “do[ing] some research” [B3e] regarding multicultural concerns so “they’re familiar with [cultural considerations]” [L2b] and able to understand the lived experience of participants. They discussed the advantages of having a facilitator “who is very educated in [cultural issues]” [B2c]. Participants agreed that facilitators must demonstrate knowledge regarding multicultural concerns to establish credibility and effectively create inclusive cohorts.

Women also suggested that facilitators should foster safe spaces and be able to manage group dynamics. They consistently described the importance of leaders doing “whatever [they] can to try to make it a safe space,” [B3d], and establishing “a safe space for everybody to come” [B2c]. Participants described safe environments as ones that “have a structure, like a strong foundation” [B1a]. They noted the importance of establishing ground rules for individuals “to feel comfortable” [L2a]. Women commented that establishing confidentiality, specifically, is critical to cultivating an environment of safety. Participants also noted that facilitators must have
the ability to navigate group dynamics appropriately. They indicated that if harmful or insulting comments are present, “The facilitator has to be there to basically, like, take control of the conversation” [B2f]. Women indicated that the development of safe spaces is reliant on facilitators, and described the importance of leaders recognizing “if someone were saying something offensive or stereotypical,” [B2c], and guiding participants towards more appropriate commentary. Moreover, they noted that leaders need to ensure that participants are “sensitive about weight,” [W1b], and, “that no one fat shames or skinny shames anyone” [W1e]. Women agreed that, “Whoever runs [the group] would have to be very, like, not biased. Like they would have to be able to, like, be the least judgmental person in the room” [B2c].

Further, women across groups noted that effective facilitators are relatable. They also commented that facilitators with a history of overcoming personal struggles with eating- and weight-related concerns might be especially helpful, as this facilitates relatability and establishes mutual understanding. Additionally, women recalled that this type of facilitator might provide inspiration to engage in positive changes. Participants described desiring leaders who “have [their] own life experiences to share and build off of,” [W2e], and are “open enough to talk about their experiences” [W3b]. They indicated they would “feel comfortable if there was like a leader kind of like …sharing their experience like with no problem,” and reported that if leaders modeled openness, participants might be more willing to disclose [L2b]. Participants further noted that a leader’s self-disclosure of personal struggles also might help establish her credibility, especially if she is conventionally attractive.

Validation of individual differences. Participants also highlighted validation, recognition, and respect of individual differences as crucial to the establishment of cohesive cohorts (43 references). They expressed that participants in heterogeneous groups need to be aware of and
“sensitive to” individual differences [L2b]. Women commented that, to create an inclusive community, diverse viewpoints must be acknowledged so “you’re not catering to one specific group” [B1b]. Participants recognized that differences exist even within racial/ethnic groups, and commented on the importance of validating individual perspectives. They described that diverse groups require recognition that one approach will not work for everyone; rather, they indicated the importance of “making sure, like, someone is constantly bringing up the fact that there is always another side” [W1e]. Participants articulated the importance of validating disparate viewpoints “to be understanding, even if you don’t agree” [L2c]. Indeed, women described the significance of being “respectful of other people you’re around” regardless of differences [B2f]. They indicated that diverse groups require “that everybody’s opinions are, like, respected, and that everybody has a chance to say what they wanna say” [B3d]. Women noted that establishing respect for different others helps individuals recognize “that, at the end of the day, [we] are all women, that [we] all deserve to be accepted; [we] all deserve to be thought that [we] are beautiful” [L1a]. Participants agreed that validating environments in which “no one is viewed higher than anyone; no one is better than the other” [L1b] are essential for developing inclusive and cohesive intervention groups.

*Fostering connection.* Women noted that group leaders should intentionally promote connection and group intimacy to create inclusive intervention cohorts (36 references). They stated that this goal could be achieved via facilitating small group discussions among participants, as well as activities in which participants can get to know one another. Women indicated that these efforts “build that interaction between everyone in the group, so that you gain trust and you feel more comfortable talking” [L1c]. Participants articulated, “Having everybody get to know each other on a personal level, in a sense, definitely creates a bit more of bond between the group”
[B1a]. They expressed that connections with others are established by identifying common
ground, and were achievable regardless of members’ racial/ethnic differences. One woman
recalled:

“You just have to make everyone feel like there’s something in here that they can identify
with that’s within everyone in here…Just the fact that we’re all women, we have
something in common. We’re all in college, that’s another thing in common. You know,
we’re all around the same age, that’s another thing that’s in common. So just point out
the things that are in common and not the things that we physically can see that aren’t in
common” [B2f].

Participants endorsed shared experiences and familiarity with other women in the group as a
motivator to continued engagement with a program. They indicated that connection with others
increases the likelihood of regular attendance. Further, women noted that developing intimacy
with other individuals who are “going through similar problems” [B1b] generates awareness that
individuals “are not alone” [L1b]. Participants articulated the importance of recognizing that
others experience similar challenges, and described relating to women with similar experiences
as supportive and uplifting.

_Broad focus on appearance._ Women also identified a broad appearance focus and the
promotion of acceptance of diverse body types as valuable to generating culturally inclusive
interventions (23 references). They noted that instead of teaching women how to obtain a certain
body type, programs focused on weight-related concerns “should definitely be more about
acceptance” [W1b]. Participants stated “teaching about things involving self-worth and
acceptance” [B1a] might help to improve appearance satisfaction in individuals of all races and
ethnicities. Women commented that genetics and physical ailments might impact individuals’
ability to achieve a certain body type, and said that a broad focus on acceptance is “more realistic”
[W1e]. Participants also noted differences in body types across cultures, and reported:
“[The programming] should be less about how our bodies should look, less about like, ‘oh I should look like Beyoncé,’ and stuff like that, and be more like appreciating your own body. Like talk about what you like about yourself because everybody focuses on what they don’t like about themselves and not what they do like. And so being able to bring that out would be more beneficial, I guess, as towards seeing yourself as a better person” [W1b].

Indeed, participants described that they would “feel more comfortable being a part of something that promoted wellness and the positive side, rather than focus on how to avoid [eating disorders and obesity]” [W2d]. They expressed a desire to “love how [we] look naturally,” [W1d], and described the benefits associated with recognizing that “there are, like, different types of pretty” [W1e].

**Diversity.** All women noted potential advantages of within group cross-cultural differences (27 references). Participants specially indicated that within-group diversity could increase awareness of the experiences of individuals different from oneself. One participant stated, “If you have diversity in the group then people would realize, oh it’s not just one group of people, like anybody and everybody can deal with it” [B1a]. They described this increased awareness as beneficial, especially for individuals of color, because so often their mental and physical health concerns are overlooked. As a result, participants noted that when these individuals experience eating or weight-related concerns, they often suffer in silence. They commented that diverse programming might help individuals recognize “there are other people that deal with this problem as well,” [B1a], and demonstrate that similar problems are experienced by “a lot of different people” [W2e]. Participants also recounted that diverse groups would enhance members’ awareness of different perspectives. One participant recalled:

“If you are looking for certain differences or viewpoints for certain things, even if you don’t relate to it or agree with it, maybe you can still get maybe something out of it. Like just a different look at something. I think that is important to have different views on certain situations because…you hear it from someone else it’s like, ‘oh I never looked at it that way’ and I think that could be beneficial” [L1b].
Women noted seeking new experiences to “learn different things,” [B3e], and indicated that “a bit more ethnicity, like, it would be nice” [L2c] for expanding perspectives and broadening awareness. They further noted downsides associated with homogeneous groups, agreeing that if participants are “all the same, there’s not much to offer” [B3e]. Participants recalled that interactions with similar others yields “a lot of the same information from, like, the same culture” [B2c]. They articulated that connecting with different others provides “an open understanding to understand that people are going to be different than you, but you may relate to them” [L1c].

**Manual Development.** Following completion of the focus groups, the INSPIRE intervention manual was developed to prevent obesity and eating disorders in young adult women. Initial creation of the manual was guided by prior research investigating the prevention of weight-related disorders. Focus group data informed modifications to the four-session, clinician-lead, DBI-based Body Project manual (Stice, Shaw, & Rohde, n.d.). Manual modifications are displayed in Table 5. Group guidelines, including confidentiality and respect for individual differences, were incorporated to foster a safe environment. Particular attention was given to removing the focus on thinness, and instead, emphasizing beauty ideals generally. Activities and role plays were revised to highlight overall appearance and incorporate more culturally relevant examples. Such examples included, “I just started wearing a waist trainer. It’s supposed to help me get that perfect hourglass shape!” and “I just read this article on Instagram about a new tummy tea. I’m going to start drinking the tea throughout the day and skip meals.” Of note, some existing examples regarding the thin ideal were retained in order to ensure content was still applicable to White women; the manual noted that they should be used with White women only.
Modifications to the four-session *Healthy Weight* manual were informed by focus group data indicating a preference for positive framing and body acceptance (Stice, Shaw, & Rohde, n.d.). For example, the definition of the “healthy ideal” in Stice and colleagues’ *Healthy Weight* manual stated, “the healthy ideal is a reasonably slender body, but one that has muscles and fat as well. Each is natural and serves important functions.” As this explanation suggests that an ideal body type exists, the definition of the healthy ideal was changed to the definition used in the two-session, peer-lead *Body Project* manual, which describes the healthy ideal as “the way your unique body looks when you are doing the necessary things to appropriately maximize your physical health, mental healthy, and overall quality of life” (Becker, Stice, Rohde, & Shaw, 2012). Additionally, explicit nutritional and physical activity guidelines were removed from the *Healthy Weight* manual based on past research suggesting that the inclusion of dietary principles weakened intervention efficacy (Stice, Rohde, et al., 2013). The manual underwent numerous iterations based on extant literature and feedback from experts in the field.
Table 5

*Overview of manual modifications*

<table>
<thead>
<tr>
<th>Manual</th>
<th>Modifications</th>
</tr>
</thead>
</table>
| DBI    | • Changed “thin-ideal” to “beauty ideal”  
        • Expanded focus on thinness to be more inclusive by emphasizing overall appearance  
        • Updated influences on appearance to include peer group, family, and cultural/ethnic background  
        • All “pressure to be thin” content was supplemented with other aspects of appearance (e.g., pressure to have a certain skin or hair type, be curvy in the right places, always look put together)  
        • Updated all activities and examples to be more inclusive and relevant to a broader group of women  
        • Created lists of role-play statements for use with all women, as well as statements for White women only  
        • Used the activity for the definition and origin of beauty ideals from the peer-lead manual, as it does not require use of fashion magazines, or visual imagery, to identify what the “perfect” body might look like  
        • Expanded introduction and overview to review all components of the program  
        • Included discussion of group rules and guidelines |
| HWI    | • Changed the definition of the “healthy ideal” used in the HWI to the definition used in the peer-lead DBI  
        • Removed explicit discussion of nutrition principles  
        • Removed explicit discussion of principles to facilitate increases in exercise  
        • Changed “slightly decrease your caloric intake” to “improve your dietary quality”  
        • Changed “increase your physical activity” to “enhance your physical activity”  
        • Changed “reaching a healthy weight is simply a function of limiting your intake of the foods highest in fat/sugar and increasing your caloric expenditure through physical activity” to “reaching a healthy weight is simply a function balancing the calories you consume with the calories you burn through activities of daily living and exercise”  
        • Introduced calories as the body’s fuel; stated that like a car needs gas, our bodies need calories  
        • Introduced the concept of listening to hunger & fullness cues; provided participants with the hunger and fullness scale  
        • After discussing emotional eating, participants were instructed to record the emotion they feel before and after each eating experience |
Phase 2

**Feasibility of Recruitment.** Recruitment yielded 127 interested women. Participants were recruited from The Wellness Resource Center’s programming at first-year orientation (39.4%; *n* = 50), the VCU student daily email (45.7%; *n* = 58), tabling events held in the University Study Commons (11.8%; *n* = 15), and flyers/advertisements distributed to university organizations (3.1%; *n* = 4). Based on the online screener, 49.6% (*n* = 63) were eligible and 50.4% (*n* = 64) were ineligible. Reasons for ineligibility at screening included meeting full criteria for threshold binge eating disorder (*n* = 33), bulimia nervosa (*n* = 8), obesity (*n* = 15), younger than 18 years (*n* = 5), and above 25 years (*n* = 3). Further, of the eligible participants, 46.6% (*n* = 30) were scheduled to complete pretest assessments. Reasons for inability to schedule pretest assessments included scheduling conflicts (*n* = 9), no response to email regarding eligibility status (*n* = 9), incorrect email address (*n* = 1), and withdrawal from school (*n* = 1). In order to keep intervention groups under ten participants, 15 eligible women were placed on a waitlist. One participant who was scheduled for pretest assessments did not show up; she did not respond to follow-up emails.

**Analyses of Attendance and Attrition.** Among participants who completed pretest assessments (*n* = 29), a total of 27 (93.1%) completed posttest and 27 (93.1%) completed 4-week follow-up assessments. The two participants who did not complete posttest and 4-week follow-up assessments withdrew before the start of the intervention due to scheduling conflicts. Thus, these participants did not receive any actual dosage of the intervention and were excluded from all analyses examining intervention effects, as a modified intent-to-treat approach was used (see Figure 1 for an overview of the sample sizes throughout the project). Independent samples t-tests examined potential differences in pretest scores for individuals who did and did not receive any
dosage of the intervention. Results did not indicate any significant differences between these groups (all $p$s > .05). A total of 27 participants were included in analyses examining intervention effects.

Attendance for each of the sessions was as follows: 96.3% ($n = 26$) attended session one; 100.0% ($n = 27$) attended session two; 85.2% ($n = 23$) attended session three; 85.2% ($n = 23$) attended session four; 77.8% ($n = 21$) attended session five; 70.4% ($n = 19$) attended session six; 92.6% ($n = 25$) attended session seven; and 70.4% ($n = 19$) attended session eight. Further, 25.9% ($n = 7$) of participants attended all sessions of the intervention, 37.0% ($n = 10$) attended seven sessions, 25.9% ($n = 7$) attended six sessions, and 11.1% ($n = 3$) attended five sessions. Of note, session 6 was held during the VCU Fall Reading Days; four participants informed therapists that they were traveling for the break.
Assessed for eligibility (n = 127)

Ineligible (n = 64)
- Full Threshold Eating Disorder (n = 41)
  - BN (n = 8)
  - BED (n = 33)
- Age (n = 8)
  - < 18 (n = 5)
  - > 25 (n = 3)
- BMI ≥ 30 (n = 15)

Eligible (n = 63)
- Incorrect Email (n = 1)
- No FU to Eligibility Email (n = 9)
- Scheduled for Baseline (n = 30)
- Withdrew from VCU (n = 1)
- Scheduling Conflict (n = 9)
- Waitlist (n = 15)

Baseline (n = 29)
- Session 1 (n = 26)
- Session 2 (n = 27)
- Session 3 (n = 23)
- Session 4 (n = 23)
- Session 5 (n = 21)
- Session 6 (n = 19)
- Session 7 (n = 25)
- Session 8 (n = 19)

Posttest (n = 27)

1 month FU (n = 27)

Included in analyses (n = 27)
2 excluded that did not receive any dosage of the intervention

Figure 1. Participant Flow Chart.
Ratings of Session Satisfaction.

