A Dissertation

Submitted to the Faculty

of

Xavier University

in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Psychology

By

Katrina R. Lenz

November 30, 2015

Approved:

Karl W. Stukenberg, PhD
Karl W. Stukenberg, PhD, ABPP
Chair, Department of Psychology

Christian End
Christian End, PhD
Dissertation Chair
The Body Positive: An Intervention Promoting Teenagers' Body Satisfaction

While Reducing Weight Stigma
Dissertation Committee

<table>
<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Christian End, PhD</td>
<td>Associate Professor of Psychology</td>
</tr>
<tr>
<td>Member</td>
<td>Jennifer Gibson, PhD</td>
<td>Assistant Professor of Psychology</td>
</tr>
<tr>
<td>Member</td>
<td>Christine M. Dacey, PhD, ABPP</td>
<td>Professor of Psychology</td>
</tr>
</tbody>
</table>
Acknowledgements

I would like to express my deepest appreciation to my dissertation chair, Dr. Christian End, for his guidance throughout this project. Thank you also to Drs. Jennifer Gibson and Christine Dacey for serving on my dissertation committee. Their thoughtful suggestions helped shape and improve my project. I want to thank Jess Petri for all of her time and wisdom – I truly could not have done this without her. I would also like to thank Mr. Foster, Mrs. Twehues and Mrs. Mertle for allowing me to collect data at their school. Their flexibility and support of this project was greatly appreciated.

Additionally, I would like to thank Dr. Elizabeth Mariutto and the staff of the Lindner Center of Hope for their ongoing support for my clinical and research training in the field of eating disorders. They have been incredibly supportive of me pursuing my dream career, and I am thankful to have such wonderful mentors. I would also like to thank my brilliant and beautiful friends in my cohort, especially Sehra Polad and Gina Radice. They have kept me sane throughout graduate school, and their willingness to answer late night phone calls and respond to endless group messages is greatly appreciated. I am also thankful for my friend Krissy Groh for always being interested in hearing about my studies and for being proud of me.

Biggest thanks to my family, who have always supported me through every endeavor. My parents, Matt and Diana Lenz are my biggest cheerleaders and I could not have done this without them. Thank you to my brother and sister, Matt and Kristen Lenz, for always being there for me when I needed them. Finally, and most importantly, thank you to my wonderful soon-to-be husband, Michael Krebs. You should have earned at least a Master’s degree in psychology at this point, and I am so thankful to have found someone so incredibly kind and supportive of my dreams.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgements</td>
<td>i</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>ii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>iii</td>
</tr>
<tr>
<td>List of Appendices</td>
<td>iv</td>
</tr>
<tr>
<td>Chapter V. Dissertation</td>
<td>1</td>
</tr>
<tr>
<td>References</td>
<td>29</td>
</tr>
<tr>
<td>Tables</td>
<td>41</td>
</tr>
<tr>
<td>Appendices</td>
<td>46</td>
</tr>
<tr>
<td>Summary</td>
<td>59</td>
</tr>
</tbody>
</table>
List of Tables and Figures

Chapter V

Table

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Participant Demographics</td>
<td>41</td>
</tr>
<tr>
<td>2. Participants Present at Times 1, 2, &amp; 3</td>
<td>42</td>
</tr>
<tr>
<td>3. Scale Reliabilities</td>
<td>43</td>
</tr>
<tr>
<td>4. Means and Standard Deviations for Females’ and Males’ Body Dissatisfaction, Drive for Thinness, Drive for Muscularity and Fat Phobia Scores</td>
<td>44</td>
</tr>
</tbody>
</table>

Figure

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>45</td>
</tr>
<tr>
<td>Chapter V</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>A. Eating Disorder Inventory: Body Dissatisfaction Scale for Girls</td>
<td>46</td>
</tr>
<tr>
<td>B. Eating Disorder Inventory: Drive for Thinness Scale for Girls</td>
<td>47</td>
</tr>
<tr>
<td>C. Eating Disorder Inventory: Body Dissatisfaction Scale for Boys</td>
<td>48</td>
</tr>
<tr>
<td>D. Drive for Muscularity Attitudes Questionnaire for Boys</td>
<td>49</td>
</tr>
<tr>
<td>E. Fat Phobia Scale Short Form</td>
<td>50</td>
</tr>
<tr>
<td>F. Demographic Form</td>
<td>51</td>
</tr>
<tr>
<td>G. Evaluation of the Modified Body Positive Intervention</td>
<td>52</td>
</tr>
<tr>
<td>H. Letter of Approval from Intervention Site</td>
<td>53</td>
</tr>
<tr>
<td>I. Letter of Approval from Xavier University’s Institutional Review Board</td>
<td>54</td>
</tr>
<tr>
<td>J. Consent Form</td>
<td>55</td>
</tr>
<tr>
<td>K. Assent Form</td>
<td>56</td>
</tr>
<tr>
<td>L. Outline of the Original Body Positive Curriculum</td>
<td>57</td>
</tr>
<tr>
<td>M. Abbreviated Body Positive Curriculum</td>
<td>58</td>
</tr>
</tbody>
</table>
Abstract

Heightened national interest in youth obesity has led many schools to implement obesity intervention programs which often emphasize that students maintain a “healthy weight.” This focus on weight-loss has increased the need to simultaneously address body dissatisfaction and the stigmatization of “overweight” individuals. This study evaluated an abbreviated Health at Every Size (HAES) informed intervention, The Body Positive (The BP; Sobczak & Scott, 2013). The BP intervention was taught to first year high school students ($N = 56$) in two, 68-minute sessions. The students watched a video and participated in various group activities and instructor-led discussions related to intuitive eating and exercise, body acceptance and weight stigma. The researcher hypothesized that pre-, post- and 6-week follow-up assessments would indicate a significant decrease in body dissatisfaction (BD) for female and male participants, a decrease in drive for thinness (DT) among female participants and drive for muscularity among male participants (DM), and a decrease in fat phobia (FP) among female and male participants. An exploratory ANOVA indicated a significant decrease in female participants’ DT scores immediately after and six weeks after the BP intervention. There were no significant changes in BD, DM or FP. Limitations of the study are addressed, and implications for future research are provided.
The Body Positive: An Intervention Promoting Teenagers' Body Satisfaction
While Reducing Weight Stigma

Childhood obesity is consistently ranked among the top concerns that parents and the public have regarding the health of children in the United States (University of Michigan Health System, 2012). Roughly one in three American children is overweight or obese, meaning these children have a body mass index greater than or equal to the 85th percentile on the BMI-for-age growth charts (Centers for Disease Control & Prevention, 2012; Kuczmarski, et al., 2000; Ogden, Carroll, Curtin, Lamb, & Flegal, 2010). Childhood obesity has been linked with a variety of health problems including type 2 diabetes (Whitlock, Williams, Gold, Smith, & Shipman, 2005), high blood pressure and high cholesterol, which are risk factors for cardiovascular disease (Freedman, Mei, Srinivasan, Berenson, & Dietz, 2007), and various social and psychological problems including discrimination, depression, low self-esteem, and diminished quality of life (Anderson, 2006; Katz, O’Connell, Njike, Yeh, & Nawaz, 2008; Schwartz & Puhl, 2003; Whitlock et al., 2005).

As a result of current obesity rates among youth, increased attention has been paid to school nutrition and physical education programs. The United States government has developed various obesity prevention and healthy living promotion efforts including the “Let’s Move!” Campaign (Obama, 2012), the United States Department of Agriculture (USDA) HealthierUS School Challenge (USDA, 2010), and the White House’s Task Force on Childhood Obesity (Task Force on Childhood Obesity, 2010). Obesity prevention programs have targeted children as young as 2-5 years old in childcare (Natale et al., 2013) and pre-school settings (Davis et al., 2013; Monasta, Lobstein, Cole, Vigneron, & Cattaneo, 2011), as well as youth in elementary
(Jansen et al., 2011; Johnston et al., 2013; Wyatt et al., 2013) and secondary schools (Bonsergent et al., 2013).

**Concerns with Obesity Prevention Programming**

The University of Michigan Health System (UMHS; 2012) revealed that 82% of surveyed parents of 6-14 year olds reported at least one form of obesity prevention and/or intervention program in their child’s school, and 30% of these parents reported worrying about changes in their children’s eating behaviors and physical activity. The majority of obesity programs use weight loss as a measure of success without thoroughly evaluating psychological and psychosocial outcomes such as eating pathology, body satisfaction and weight stigmatization (Carter & Bulik, 2008; Katz, O’Connell, Njike, Yeh, & Nawaz, 2008). Programs focusing on weight loss have the potential to be dangerous in promoting an unhealthy obsession with weight and possibly increasing prevalence rates of eating disorders (Neumark-Stainer, 2005; O’Dea 2005). As a result, many researchers have advocated for programs promoting general health, rather than solely focusing on weight loss (Bacon, 2008; Farrell, 2011; Provencher et al., 2009).

The abbreviated health promotion program, “The Body Positive,” was evaluated in this study for its effectiveness in reducing the stigmatization of overweight individuals and increasing adolescent boys’ and girls’ body satisfaction.

**The Importance of Addressing Body Satisfaction**

Body dissatisfaction, the discrepancy between aspects of one’s perceived body and aspects of one’s ideal body, has been called an “epidemic among youth” (Maxwell & Cole, 2012, p. 721), and has even been described as normative for adolescents (Dohnt & Tiggemann, 2005; Rodin, Silberstein, & Striegel-Moore, 1985). While females are often most concerned with decreasing the size of their bodies to achieve the thin ideal endorsed by society, males are most
concerned with increasing muscle size, while also decreasing their fat levels (Stanford & McCabe, 2002). Regardless of the person’s area of concern, body dissatisfaction is positively correlated with low self-esteem (Heatherton & Polivy, 1992) and many harmful, and ineffective, weight control behaviors including dieting or restrictive eating, diet pill use, excessive exercise, steroid use, vomiting and laxative use, and other forms of disordered eating (Centers for Disease Control and Prevention, 2001; Stanford & McCabe, 2005). Dieting is ineffective in preventing weight gain, and may actually be associated with weight gain since dieters often develop a cognitive style of eating, rather than following physiological cues of hunger and fullness (Haines & Neumark-Sztainer, 2006). Given the harmful consequences of poor body dissatisfaction and ineffectiveness of weight control behaviors such as dieting it is critical that youth learn to sustain healthy eating and exercise behaviors.

The Importance of Addressing Weight Stigmatization

In addition to the concerns about body dissatisfaction and unhealthy weight control behaviors among youth, O’Dea (2005) expressed concern that emphasizing obesity prevention in schools may result in further stigmatization and discrimination against overweight and obese individuals. Individuals begin to assign negative characteristics to overweight or obese figures as young children (Grogan, 2008). Though negative stigma-related experiences begin in childhood, they typically peak during the school-age and adolescent years (Browne, 2012). Peers perceive overweight and obese youth as unpopular, unmotivated, lacking in self-discipline, incompetent, noncompliant, and sloppy (Puhl & Heuer, 2009). Anti-fat biases among children have existed for decades, and have gotten worse over time, despite a growing population of overweight and obese individuals (Bissell & Hays, 2011; Latner & Stunkard, 2003; Politano & Politano, 2011). Politano and Politano suggested that an increased emphasis on methods to be healthier in order
to lose weight, and focus on the “obesity epidemic” may explain a lack of acceptance of diverse sizes. Stigmatization of overweight and obese youths is problematic because such stigmatization is associated with increased experiences of weight teasing (Haines, Neumark-Sztainer, Hannan, van den Berg & Eisenberg, 2008), bullying (Browne, 2012), harassment and discrimination in multiple settings (Puhl & Brownell, 2003; Puhl et al., 2008) such as employment (Fikkan & Rothblum, 2005; Pascal & Kurpius, 2012), health-care (Rogge, Greenwald, & Golden, 2004) and educational settings (Latner, Stunkard, & Terence, 2005). Furthermore, bullying, teasing and social exclusion have been identified as risk factors for negative self-evaluations of general appearance and weight (Lunde et al., 2005; McCabe et al., 2002) and increased depressive symptoms among overweight and obese individuals (Puhl et al., 2008). Therefore, it is important for schools to take the necessary precautions in order to reduce stigmatization of overweight and obese students.

Health at Every Size

As previously mentioned, it is unclear whether increased focus on the weight of the nation’s children and adolescents has had iatrogenic effects. However, as indicated by previous research, stigma toward overweight and obese individuals has continued to increase (Latner & Stunkard, 2003; Politano & Politano, 2011), as have unhealthy weight control behaviors among youth (Battle & Brownell, 1996). Haines and Neumark-Sztainer (2006) explained that eating disorders and obesity exist along a continuum, and that prevention efforts should strive to address the spectrum of weight and eating-related concerns. Advocates of a model known as Health at Every Size (HAES) have argued for health-promotion programs that actively discourage dieting and other unhealthy weight-loss behaviors and promote size acceptance. The HAES approach shifts from the traditional weight-centered approach to a more health-centered...
approach, promoting overall health benefits of behavior changes related to dietary habits and physical activity. This approach emphasizes size acceptance, while rejecting dieting. In addition, physiological, social, spiritual, occupational, emotional and intellectual factors are considered measures of health, independent of weight status (Association for Size Diversity and Health, 2013). Finally, much of the work of HAES focuses on challenging discrimination against ‘fat’ people, and on encouraging individuals of all sizes to take pleasure in eating, while listening to bodily cues and eating healthy foods (Bacon, 2008).

Several studies have compared HAES interventions with traditional weight-loss programs for overweight and obese adult women. Bacon et al. (2002) found that, although participants in both a 'health-centered' non-diet wellness program (HAES group) and participants in a 'weight loss-centered' diet program demonstrated significant improvements in many measures of metabolic fitness, healthy eating behaviors and psychological wellness, the HAES group had a significantly lower attrition rate. Authors of the study concluded that a non-diet HAES approach is capable of producing improvements in metabolic fitness, eating behaviors, and psychological outcomes. Bacon, Stern, and Kleim (2005) also compared an HAES intervention focused on body and self-acceptance with a conventional dieting program. Results indicated that women in the dieting condition experienced some initial weight loss and health improvements but failed to sustain those health benefits or the weight loss, and ultimately went back to their baseline weight. The HAES women experienced significant improvements in their cholesterol and blood pressure and experienced a decrease in depressive thoughts. Additionally, they reported being more active, enjoying their bodies more when engaging in physical activity and an overall increase in body image and self-esteem. Comparatively, each of these variables either stayed the same or worsened in the diet condition. Finally, a third study evaluated an HAES intervention for
women that focused on general well-being and leading a healthful and satisfying life. Results indicated that women in the HAES condition experienced beneficial effects on eating behaviors related to disinhibition (the overconsumption of food in response to a variety of stimuli associated with a loss of control on food intake) and susceptibility to hunger (food intake in response to feelings and perceptions of hunger) compared to a control group (Provencher et al., 2009).

**Consideration of the HAES approach as a school-based intervention.** The aforementioned HAES studies (Bacon et al., 2002; Bacon et al. 2005; Provencher et al., 2009) relied on volunteer adult women who were either overweight, obese, or had a history of chronic dieting. Since research examining an HAES intervention for youth that emphasizes all aspects of the HAES model (as outlined by Bacon, 2002) is scarce, it is unknown whether a similar HAES intervention would be associated with positive outcomes for the proposed study’s population: adolescent male and female high school students of various weights. A brief literature review of youth-focused interventions that use elements of a HAES approach (such as size acceptance, positive body image regardless of size, intuitive eating, and healthy physical activity) is provided (for additional information regarding school-based eating disorder prevention efforts, see Shulman & Mulloy-Anderson, 2009 or Stice & Shaw, 2004).