**Descriptive statistics.** Responses to the ordinal-level items on the weekly satisfaction surveys suggested that participants were highly satisfied with INSPIRE (see Table 6): 99.4% said the topics were helpful; 99.4% believed the homework was helpful; and 100.0% reported enjoying the sessions. In addition, 99.4% were comfortable with their leaders and other group members. Lastly, 95.4% endorsed being “very satisfied” overall with the sessions.

Table 6

<table>
<thead>
<tr>
<th>Session satisfaction survey results</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you think the topics covered today were helpful?</td>
<td>0.6% 8.2% 91.2%</td>
</tr>
<tr>
<td>Do you think the homework for this week was helpful?</td>
<td>0.6% 15.8% 83.6%</td>
</tr>
<tr>
<td>Did you enjoy today’s session?</td>
<td>- 6.6% 93.4%</td>
</tr>
<tr>
<td>Did the group leaders make you feel comfortable?</td>
<td>0.6% 99.4%</td>
</tr>
<tr>
<td>Did the other group members make you feel comfortable?</td>
<td>0.6% 99.4%</td>
</tr>
<tr>
<td>How satisfied are you with the group so far?</td>
<td>- 5.5% 94.5%</td>
</tr>
</tbody>
</table>

**Qualitative responses.** Responses to open-ended questions from the session satisfaction surveys were analyzed for major themes and ideas. A summary of these responses is presented in Table 7.
Table 7

Session satisfaction survey responses to open-ended questions.

<table>
<thead>
<tr>
<th>Session</th>
<th>What did you like about today’s session?</th>
<th>What did you dislike about today’s session?</th>
<th>What has been beneficial about the group so far?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Honestly &amp; openness</td>
<td>Feeling pressure to talk</td>
<td>Not feeling alone &amp; relating to others</td>
</tr>
<tr>
<td></td>
<td>Deconstructing beauty ideals</td>
<td>Time restrictions on discussions</td>
<td>Open &amp; accepting atmosphere</td>
</tr>
<tr>
<td></td>
<td>Feeling comfortable and support by others</td>
<td>Awkward silences</td>
<td>Talking about critical issues</td>
</tr>
<tr>
<td></td>
<td>Positivity</td>
<td>Nervousness</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Role playing activities</td>
<td></td>
<td>Acceptance &amp; support from others</td>
</tr>
<tr>
<td></td>
<td>Deep discussions</td>
<td></td>
<td>Being able to talk with others about issues &amp; finding that other people struggle with the same issues</td>
</tr>
<tr>
<td></td>
<td>Vulnerability</td>
<td></td>
<td>Gaining confidence</td>
</tr>
<tr>
<td>3</td>
<td>Reading &amp; hearing letters</td>
<td>Tracking food &amp; exercise</td>
<td>Role plays</td>
</tr>
<tr>
<td></td>
<td>Role playing activities</td>
<td></td>
<td>Learning self-love</td>
</tr>
<tr>
<td></td>
<td>Deep discussions</td>
<td></td>
<td>Not feeling alone</td>
</tr>
<tr>
<td></td>
<td>Hunger &amp; fullness scale</td>
<td></td>
<td>Gaining confidence &amp; insight</td>
</tr>
<tr>
<td>4</td>
<td>Support</td>
<td>Content was triggering (re: food/diet)</td>
<td>Self-awareness/recognition</td>
</tr>
<tr>
<td></td>
<td>Sharing experiences</td>
<td>Repetitive</td>
<td>Learning how to take care of one’s body</td>
</tr>
<tr>
<td></td>
<td>Vulnerability</td>
<td>Time constraint</td>
<td>Hunger &amp; fullness scale</td>
</tr>
<tr>
<td>5</td>
<td>Helpful feedback from others</td>
<td>Time constraint</td>
<td>Helpfulness of the other participants</td>
</tr>
<tr>
<td></td>
<td>Not feeling alone</td>
<td>Repetitive goals</td>
<td>Gaining self-confidence/love</td>
</tr>
<tr>
<td></td>
<td>Learning new options on campus for exercise</td>
<td></td>
<td>Learning how to make healthy changes &amp; live a healthier life</td>
</tr>
<tr>
<td></td>
<td>Openness and acceptance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Sharing experiences w/others</td>
<td>Repetitive</td>
<td>Not feeling alone</td>
</tr>
<tr>
<td></td>
<td>Learning about emotions &amp; how to cope with emotions</td>
<td></td>
<td>Learning how to live a healthier life</td>
</tr>
<tr>
<td></td>
<td>Learning about the connection b/w food &amp; emotions</td>
<td></td>
<td>Growing as a person</td>
</tr>
<tr>
<td>7</td>
<td>Learning new ways to cope</td>
<td></td>
<td>Not feeling alone</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Support/positivity from others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gaining awareness re: emotions</td>
</tr>
<tr>
<td>8</td>
<td>Reflecting on accomplishments</td>
<td>Final session</td>
<td>Everything</td>
</tr>
<tr>
<td></td>
<td>Positivity</td>
<td></td>
<td>Not feeling alone</td>
</tr>
<tr>
<td></td>
<td>Overview of what was learned</td>
<td></td>
<td>Support from others</td>
</tr>
<tr>
<td></td>
<td>Planning for the future</td>
<td></td>
<td>Learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Growth</td>
</tr>
</tbody>
</table>
was to talk to everyone,” and “how deep the conversations always get.” Several responses mentioned the supportive community of the group and feeling comfortable with other group members, with participants stating they enjoyed “the inclusiveness and bonding” and “the sense of community.” Participants indicated feeling the sessions generated positivity, reporting valuing “everyone’s overwhelming positivity and inclusiveness” and “the positive vibe.” They stated appreciating “everyone being so vulnerable” and the opportunity to share experiences with others and recognize that they are not alone. Many women stated, “everyone was so relatable in their responses” which helped “reassure [them] that [they were] not alone.” Participants also reported valuing the chance to “see everyone reach their goals and strive” and stated they benefitted from receiving group feedback.

More specifically, many participants noted they enjoyed the interactive role-plays that facilitated “learning how to respond to people talking about [beauty] ideals” and helped “build confidence.” They also stated they appreciated “deconstructing beauty ideals” and “a chance to talk about body image realistically, not just conceptually.” Participants indicated they further enjoyed the activity that involved writing a letter to a younger girl about beauty ideals. They reported appreciating the focus on health opposed to beauty, and liked learning “healthy things [they] can do to feel better.” Many women indicated enjoying the hunger and fullness scale and liked learning “different healthy [food] options” and “ideas for exercise.” Participants further commented that they valued the chance to learn about emotions and “recognize not all emotions are bad.” They stated appreciating the discussion regarding the purpose of emotions and benefitting from learning about the relation between emotions and food. Many women reported liking “learning new skills to cope with emotions;” specifically, they commented frequently on
the self-soothing and distraction techniques. Finally, participants indicated they appreciated the chance to “reflect on all we’ve accomplished” and “think of practical ways to carry on lessons.”

Potential areas of improvement. Most participants indicated that they disliked “nothing” in the INSPIRE sessions. Yet, among those who did note some dislikes, the most common related to time limits, (e.g., “How we couldn’t talk as much with each other because of time restrictions.”) Some responses addressed feeling pressure to talk. Further, some participants indicated disliking “the repetitive goals” related to making eating and exercise changes. Two participants reported disliking tracking food and exercise. One participant also indicated, “some of the talking about food was challenging and triggering.” Finally, in the last session, participants discussed feeling sad that INSPIRE was over.

Perceived benefits. When asked about the benefits of the group, participants most frequently commented on group dynamics. They repeatedly mentioned the benefits of “the openness and accepting atmosphere,” stating, “It’s nice to be in an environment of a group of girls who are, right away, accepting of who you are.” Multiple women commented on the helpfulness of “sharing experiences” with other group members, hearing the experiences of others, “realizing [we’re] not alone,” and “relating to other people.” Participants expressed gratitude for the supportiveness of the group and the friendships established.

With respect to intervention content, participants appreciated the “safe space” to “talk openly about body image” and “learn new tactics for combatting beauty ideals.” They appreciated the roles plays and critical discussions related to beauty ideals and the focus on challenging the status quo that facilitated “learning how to love myself.” Participants reported that engaging in these conversations “has made [us] more [sic] happier about who [we are] inside and out.” They stated that focusing on eating and exercise habits facilitated “motivation to try
new things” and helped them “see [our] bodies, food, and exercise in a new and less intimidating light.” Women indicated that discussing positive behavioral changes was beneficial and helped them “learn how to live a more positive and healthier life.” Participants also liked the hunger and fullness scale, and noted it enhanced their self-awareness. They also reported enjoyed learning about emotions and strategies to regulate them, stating it facilitated “feeling more in control of my body and emotions.” Overall, participants indicated benefiting from many aspects of the program, reporting, “Literally everything we’ve learned is applicable to life in general. It’s been awesome and insightful.” They stated that all of the topics covered were informative, and indicated noticing tangible changes. Women reported that participation in INSPIRE facilitated increases in confidence, self-appreciation, acceptance of others, positive health behaviors, body acceptance, self-love, and overall growth as a person.

**Ratings of Program Acceptability.**

**Descriptive statistics.** Examination of ordinal-level items on the exit questionnaire demonstrated that participants reported high satisfaction with the overall program (see Table 8): 96.3% indicated it addressed their concerns about healthy living, 85.1% believed it helped them regulate their emotions better, 88.9% reported it helped them appreciate their appearance more, 55.5% indicated it helped improve their eating habits, and 96.3% stated they would recommend the group to another woman.
Table 8

*Exit questionnaire results*

<table>
<thead>
<tr>
<th>Frequency (n)</th>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Neither Disagree nor Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoyed attending INSPIRE.</td>
<td></td>
<td></td>
<td>7.4% (2)</td>
<td>29.6% (8)</td>
<td>63.0% (17)</td>
</tr>
<tr>
<td>I thought the group was boring.</td>
<td>51.9% (14)</td>
<td>37.0% (10)</td>
<td>7.4% (2)</td>
<td>3.7% (1)</td>
<td></td>
</tr>
<tr>
<td>The INSPIRE session topics addressed my concerns about healthy living.</td>
<td></td>
<td>3.7% (1)</td>
<td></td>
<td>33.3% (9)</td>
<td>63.0% (17)</td>
</tr>
<tr>
<td>There were too many sessions.</td>
<td>40.7% (11)</td>
<td>25.9% (7)</td>
<td>18.5% (5)</td>
<td>14.8% (4)</td>
<td></td>
</tr>
<tr>
<td>Participating in this group helped me deal with my emotions better.</td>
<td>3.1% (1)</td>
<td>3.1% (1)</td>
<td>7.4% (2)</td>
<td>48.1% (13)</td>
<td>37.0% (10)</td>
</tr>
<tr>
<td>Participating in this group helped me appreciate my appearance more.</td>
<td>7.4% (2)</td>
<td></td>
<td>3.7% (1)</td>
<td>33.3% (9)</td>
<td>55.6% (15)</td>
</tr>
<tr>
<td>My eating habits have improved because of participating in this group.</td>
<td>11.1% (3)</td>
<td>11.1% (3)</td>
<td>22.2% (6)</td>
<td>37.0% (10)</td>
<td>18.5% (5)</td>
</tr>
<tr>
<td>I felt comfortable sharing/participating in the group.</td>
<td></td>
<td>3.7% (1)</td>
<td>3.7% (1)</td>
<td>25.9% (7)</td>
<td>66.7% (18)</td>
</tr>
<tr>
<td>I felt comfortable with the other group members.</td>
<td>3.7% (1)</td>
<td></td>
<td></td>
<td>18.5% (5)</td>
<td>77.8% (21)</td>
</tr>
<tr>
<td>I felt comfortable with the group leaders.</td>
<td></td>
<td></td>
<td></td>
<td>11.1% (3)</td>
<td>88.9% (24)</td>
</tr>
<tr>
<td>I would recommend this group to another woman.</td>
<td>3.7% (1)</td>
<td></td>
<td></td>
<td>14.8% (4)</td>
<td>81.5% (22)</td>
</tr>
</tbody>
</table>
**Qualitative responses.** Responses to open-ended questions from the exit questionnaires were analyzed for major themes and ideas. A summary of responses to the open-ended questions is presented in Table 9.
### Table 9

**Exit questionnaire responses to open-ended questions.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Responses</th>
</tr>
</thead>
</table>
| How did you feel about attending the group sessions? | • Enjoyable/fun  
• Informative  
• Personal growth  
• Self-knowledge/appreciation  
• Community |
| What did you think of the topics covered? | • Enjoyable  
• Relevant  
• Useful/helpful |
| What parts of the group were most helpful to you? | • Sharing personal experiences  
• Activities/role plays  
• Challenging beauty ideals  
• Hunger & fullness scale  
• Emotional education |
| Least helpful? | • Nothing  
• Tracking eating & exercise  
• Homework |
| What other topics do you with were in the group? | • None/not sure  
• More discussion re: mental health  
• Education re: eating disorders  
• Appearance concerns in interpersonal relationships  
• Intersectional approach |
| What did you think about the length and number of sessions? | • Good/perfect  
• Length was too long |
| What is the most important thing you learned from the group? | • Self love/acceptance  
• Body acceptance  
• Validity of emotions  
• Knowledge re: healthy behaviors  
• Solidarity |
| What has been the hardest part of being in the group? | • Home exercises  
• Following through with goals  
• Time commitment  
• Vulnerability  
• Self acceptance |
| Has this program impacted your life in any way? If so, how? | • Improved ability to care for self  
• Enhanced ability to reach out for support  
• Improved body appreciation  
• Increased healthy habits re: diet and exercise  
• Decreased self-criticism  
• Improved confidence  
• Increased emotional awareness  
• Established friendships  
• Shifted perspective of others |
| Do you have any other suggestions for future groups like this one? | • None or “keep doing what you’re doing”  
• Increase accessibility  
• Increase number of sessions  
• Limit pressure to speak  
• Shorten sessions |
Feelings about sessions. Most participants stated that the sessions “were very fun and engaging” and stated that they “really enjoyed attending the sessions.” Participants also said they appreciated the information presented, and indicated that the program “was truly an educational experience.” Many individuals mentioned experiencing personal growth as a result of the information discussed. One woman wrote, “I overcame some personal obstacles and I’m grateful I was able to learn and grow in this study.” More specifically, many participants reported learning about themselves and gaining a new sense of appreciation for who they are. For example, one participant commented, “I felt good about attending the group sessions because it was a good opportunity to learn about how to live a healthy lifestyle and appreciate myself for who I am.” Further, women frequently highlighted the benefits of the group setting and the chance to talk with others and share their experiences. One woman wrote, “It helped me see that I am not alone in feeling the way that I do about many topics that we discussed.” Another participant indicated, “I loved being a part of such a supportive and friendly group. We all began to love ourselves more (by what I have seen) and have more confidence.” In contrast to this positive feedback, however, two participants reported dissatisfaction with the second half of the program, stating that they enjoyed the beginning sessions, “but some of the topics became repetitive and uninteresting near the end.”