Kater, Rohwer and Levine (2000) and Kater, Rohwer and Londre (2002) conducted two of the most comprehensive investigations of a HAES, school-based intervention for fourth and sixth grade male and female students. The curriculum focused on healthy behavior choices, as opposed to unhealthy weight control behaviors, the intrinsic nature of body size, shape and composition, as well as acceptance of size diversity as natural, rather than a basis for weight-prejudice. Results from a 10-week pilot study indicated significant positive changes following
the intervention in students’ responses about their own body development, attitudes about body sizes in general, factors influencing body size and shape, the expected counterproductive effects of dieting, self-assessment of their own body image, and critical thinking regarding media messages (Kater et al., 2000). A second evaluation of the same HAES curriculum taught over 10 weeks revealed that boys and girls who completed the intervention experienced significant improvements in assessed knowledge, media awareness, body size prejudice, and life-style behaviors (Kater et al., 2002). Female participants experienced improved self-image, as well. This study provides promising results that an HAES intervention can produce significant changes in important variables among school-aged children.

**Body satisfaction interventions related to the HAES model.** Although Kater and colleagues (2000; 2002) examined a comprehensive HAES based intervention for children, other researchers have examined curricula with particular components of an HAES intervention such as improving children’s and adolescents’ body satisfaction. For example, Richardson, Paxton and Thomson (2009) evaluated a body image and self-esteem program for seventh grade boys and girls named “BodyThink.” Four 50 minute sessions addressed media literacy, self-esteem, internalization of the media ideal, body comparisons, and body image. The results indicated that among girls, the intervention group reported significantly higher media literacy scores, and significantly lower internalization of the thin ideal than the control group. Additionally, there was a trend towards the intervention group reporting higher self-esteem and lower body comparisons. Among boys, the intervention group compared to the control group reported significantly higher media literacy, and higher body satisfaction scores.

O’Dea and Abraham (2000) examined the outcomes of another school-based, self-esteem education program for boys and girls, “Everybody’s Different” (O’Dea, 1995). The goal of the
program was to improve body image by building general self-esteem over the course of nine 50-80 minute lessons. Results indicated improved body satisfaction and physical appearance ratings three months after baseline. Furthermore, females who completed the program were significantly less likely to report they were trying to lose weight three months after baseline than females in the control condition. Additionally, students in the intervention condition rated social acceptance and physical appearance as significantly less important than students in the control condition immediately following the intervention, as well as at the 12 month follow-up. This particular finding suggests that this intervention has the potential to challenge peer group pressure and cultural body image norms.

**Stigma reduction interventions related to the HAES model.** In general, the aforementioned studies (Kater et al., 2000; Kater et al., 2002; O’Dea et al., 2000; Richardson et al., 2009) provide promising results that attitudes, knowledge and behaviors related to body satisfaction and weight can be improved at least in the short-term. Additionally, Kater et al. (2002) and Richardson et al. (2009) found positive changes related to appearance teasing following the implementation of their interventions. Despite the negative outcomes associated with appearance teasing (Halvarsson, Lunner, Westerberg, Anteson, & Sjoden, 2002; Tantleff-Dunn & Thompson, 1998; Thompson et al., 1995), few additional studies have examined interventions that emphasize size acceptance and the reduction of stigma toward overweight and obese individuals.

Irving (2000) found support for a school-based program promoting size acceptance among elementary children (grades K-5). Using life-sized puppets, Irving addressed issues related to the development of body acceptance, dieting and emotional distress. Additionally, students learned that human body shapes are naturally diverse and teasing and discrimination can
have harmful effects on people. The results indicated that negative attitudes about large body shapes were reduced among participants. A second school-based intervention, Very Important Kids (VIK), also targeted weight and appearance-related teasing for fourth through sixth grade male and female students (Haines, Neumark-Sztainer, Perry, Hannan & Levine, 2006). Results indicated that the percentage of students reporting being teased decreased significantly in the intervention condition compared to the control condition. The findings of Irving (2000) and Haines et al. (2006) suggest that school-based programs have the potential to influence attitudes and behaviors related to appearance and weight teasing. Since other studies have found that school-based interventions are able to change attitudes and behaviors related to body satisfaction (Kater et al., 2000; Kater et al., 2002; O’Dea et al., 2000; Richardson et al., 2009), continuing to evaluate programs that promote general health, body satisfaction, and size acceptance as opposed to weight loss, is a worthwhile endeavor.

**The Body Positive.** While several of the aforementioned studies systematically evaluated interventions targeting aspects of the HAES model (Haines et al., 2006; Irving, 2000; O’Dea et al., 2000; Richardson et al., 2009), many existing interventions using an HAES framework have yet to be evaluated. Sobczak and Scott (2013) have developed “The Body Positive” (BP), an intervention that emphasizes self-love, the acceptance of genetic diversity in body size, the celebration of the unique beauty of every individual and intuitive self-care that is fundamental to achieving good health (emotionally, physically, socially and spiritually). The BP aims to assist individuals overcome body dissatisfaction and stigmatization of weight. While Kater et al. (2000; 2002) developed a curriculum that targeted similar outcomes in an elementary student population, the BP can be applied to students from a wider age range, including high school students. Additionally, the creators of the BP encourage those who implement the intervention to
adapt it according to the needs of students involved. The present study extends the current research on HAES-based interventions by examining the outcomes of a modified version of the BP intervention in a high-school setting. Based on previous research (Haines et al., 2006; Irving, 2000; O’Dea et al., 2000; Richardson et al., 2009) the researcher of the current study hypothesized the following:

**H₁**: There will be significant changes on body dissatisfaction and drive for thinness scales for female students, such that, female students will report increased body satisfaction and decreases in drive for thinness at the conclusion of the intervention and at follow-up.

**H₂**: There will be significant changes on the modified body dissatisfaction scale of the EDI and Drive for Muscularity Attitudes Questionnaire (DMAQ) for male students, such that, male students will report increased body satisfaction and decreases in desire to achieve a muscular body type at the conclusion of the intervention and at follow-up.

**H₃**: There will be significant changes on the Fat Phobia Scale Short Form (FPSSF), such that, male and female students in the BP condition will report decreases in FPSSF scores over the course of the intervention and at follow-up.

**Method**

**Participants**

Participants for this study were male and female high school students enrolled at a private Catholic high school. At the time of the intervention, all participants ($M_{age} = 14.65$ years; $SD = .66$ years) were enrolled in a general health class required of all students. The majority of participants (96%) self-identified as White/Caucasian ($n = 54$; see Table 1 for demographic information). Due to the small sample size of non-White/Caucasian participants, differences
between participants of different races/ethnicities in regards to dependent variables could not be evaluated.

Exclusion criteria of the study included missing a day of the intervention or failing to provide student assent and/or parental consent. The data were collected over two trimesters; during the fall, students in the honors section of the health course (Class 1) completed the intervention, and during the spring, students in the two general sections of the health course (Classes 2 and 3) completed the intervention. Although the initial power analysis called for 128 participants in order to detect a medium effect size of .25 with power set at .80 and alpha set at .05, the final sample size was much smaller (N = 56). This was partially due to low enrollment at the high school during the year of data collection (75 first-year high school students compared to the usual 85-100 first-year students). Additionally, 19 students were excluded for either not providing parental consent or missing one or more days of data collection. Fifty-six (n = 29 female students, n = 27 male students) out of 75 potential students were present for all three days of data collection and provided necessary consent and assent. (See Table 2 and Figure 1 for information regarding participants present at various time points).

Measures

**Eating Disorders Inventory** (Garner, Olmsted, & Polivy, 1983). The EDI is one of the most frequently used measures of characteristics common in eating disorders (Bernert, et al., 2013; Fernandez & Pritchard, 2012; Schuster, Negy, & Tantleff-Dunn, 2013). The EDI is divided into eight scales, with reliability estimates ranging from .82 to .93 for these subscales (Espelage et al., 2003). The EDI has well-established criterion-related validity, and it has been normed for use with respondents ages 11 to 18 (Shore & Porter, 1988). Individual subscales of the EDI are often administered to nonclinical populations, including students participating in
school-based eating disorder prevention programs and body satisfaction interventions, to assess constructs such as the drive for thinness and body dissatisfaction (McCabe, 2010; Richardson et al., 2009; Richardson & Paxton, 2010). Participants responded to six point, forced choice items by rating whether each item applied \(6 = \text{always}, 5 = \text{usually}, 4 = \text{often}, 3 = \text{sometimes}, 2 = \text{rarely} \) or \(1 = \text{never}\). Schoemaker, van Strien and van der Staak (1994) found improved psychometric properties and variability using a scoring technique designed for a non-clinical population; therefore, scoring for non-clinical populations was used in this study.

Due to limited time with the participants, female students only completed two of the EDI subscales: the body dissatisfaction scale (see Appendix A) and drive for thinness scale (see Appendix B). The body dissatisfaction scale for females included nine items and assessed the belief that certain parts of the body are too large. The drive for thinness scale included seven items and measured the presence of extreme concern with thinness. The male participants only completed the body dissatisfaction scale (seven items), which was slightly modified (see Appendix C) to assess for satisfaction with chest and bicep size, rather than satisfaction with hips and thighs (Jones et al., 2004). Higher scores on each of the subscales reflect greater body dissatisfaction or drive for thinness. (See Table 3 for reliability data).

**Drive for Muscularity Attitudes Questionnaire** (Morrison, Morrison, Hopkins & Rowan, 2004). The DMAQ (Appendix D) is a unidimensional measure of male participants’ drive for muscularity, the desire to increase muscularity to reduce a perceived discrepancy between actual and ideal levels (McCreary & Sasse, 2000). This eight item measure has good construct validity (Morrison, Morrison, & McCann, 2006) and a reliability coefficient of .85 (Tod, Morrison, & Edwards, 2012), which indicates good reliability. The responses for the DMAQ range from 1 (strongly disagree) to 5 (strongly agree). Scores range from 8 to 40, with
an average score of 25.9, indicating modest levels of the drive for muscularity. Although the DMAQ was normed on undergraduate male students (ages 17-51), an English teacher at the study site confirmed that the language of the scale was appropriate for ninth grade students. (See Table 3 for reliability data).

**Fat Phobia Scale: The Short Form** (Bacon, Scheltemaz, & Robinson, 2001). The FPSSF (Appendix E) is a widely used measure (McClure, Puhl, & Heuer, 2011; Pascal & Kurpius, 2012; Peterson et al., 2012; Sikorski, et al., 2012) that assesses stereotypical and prejudicial attitudes towards “fat” people (termed ‘fat phobia’ by the scale developers). The FPSSF has strong construct and concurrent validity and a reliability coefficient of .91 (Bacon et al., 2001). The FPSSF has been used in studies with adult respondents (18-97 years old) of a wide variety of ages (Sikorski, et al., 2012). Participants were provided with 14 pairs of adjective pairs (such as “lazy” versus “industrious,” and “weak” versus “strong”) and were asked to place an “X” on the line closest to the adjective they believed best described their feelings and beliefs regarding “fat” or “overweight” people. Although the FPSSF was not normed on an adolescent population, a high-school English teacher at the study site reviewed the scale to assess whether the language of the scale was appropriate for first-year high school students. Per this teacher’s suggestion, four of the scale’s adjectives (“industrious,” “endurance,” “self-indulgent” and “self-sacrificing”) included definitions below the items.

Item scores on the FPSSF range from 1-5, with higher scores indicating greater fat phobia. For adults, an average score of 3.6 on the 14 item form is indicative of an average amount of fat phobia, and a score of 4.4 or above is indicative of a high level of fat phobia. However, the scores of the current study’s population may not be comparable to an adult normed
sample since adolescents, in comparison to adults, often experience more stigma-related experiences because of weight (Browne, 2012). (See Table 3 for reliability data).

**Demographic Questionnaire.** A demographic questionnaire (see Appendix F) was distributed in order to obtain background information from participants, specifically age, gender and ethnicity.

**Intervention Evaluation.** Participants also completed a brief questionnaire (see Appendix G) regarding their experience of the modified BP intervention. Participants responded to two items (Neu, 2008) assessing how much they enjoyed and learned from the intervention on a scale of 1 (*not at all*) to 5 (*very much*). Per the request of The BP curriculum developer, participants were also given an opportunity to provide qualitative feedback regarding what they enjoyed about the program and what they learned from the program. Participants also provided feedback regarding what they would like to be different about the program.

**Procedure**

**Pre-intervention.** Approval from both Newport Central Catholic (see Appendix H) and Xavier University Institutional Review Board (IRB; see Appendix I) was obtained prior to collecting data for this study. Prior to Day 1 of the intervention with the participants, the researcher obtained parental consent for each participant in the study (see Appendix J). The researcher also obtained assent from each participant immediately before beginning the curriculum (see Appendix K). Because the intervention was incorporated into the course’s curriculum, students who failed to provide consent to participate in the study (*n* = 11 participants; *n* = 1 female, *n* = 10 males) participated in the intervention without generating data. There were no known parental objections to students participating in the intervention. Each participant was given a packet of measures for completion: the EDI body dissatisfaction scale,
the drive for thinness scale of the EDI or DMAQ depending on gender of the participant, FPSSF and Demographic Questionnaire in order to establish baseline data.

**Theoretical Basis of the Intervention.** The Body Positive intervention was developed based on an HAES model. According to Bacon (2008), the aim of HAES is to promote overall health benefits of behavior changes related to dietary habits and physical activity. The HAES approach emphasizes size acceptance and actively challenges discrimination against overweight and obese individuals. Within this framework, health is measured by physiological, social, spiritual, occupational, emotional and intellectual factors, rather than weight (Association for Size Diversity and Health, 2013).

**Overview of the Intervention.** The original Body Positive curriculum (see Appendix L for an outline of the curriculum) is typically presented over the course of 12, 30 minute sessions. The original BP curriculum was modified in order to be presented in two, 68 minute sessions. The creators of the BP encourage group leaders to adapt the BP curriculum to fit the needs of each individual school and/or organization, as long as the core principles of the BP and HAES models remain the same. Four of the original 30 minute sessions were entirely eliminated, and other session activities were shortened due to limited time with participants. In following recommendations based on a meta-analysis of eating disorder prevention programs (Stice & Shaw, 2004) as well as those of the BP developers, the intervention was interactive and required a great deal of discussion and activity by the participants.

**Intervention Sessions.** The first 68 minute session (see Appendix M) focused on the topic of “Understanding the Body Positive and Health at Every Size.” This session included activities and discussions from the original BP curriculum (Sobczak & Scott, 2013) that were slightly modified for time purposes. Participants were briefly introduced to the purpose of the
group and reviewed guidelines for creating a space in which students felt comfortable discussing personal issues. Participants then watched the 25 minute long “BodyTalk” DVD (Sobczak & Scott, 2013) which explained the HAES and BP model in detail. Students then participated in the activity “Exploring Body Messages,” during which students discussed the messages they have received about their bodies from family, friends, media and the medical field/doctors. Following this activity, participants continued to discuss the principles of HAES and participated in an activity addressing common myths related to weight and health within the HAES model.
Students received a handout with more information regarding HAES and the BP to take home with them for the day.