Thoughts on topics covered. For the most part, participants indicated enjoying the topics covered in the program. One woman noted, “I enjoyed learning about combatting beauty ideals and I loved learning about healthy ways to stay active. Coping mechanisms for stress was also a good topic.” Another stated, “I thought were was a good range from ideal beauty standards to healthy standards to handling conflict and emotions.” Participants also reported that the information presented was not only relevant, but also beneficial. Comments included: “They
were relevant and helpful;” “They were mostly very useful, and provided us with good information and tools;” and, “They were very relatable and worked well with everyone, because everyone could relate to the topic in some way or another.” Further, participants touched on appreciating the space to discuss topics not often addressed. Women stated, “It was awesome to talk about some things that are usually never discussed,” and, “[We] never would have thought more about emotions or the right way of eating, or my appearance if it weren’t for this study because everything ties in together and [we] wish we could talk more about them.” Finally, two participants indicated they were not fond of the discussion regarding food and exercise, stating, “[We] liked the topics about body ideals but not so much about food/exercise.”

Most helpful. Comments regarding “sharing personal experiences” were most frequently mentioned as the most helpful part of INSPIRE. Participants indicated that “just talking about what other members were experiencing,” “having other individuals to open up around,” and, “talking to others that understood what [we were] going through” were beneficial components of the program. Additionally, many women recalled that the interactive activities and role-plays “really helped instill the information we covered into our lifestyles.” Specifically, participants mentioned that activities and discussions that challenged societal beauty ideals were advantageous. They reported, “Practicing responses with the leaders as to how to respond to people talking about negative body ideals,” and, “Learning how to accept [ourselves] for who [we are] instead of listening to what society says [we] should be,” were beneficial. Further, some participants indicated that the “eating and food scale was very helpful” and reported appreciating practicing mindful eating. Finally, a few women stated they liked the sessions that focused on mental health and explored the link between emotions and eating behaviors.
Least helpful. The most frequent response to the item assessing the least helpful aspects of INSPIRE was “nothing at all.” Yet, a few women reported that content related to food and exercise was triggering. Specifically, some participants stated that “tracking what [they] ate that day” was not beneficial and “made [them] anxious and feel embarrassed.” Finally, a few individuals reported that “some of the homework” was not helpful.

Suggestions for other topics. Many participants replied “none” or “not sure” in response to topics they wish were covered in the program. Individuals frequently indicated, “Pretty much everything was covered,” “We covered so much,” and, “The topics we had were good.” Yet, some women recommended aspects that might beneficial to include. The most common suggestion was to address broader mental health concerns. Individuals reported that they “wish[ed] we could’ve gone a little further with mental health,” and recommended, “directly talk[ing] about mental health, like depression.” More specifically, a few participants proposed, “talking about eating disorders,” and “learning more about misconceptions about eating disorders.” Further, a couple of women endorsed a desire for more information regarding “how to be confident around friends and significant others when your figure is exposed.” Finally, two participants indicated that a “more intersectional approach would be nice.”

Length and number of sessions. Most participants indicated that the length and number of sessions were “good,” “perfect,” or “decent.” Yet, five individuals reported that one and a half hours was too long. For example, “The number [of sessions] was great, but that they were a bit long. [We] would have preferred that they were only an hour.” In contrast, two women stated, “Sometimes it felt like the sessions were too short.”

Most important thing learned. Participants frequently reported that cultivating self-acceptance was the most important thing they learned from the group. They reported learning
how “to love and accept [themselves],” and, “to love [themselves] no matter what other people think or say.” Specifically, many women recalled learning body love and acceptance. For example, one participant recalled learning, “I am worth it and I am beautiful no matter what anyone else says. I love myself, my appearance, and that’s all that matters.” Another women indicated discovering, “that you don’t have to fit a certain image; you’re already perfect.” Participants also often commented on increased awareness regarding emotions and understanding that “all emotions are equally valid and [we] shouldn’t be ashamed to express them in a healthy manner.” Further, some women mentioned learning about the importance of striving “for health and not ideals,” and “how to make better decisions with food and working out.” More specifically, participants reported discovering that, “Healthy living looks different for everyone,” and, “Diet and exercise don’t have to be something that is routine or obligatory. It can/should be fun; something to look forward to.” Finally, some group members commented on recognizing, “That we truly are never alone and that there are always people to reach out to.”

Hardest part of participation. The most commonly reported challenges associated with group participation were completing the home exercises and following through with the eating and exercise goals. Women indicated, “remembering to complete some of the homework and challenges,” and, “going through with our goals” were difficult. Further, some participants commented on the time commitment of the group, and stated, “attending every week” and “committing to a weekly routine” was tough. Alternatively, many women stated that “sharing personal information” and “opening up about certain things” were difficult. Finally, some indicated “Learning how to love and accept myself,” and, “Learning to not judge myself and/or others” were challenging.
Life impact. Most participants (n = 25) indicated that the program had a positive impact on their lives. Specifically, many reported increased body appreciation; for example, one participant responded:

“Yes, because when I walked into this program, I never loved my body, the way I looked, I never accepted myself for the way I was; but, after I realized that no one else's opinions matter, I am starting to love myself more and more everyday and I can't thank this program enough!”

Individuals indicated that participation in INSPIRE helped them “really reach out to friends with support and care,” and be “better able to take care of [themselves].” They also commented that INSPIRE “has given [them] the tools to improve [their] self-esteem and live a healthier life with healthy foods and exercise.” Women reported that they could “eat more diverse food,” “no longer feel a need to only eat salads to feel healthy,” and are “a lot less hard on [themselves] now when it comes to weight.” Participants indicated feeling “more confident” and “more comfortable in [their] skin.” Individuals recalled increased ability to “pay attention to [their] emotions” and “take into account how [they] feel.” Participants also frequently commented on the “amazing” friends the group fostered. Further, women reported that their participation also shifted their perspective of others, stating, “It has definitely changed the way [we] think of [ourselves] and how [we] think of others,” and, “It make [us] more respectful of [our bodies] and others.” One participant even indicated that she use the information to help her peers become more accepting of their bodies.

Suggestions for future groups. The most common response to the item assessing suggestions for future groups was “none.” Multiple participants recommended, “just keep doing what you’re doing,” and suggested offering INSPIRE more often on campus to increase accessibility. For example, one participant stated, “This was amazing and helped me grow as a person, so I think it should be available to all girls.” Some women even expressed a desire for
more sessions; specifically, a couple individuals stated that more sessions would allow time for participants to speak and generate deeper discussion. Further, two participants indicated that the group should include all genders. Two women recalled feeling pressure to speak during uncomfortable topics and recommended that participants not answer questions in a circle. Some indicated the sessions should be shortened. Finally, one person suggested that the intersectionality of race and economic status be addressed.

**Therapists’ Ratings of Feasibility.**

**Descriptive statistics.** INSPIRE therapists viewed INSPIRE as highly feasible (see Table 10): 100.0% reported that they were able to cover all content; 100.0% believed the topics were appropriate; 100.0% indicated groups members enjoyed the content; and 97.9% believed group members understood the content.

Table 10

<table>
<thead>
<tr>
<th>Therapist feasibility results</th>
<th>Frequency</th>
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<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>We were able to cover all of the materials included in the manual for today’s session.</td>
<td>-</td>
</tr>
<tr>
<td>The topics covered were appropriate for the group.</td>
<td>-</td>
</tr>
<tr>
<td>Group members seemed to enjoy the content.</td>
<td>-</td>
</tr>
<tr>
<td>Group members appeared to understand the content.</td>
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</table>

**Qualitative responses.** Therapists’ open-ended responses indicated that the DBI content elicited the most participant enthusiasm and engagement. Specifically, they indicated that participants really enjoyed the role-plays and discussions surrounding beauty ideals. Leaders stated observing a shift in enthusiasm with the introduction of the HWI content. They reported
that the HWI content was more psychoeducational and less interactive, and suggested that more
activities should be included to maximize participant engagement. Further, leaders noted that
some of the HWI information felt repetitive. Nonetheless, therapists reported that participants
appreciated the chance to provide one another feedback on individualized exercise and dietary
goals, enjoyed receiving information about alternative ways to engage in physical activity, and
valued the hunger and fullness scale.

Regarding the DBT content, leaders stated that participants enjoyed learning about
eémotions and were very excited about the distraction and self-soothing techniques. Yet, they
indicated that some components of the emotion regulation and distress tolerance skills training
seemed difficult for participants to comprehend. Therapists suggested building a solid foundation
in these areas to increase understanding (i.e., introducing emotional content earlier and
integrating it more with food and dietary information) and incorporating more specific examples
of these skills to demonstrate application.

Therapists further reported that one of the biggest challenges to implementation was
balancing covering session content with participant engagement. Leaders stated that some
sessions were lengthy; therefore, time management was difficult. Additionally, one group had 10
participants; leaders of this group stated that they felt it was too large, as it was difficult to
engage all participants and facilitate in-depth conversation. Another challenge leaders identified
was balancing participation between more talkative and quieter participants without feeling like
they were pressuring individuals to speak. They reported trying various strategies to maximize
participation from all group members while respecting individuals' desire to “pass.” Finally,
therapists stated that it was tough to navigate health comments that emerged in the role-plays
(e.g., suggestion that if a participant is unhappy with their body, they can exercise at the gym to
tune their physique). They recommended discussing ways to handle this situation during facilitator training.

Informal discussion with the therapists yielded feedback regarding the overall intervention. Group leaders stated feeling like the different content areas were sometimes too disconnected (e.g., apparent shifts between DBI, HWI, and DBT content; distinct information was not integrated throughout the intervention) and suggested improving cohesiveness throughout the manual (e.g., incorporating emotion regulation content earlier in the intervention and discussing early in INSPIRE how this information is relevant to eating and exercise). Overall, therapists reported that participants seemed to both benefit from and enjoy their experience in INSPIRE.

**Intervention Effects.** Table 11 presents means and standards deviations for outcome variables over time.

Table 11

<table>
<thead>
<tr>
<th>Raw means and standard deviations for outcome variables over time</th>
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<tr>
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<tr>
<td>BMI</td>
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<td>EDE-Q Global</td>
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<tr>
<td>EDE-Q Shape/Weight</td>
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<tr>
<td>BIQ</td>
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<tr>
<td>TFEQ</td>
</tr>
<tr>
<td>EEI</td>
</tr>
<tr>
<td>DRES</td>
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<tr>
<td>PANAS-X</td>
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<tr>
<td>IBSS-R</td>
</tr>
<tr>
<td>DERS</td>
</tr>
<tr>
<td>BFS Fat</td>
</tr>
<tr>
<td>BFS Fiber</td>
</tr>
<tr>
<td>PAR</td>
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</tbody>
</table>

*Note.*

*a* Indicates significant changes from pretest to posttest.

*b* Indicates significant changes from pretest to 4-week follow-up.

*c* Indicates significant changes from posttest to 4-week follow-up.
Risk for Obesity. The assumption of sphericity was violated (Mauchley’s $W = .486; p < .001$); thus, the Greenhouse-Geisser epsilon was used. Results demonstrated that BMI significantly increased over time, $F(1.32, 34.34) = 4.37, p = .034$, partial $\eta^2 = .144$. Repeated planned contrasts using a Bonferroni correction did not reveal significant differences in BMI from pretest to posttest ($p = .761$) or pretest to 4-week follow-up ($p = .071$). However, BMI significantly increased over time from posttest to 4-week follow-up ($p = .017$).

Eating Pathology. The assumption of sphericity was violated (Mauchley’s $W = .428; p < .001$); thus, the Greenhouse-Geisser epsilon was used. Results revealed that Global EDE-Q significantly decreased over time, $F(1.27, 33.08) = 10.07, p = .002$, partial $\eta^2 = .279$. Repeated planned contrasts using a Bonferroni correction demonstrated that eating pathology significantly decreased from pretest to posttest ($p = .044$) and from pretest to 4-week follow-up ($p = .002$).

Body Dissatisfaction. The assumption of sphericity was violated (Mauchley’s $W = .363; p < .001$); thus, the Greenhouse-Geisser epsilon was used. Results indicated that EDE-Q Shape/Weight Concern significantly decreased over time, $F(1.22, 31.76) = 7.13, p = 0.008$, partial $\eta^2 = .215$. Repeated planned contrasts using a Bonferroni correction did not reveal significant differences in body dissatisfaction from pretest to posttest ($p = .067$). However, body dissatisfaction significantly decreased over time from pretest to 4-week follow-up ($p = .015$).

Appearance Dissatisfaction. The assumption of sphericity was violated (Mauchley’s $W = .702; p = .012$); thus, the Greenhouse-Geisser epsilon was used. Results demonstrated that BIQ scores significantly decreased over time, $F(1.54, 40.06) = 9.24, p = .001$ partial $\eta^2 = .262$. Repeated planned contrasts using a Bonferroni correction indicated that appearance dissatisfaction significantly decreased from pretest to posttest ($p = .009$) and from pretest to 4-week follow-up ($p = .008$).
**Disinhibition.** The assumption of sphericity was violated (Mauchley’s $W = .421; p < .001$); thus, the Greenhouse-Geisser epsilon was used. Results indicated that TFEQ-Disinhibition significantly decreased over time, $F(1.26, 32.93) = 7.12, p = .008$ partial $\eta^2 = .215$. Repeated planned contrasts using a Bonferroni correction revealed that the disinhibited eating significantly decreased from pretest to posttest ($p = .026$) and from pretest to 4-week follow-up ($p = .032$).

**Eating Expectancies.** The assumption of sphericity was violated (Mauchley’s $W = .509; p < .001$); thus, the Greenhouse-Geisser epsilon was used. Results revealed that EEI scores did not significantly change over time $F(1.34, 34.87) = 3.28, p = .067$ partial $\eta^2 = .112$.

**Dietary Restraint.** Results demonstrated that DRES scores significantly decreased over time, $F(2, 52) = 14.31, p < .001$ partial $\eta^2 = .355$. Repeated planned contrasts using a Bonferroni correction revealed that restrained eating significantly decreased from pretest to posttest ($p = .002$) and from pretest to 4-week follow-up ($p < .001$).

**Negative Affect.** The assumption of sphericity was violated (Mauchley’s $W = .398; p < .001$); thus, the Greenhouse-Geisser epsilon was used. Results indicated that PANAS-X scores significantly decreased over time, $F(1.24, 32.27) = 4.42, p = .036$ partial $\eta^2 = .145$. Repeated planned contrasts using a Bonferroni correction revealed that negative affect significantly decreased from pretest to posttest ($p = .048$) and from pretest to 4-week follow-up ($p = .035$).