The second 68 minute session, presented the day after the first session, emphasized putting the BP and HAES principles into practice. The session began with a short discussion of the previous day, followed by a discussion of the differences between confidence and conceit. Students then participated in an interactive activity related to critical thoughts about one’s body. After this activity, students learned skills to “cultivate self-love” by identifying qualities that described their unique beauty. The final session also included time specifically reserved for the discussion of sizeism, discrimination based on someone’s body size. Participants discussed how they have been affected by sizeism, as well as how to be an advocate for size acceptance. Finally, participants engaged in a brief discussion about “building community.”

Following the last session, participants were given another packet of measures to complete: the EDI (body dissatisfaction scale for boys and girls, and drive for thinness scale for girls), the DMAQ for boys, and the FPSSF. Additionally, participants completed the brief evaluation of the modified BP intervention. Participants completed follow-up questionnaires (the same measures as time 2) 6 weeks after the intervention. The primary investigator and an
undergraduate or graduate research assistant administered all intervention and data collection sessions.

**Results**

*Differences between classes at pre-intervention*

Since data were collected from three classes over the course of two trimesters, analyses of variance (ANOVAs) were conducted on the dependent variables (body dissatisfaction, drive for thinness and fat phobia for females, and body dissatisfaction, drive for muscularity and fat phobia for males) in order to assess for differences between the classes. ANOVAs were conducted on male and female participants’ data separately. Results indicated no significant differences between males in the three classes, and no significant differences between females’ body dissatisfaction or drive for thinness scores in the three classes. However, results indicated a significant difference between females’ fat phobia scores in classes 1 and 3. Female participants in class 3 had significantly greater fat phobia than female participants in class 1, $F(2, 26) = 3.44$, $p < .05$. (See Table 4 for means and standard deviations). Due to the small sample size, all participants were included in data analysis despite differences in fat phobia scores at baseline.

**Post-intervention Changes among Females on Body Satisfaction, Drive for Thinness, and Fat Phobia Variables**

In order to test the first and third hypotheses regarding changes in body dissatisfaction, drive for thinness, and fat phobia for female participants over time, a repeated measures Multivariate Analysis of Variance (MANOVA) was conducted. Time was treated as the independent variable and total scores on the body dissatisfaction and drive for thinness scales of the Eating Disorder Inventory (EDI) and Fat Phobia Scale Short Form (FPSSF) functioned as the dependent variables. A MANOVA did not reveal significant differences between male and
female students’ FPSSF scores at baseline, time 2, or time 3, Wilks’ Λ .99, \( F(2, 52) = .38, p = .69 \). Therefore, fat phobia was included as a dependent variable in the repeated measures MANOVAs for both female and male participants’ data. The MANOVA analyzing female students’ data did not reveal significant changes for female participants over time, Wilks’ Λ .73, \( F(2, 26) = 3.04, p = .096 \). (See Table 4 for means and standard deviations). Exploratory ANOVAs revealed females’ drive for thinness scores changed over time, Wilks’ Λ .73, \( F(2, 26) = 7.52, p = .001 \). Specifically, there were significant differences between drive for thinness scores at time 1 and time 2, \( t(29) = 2.95, p = .006 \). There were also significant differences between drive for thinness scores at time 1 and time 3, \( t(29) = 3.15, p = .004 \). There was not a significant difference between drive for thinness scores at time 2 and time 3, \( t(29) = 3.15, p = .19 \).

**Post-intervention Changes among Males on Body Satisfaction, Drive for Muscularity, and Fat Phobia Variables**

In order to test the second hypothesis regarding changes in body dissatisfaction, drive for muscularity, and fat phobia for male participants over time, a repeated measures Multivariate Analysis of Variance (MANOVA) was conducted. Time was treated as the independent variable and total scores on the body dissatisfaction scale of the EDI, Drive for Muscularity Attitudes Questionnaire (DMAQ), and FPSSF functioned as the dependent variables. The MANOVA did not reveal significant changes for male participants over time, Wilks’ Λ .96, \( F(2, 24) = .39, p = .89 \). (See Table 4 for means and standard deviations).

**Female and Male Participants’ Qualitative Experience of the Intervention**

Immediately following the intervention, participants present at time 3 of data collection (\( n = 69 \)) answered quantitative and qualitative questions regarding how much they enjoyed the
program/what they enjoyed about the program, and how much they learned from the program/what they learned from the program. They also answered how much they read from the handout provided at the end of day 1; only three (4%) participants reported reading the entire handout, 20 students (29%) reported they did not read any of the handout, and 46 students (67%) reported reading some of the handout.

On average, participants rated their enjoyment of the program a 3.81 ($SD = .75$; responses ranged from 1 = *Not at all* to 5 = *Very much*). On average, males rated their enjoyment as 3.78 ($SD = .67$), and females rated their enjoyment as 3.85 ($SD = .83$). General responses to what they enjoyed about the program included learning about sizeism and how to be more self-confident, hearing others’ thoughts, and engaging in activities and interactive discussions. Several participants reported they had fun, felt comfortable to talk about their feelings without judgment, and shared what they learned with family members and friends. One participant wrote “it helped me to be confident in myself and to feel good. It also inspired me to help others dealing with problems that deal with size and health.” Three participants wrote that they enjoyed being out of health class for the day.

On average, participants rated how much they learned from the program as 3.79 ($SD = .85$; responses ranged from 1 = *Not at all* to 5 = *Very much*). On average, males rated their learning as 3.68 ($SD = .78$), and females rated their learning as 3.91 ($SD = .91$). Popular responses to what they learned from the program included learning about sizeism and its effects, learning that health includes variables other than weight/size, and learning that it is acceptable and important to have confidence and self-love. Specifically, one participant wrote “I learned to love my body just the way it is,” and another responded with “I learned that everyone is different in shape and size, and we shouldn’t judge someone based on that.”
Regarding what they wished would be different about the program, two participants reported they felt uncomfortable sharing personal information in class, and two participants reported concerns with the curriculum content. Specifically, they wrote “[the program should] explain that being perfect the way you are doesn’t mean that you should/can eat whatever you want…” and “I think [the program] should stress exercise more…I felt it said eat whatever, whenever.” Six participants wrote that the video was either too long or not interesting to them. Other responses were mostly positive in nature; 13 participants said they would change nothing about the program, 15 participants expressed a desire for more activities similar to the ones they engaged in, four participants wanted the intervention to be longer, and one participant wrote the program should be school-wide. Finally, two female participants wrote that they would like the program to be presented separately to males and females for at least one of the intervention days.

Discussion

Given the harmful consequences of body dissatisfaction (Centers for Disease Control and Prevention, 2001; Heatherton & Polivy, 1992; Stanford & McCabe, 2005) and weight stigma (Browne, 2012; Haines, et al., 2008; Lunde et al., 2005; McCabe et al., 2002; Puhl & Brownell, 2003; Puhl et al., 2008), the current study evaluated an abbreviated version of a Health at Every Size intervention, “The Body Positive” (BP; Sobczak & Scott, 2013), specifically targeting ninth graders’ body dissatisfaction and weight stigma.

The first hypothesis predicted that, immediately following the intervention and at follow-up, female participants would demonstrate significantly lower body dissatisfaction (BD) and drive for thinness (DT) than at baseline. The results were partially consistent with the hypothesis and intervention goals. Female participants did not experience significantly decreased BD immediately following the intervention or at follow-up. However, BD scores remained steady
over time, suggesting that female participants did not experience worsening BD. Consistent with the hypothesis, female participants experienced a significant decrease in DT immediately following the intervention; this decrease was maintained at follow-up. This indicates the program was effective in reducing females’ DT immediately after the intervention and the changes were sustained over the six weeks following the intervention.

It is possible that significant changes in BD over time were not found because female participants had low BD scores at baseline. Weiss and Wertheim (2005) found that eating disorder prevention programs often result in significant outcomes for female participants at a high-risk for eating disorders, but not for females at a low-risk for eating disorders. In the Weiss and Wertheim study, participants were categorized into low- and high-risk categories based on scores on the EDI subtests and other measures. The average BD score for low-risk girls was 30.68 ($SD = 9.92$) and 40.86 ($SD = 9.22$) for high-risk girls; in the current study, the average BD score was 27.90 ($SD = 10.97$). A limitation of this study is that the small sample size precluded analyses separating low- from high-risk participants. Therefore, high-risk participants may have experienced significant changes in BD, but their results could have been overshadowed in the analyses by low- or moderate-risk participants. Interestingly, the average baseline DT score for female participants in the current study ($M = 20.62, SD = 8.13$) was closer to the average moderate- or high-risk scores ($M = 28.55, SD = 7.61$) than the average low-risk score ($M = 13.85, SD = 5.35$) in the Weiss and Wertheim study.

The second hypothesis predicted that, immediately following the intervention and at follow-up, male participants would demonstrate significantly lower BD and drive for muscularity (DM) than at baseline. Inconsistent with the hypothesis and intervention goals, male participants’ BD and DM did not significantly decrease over time. Male BD and DM scores stayed stable
from baseline to post-intervention assessments, indicating BD and DM did not worsen for male participants following the intervention. The average score on the Drive for Muscularity Attitudes Questionnaire (DMAQ) is 25.90 and indicates a modest level of DM; the average score for males in the current study was 26.26 (SD = 5.84). Since the average DMAQ score was modest at baseline, and was stable over time, there may have been a floor effect influencing the results. It is important to note that the DMAQ was normed on ages 17-51, and another measure may have been more developmentally appropriate for ninth grade students. However, scores from the current study indicated that, on average, ninth grade males have modest levels of DM comparable to an older population. Unfortunately, the average baseline BD score for male participants (M = 17.52, SD = 6.75) cannot be compared to a normative sample because of limited use of the BD scale of the EDI with a male population. However, the average score suggests male participants responded to most items with “rarely” or “sometimes” experiencing body dissatisfaction (as opposed to “often,” “usually,” or “always”). Again, it is possible that a floor effect influenced the results since male participants consistently endorsed low body dissatisfaction.

The third hypothesis predicted that immediately following the intervention and at follow-up, female and male participants would demonstrate significantly lower fat phobia (FP) than at baseline. Contrary to this hypothesis, a significant change in FP scores was not found at post-intervention assessments. In the current study, the average score on the FBSSF at time 1 was 2.73 for females and 2.46 for males (see Table 4 for means and standard deviations at the three time points). Scores for both female and male participants at baseline were lower than the average adult score of 3.6 on this measure. However, the FPSSF was not normed on an adolescent population, and adult and adolescent scores may not be comparable as a result. Future
researchers should examine whether other measures are more appropriate for an adolescent sample and more sensitive to changes in attitudes among this population. Another potential reason for non-significant findings is a floor effect; adolescent scores started low and remained stable over time. It is also possible that this heterogeneous sample of ninth grade students from a private, Catholic high school may have lower FPSSF scores than the general population or another group of high school students. Future researchers should examine whether this specific sample has differing attitudes toward overweight and obese people than other populations. Finally, despite the confidential nature of the study, students may have been concerned about presenting themselves positively and thus responded in a manner that was not indicative of their true level of fat phobia.

Another possible reason the current study failed to demonstrate significant reductions in BD, DM and FPSSF scores as predicted is that the study examined an abbreviated version of the BP, and the original BP curriculum is presented over 12 sessions during 30-minute lunch periods. Components of the original program were excluded for time purposes, and it is possible that these components were important parts of the original intervention. In the original intervention, students watched the Body Talk video twice, potentially allowing for greater understanding of content, and had an entire session dedicated to discussion of their experiences related to the program. Other activities from the original program that were excluded included intuitive eating and self-love meditation exercises. Some activities were edited due to confidentiality concerns; for example, participants were not asked to share their critical voice or their “body story” (the story of the development of their relationships with their bodies) with the class. Since the original BP curriculum is presented over several months, there are opportunities for homework assignments; this was not feasible for the current study. Homework assignments
included being mindful of messages in the environment about weight, writing personal body stories, engaging in activism activities (interviewing adults about attitudes toward their bodies), and practicing intuitive eating. Homework assignments provide an opportunity to develop a better understanding of material presented in the classroom through additional reflection and the “real-world” application of skills taught in class. Without homework assignments, the in-class presentations and discussions may not have been sufficient for students to adequately understand, appreciate and internalize the messages taught in class. Future researchers should examine these excluded components to determine which activities and/or homework assignments increase the likelihood of positive outcomes.

Another deviation from the original BP intervention and potential limitation of the current study was the brief nature of the intervention (two, 68 minute sessions); significant improvements in BD, DM, and FP may require more intensive and lengthy intervention than the current study was able to provide. Since the current study was implemented within health courses with pre-existing curricula that needed to be covered over the course of the trimester, time allotted for the intervention was limited. Few studies have examined outcomes related to body satisfaction, drive for thinness and/or muscularity and weight stigma in a single intervention for students (Kater et al., 2000; Kater et al. 2002). A greater number of studies have found significant improvements on outcomes related to body satisfaction following short-term interventions; most of these studies have used more time than the current study and/or were presented over a longer time period. Examples of such interventions include nine weeks of 50-80 minute sessions (O’Dea, 1995), four weeks of 100 minute sessions (Weiss & Wertheim, 2005), four weeks of 50 minute sessions (Richardson, Paxton & Thompson, 2009), and four weeks of 20 minute sessions (Halliwell & Diedrichs, 2014). Short-term interventions that address multiple
topics (for example, body satisfaction, healthy eating practices and weight stigma) are desirable because teachers can implement them during scheduled class times without needing to exclude components of their required curricula. Given the lack of existing research evaluating short-term comprehensive interventions, specifically Health at Every Size (HAES) informed programs, future researchers are encouraged to identify the optimal length for such interventions in order to achieve greater outcomes. Researchers are also encouraged to examine whether additional involvement from teachers or parents may improve outcomes if a classroom has a limited time period allotted for the intervention.

Since the curriculum was implemented in two, consecutive days, participants may not have had time to reflect upon and internalize the material. As previously noted, homework assignments create opportunities to reflect and practice applying material taught in the classroom, and the brief nature of this intervention precluded the assignment of homework other than reading a short handout. Although most participants reported they enjoyed and learned from the program, the majority of students read either some (66% of students) or none (30% of students) of the handout provided at the end of day 1. This suggests participants failed to spend much time outside of the classroom reflecting upon the material. Perhaps participants would have spent more time viewing the handouts if they were more colorful, included images and were not limited to text. It is also possible that students would have been more receptive if the material was presented in an electronic format (for example, listening to a podcast, watching short videos on the internet, reading material on an online blog or discussing material with classmates on a social media website). Furthermore, students were not evaluated on whether they learned the BP material; had there been a graded quiz or required written assignment (perhaps one of the homework assignments excluded from the original BP curriculum), participants may
have been more likely to read the handout outside of class, as well as put forth additional effort to retain information provided in class.

Additional opportunities for improving the abbreviated curriculum in the current study involve consideration of the qualitative feedback. Participants expressed the desire for a shorter, more interesting video. The video could be presented over several sessions in smaller time increments, or parts of the video that researchers find ineffective could be eliminated from the intervention entirely. Two female participants requested that the intervention be presented separately to males and females; perhaps separating into male and female groups for parts, or all, of the intervention would increase participants’ comfort levels with sharing personal information and more fully engaging in activities. Finally, many participants requested more activities, which is likely only feasible with an extended intervention. Other participants specifically stated they would like the intervention to be longer and/or presented to the entire student body rather than ninth grade health courses.