**Thin-Ideal Internalization.** Results demonstrated that IBSS-R scores significantly decreased over time $F(2, 52) = 13.26, p < .001$ partial $\eta^2 = .337$. Repeated planned contrasts using a Bonferroni correction indicated that thin-ideal internalization significantly decreased from pretest to posttest ($p < .001$) and from pretest to 4-week follow-up ($p < .001$).
**Emotion Regulation.** The assumption of sphericity was violated (Mauchley’s $W = .580; p = .001$); thus, the Greenhouse-Geisser epsilon was used. Results revealed that DERS scores significantly decreased over time $F(1.41, 36.62) = 13.72, p < .001$ partial $\eta^2 = .345$. Repeated planned contrasts using a Bonferroni correction demonstrated that problems with emotion regulation significantly decreased from pretest to posttest ($p = .001$) and from pretest to 4-week follow-up ($p = .002$).

**Fat Intake.** Results indicated that BFS Fat total significantly decreased over time, $F(2, 52) = 11.18, p < .001$ partial $\eta^2 = .301$. Repeated planned contrasts using a Bonferroni correction revealed that fat intake decreased significantly from pretest to posttest ($p = .018$) and from pretest to 4-week follow-up ($p < .001$).

**Fiber Intake.** The assumption of sphericity was violated (Mauchley’s $W = .598; p = .002$); thus, the Greenhouse-Geisser epsilon was used. Results demonstrated that BFS Fiber total significantly decreased over time, $F(1.43, 37.09) = 6.23, p = .010$ partial $\eta^2 = .193$. Repeated planned contrasts using a Bonferroni correction indicated that fiber intake did not significantly decrease from pretest to posttest ($p = .307$). However, fiber intake deceased significantly from pretest to 4-week follow-up ($p = .006$).

**Physical Activity.** Results suggested that exercise frequency did not change over the course of the intervention, $F(2, 52) = 2.30, p = .111$ partial $\eta^2 = .081$.

**Ethnic Identity.** Bivariate correlations did not reveal any relation between ethnic identity and outcome variables at 4-week follow-up. Correlations are presented in Table 12.

**Family History.** Bivariate correlations demonstrated significant relations between family history of obesity and BMI ($p < .05$), as well as family history of mental illness and negative
affect \( (p < .05) \). No other correlations between outcome variables at 4-week follow-up and family history were significant. Correlations are presented in Table 12.
Table 12

**Bivariate correlations between outcome variables at FU and ethnic identity and family history**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Ethnic identity</th>
<th>Family h/o obesity</th>
<th>Family h/o eating disorder</th>
<th>Family h/o mental illness</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>-.368</td>
<td>.405*</td>
<td>.079</td>
<td>.064</td>
</tr>
<tr>
<td>EDE-Q Global</td>
<td>-.048</td>
<td>-.151</td>
<td>.123</td>
<td>.262</td>
</tr>
<tr>
<td>EDE-Q</td>
<td>-.032</td>
<td>-.127</td>
<td>.193</td>
<td>.250</td>
</tr>
<tr>
<td>Shape/Weight</td>
<td>.120</td>
<td>-.196</td>
<td>.223</td>
<td>.154</td>
</tr>
<tr>
<td>BIQ</td>
<td>-.033</td>
<td>.143</td>
<td>.022</td>
<td>.052</td>
</tr>
<tr>
<td>PAR</td>
<td>.185</td>
<td>-.011</td>
<td>-.081</td>
<td>-.205</td>
</tr>
<tr>
<td>BFS Fiber</td>
<td>.158</td>
<td>-.047</td>
<td>.166</td>
<td>.189</td>
</tr>
<tr>
<td>BFS Fat</td>
<td>-.196</td>
<td>-.131</td>
<td>.293</td>
<td>.116</td>
</tr>
<tr>
<td>IBSS-R</td>
<td>-.105</td>
<td>-.178</td>
<td>.324</td>
<td>.131</td>
</tr>
<tr>
<td>DRES</td>
<td>-.190</td>
<td>.041</td>
<td>.010</td>
<td>.396*</td>
</tr>
<tr>
<td>PANAS-X</td>
<td>-.116</td>
<td>-.081</td>
<td>.069</td>
<td>.303</td>
</tr>
<tr>
<td>DERS</td>
<td>-.178</td>
<td>-.124</td>
<td>.306</td>
<td>.278</td>
</tr>
<tr>
<td>TFEQ</td>
<td>-.206</td>
<td>-.094</td>
<td>-.025</td>
<td>.251</td>
</tr>
</tbody>
</table>

*p < .05.

**Intervention Fidelity.** Undergraduate research assistants coded a random sample of sessions (25%) to examine facilitator adherence to the manual. Group leaders covered 100% of exercises and discussion points included in the manual. Because the intervention used a highly scripted manual, this approach to assessing intervention fidelity was deemed sufficient.

**Discussion**

This study assessed the feasibility, acceptability, and preliminary outcomes of INSPIRE, a prevention program targeting both obesity and eating disorders in a diverse group of young adult women. The following sections review the results and place them in the larger context of the field. Implications, strengths, and limitations of this research are also discussed.

**Formative Research**
In the first phase of the study, focus groups with young adult women explored associations among race, ethnicity, and appearance ideals. The INSPIRE intervention manual was informed by these qualitative data.

**Beauty standards.** Although White women overwhelmingly reported experiencing pressure to be thin, they perceived this standard of extreme thinness as unique to their racial/cultural group. Indeed, Black and Latina women reported idealizing a more curvaceous figure and denied experiencing pressure to obtain the thin ideal. Rather, these women perceived the White standard of thinness as “too skinny” and indicated that extremely slender bodies are viewed negatively within their racial/ethnic communities. These results are consistent with research indicating that Black women resist the thin-ideal (Rubin, Fitts, & Becker, 2003), and Latina women are critical of ultra thin body shapes (Romo, Mireles-Rios, & Hurtado, 2015; Viladrich, Yeh, Bruning, & Weiss, 2009). Findings indicate that Black and Latina women are unlikely to view thinness as relevant, highlighting the need for interventions targeting appearance concerns to incorporate more diverse narratives regarding body shape and size.

Importantly, body shape and weight did not emerge as the most prominent factor influencing attractiveness within Black and Latinx communities. Rather, Black women noted that skin tone, hair, and facial features were significant components of idealized beauty within their race. Previous research documents that for Black women, greater satisfaction with one’s skin color is positively associated with overall appearance ratings (Falconer & Neville, 2000), and that hair texture, length, and color are important aspects of attractiveness (Capodilupo & Kim, 2014). Further, traditional African facial features (e.g., bigger noses and lips) have emerged in past literature as significant to Black Americans’ evaluations of attractiveness (Neal & Wilson,
Findings suggest that interventions targeting appearance concerns among Black women should address body shape as well as other physical features especially relevant to this group.

Latina women identified overall presentation, skin, and hair as critical elements of beauty within their ethnic group. These results are consistent with prior research indicating that style is a key aspect of Latina aesthetic ideals, and hygiene and grooming are prioritized over bodily control and manipulation (Rubin et al., 2003). Additionally, tan skin emerged in past literature as the ideal skin color, while pale skin is viewed as unattractive, and dark skin as problematic (Stephens & Fernández, 2012). The current study extends prior work on Latina standards of appearance and suggests that long, dark hair is glorified within this culture. Results demonstrate that incorporating other aspects of physical features beyond body shape might increase applicability of interventions targeting appearance concerns among Latina women.

**Awareness of beauty standards.** Women acknowledged the aforementioned cultural differences in appearance ideals, and noted that awareness of these differences limits the extent to which they compare themselves to individuals from other racial and ethnic groups. Prior research similarly notes that awareness of racial/ethnic differences in appearance decreases the likelihood that Black women view mainstream standards as appropriate comparisons (Awad et al., 2015). Research also indicates that, among Latina women, ethnic identity might mitigate the effect of social comparisons made with White women (Schooler & Daniels, 2014). Scholars posit that women of color might de-identify with White mainstream standards of beauty to preserve self-esteem (Evans & McConnel, 2003). As such, content related to thinness in eating-related resources might be irrelevant to Black and Latina women, highlighting the importance of including alternate materials emphasizing appearance issues significant to these groups.
Moreover, women of all ethnic/racial backgrounds expressed awareness of the unrealistic nature of beauty ideals and commented on the proliferation of digital alteration of media images. Yet, they indicated that this awareness does not always protect them from negative consequences. It appears that the internalization of beauty ideals is not easily modified by knowledge of the unrealistic nature of appearance standards. Engagement in formal critical discourse (e.g., eating disorder DBIs, media literacy interventions) might be needed to limit negative consequences associated with idealized media exposure.

**Origins of beauty standards.** Women across groups noted that media exposure influenced their perceptions of beauty. Latina women specifically mentioned that pressure for thinness is experienced from Westernized media sources. Research supports the influence of Westernized media on the internalization of thinness in Latinx individuals (Stokes & Clemens, 2016). Thus, although Latina women denounced pressure to achieve the thin ideal, including some discourse surrounding the promotion of thinness in the media might be beneficial to help combat the potential consequences of Westernized media consumption.

Black women described how Black models typically possess Eurocentric features and light skin. Prior research highlights the misrepresentation of Black women in the media and the lack of acknowledgement of Afrocentric features (Awad et al., 2015; Capodilupo & Kim, 2014; Hesse-Biber, Livingstone, Ramirez, Barko, & Johnson, 2010; Poran, 2006). Rather, media images celebrate and portray “White-like” images of Black women (Capodilupo & Kim, 2014; Poran, 2006). Further, both Black and White women discussed the media’s glorification of traditionally Black features on non-Black individuals. Women viewed the celebration of Afrocentric features on White individuals as devaluing the inherent features Black individuals possess. Results coincide with research noting that traditional Afrocentric features are often only
considered beautiful when they appear on White women (Capodilupo & Kim, 2014; Poran, 2006). Findings indicate that when non-Black individuals appropriate characteristics of Black beauty, it is experienced as insulting and promoting feelings of invisibility (Capodilupo & Kim, 2014). As such, culturally sensitive resources targeting appearance should incorporate information surrounding the unrealistic and inappropriate presentation of Eurocentric and Afrocentric features on Black and White women, respectively.

Further, Black and Latina women described oppression as critical to their understanding of appearance. Black participants articulated that the historical implications of slavery contribute to the current idealization of Eurocentric features. Consciousness of Black history and its current manifestations (e.g., racism) make the defining features of the White race a salient and important distinction among Black women (Poran, 2002). Both Black and Latina women endorsed pressure to present themselves well to demonstrate they are worthy of the same respect White individuals receive. Participants detailed the need to overcompensate for their minority status with their appearance. Indeed, research corroborates that Black and Latina women discern devaluation of “ethnic” looks by White culture (Rubin et al., 2003). Current findings indicate the need for appearance resources to address the racialized aspects of beauty that are a result of oppression (Awad et al., 2015).

**Impact of standards.** All participants outlined the negative consequences of appearance ideals. They reported experiencing emotional harm as a result of beauty ideals and discussed that feeling discrepant from these appearance standards induced negative self-evaluations. Black women, specifically, articulated experiencing emotional harm when they perceived themselves as discrepant from Eurocentric beauty ideals. They endorsed heightened awareness of their bodies as divergent from Western appearance standards, and while they maintained these
standards are not appropriate comparisons, they noted that this awareness was nonetheless linked to feelings of insecurity and unworthiness (Capodilupo & Kim, 2014). Research suggests that White aesthetic ideas are particularly oppressive when encouraged for women of color and foster feeling both unseen and devalued by society (Capodilupo & Kim, 2014; Rubin et al., 2003).

Current results demonstrate the need for appearance resources to include the unique consequences of appearance discrepancies for Black women, such as feelings of invalidation, invisibility, and experiences of microaggressions (Awad et al., 2015).

Importantly, although Black women are often thought to feel more satisfied with their appearance than White women, the current study corroborates that when race-specific definitions of appearance are taken into account, Black women manifest comparable appearance dissatisfaction to other ethnic/racial groups (Shuttlesworth & Zotter, 2011). Indeed, Black women are not immune to negative feelings about their physical appearance and attractiveness (Capodilupo, 2014). Findings underscore the importance of not only acknowledging the presence of appearance dissatisfaction within Black women, but also adapting interventions to reflect the potential harmful consequences of idealized Black beauty.

Participants also endorsed experiencing physical harm as a result of appearance standards. White women expressed engaging in harmful dietary behaviors to achieve the thin ideal (Stice, 2001). Alternatively, Black women endorsed increasing their caloric intake and experiencing detrimental effects of weight cycling in an attempt to meet the larger body type idealized in Black culture (Capodilupo & Kim, 2014). Black women also recalled attempts to bleach their skin to meet Eurocentric standards of beauty, which is associated with immeasurable harm (Hunter, 2011). Participants also recalled observing harmful consequences associated with recent beauty trends, such as waist trainers, flat tummy teas, and lip plumps. Findings highlight the
numerous physical consequences associated with idealized appearance standards and highlight the need for interventions to address detrimental aspects of beauty ideals beyond thinness.

**Appearance comments.** Women in all of the groups reported hearing negative appearance comments related to body shape or weight most frequently. Participants in all groups also noted that negative comments about excess fat were the most common form of this type of evaluation. This suggests that although Black and Latina women do not desire thinness, they harbor negative attitudes towards higher weight bodies. Indeed, recent research reveals no racial/ethnic group differences in the frequency of negative commentary surrounding higher weights/larger shapes (Herbozo, Stevens, Moldovan, & Morrell, 2017). The frequency of negative weight-related talk for Black and Latina women might be due to the slender waistline associated with the idealized hourglass shape. When Black and Latina women engage in this type of discourse, they might be alluding to dissatisfaction with excess fat on their stomach (Romo et al., 2015). Findings highlight the prevalence of negative weight-related talk across racial/ethnic groups, as well as the need for education regarding the consequences of such discourse and strategies to deter it.

Black women also noted that individuals at low body weights were also criticized within their culture. This is consistent with research finding that thin Black women received negative comments about their appearance (e.g., that they look sickly or malnourished; Talleyrand, Gordon, Daquin, & Johnson, 2017). Further, Black women report that being “naturally thin” generates praise from White women, while provoking criticism from Black individuals (Capodilupo & Kim, 2014). As such, it appears that Black women experience hurtful commentary on either end of the weight spectrum. Results reveal that culturally informed
resources targeting appearance concerns need to address not only stigmatization of individuals with overweight and obesity, but also bias against individuals with lower body weights.

**Resources.** Participants agreed on the need for more culturally sensitive resources addressing eating-related concerns. Previous research also indicates that there is a dearth of culturally sensitive eating disorder resources (Levinson & Brosof, 2016). Research tailoring treatment and prevention for Latina women is in its infancy (Cachelin, Shea, et al., 2014; Reyes-Rodriguez, Baucom, & Bulik, 2014), and there is no known treatment and prevention tailored for Black women (Levinson & Brosof, 2016). Black and Latina women also endorsed limited awareness of eating disorders among women of color and reported that these conditions are perceived to only impact White individuals. Indeed, research suggests eating disorders are more recognizable when they affect White women, compared with Black or Latina women, even when the same symptoms are presented (Gordon, Perez, & Joiner, 2002). Given that rates of eating disorders among White, Black, and Latina women are comparable, results underscore the importance of developing culturally relevant resources targeting eating disorders to increase awareness of these conditions among all women (Crago, Shisslak, & Estes, 1996; Grabe & Hyde, 2006; Rakhkovskaya & Warren, 2014).

Participants also described the minimization of minority mental health in general. Consistent with past research, Black participants expressed the belief that mental illness is bad or shameful (Alvidrez, Snowden, & Kaiser, 2008). Women stated that mental illness is not discussed within the Black community, and further shared the belief common within their group that such illnesses only impact White individuals (Alvidrez, Snowden, & Kaiser, 2008). Also congruent with prior literature, Latina participants expressed that their families are often less knowledgeable about mental health issues, and tend to minimize these issues (Rastogi &
Massey-Hastings, 2012; Shea et al., 2012). Prior research also has identified the misconception that eating disorders do not occur in Black or Latina women (Reyes-Rodríguez, Ramírez, Davis, Patrice, & Bulik, 2013). Indeed, when individuals of color present for treatment, clinicians are more likely to overlook, and even ignore, their symptomatology (Pike & Walsh, 1996; Reyes-Rodríguez et al., 2013). Further, when Black and Latina women pursue treatment, their symptoms are unrecognized, misinterpreted, or dismissed due to social expectations regarding the presentation of eating disorders or weight-related issues (Becker, Hadley Arrindell, Perloe, Fay, & Striegel-Moore, 2010; Reyes-Rodríguez, Ramírez, et al., 2013). In addition, until recently, the scientific community asserted that, because Black women endorsed lower levels of body dissatisfaction (as measured by assessments centralizing the thin ideal), they also exhibited fewer eating disturbances than their White counterparts (Grabe & Hyde, 2006). Current findings underscore the adverse impact of culturally based stereotypes on appropriate care and indicate the need for education regarding eating disorders among both providers and potential patients.

**Risk factors.** Women across groups noted that eating in response to uncomfortable emotions contributed to eating and weight problems. This result is consistent with the affect regulation model, which suggests that individuals engage in binge eating behavior to distract themselves from negative emotions (Hawkins & Clement, 1984). Subsequent research has found similar results within both Black (Talleyrand et al., 2017) and Latina (Shea et al., 2012) samples. Results highlight the relevance of including emotion regulation and distress tolerance skills training in interventions targeting the appearance concerns of diverse women.

Current participants also viewed limited accessibility to healthy foods as a risk factor for eating- and weight-related concerns. They noted that the cost of nutrient-dense foods deters them from purchasing these healthy options. This result is consistent with prior research, both that
conducted in primarily White, mixed-gender samples (Cluskey & Grobe, 2009), as well as in samples of Black women (Talleyrand et al., 2017). As such, resources to address eating- and weight-related concerns in college women must recognize financial limitations and offer cost-effective health promotion strategies.

Further, Black and Latina women in this study reflected on the role of culture in the development of food preferences, views of food, and the potential development of weight-related concerns. Black women noted that many of the foods typically consumed in their households are high in salt and fat. Prior research with Black women is consistent with the current data, and corroborates the large role culture plays in shaping attitudes towards food and eating, especially in relation to exposure to unhealthy food (e.g., fried foods, saltier foods; Talleyrand et al., 2017).

Latina women in the current study discussed the high degree of importance of food and eating in their culture. Past research indicates that food symbolizes abundance and hospitality in the Latinx community (Perez, Ohrt, & Hoek, 2016; Shea et al., 2012). Cooking and serving extra portions is common practice, and eating until full to prevent hunger before the next meal is viewed as a positive habit (Gans et al., 1999). Consistent with prior studies, Latina women expressed concern about being disrespectful and disrupting social harmony when attempting to monitor food intake (Shea et al., 2012). Results further demonstrate the need to be mindful of, and adherent to, cultural perceptions of food when developing eating- and weight-related resources.

Additionally, women across groups in the current study noted that pressure to achieve societal expectations of beauty influences the development of eating-related concerns. This is consistent with the dual-pathway model, which posits that sociocultural pressures (from family, peers, and the media) and thin-ideal internalization lead to the onset of eating pathology (Stice,
Although Black and Latina women in the current study did not feel that the thin ideal was relevant to them, they did experience sociocultural pressures that negatively impacted their eating and weight-related behaviors. Thus, future quantitative research should investigate the role of curvy-ideal internalization, in conjunction with other sociocultural pressures, in eating pathology. Findings underscore the importance of continuing to discuss the unrealistic nature of a broad range of idealized beauty standards in eating- and weight-related resources.

**Barriers and facilitators.** Participants in all groups noted barriers and facilitators to developing and establishing culturally sensitive programming. They indicated that stereotypes cause discomfort and can invalidate individuals’ lived experience. Prior work has also identified fear of discrimination as a barrier to help-seeking for ethnic minority women (Cachelin, Rebeck, Veisel, & Striegel-Moore, 2001). Latina women in this study expressed a preference to seek support for eating-related issues from informal sources because of the stigma associated with receiving professional help for mental health concerns within their culture (Shea et al., 2012). All participants noted the need for a skilled facilitator who fosters a nonjudgmental environment, appropriately manages group dynamics, and validates the uniqueness of individual experiences (Ciao, Ohls, & Pringle, 2018).

All women in this study noted that racially/ethnically diverse groups might present implementation challenges. Participants described difficulty relating to individuals from disparate backgrounds. They also noted fear of judgment from different others, and indicated diverse groups might silence honest expression. However, all women also acknowledged benefits of diverse groups. They recognized that heterogeneous groups might expand perspectives and increase awareness regarding what different others experience. Prior research on interventions for eating-related concerns identified both increasing diversity, and discussing
diversity directly, as beneficial to establishing inclusive programming (Ciao et al., 2018). In order to develop cohesive cohorts of diverse individuals, participants in the current study recounted validation, recognition, and respect of individual differences as paramount.

In addition to concerns about group composition, Latina women in the current study noted that multiple demands on their time presented a barrier to their participation in any intervention. They commented that they typically have more time-intensive responsibilities than their White counterparts (e.g., jobs). Prior research with Latina women has also identified time flexibility as a facilitator to treatment engagement for Latina women (Reyes-Rodríguez, Ramírez, et al., 2013). Results show that scheduling flexibility might increase engagement among Latina women.

Black and White focus group participants also highlighted the promotion of acceptance of diverse body types as valuable to inclusive interventions. They recounted that a focus on body acceptance and appreciation is a realistic, positive approach to addressing the range of appearance concerns. Indeed, promoting body size diversity and emphasizing positive health change reduces stigmatization, remains sensitive to weight, and is more likely to facilitate beneficial outcomes for the spectrum of eating- and weight-related concerns (Sánchez-Carracedo et al., 2012).

Overall, focus groups revealed vast differences in beauty standards among racially and ethnically diverse women. Despite these differences, participants endorsed experiencing similar negative outcomes related to unrealistic appearance ideals. Women discussed the need for culturally sensitive resources targeting eating- and weight-related concerns to enhance their relevance for racial/ethnic minority women, and expand awareness of the prevalence of these concerns across diverse groups.
The focus group data were used to inform the development of a culturally sensitive intervention, INSPIRE, to prevent obesity and eating disorders in young adult women. The DBI-based Body Project manual was altered to remove the focus on thinness and instead emphasize beauty ideals generally (Stice, Shaw, & Rohde, n.d.). Activities and role-plays were revised to highlight overall appearance and incorporate more culturally relevant examples. The Healthy Weight manual was modified to frame health in a more positive manner and underscore body acceptance (Stice, Shaw, & Rohde, n.d.). Further, group guidelines, including confidentiality and respect for individual differences, were incorporated to foster a safe environment.

**Pilot Feasibility Trial**

In the second phase of the study, 27 young adult women participated in a pilot feasibility trial of the developed intervention, INSPIRE. It was hypothesized that the intervention would be feasible, acceptable, and yield significant reductions in disordered eating behaviors and obesity risk. It was also hypothesized that INSPIRE participants would exhibit reductions in body dissatisfaction, appearance dissatisfaction, disinhibition, dietary restraint, eating expectancies, negative affect, thin-ideal internalization, and emotion regulation difficulties, and increases in healthy eating and physical activity.

**Feasibility & Acceptability.** High retention suggests satisfactory intervention feasibility. Therapists’ perceptions also support the feasibility of INSPIRE. Therapists noted that they were able to cover all content, felt the topics were appropriate for the group, perceived participant enjoyment, and believed group members understood the material. Participants indicated that they enjoyed the sessions and found the topics covered relevant and useful. Most participants rated the length and number of sessions as satisfactory. Overall, women conveyed experiencing
significant positive benefits as a result of participating in INSPIRE. Results suggest INSPIRE is both feasible and acceptable.

Qualitative responses revealed that therapists’ believed that participants were most enthusiastic about, and engaged with, the DBI content. Indeed, some participants noted that the dietary and physical activity goals were repetitive. Therapists’ indicated that the manual might benefit from incorporating more interactive activities within the HWI content to maximize participants’ engagement with health behavior change. Past research indicates that interactive interventions produce greater effects than didactic psychoeducational interventions; thus, incorporating more hands-on activities within the HWI content might enhance outcomes and increase engagement (Shaw, Stice, & Becker, 2010; Stice, Shaw, & Marti, 2006).

**Preliminary effectiveness.**

**Primary outcomes.** Contrary to the hypothesis, participants manifested increases in BMI over time. Of note, significant increases in BMI were not observed from pretest to posttest. This suggests that during the active phase of the intervention, participants’ engagement might have lessened the rate of weight gain. Yet, participants exhibited small, but statistically significant increases in BMI from posttest to 4-week follow-up. Cessation of group sessions might have limited participants’ engagement in weight management behaviors as they were no longer encouraged to set and work towards weekly health goals. Results might also reflect the timing of the 4-week follow-up, which occurred shortly after Thanksgiving; thus, participants might have consumed a larger amount of food than normal during the holidays that led to increased weight. Importantly, the HWI demonstrates effectiveness in slowing the rate of weight gain over time (Stice et al., 2012; Stice, Marti, Spoor, Presnell, & Shaw, 2008; Stice, Shaw, Burton, & Wade,
Thus, results suggest that INSPIRE might have reduced the risk for medically hazardous weight gain (obesity onset), but not normative fluctuations in weight (Stice et al., 2006).

Further, participants exhibited reductions in disordered eating behaviors over time. These findings add to the extensive literature documenting the effectiveness of DBIs in decreasing eating disorder symptomatology (Becker & Stice, 2017; Stice, Becker, & Yokum, 2013; Stice, Shaw, Becker, & Rohde, 2008). Moreover, results suggest that shifting the intervention’s focus from the thin ideal, to encompass broader beauty ideals, did not reduce its effects on eating pathology. It appears that arguing against general appearance standards also creates attitudinal change that motivates individuals to change their behavior and reduce disordered eating (Stice et al., 2008; Stice, 2001). Overall, current findings demonstrate that expanding the cultural relevance of DBIs yields results comparable to the original intervention, and might be more relevant to individuals from diverse racial and ethnic groups.

**Secondary outcomes.** Findings support the hypothesis that INSPIRE would promote reductions in body dissatisfaction. Results are consistent with numerous studies revealing the effectiveness of DBIs in decreasing body dissatisfaction (Becker & Stice, 2017; Stice, Becker, & Yokum, 2013; Stice, Shaw, Becker, & Rohde, 2008). As one of the most robust eating disorder risk factors, body dissatisfaction is the primary target of DBIs (Becker & Stice, 2017; Stice & Shaw, 2002). Lower body dissatisfaction is also associated with less weight gain over time (van den Berg & Neumark-Sztainer, 2007). The current study demonstrates that body dissatisfaction is reduced via targeting not only the thin ideal, but also broad appearance ideals. Findings suggest that the thin ideal might not be the only appearance standard that induces body dissatisfaction.
Results also corroborate the hypothesis that INSPIRE participation would be associated with decreases in appearance dissatisfaction. Findings are promising given that appearance dissatisfaction is associated with eating dysregulation and emotional distress (e.g., depression, social anxiety; Cash & Szymanski, 1995). Shifting the focus from the thin ideal to encompass broader beauty ideals appears to reduce discontent with aspects of appearance beyond body weight and shape (e.g., skin complexion, hair texture, facial features). As such, INSPIRE might improve satisfaction with aspects of appearance more relevant for racially/ethnically diverse women.

Findings also substantiate the hypothesis that INSPIRE would generate reductions in disinhibited eating, or the tendency to eat in response to emotional, cognitive, or social cues (Stunkard & Messick, 1985). This is encouraging, as high disinhibition is associated with binge eating and weight regulation difficulties (Heatherton & Baumeister, 1991; Niemeier et al., 2007). Acceptance-based strategies, such as DBT, provide skills to manage and tolerate uncomfortable internal reactions to triggers, and simultaneously promote behaviors consistent with desired goals and values (Forman & Butryn, 2013; Linehan, 2015). As such, the DBT components of INSPIRE that introduced emotion regulation and distress tolerance skills might have provided participants with adaptive coping strategies. Future research should investigate whether the DBT content in INSPIRE contributes to reductions in disinhibited eating over and above other intervention features.

Results did not support the hypothesis that INSPIRE would foster decreases in eating expectancies, or the cognitive expectancies regarding the benefits of eating. Thus, although the intervention decreased the tendency to eat in response to triggers, the perception that eating is an effective strategy for managing triggers remained unchanged. Yet, it appears that participants
were less likely to act on such beliefs. Nonetheless, harboring expectancies for reinforcement from eating are associated with binge eating and purging (Hohlstein et al., 1998; Smith, Simmons, Flory, Anus, & Hill, 2007). Thus, future versions of INSPIRE might benefit from not only providing education about adaptive strategies to manage emotions, but also challenging beliefs regarding the benefits of eating (e.g., that eating can help ameliorate sadness).

Findings supported the hypothesis that INSPIRE would promote reductions in dietary restraint. Results add to the extensive literature documenting the effectiveness of DBIs in decreasing restraint (Becker, Smith, & Ciao, 2006; Brown et al., 2017; Stice, Butryn, Rohde, Shaw, & Marti, 2013; Stice, Trost, & Chase, 2003). This is encouraging, as high cognitive effort exerted to limit dietary intake is associated with the etiology and maintenance of eating disorders and obesity (Schaumberg et al., 2016; Stice, 2001; Van Strien, Herman, & Verheijden, 2014). Indeed, the dual pathway model posits that perceiving higher levels of deprivations increases the propensity to engage in counter-regulatory eating behaviors (Stice, 2001). Results suggest that emphasizing broad appearance ideals, rather than just the thin ideal, might reduce ineffective dieting in a manner more relevant for racially/ethnically diverse women.