A major limitation of the current study was the small sample size. The initial power analysis called for 128 participants, and only 56 participants completed questionnaires at all three data collection time points. Therefore, observed power was weak (ranging from .16 to .62), which may have masked significant differences that would have been uncovered with a larger sample. Another limitation of this study is that the sample was racially homogenous and from a private, Catholic school. Therefore, the generalizability of the findings to other high school student populations is limited. This study should be replicated in other school environments in order to increase the generalizability of the findings. Finally, the original Body Positive curriculum is traditionally presented to individuals volunteering to participate in the program. Although students provided assent, they were “required” to participate in the intervention and,
therefore, may have enjoyed or learned less from the intervention than past studies where students with a specific interest in the topic were utilized.

While the current study’s intervention did not produce significant changes in BD, DM, or FP, it is important to note that participants did not experience harm as a result of the intervention. Previous authors have discussed an increase in eating disorder risk factors following participation in eating disorder prevention programs (Botta, 1999; Garner, 1985; Mann et al., 1997). Furthermore, the abbreviated intervention was able to be implemented in its entirety during the two allotted class times, suggesting it would be feasible for health teachers to incorporate the material into preexisting curricula. The majority of students were attentive and actively engaged in discussions, and several students remarked that they found the material personally relevant. In addition to the absence of iatrogenic effects of the intervention and positive qualitative feedback, the modified BP intervention led to significant reductions in DT for females over time, suggesting the intervention had some utility and positive benefits.
References


http://dx.doi.org/10.1038/sj.ijo.0801537


http://dx.doi.org/10.1016/j.jada.2005.03.011


http://dx.doi.org/10.1016/0306-4603(96)00034-2


http://dx.doi.org/10.1016/j.bodyim.2005.12.001


http://dx.doi.org/10.1037/0278-6133.16.3.215


http://dx.doi.org/10.1016/j.bodyim.2012.02.001


Table 1

*Participant Demographics*

<table>
<thead>
<tr>
<th>Gender or Race/Ethnicity</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>29</td>
</tr>
<tr>
<td>Male</td>
<td>27</td>
</tr>
<tr>
<td>White</td>
<td>54</td>
</tr>
<tr>
<td>Black</td>
<td>0</td>
</tr>
<tr>
<td>Latino</td>
<td>0</td>
</tr>
<tr>
<td>Asian American</td>
<td>2</td>
</tr>
<tr>
<td>Native American</td>
<td>0</td>
</tr>
<tr>
<td>Biracial</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 2

Participants Present at Times 1, 2, and 3

<table>
<thead>
<tr>
<th>Time and Class</th>
<th>Total Participants</th>
<th>Female Participants</th>
<th>Male Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generated data/attended at time 1 (class 1)</td>
<td>30/32</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Generated data/attended at time 1 (class 2)</td>
<td>20/22</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Generated data/attended at time 1 (class 3)</td>
<td>14/21</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Generated data/attended at time 1 (all classes)</td>
<td>64/75</td>
<td>33/34</td>
<td>31/41</td>
</tr>
<tr>
<td>Missed time 2 or 3 (all classes)</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Generated data at times 1, 2, and 3 (All classes; final sample)</td>
<td>56</td>
<td>29</td>
<td>27</td>
</tr>
</tbody>
</table>
Table 3

*Scale Reliabilities*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDI Body Dissatisfaction Subscale (Females)</td>
<td>.92</td>
<td>.91</td>
<td>.91</td>
</tr>
<tr>
<td>EDI Drive for Thinness Subscale</td>
<td>.91</td>
<td>.85</td>
<td>.88</td>
</tr>
<tr>
<td>EDI Body Dissatisfaction Subscale (Males)</td>
<td>.87</td>
<td>.87</td>
<td>.90</td>
</tr>
<tr>
<td>Drive for Muscularity Attitudes Questionnaire</td>
<td>.77</td>
<td>.76</td>
<td>.79</td>
</tr>
<tr>
<td>Fat Phobia Scale: Short Form</td>
<td>.80</td>
<td>.82</td>
<td>.84</td>
</tr>
</tbody>
</table>
Table 4

*Means and Standard Deviations for Females’ and Males’ Body Dissatisfaction, Drive for Thinness, Drive for Muscularity and Fat Phobia Scores*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Scale</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Female Body Dissatisfaction (BD)</td>
<td></td>
<td>27.90</td>
<td>10.97</td>
<td>27.31</td>
</tr>
<tr>
<td>Female Drive for Thinness (DT)</td>
<td></td>
<td>20.62</td>
<td>8.13</td>
<td>18.41&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Female Fat Phobia (FP)</td>
<td></td>
<td>2.73</td>
<td>.53</td>
<td>2.65</td>
</tr>
<tr>
<td>Male BD</td>
<td></td>
<td>17.52</td>
<td>6.75</td>
<td>17.89</td>
</tr>
<tr>
<td>Male Drive for Muscularity (DM)</td>
<td></td>
<td>26.26</td>
<td>5.84</td>
<td>26.33</td>
</tr>
<tr>
<td>Male FP</td>
<td></td>
<td>2.46</td>
<td>.43</td>
<td>2.50</td>
</tr>
</tbody>
</table>

<sup>a</sup> Denotes a significant difference between DT scores at time 1 and time 2, \( t(29) = 2.95, p = .006 \).

<sup>b</sup> Denotes a significant difference between DT scores at time 1 and time 3, \( t(29) = 3.15, p = .004 \).
Figure 1. This figure represents the number of participants that were present for day 1 of the intervention, as well as the number of participants that generated data at Times 1, 2, and 3.
Appendix A

Eating Disorder Inventory Body Dissatisfaction Scale (for Girls)

Please refer to the following article for this scale and scoring information.

Appendix B

Eating Disorder Inventory Drive for Thinness (for Girls)

Please refer to the following article for this scale and scoring information.

Appendix C

Eating Disorder Inventory Body Dissatisfaction Scale (for Boys)

Please refer to the following article for information about this scale.

Appendix D

Drive for Muscularity Attitudes Questionnaire (for Boys)

Please refer to the following article for this scale and scoring information.

Appendix E

Fat Phobia Scale Short Form

Please refer to the following article for this questionnaire and scoring information.

Appendix F

Demographic Form

ID # ________
(The last four digits of your home phone number)

Please answer the following questions:

Age (in year and months): _________years    _________months

Gender: _____________

Race/Ethnicity: (please circle)

- White/Caucasian
- Black/African American
- Latino/a
- Asian American
- Native American/Alaskan Native
- Biracial
- Other: ____________________
Appendix G

Evaluation of the modified Body Positive Intervention

ID # __________

Please circle the number you feel best represents your experience of The Body Positive program.

1. How much did you enjoy this program?

Not at all 1 2 3 4 5 Very Much

2. What did you enjoy about this program?

3. How much do you feel you learned from this program?

Not at all 1 2 3 4 5 Very Much

4. What did you learn from this program?

5. Did you read the Health at Every Size/Body Positive Handout provided on Day 1 of the intervention? (Please circle your response)

Yes, I read all of it. I read some of it. No, I did not read it at all.

6. What would you like to be different about this program?
Appendix H

Letter of Approval from Intervention Site

Newport Central Catholic

January 18, 2013

Katrina Lenz
22 Rose Drive,
Dayton KY 41074

Dear Katrina Lenz:

After discussing the initial plans for your research study, I would like to extend my support for you to conduct a "Body Positive" intervention at Newport Central Catholic and to collect data from involved students. I understand that the Body Positive Intervention will address body image and negative attitudes toward overweight and obese individuals, and will be conducted with freshman students in their second trimester of health class during winter 2014. I understand that the intervention will take approximately two classes to complete. I understand that the intervention will first be discussed and approved by Mrs. Jenny Martie, and any changes to the approved intervention must first be approved by Mrs. Martie and/or the principal and vice-principal of Newport Central Catholic. Additionally, all results of the study will be discussed with the faculty, staff, and administrators of Newport Central Catholic.