Results also corroborated the hypothesis that INSPIRE would be linked to decreases in negative affect. This is promising, as negative affect increases risk for eating disorders and obesity onset (Stice, Presnell, Shaw, & Rohde, 2005). Findings are congruent with past research establishing that DBIs effectively reduce negative emotionality (Becker & Stice, 2017; Stice, Becker, et al., 2013; Stice, Mazotti, Weibel, & Agras, 2000). Importantly, negative affect has not been targeted directly in previous iterations of DBIs (Becker & Stice, 2017; Stice, Becker, et al., 2013). Thus, scholars have posited the potential usefulness of including content in DBIs that focuses on reducing negative affect (Becker & Stice, 2017). The current study evaluated an
intervention specifically targeting negative affect; yet, given the absence of comparison group, conclusions regarding the advantages of content specifically targeting negative affect on decreased emotionality cannot be drawn. Future research should investigate whether incorporating DBT skills training decreases negative affect over and above standard DBI materials.

Findings also substantiate the hypothesis that INSPIRE would generate reductions in emotional dysregulation. Eating disorders are characterized by difficulties in emotion regulation, including poor emotional awareness, impulse control difficulties, and lack of access to effective coping strategies (Hawkins & Clement, 1984; Kittel, Brauhardt, & Hilbert, 2015; Lavender et al., 2015). Moreover, eating in response to negative emotional states contributes to weight gain and obesity (Croker, Cooke, & Wardle, 2011). Thus, research demonstrates that greater adaptive emotion regulation skills are strongly related to decreases in overall eating pathology (Juarascio et al., 2017). Results reveal that incorporating DBT skills into existing methods of prevention yields improvements in coping strategies for managing negative affect. Future research is needed to explore whether employing these coping strategies is the mechanism by which participants experienced reduced negative affect.

In addition, results support the hypothesis that INSPIRE would foster decreases in thin-ideal internalization. Findings are consistent with numerous studies revealing the effectiveness of DBIs in decreasing thin-ideal internalization (Becker & Stice, 2017; Stice, Becker, et al., 2013; Stice, Mazotti, Weibel, & Agras, 2000; Stice, Shaw, Burton, et al., 2006). Theoretically, thin-ideal internalization contributes to body dissatisfaction, which then predicts problematic eating behaviors (Stice, 2001). As such, decreasing thin-ideal internalization is paramount for preventing eating disorders, a risk factor most potent for White women. Results reveal the
replacing the thin ideal with broader appearance ideals does not hinder intervention outcomes regarding thin-ideal internalization. Thus, DBI content remains relevant for White women when the intervention’s cultural relevance for women of other racially/ethnic backgrounds is improved.

Findings partially supported the hypothesis that INSPIRE would promote increases in healthy eating. Participants’ consumption of both fat and fiber significantly decreased over time. Although the current study did not measure total caloric intake, past research suggests that the HWI does not significantly reduce total calorie consumption (Stice et al., 2012; Stice et al., 2013). The current study expands past literature indicating that although the HWI might not decrease overall caloric intake, reductions in fat intake are observed (Stice et al., 2012; Stice et al., 2013). This is favorable, as recent literature demonstrates that diet quality, not quantity, is essential to optimal health and weight (Gardner et al., 2018). Yet, fiber intake decreased, and greater consumption of fiber is associated with numerous health benefits (Slavin, 2013). As such, it might be advantageous for manual modifications to incorporate more discourse surrounding the benefits of frequent fiber consumption.

Results also were inconsistent with the hypothesis that INSPIRE would yield increases in physical activity. These results differ from those of previous research, which indicated that HWI participation was linked to increased engagement in exercise (Stice, Presnell, Gau, & Shaw, 2007; Stice et al., 2012). Physical activity levels in the current study increased from pretest to posttest; however, this finding was not significant. Results might be related to the challenges inherent with measuring physical activity via self-report (Sylvia, 2015). Yet, overall, current participants demonstrated less enthusiasm for the HWI content, compared with other topics covered in INSPIRE. Thus, perhaps they were more motivated to make behavioral changes in
these other areas. Future versions of INSPIRE might benefit from incorporating interactive, engaging activities to promote regular movement.

Overall, findings demonstrate the feasibility and acceptability of an integrated approach to obesity and eating disorder prevention. Participants exhibited reductions in eating pathology and established risk factors for eating- and weight-related concerns. Results suggest that expanding the focus from thinness to broader appearance ideals does not weaken intervention outcomes, and provide preliminary support for targeting additional risk factors.

Implications

This study highlights important differences in appearance standards across diverse racial/ethnic groups. Yet, resources addressing eating- and weight-related concerns typically target one appearance standard: extreme thinness. However, dissatisfaction with appearance in general is associated with negative outcomes, such as disordered eating and weight gain (Cash & Szymanski, 1995). By focusing solely on one beauty standard, resources aimed at primary or secondary prevention of weight and appearance concerns are irrelevant to racially and ethnically diverse women, who typically have alternative ideals. This focus on thinness discourages diverse women from participating in interventions; thus their appearance dissatisfaction remains unaddressed. Further, it promotes the inaccurate stereotype that eating pathology only affects White women, which hinders women from other racial and ethnic groups from seeking help when they experience these problems. Thus, eating- and weight-related resources must expand to incorporate diverse narratives of beauty. Enhancing the cultural sensitivity of these resources is necessary to reduce eating disorders and obesity, particularly among Black and Latina women.

Results from the current study demonstrate the feasibility and acceptability of a culturally sensitive intervention, INSPIRE, to prevent eating disorders and unhealthy weight gain in young
adult women. Findings demonstrate that expanding the focus from thinness to broader appearance ideals does not weaken intervention outcomes. Thus, current prevention and treatment efforts might benefit from modifications, specifically cultural adaptations that make them more relevant for Black and Latina women. Such endeavors are necessary to improve healthcare efficiency and quality.

**Strengths and Limitations**

This project extends the current literature in a number of innovative ways. It was the first study to design and preliminarily evaluate an intervention for young adult women targeting two important public health issues: unhealthy weight gain and eating disorders. Moreover, focus groups explored the associations among race, ethnicity, and appearance ideals. Qualitative data were used to modify existing prevention interventions and enhance INSPIRE’s relevance to racially/ethnicity diverse women. Further, DBT skills training was incorporated into INSPIRE to target the negative affect associated with eating disorders and obesity.

Limitations of the focus groups include the convenience sampling method. Participants were VCU undergraduate students enrolled in Psychology courses. Racial/ethnic minority college students at a predominantly White university might have different perspectives on appearance and eating behaviors than non-college-educated women. Another potential limitation of the focus groups is that the group settings can influence participants’ responses. The questions posed were face valid and might have evoked social desirability. Further, qualitative data are inherently biased, as researchers subjectively interpret the data. However, the audit trail provided accountability and regular meetings with secondary coders strengthened credibility.

Limitations of the pilot intervention include the lack of a control group. Because this was a pilot study, it was appropriate to first establish feasibility and acceptability. Another limitation
is that it is unknown if intervention effects extended beyond 4-week follow-up. Similarly, the short duration of the study is unsuitable for drawing conclusions on the long-term effects on BMI. Further, only one Latina woman participated in the intervention. Attempts were made to diversify the sample; however, these attempts were not successful for Latina women. Another limitation is the use of primarily self-report measures. Questionnaire responses might be influenced by social desirability. Additionally, the measures used were developed and validated among predominantly White European samples, limiting their ability to assess Black and Latina women’s experiences of eating and embodiment. Finally, because of the small sample size, there was insufficient power to examine the influence of racial/ethnic differences or racial/ethnic identity on intervention outcomes.

**Future Directions**

Future research is needed to refine the INSPIRE manual and evaluate the effectiveness of this intervention in a randomized control trial. Manual modification should especially focus on incorporating interactive activities within the HWI content to increase engagement and improve outcomes regarding physical activity and dietary behaviors. Evaluating the intervention in a randomized controlled trial is necessary to make causal inference and establish intervention efficacy. Additionally, future research should focus on replicating INSPIRE in a more racially/ethnically diverse sample. This will enable examination of the influence of racial/ethnic identity as a potential moderator of intervention outcomes.

Future research should also explore the potential of improving the cultural sensitivity of the intervention over and above what was feasible in this study. For example, including family members in the intervention, or incorporating assertiveness training addressing specific strategies for navigating food situations with family, might increase accessibility or relatability,
respectively, for Latinas. Additionally, including more content addressing the role of culture in eating and food choice might be beneficial for Black and Latina women.

Finally, future research is needed to develop measures that accurately assess the psychological issues related to beauty and body image for racial/ethnic minority women. Current measures of body dissatisfaction often do not capture race-specific definitions of body image, such as satisfaction with hair and facial features. As such, conceptualization of these issues needs to expand. Exclusion of the racialized aspects of beauty will contribute to the continued marginalization of racial/ethnic minority women.

Conclusion

This study developed and empirically evaluated a culturally sensitive manualized intervention to prevent obesity and eating disorders in a racially and ethnically diverse sample of young adult women (ages 18-25). Two successful existing prevention programs were integrated, and qualitative data were gathered to inform culturally relevant modifications. Emotion regulation and distress tolerance skills training were incorporated to target the negative affect associated with eating pathology. Results suggest that current approaches to eating disorder and obesity prevention are not relevant for racial/ethnic minority women. Findings inform prevention of the broad spectrum of weight-related disorders and contribute to the empirical examination of these serious public health conditions, for which there are few affordable and effective treatments (Nelson et al., 2008; Rancourt & McCullough, 2015; Stice, Rohde, et al., 2013).


http://doi.org/10.1207/s15327752jpa6403_6


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Appendix A

Focus Group Recruitment Flyer

Food, Culture & the Body

What do you think culture has to do with body ideals and healthy eating? We want to know! We are developing a program for college women of all races and cultural backgrounds to promote body acceptance, healthy eating, and living a healthy lifestyle.

We are seeking college women (18-25 years old) to attend a 2 hour focus group to provide us your opinions.

For more information, please contact Courtney Simpson, MS, with VCU’s Dept. of Psychology at healthyeats@vcu.edu
Appendix B

Demographic Questionnaire (Phase 1)

1. Age: _____

2. Year in school:
   ___ Freshman (first-year)
   ___ Sophomore
   ___ Junior
   ___ Senior
   ___ Graduate

3. Race/ethnicity (check all that apply):
   ___ White/Caucasian
   ___ Black/African-American
   ___ Hispanic/Latino
   ___ Asian/Asian-American
   ___ Other (please specify): _____________

4. Sex:
   ___ Male
   ___ Female

5. Current height: _____

6. Current weight: _____

7. Are you currently pregnant?
   _____ Yes
   _____ No
Appendix C

Focus Group Questions

1. Appearance ideals & perceived influences

- **Most of us are aware of various appearance ideals or beauty standards that are present in our culture.**
  - What are some of the cultural appearance or beauty ideals that stand out to you? [Probe to investigate what appearance ideals they feel “pushed” to strive towards.]
    - What are specific aspects of appearance that you consider beautiful?

- Where do you think we learn that these aspects of appearance are beautiful?
  - With all the emphasis on appearance present in today’s society, it is hard for any woman to be completely satisfied with her body.

- How do appearance messages impact the way you feel about your body?
  - What parts of your appearance are you dissatisfied, or satisfied, with?

- How much would you say that how your look influences how you feel about yourself?
  - Where have you received the message that your appearance influences your self-worth (e.g., media, family, friends)?

- Who, if anyone, do you compare yourself to in terms of appearance? (e.g., peers, family members, actors, models)
  - How do your comparison to others impact the way you feel about your body?
  - How does the racial/ethnic identity of your peers influence the way you compare yourself to them?

- What types of statements do you hear women commonly make when they are “down talking,” or talking badly about, their appearance or the appearance of others?
  - Do the type of comments you hear differ based on racial/ethnic identity of the women involved?

- What would be different about your life if you could wave a magic wand and were satisfied with the way you looked?

2. Differences in appearance ideals among different ethnic & racial groups

- How do you think your racial or ethnic background affects your appearance ideals (i.e. the way you want to look)?
  - [Probe to see if they feel their racial or ethnic background pressures them to look, or try to look, a certain way].

- How does your racial or ethnic background affect how you feel about your appearance?
• What types of beauty ideals were seen as important in your family and/or culture?

• What do your family and/or culture tell you will happen if you achieve these beauty ideals?
  - How are your personal beauty standards different from people in your same racial/ethnic group? How are they the same?
  - How do your personal beauty standards compare to the beauty standards of people in other racial/ethnic groups? (i.e., how are they different, how are they the same?)

3. Rationale for proposed intervention

As you probably know, both obesity and eating disorders are common and serious issues that disproportionately affect young adult women. Programs to prevent the development of obesity and eating disorders exist, yet they have been largely implemented in White populations. The most effective eating disorder prevention program currently available focuses on the Western (White) thin ideal as the target for change. Yet, in a previous study, many women at VCU told us that this ideal wasn't relevant for them. Therefore, the goal of this focus group is to gather information about how to design a prevention program that is more culturally sensitive and in order to combat eating disorders and obesity in a broader range of college women.

• What do you think about the idea of developing a prevention program that targets obesity and eating disorders at the same time; is it needed?

• What are your thoughts about the amount of culturally-relevant resources for individuals with eating disorders and/or obesity (specifically your culture)?

• Do you feel pressure to achieve the White thin ideal?

• Do you see the thin ideal affecting people in your same racial/ethnic group? How so?

• Do you think the thin ideal affects women of different racial/ethnic groups in different ways? [If yes, probe for these differences and how they might manifest in across racial/ethnic groups.]

• What do you think are the greatest risk factors for an eating disorder and/or obesity in your racial/ethnic group?

I mentioned earlier that the most effective eating disorder prevention program to date focuses on the White, European thin ideal. As part of this program, participants engage in role-plays in which they try to discourage other people from pursuing the thin ideal. I’m going to review some of these existing role-plays. I would like you to provide feedback for how the role-plays can be improved to benefit women like you. [Probe for ways to improve that are related to culture, but also see if there are other ways they mention role plays could be changed to enhance relevance.]
In these role-plays, the leaders play a person who is obsessed with the thin ideal. The participant’s job is to convince the leaders to not pursue the thin ideal. There are different characters that the leader can play. I’ll read the script for two characters, and ask for your critiques and feedback.

- **Character 1**: 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 carbohydrates. 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 swimsuit in front of everyone if I don’t have an amazingly flat stomach.

[Probe for critiques of role-play & feedback on role play especially (but not exclusively) ways to make it more culturally relevant to the current focus group participants]

- **Character 2**: 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 weigh 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 ¼ of a pound.

[Probe for critiques of role-play & feedback on role play especially (but not exclusively) ways to make it more culturally relevant to the current focus group participants]

4. **Cultural acceptability of proposed intervention**

- How could researchers design an intervention to prevent eating disorders and obesity in a culturally diverse group of young women?

- What types of things could help improve the cultural acceptability of the intervention?

- What types of things might hinder the cultural acceptability of the intervention?

- How can we best design an intervention to address multiple aspects of appearance and remain respectful of racial/ethnic differences?

5. **Barriers & Facilitators to programming for obesity & EDs**
• Would you be interested in participating in the intervention that we have talked about to learn ways to accept your appearance, eat better, and live a healthier life? Why or why not?

• What types of things should be included in this type of intervention?

• What would make you more likely to participate in the intervention? Less likely?

• What length of time do you think is best (i.e., how many weeks) for this type of intervention?
  o What times of the year? Times/days of the week? Lengths of sessions?

• What would make it most challenging for you to be in this type of intervention?

• What would make you likely to stay in such an intervention?

6. Strategies for creating cohesive intervention cohorts

We know that discussing personal experiences surrounding food and weight can be uncomfortable, and that these discussions can be even more uncomfortable if you feel different than or judged by other group members. We are hoping to minimize discomfort and create intervention groups that feel safe and encourage connection.

• Would you feel comfortable in this type of intervention group? What would make you feel more/less comfortable?

  • Many people prefer being in groups with people similar to themselves. Might the cultural backgrounds of others in the group (i.e., race/ethnicity, religion, socio-economic status) influence how comfortable you would feel?
  • What about other factors like body size, age, year in school?
  • Anything else about other group members that might be important to you?
  • What about the cultural background of the intervention leader? Are there any features of the intervention leader that would influence how comfortable you would feel (i.e., race/ethnicity, religion, socio-economic status, body size, age, year in school)?

  • How do you feel about participating in a more homogenous group? What are the pros and cons of a homogenous group?

  • How do you feel about participating in a more diverse group? What are the pros and cons of a diverse group?

  • If a homogenous group is not feasible, what things can we do to create a cohesive group?

  • How can we facilitate a safe and open group environment among women of various cultural backgrounds?
Appendix D

Eating Disorder Diagnostic Screener

Please carefully complete all questions.

<table>
<thead>
<tr>
<th>Over the past 3 months…</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you felt fat?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Have you had a definite fear that you might gain weight or become fat?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Has your weight or shape influenced how you judge yourself as a person?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

4. During the past **3 months** have there been times when you have eaten what other people would regard as an unusually large amount of food (e.g., a quart of ice cream) given the circumstances?

    YES   NO

5. During the times when you ate an unusually large amount of food, did you experience a loss of control (feel you couldn't stop eating or control what or how much you were eating)?

    YES   NO

6. How many **times per month** on average over the past **3 MONTHS** have you eaten an unusually large amount of food and experienced a loss of control?

    0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16+

**During these episodes of overeating and loss of control did you…**

7. Eat much more rapidly than normal?   YES   NO
8. Eat until you felt uncomfortably full? YES   NO
9. Eat large amounts of food when you didn't feel physically hungry?   YES   NO
10. Eat alone because you were embarrassed by how much you were eating? YES   NO
11. Feel disgusted with yourself, depressed, or very guilty after overeating? YES   NO
12. Feel very upset about your uncontrollable overeating or resulting weight gain? YES   NO

13. How many **times per month** on average over the past **3 months** have you made yourself vomit to prevent weight gain or counteract the effects of eating?

    0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16+

14. How many **times per month** on average over the past **3 months** have you used laxatives or diuretics to prevent weight gain or counteract the effects of eating?

    0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16+

15. How many **times per month** on average over the past **3 months** have you fasted (skipped at least 2 meals in a row) to prevent weight gain or counteract the effects of eating?

    0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16+

16a. How many **times per month** on average over the past **3 months** have you engaged in excessive exercise specifically to counteract the effects of overeating episodes?

    0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16+

16b. If you exercise excessively to counteract the effects of overeating, how long do you exercise for, **on average**? ______ minutes
16c. If you exercise excessively to counteract the effects of overeating, please indicate your level of intensity, **on average:** ___ moderate ___ hard ___ very hard

16d. If you exercise excessively to counteract the effects of overeating, please indicate the type of exercise you engage in, **on average:** _________

16e. If you exercise excessively to counteract the effects of overeating, have you continued to exercise when injured or sick? YES NO

16f. If you exercise excessively to counteract the effects of overeating, have you avoided social functions to exercise? YES NO

16g. If you exercise excessively to counteract the effects of overeating, have you felt anxious or upset when forced to miss an exercise session? YES NO

17. How many **times per month** on average over the **past 3 months** have you eaten after awakening from sleep or eaten an unusually large amount of food after your evening meal and felt distressed by the night eating?

   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16+

18. How much do eating or body image problems impact your relationships with friends and family, work performance, and school performance?

   Not at all Slightly Moderately Extremely

   0 1 2 3 4 5 6


20. How tall are you? Please specify in inches (5 ft. = 60 in.) ______ in.

21. Over the past **3 months**, how many menstrual periods have you missed?

   0 1 2 3 n/a

22. Have you been taking birth control pills during the past **3 months**? YES NO
Appendix E

INSPIRE Recruitment Flyers

Want to love your body & live a balanced life?

Women students are invited to participate in a research study designed to promote body acceptance and healthy living.

Participants will be asked to attend eight 1.5-hour interactive groups designed to improve body satisfaction and enhance wellness.

All participants can receive up to $70 for attending three 1-hour assessments to complete interviews and surveys. All study activities will take place at The Well.

For more information, email Courtney Simpson with VCU’s Dept. of Psychology at simpsoncc2@vcu.edu

Love the life you’re living!

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Love the life you’re living!
Appendix F
Demographic Questionnaire (Phase 2)

1. VCU Email: ________________________

2. Cell phone number: _____________

3. Age: _____

4. Year in school:
   ___ Freshman (first-year)
   ___ Sophomore
   ___ Junior
   ___ Senior
   ___ Graduate

5. Race/ethnicity:
   ___ White/Caucasian
   ___ Black/African-American
   ___ Hispanic/Latino
   ___ Asian/Asian-American
   ___ Other (please specify): _____________

6. Sex:
   ___ Male
   ___ Female

7. Current height: _____

8. Current weight: _____

9. Highest weight (excluding pregnancy) at your current height: ______

10. Lowest weight at your current height: ______

11. Are you currently pregnant?
    _____ Yes
        _____ No
Appendix G

Family History Questionnaire

Please respond to the following items as honestly as possible.

1) Do you have a family history of obesity?  YES  NO

2) If so, who in your family is/was obese? (Please circle all that apply)
   - Mother
   - Father
   - Brother
   - Sister
   - Grandmother
   - Grandfather
   - Aunt
   - Uncle

3) Has anyone in your family ever suffered from an eating disorder?  YES  NO

4) If so, which eating disorder? (Please circle all that apply)
   - Anorexia
   - Bulimia
   - Binge Eating Disorder
   - Not Sure

6) Has anyone in your family ever suffered from a psychological disorder other than an eating disorder (e.g., depression, anxiety, substance use)?  YES  NO

7) If so, what? ________________________________________

8) If so, whom? (Please circle all that apply)
   - Mother
   - Father
   - Brother
   - Sister
   - Grandmother
   - Grandfather
   - Aunt
   - Uncle
Appendix H

Eating Disorder Examination Questionnaire with Instruction

Some questions ask about (1) eating what most people would regard as an unusually large amount of food and (2) feeling a sense of having lost control while eating.

1. An unusually large amount of food is something that most people would feel is more than a large meal.

2. A sense of having lost control while eating might be experienced as feeling driven or compelled to eat; not being able to stop eating once you have started; not being able to keep yourself from eating large amounts of certain kinds of foods in the first place; or giving up on even trying to control your eating because you know that, no matter what, you are going to overeat.

Here are some examples:

After work one evening, Diana ate two pieces of chicken, a 16-ounce package of frozen vegetables, three cups of rice, three fourths of a coffee cake, and a piece of fruit. This is an unusually large amount of food. While she ate Diana felt completely out of control, ate more quickly than usual, and ate until she felt uncomfortable full. Afterwards, Diana was very upset about how much she had eaten, and said she felt depressed, guilty, and hated herself for giving in to the urge to binge.

Several times a week JoAnne ate lunch at McDonald’s with two coworkers. Her usual order was a Big Mac, a fish fillet sandwich, two large orders of fries, and a large chocolate shake. This is an unusually large amount of food. Although she ate somewhat more than her friends did and knew she was eating a lot of high-fat food, she did not feel out of control while eating or feel upset afterwards about how much she had eaten.

For lunch one day, Joseph had a ham and cheese sandwich with mayonnaise on a roll, a small bag of potato chips, a candy bar, and a diet coke. Although this was a large meal, it was not unusually large. However, Joseph felt out of control because he had planned to have turkey on whole wheat with lettuce and tomato plus a piece of fruit for dessert, but changed his mind at the last minute while ordering his sandwich.

Carol ate two donuts someone brought to the office one morning. She had started a diet that day and planned to skip breakfast. Carol initially refused the donuts, but after everyone else had gone to a meeting she snuck into the break room and very quickly ate the donuts so no one would see her eating. She felt very guilty and ashamed afterwards and hated feeling so out of control of her eating, resolving to start dieting again the next day. Although Carol felt bad about eating the donuts, this was not an unusually large amount of food.
Diana and JoAnne ate an unusually large amount of food, but Joseph and Carol did not. Diana, Joseph, and Carol felt a loss of control while eating, but JoAnne did not. Of the four, Diana is the only one who actually had a binge episode, which includes both (1) eating an unusually large amount of food and (2) feeling a sense of having lost control while eating.

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

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

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

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

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

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

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

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

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

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

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

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

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

<table>
<thead>
<tr>
<th>No days</th>
<th>1-5 days</th>
<th>6-12 days</th>
<th>13-15 days</th>
<th>16-22 days</th>
<th>23-27 days</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>None of the times</th>
<th>A few of the times</th>
<th>Less than half</th>
<th>Half of the times</th>
<th>More than half</th>
<th>Most of the time</th>
<th>Every time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
21. Over the past 28 days, how concerned have you been about other people seeing you eating? …Do not count episodes of binge eating.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Markedly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Questions 22 to 28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

<table>
<thead>
<tr>
<th>Over the past 28 days…</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Markedly</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Has your weight influenced how you think about (judge) yourself as a person?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23. Has your shape influenced how you think about yourself as a person?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24. How much would it have upset you if you had been asked to weight yourself once a week (no more, or less, often) for the next four weeks?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25. How dissatisfied have you been with your weight?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26. How dissatisfied have you been with your shape?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>27. How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>28. How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
## Appendix I

### Block Food Screener

Think about your eating habits over the past year or so. About how often do you eat each of the following foods? Remember breakfast, lunch, dinner, snacks and eating out. Check one box for each food.

<table>
<thead>
<tr>
<th>Meats and Snacks</th>
<th>1/MONTH or less</th>
<th>2-3 times a MONTH</th>
<th>1-2 times a WEEK</th>
<th>3-4 times a WEEK</th>
<th>5+ times a WEEK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburgers, ground beef, meat burritos, tacos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef or pork, such as steaks, roasts, ribs, or in sandwiches</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fried chicken</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot dogs, or Polish or Italian sausage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold cuts, lunch meats, ham (not low-fat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacon or breakfast sausage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salad dressings (not low-fat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Margarine, butter or mayo on bread or potatoes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Margarine, butter or oil in cooking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eggs (not Egg Beaters or just egg whites)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pizza</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheese, cheese spread (not low-fat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>French fries, fried potatoes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn chips, potato chips, popcorn, crackers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Think about your eating habits over the past year or so. About how often do you eat each of the following foods? Remember breakfast, lunch, dinner, snacks and eating out. Check one box for each food.

<table>
<thead>
<tr>
<th>Fruits, Vegetables, and Grains</th>
<th>Less than 1/WEEK</th>
<th>Once a WEEK</th>
<th>2-3 times a WEEK</th>
<th>4-6 times a WEEK</th>
<th>Once a DAY</th>
<th>2+ a DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit juice, like orange, apple, grape, fresh, frozen or canned. (Not sodas or other drinks)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often do you eat any fruit, fresh or canned (not counting juice?)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable juice, like tomato juice, V-8, carrot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green salad</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Potatoes, any kind, including baked, mashed or french fried</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable soup, or stew with vegetables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any other vegetables, including string beans, peas, corn, broccoli or any other kind</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiber cereals like Raisin Bran, Shredded Wheat or Fruit-n-Fiber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beans such as baked beans, pinto, kidney, or lentils (not green beans)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dark bread such as whole wheat or rye</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix J

Ideal-Body Stereotype Scale – Revised

**Directions:** We want to know what you think attractive women look like. How much do you agree with these statements:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Slender women are more attractive</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Women who are in shape are more</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Tall women are more attractive</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Women with toned (lean) bodies are</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>more attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Shapely women are more attractive</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. Women with long legs are more</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix K

Dutch Restrained Eating Scale

**Directions:** Circle the best answer to describe your behavior over the last month:

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If you put on weight, did you eat less than you normally would?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Did you try to eat less at mealtimes than you would like to eat?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. How often did you refuse food or drink because you were concerned about your weight?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Did you watch exactly what you ate?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Did you deliberately eat foods that were slimming?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. When you ate too much, did you eat less than usual the next day?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Did you deliberately eat less in order not to become heavier?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. How often did you try not to eat between meals because you were watching your weight?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. How often in the evenings did you try not to eat because you were watching your weight?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Did you take into account your weight in deciding what to eat?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix L

Difficulties in Emotion Regulation Scale

Please indicate how often the following statements apply to you by writing the appropriate number from the scale below on the line beside each item.

| 1---------------2------------------------3--------------------------4-----------------------5 |
|---------------------------------------------------------------|-----------------|
| almost never (0-10%) | sometimes (11-35%) | about half the time (36-65%) | most of the time (66-90%) | almost always (91-100%) |

| 1 | I am clear about my feelings. | 21) When I’m upset, I feel ashamed at myself for feeling that way. |
| 2 | I pay attention to how I feel. | 22) When I’m upset, I know that I can find a way to eventually feel better. |
| 3 | I experience my emotions as overwhelming and out of control. | 23) When I’m upset, I feel like I am weak. |
| 4 | I have no idea how I am feeling. | 24) When I’m upset, I feel like I can remain in control of my behaviors. |
| 5 | I have difficulty making sense out of my feelings. | 25) When I’m upset, I feel guilty for feeling that way. |
| 6 | I am attentive to my feelings. | 26) When I’m upset, I have difficulty concentrating. |
| 7 | I know exactly how I am feeling. | 27) When I’m upset, I have difficulty controlling my behaviors. |
| 8 | I care about what I am feeling. | 28) When I’m upset, I believe there is nothing I can do to make myself feel better. |
| 9 | I am confused about how I feel. | 29) When I’m upset, I become irritated at myself for feeling that way. |
| 10 | When I’m upset, I acknowledge my emotions. | 30) When I’m upset, I start to feel very bad about myself. |
| 11 | When I’m upset, I become angry with myself for feeling that way. | 31) When I’m upset, I believe that wallowing in it is all I can do. |
| 12 | When I’m upset, I become embarrassed for feeling that way. | 32) When I’m upset, I believe that wallowing in it is all I can do. |
| 13 | When I’m upset, I have difficulty getting work done. | 33) When I’m upset, I lose control over my behavior. |
| 14 | When I’m upset, I become out of control. | 34) When I’m upset I take time to figure out what I’m really feeling. |
| 15 | When I’m upset, I believe that I will remain that way for a long time. | 35) When I’m upset, it takes me a long time to feel better. |
| 16 | When I’m upset, I believe that I will end up feeling very depressed. | 36) When I’m upset, my emotions feel overwhelming. |
| 17 | When I’m upset, I believe that my feelings are valid and important. | |

185
18) When I’m upset, I have difficulty focusing on other things.
19) When I’m upset, I feel out of control.
20) When I’m upset, I can still get things done.
Appendix M

Positive and Negative Affect Scale – Revised

**Directions:** Please circle the response that indicates how you have felt over the past few weeks.

<table>
<thead>
<tr>
<th></th>
<th>Not At All</th>
<th>A Little</th>
<th>Moderately</th>
<th>A Lot</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Disgusted with self</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Sad</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Afraid</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Shaky</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Alone</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Blue</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Guilty</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Nervous</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Lonely</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Jittery</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Ashamed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Scared</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. Angry at self</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Downhearted</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Blameworthy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. Frightened</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. Dissatisfied with self</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. Anxious</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. Depressed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. Worried</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix N

Body-Image Ideals Questionnaire (BIQ)

Each item on this questionnaire deals with a different physical characteristic. For each characteristic, think about how you would describe yourself as you actually are. Then think about how you wish you were. The difference between the two reveals how close you come to your personal ideal. In some instances, your looks may closely match your ideal. In other instances, they may differ considerably. On Part A of each item, rate how much you resemble your personal physical ideal by selecting the appropriate rating.