Sincerely,

[Signature]

Carl R. Foster
Principal
Appendix I

Letter of Approval from Xavier University’s Institutional Review Board

November 27, 2013

Katrina Lenz
22 Rose Dr.
Dayton, KY 41074

Dear Ms. Lenz:


If you wish to modify your study, including any changes to the approved Informed Consent form, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

We wish you success with your research!

Sincerely,

Morell E. Mullins, Jr., Ph.D.
Chair, Institutional Review Board
Xavier University

MEM/sb

c: Christian End, Advisor

enclosure: stamped informed consent and assent form
Dear Parent,

Hello, my name is Katrina Lenz and I am currently a graduate student in the clinical psychology doctoral program at Xavier University. I am currently working in conjunction with the principal, Mr. Foster, and your child’s health teacher, Mrs. Mertle or Mrs. Twehues, in order to implement a very special program for the freshman class at Newport Central Catholic.

This focus of this program will be to help your son or daughter think and feel more positively about him or herself and others. This program will take place during your son or daughter’s health class over two days during one week. Through a series of presentations, discussions, and group activities, we hope your son or daughter will learn important skills that he or she will maintain in the years to come.

In order to ensure that the program is reaching its goals, and to improve it for future years, your son or daughter will be asked to fill out some questionnaires asking him or her about body image and attitudes toward others before and after the program. Your son or daughter’s information will remain confidential and will be stored securely at Xavier University.

Please sign one copy of this form to indicate your understanding of this program and consent for your son or daughter to participate and return it with your son or daughter to school by XX/XX/XXXX. You are also being given a copy of this form to keep and are free to withdraw your son or daughter from participation at any time.

If you have any questions at any time, you may contact me at (513)787-0349 or Dr. Christian End, advisor, of Xavier University at (513)745-3249. Questions about your son or daughter’s rights as a research subject should be directed to Xavier University’s Institutional Review Board at (513) 745-2870.

Sincerely,

Katrina Lenz, M.A.

I have been given information about this program and study and its risks and benefits and was instructed to contact Katrina Lenz should I have any questions or concerns. I freely give my consent for my son or daughter to participate.

_________________________________________                        ___________  
Signature                                                                 Date
Appendix K

Assent Form

You are being given the opportunity to volunteer to participate in a program conducted through Xavier University and Newport Central Catholic. This program’s goal is to help you think about yourself and others. This program will take place during your health class over two days during one week. Through a series of presentations, discussions, and group activities, we hope you will learn some valuable skills.

In order to evaluate the program, and to improve it for future years, you will be asked to fill out some questionnaires asking you about your thoughts, feelings, and attitudes.

Please sign one copy of this form to indicate your willingness to participate. You will also be given a copy of this form to keep. Please remember you are free to withdraw at any time from the program without any type of penalty. Your information will remain confidential and will be stored securely at Xavier University.

If you have any questions at any time, you may contact me (Katrina Lenz) at (513)787-0349 or Dr. Christian End, advisor, of Xavier University at (513)745-3249. Questions about your rights as a research subject should be directed to Xavier University’s Institutional Review Board at (513) 745-2870.

I have been given information about this program and study and its risks and benefits and have had the opportunity to ask questions and to have my questions answered to my satisfaction. I freely give my consent to participate.

___________________________________________                        ______________  
Signature                                      Date
Appendix L

Outline of the Original Body Positive Curriculum

Twelve-Session 20-30 Minute Discussion Group Overview

Session 1: Introduction to Your Body Positive Group
Session 2: Exploring Body Messages
Session 3: Share Body Stories
Session 4: Reclaim Health—Understanding Health at Every Size
Session 5: Practice Intuitive Self-Care
Session 6: Confidence vs. Conceit
Session 7: Time to Talk
Session 8: Cultivate Self-Love
Session 9: Declare Your Own Authentic Beauty
Session 10: Exploring Sizeism
Session 11: Build Community
Session 12: Closing and Staying Connected
Appendix M

Abbreviated Body Positive Curriculum

The Body Positive curriculum was adapted and used with permission from the curriculum developers. Please refer to the following website for more information.

Summary

Title: The Body Positive: An Intervention Promoting Teenagers' Body Satisfaction While Reducing Weight Stigma

Problem: Obesity among youth is consistently ranked among the top concerns that parents and the public have regarding the health of children in the United States (University of Michigan Health System, 2012). The increased national attention on weight and the “obesity epidemic” has led to the development of various school-based obesity prevention and intervention programs (Obama, 2012; USDA, 2010) that often focus on weight loss rather than general overall health (Katz et al., 2008). Such programs typically fail to address rising rates of body dissatisfaction (BD) among youth (Linde, et al., 2009). BD is positively correlated with many harmful, and ineffective, weight control behaviors and disordered eating (Centers for Disease Control and Prevention, 2001; Stanford et al., 2005). There is also concern that current obesity prevention and intervention programs fail to address the increased stigmatization of overweight and obese youth (Andreyeva et al., 2008; O’Dea, 2005; Puhl et al., 2003). Such stigmatization is positively correlated with weight teasing (Haines et al., 2008), bullying (Browne, 2012), harassment and discrimination (Puhl et al., 2003; Puhl et al., 2008). This dissertation evaluated the effects of an abbreviated Health at Every Size (HAES) informed intervention, The Body Positive (BP), on BD, drive for thinness and muscularity (DT and DM), and fat phobia (FP).

Method: Participants for this study (n = 56) were male (n = 29) and female (n = 27) high school students enrolled at a private Catholic high school. At the time of the intervention, all participants (M age = 14.65 years; SD = .66 years) were enrolled in a general health class required of all students. Participants completed questionnaires at baseline, immediately following the intervention, and 6 weeks after the intervention. Female participants completed the BD and DT Scales of the Eating Disorder Inventory (EDI; Garner, Olmsted, & Polivy, 1983) and male participants completed an adapted version of the BD scale of the EDI (Jones et al., 2004) and the Drive for Muscularity Attitudes Questionnaire (DMAQ; Morrison, Morrison, Hopkins & Rowan, 2004). All participants completed the Fat Phobia Scale: The Short Form (FPSSF; Bacon, Scheltemaz, & Robinson, 2001). The researcher obtained parental consent and assent prior to data collection; because the intervention was incorporated into the course’s curriculum, students who failed to provide consent participated in the intervention without generating data. Students participated in two, 68 minute sessions of an abbreviated BP curriculum.

Findings: A repeated measures Multivariate Analysis of Variance (MANOVA) was conducted to determine whether female students experienced changes in BD, DT or FPSSF scores over time. The MANOVA did not reveal significant changes for female participants over time. Exploratory ANOVAs revealed DT scores changed over time, Wilks’ Λ .73, F(2, 29) = 7.52, p = .001. There were significant differences between DT scores at time 1 and time 2, t(29) = 2.95, p = .006, and at time 1 and time 3, t(29) = 3.15, p = .004. A second MANOVA examined whether male students experienced changes in BD, DMAQ or FPSSF scores over time; the MANOVA did not reveal significant changes for male participants over time.

Implications: The results of this study imply some significant changes can result from the implementation of a short-term HAES informed intervention in a health course. However, since there were not significant changes in BD, DM or FP following the intervention, as the researcher had hypothesized, there are many implications for future research. Multiple components of the original BP were excluded for time purposes, and future researchers should examine these components to determine which activities and/or homework assignments increase the likelihood of positive outcomes. Researchers are encouraged to identify the optimal length of a short-term intervention, as well as to examine whether additional involvement from teachers and/or parents may improve outcomes if a classroom has a limited time period allotted for the intervention.