**Part A:** How much you resemble your personal physical ideal.

<table>
<thead>
<tr>
<th></th>
<th>Exactly As I Am</th>
<th>Almost As I Am</th>
<th>Fairly Unlike Me</th>
<th>Very Unlike Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My ideal height is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. My ideal skin complexion is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. My ideal hair texture and thickness are:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. My ideal facial features (eye, nose, ears, facial shape) are:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. My ideal muscle tone and definition is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. My ideal body proportion is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. My ideal weight is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. My ideal chest size is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. My ideal physical strength is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10: My ideal physical coordination is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. My ideal overall physical appearance is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Your physical ideals may differ in their importance to you, regardless of how close you come to them. You may feel strongly that some ideals embody the way you want to look or be. In other areas, your ideals may be less important to you. On Part B of each item, rate how important your ideal is to you by selecting the most appropriate rating.

**Part B:** How important your ideal is to you
Rated with: Not Important, Somewhat Important, Moderately Important, Very Important

<table>
<thead>
<tr>
<th>1. My ideal height is:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. My ideal skin complexion is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. My ideal hair texture and thickness are:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. My ideal facial features (eye, nose, ears, facial shape) are:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. My ideal muscle tone and definition is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. My ideal body proportion is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. My ideal weight is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. My ideal chest size is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. My ideal physical strength is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10: My ideal physical coordination is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. My ideal overall physical appearance is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Appendix O

The Multigroup Ethnic Identity Measure – Revised (MEIM-R)

In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Hispanic or Latino, Black or African American, Asian American, Chinese, Filipino, American Indian, Mexican American, Caucasian or White, Italian American, and many others. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please fill in: In terms of ethnic group, I consider myself to be ____________________

Use the numbers below to indicate how much you agree or disagree with each statement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. I have a strong sense of belonging to my own ethnic group.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I understand pretty well what my ethnic group membership means to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I have often done things that will help me understand my ethnic background better.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I have often talked to other people in order to learn more about my ethnic group.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I feel a strong attachment towards my own ethnic group.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### Appendix P

Three Factor Eating Questionnaire – Disinhibition

**Directions:** Circle the best answer to describe your behavior.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When I smell a sizzling steak or see a juicy piece of meat, I find it very difficult to keep from eating, even if I have just finished a meal.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>2. I usually eat too much at social occasions, like parties and picnics.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>3. Sometimes things just taste so good that I keep on eating even when I am no longer hungry.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>4. When I feel anxious, I find myself eating.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>5. Since my weight goes up and down, I have gone on reducing diets more than once.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>6. When I am with someone who is overeating, I usually overeat too.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>7. Sometimes when I start eating, I just can’t seem to stop.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>8. It is difficult for me to leave something on my plate.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>9. When I feel blue, I often overeat.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>10. My weight has gone up and down in the last ten years.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>11. When I feel lonely, I console myself by eating.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>12. Without even thinking about it, I take a long time to eat.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>13. While on a diet, if I eat a food that is not allowed, I often then splurge and eat other high calorie foods.</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>14. Do you eat sensibly in front of others and splurge alone?</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>15. Do you go on eating binges though you are not hungry?</td>
<td>Never</td>
<td>Rarely</td>
<td>Often</td>
</tr>
</tbody>
</table>

16. To what extent does this statement describe your eating behavior?
“I start dieting in the morning, but because of any number of things that happen during the day, by evening I have given up and eat what I want, promising myself to start dieting again tomorrow.”

1 not like me
2 little like me
3 pretty good
4 describes me perfectly

description of me
Appendix Q

Eating Expectancy Inventory

Read each statement and circle the number of the response that most closely matches your level of agreement. Please respond to the items in terms of what the word “eating” means to you. There are no right or wrong answers. Choose only one response for each item. Do not leave any items blank.

<table>
<thead>
<tr>
<th></th>
<th>Completely Disagree</th>
<th>Mostly Disagree</th>
<th>Slightly Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Slightly Agree</th>
<th>Mostly Agree</th>
<th>Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eating makes me feel loved.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>When I am feeling depressed or upset, eating can help me take my mind off my problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Eating makes me feel out of control.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Eating fills some emotional need.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>When I am feeling anxious or tense, eating helps me relax.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tr>
<tr>
<td>6</td>
<td>I don’t see eating as a pleasurable event.</td>
<td>1</td>
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</tr>
<tr>
<td>7</td>
<td>Eating helps me deal with feelings of inadequacy.</td>
<td>1</td>
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<td>6</td>
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<tr>
<td>8</td>
<td>Eating doesn’t help me deal with boredom.</td>
<td>1</td>
<td>2</td>
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<td>6</td>
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<tr>
<td>9</td>
<td>When I have nothing to do, eating helps relieve the boredom.</td>
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<tr>
<td>10</td>
<td>When I eat, I often feel that I am not in charge of my life.</td>
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<tr>
<td>11</td>
<td>When I am feeling anxious, eating does not make me feel calmer.</td>
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<td>6</td>
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<tr>
<td>12</td>
<td>Eating serves as an emotional release.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13</td>
<td>Eating seems to decrease my level of anxiety.</td>
<td>1</td>
<td>2</td>
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<td>6</td>
</tr>
<tr>
<td>14</td>
<td>Eating is a good way to celebrate.</td>
<td>1</td>
<td>2</td>
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<td>6</td>
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<tr>
<td>15</td>
<td>When I do something good, eating is a way to reward myself.</td>
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<tr>
<td>16. Eating isn’t useful as a reward for me.</td>
<td>1</td>
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<td>6</td>
<td>7</td>
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<tr>
<td>17. I don’t get a sense of security or safety from eating.</td>
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<td>6</td>
<td>7</td>
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<tr>
<td>18. If I have nothing planned to do during the day, eating isn’t something that would help me fill the time.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>19. Eating helps me think and study better.</td>
<td>1</td>
<td>2</td>
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<tr>
<td>20. Eating is fun and enjoyable.</td>
<td>1</td>
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<td>4</td>
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<tr>
<td>21. My eating behavior often results in a feeling that I am not in control.</td>
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<tr>
<td>22. When I work hard or accomplish something, eating doesn’t serve as a good reward.</td>
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<td>3</td>
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<tr>
<td>23. Eating is something to do when you feel bored.</td>
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<tr>
<td>24. Eating is a way to vent my anger.</td>
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<td>7</td>
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<tr>
<td>25. Eating helps me avoid uncomfortable social situations.</td>
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<td>7</td>
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<tr>
<td>26. When I am angry at my parents, spouse, or friends, eating helps me get back at them.</td>
<td>1</td>
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<tr>
<td>27. When I am faced with difficult tasks, eating can help me avoid doing them.</td>
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<tr>
<td>28. Eating helps me forget or block out negative feelings, like depression, loneliness, or fear.</td>
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<td>29. Eating calms me when I am feeling stressed, anxious, or tense.</td>
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<td>30. Eating can help me bury my emotions when I don’t want to feel them.</td>
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<td>31. Eating helps me work better.</td>
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<tr>
<td>32. Eating helps me cope with negative emotions.</td>
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<td>33. Eating does not make me feel out of control.</td>
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<tr>
<td>34. Eating helps me deal with sadness or emotional pain.</td>
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Appendix R

Seven-Day Physical Activity Recall

Participant ID______ Date: ______ Day of Week:_______ Interviewer:___________

<table>
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<tr>
<th>DAYS</th>
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<td>Very Hard</td>
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<td>Afternoon</td>
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<td>Flexibility</td>
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</table>

Worksheet Key

Rounding: 10-22 min = .25  23-37 min = .50  38-52 min = .75  53-1:07 hr/min = 1.0  1:08-1:22 hr/min = 1.25

*denotes a work-related activity  ~A squiggly line denotes a weekend day.

Totals

Moderate:__  Hard:__  Very Hard:__  Vig (hard+very hard):_____
Appendix S

Acceptability Questionnaire

Date: _______________   Session #: __________

1. Do you think the topics covered today were helpful?
   Not at all helpful   A little bit helpful   Yes, very helpful

2. Do you think the homework for this week was helpful?
   Not at all helpful   A little bit helpful   Yes, very helpful

3. Did you enjoy today’s session?  Not at all   A little bit   Yes, a lot
   What did you like about today’s session?
   ____________________________________________________________
   What did you dislike about today’s session?
   ____________________________________________________________

4. Did the group leaders make you feel comfortable?  Yes   No
   If no, how did they make you uncomfortable?
   ____________________________________________________________

5. Did the other group members make you feel comfortable?  Yes   No
   If no, how did they make you uncomfortable?
   ____________________________________________________________

6. What has been beneficial about the group so far?
   ____________________________________________________________

7. How satisfied with the group are you so far?
   Not at all satisfied   Somewhat satisfied   Very satisfied
Appendix T

Exit Questionnaire

We will not know who filled out what survey, so please feel free be brutally honest 😊

Please circle one response for each item.

1. I enjoyed attending INSPIRE.

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<tbody>
<tr>
<td>Disagree</td>
<td>Strongly</td>
<td>Moderately</td>
<td>Neither Disagree nor Agree</td>
<td>Moderately</td>
<td>Strongly</td>
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<tr>
<td>Agree</td>
<td>Disagree</td>
<td>Disagree</td>
<td>nor Agree</td>
<td>Agree</td>
<td>Agree</td>
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</table>

2. I thought the group was boring.

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<td>Disagree</td>
<td>Strongly</td>
<td>Moderately</td>
<td>Neither Disagree nor Agree</td>
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<td>Strongly</td>
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<tr>
<td>Agree</td>
<td>Disagree</td>
<td>Disagree</td>
<td>nor Agree</td>
<td>Agree</td>
<td>Agree</td>
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</table>

3. The INSPIRE session topics addressed my concerns about healthy living.

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<td>Disagree</td>
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<td>Moderately</td>
<td>Neither Disagree nor Agree</td>
<td>Moderately</td>
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<tr>
<td>Agree</td>
<td>Disagree</td>
<td>Disagree</td>
<td>nor Agree</td>
<td>Agree</td>
<td>Agree</td>
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4. There were too many sessions.

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<td>Neither Disagree nor Agree</td>
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<tr>
<td>Agree</td>
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<td>Disagree</td>
<td>nor Agree</td>
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<td>Agree</td>
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5. Participating in this group has helped me deal with my emotions better.

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<tr>
<td>Disagree</td>
<td>Strongly</td>
<td>Moderately</td>
<td>Neither Disagree nor Agree</td>
<td>Moderately</td>
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<tr>
<td>Agree</td>
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<td>Disagree</td>
<td>nor Agree</td>
<td>Agree</td>
<td>Agree</td>
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</table>

6. Participating in this group has helped me appreciate my appearance more.

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<td>Strongly Disagree</td>
<td>Moderately Disagree</td>
<td>Neither Disagree nor Agree</td>
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</table>

7. My eating habits have improved because of participating in this group.

8. I felt comfortable sharing/participating in the group.

9. I felt comfortable with the other group members.

10. I felt comfortable with the group leaders.

11. I would recommend this group to another woman.

Please respond to the following questions in the space provided.

1. How did you feel about attending the group sessions?
2. What did you think of the topics covered?

3. What parts of the group were most helpful to you?

4. Least helpful?

5. What other topics do you wish were in the group?

6. What did you think about the length and number of sessions?

7. What is the most important thing you learned from this group?

8. What has been the hardest part of being in this group?

9. Has this program impacted your life in any way? If so, how?

10. Do you have any other suggestions for future groups like this one?
Appendix U

Feasibility Questionnaire

Therapist Name: ________________________ Date: __________________

Session Topic: _______________________

1. We were able to cover all of the material included in the manual for today’s session.

   Strongly Disagree    Disagree    Agree    Strongly Agree

   Notes (including whether some sections should be shortened, lengthened or removed):

_____________________________________________________________________________________

2. The topics covered were appropriate for the group.

   Strongly Disagree    Disagree    Agree    Strongly Agree

   Notes (including whether some sections were more/less appropriate and why):

_____________________________________________________________________________________

3. Group members seemed to enjoy the content.

   Strongly Disagree    Disagree    Agree    Strongly Agree

   Notes (including what they particularly did/did not enjoy):

_____________________________________________________________________________________

4. Group members appeared to understand the content.

   Strongly Disagree    Disagree    Agree    Strongly Agree

   Notes (including what was too difficult comprehend, or overly simplified):

_____________________________________________________________________________________

5. Please list any suggestions for improving this session.

_____________________________________________________________________________________
Vita

Courtney Christian Simpson was born on January 17th, 1989 in Seattle, Washington and is an American citizen. She graduated from Lewis and Clark High School in Spokane, Washington in 2007. She received her Bachelor of Arts in Psychology from Whitworth University in Spokane, Washington in May 2013. She received her Master of Science in Counseling Psychology from Virginia Commonwealth University, Richmond, Virginia in May 2015.