

Addressing Size Stereotypes: A Weight Bias and Weight-related Teasing Intervention Among Adolescents

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ABSTRACT

Purpose: *The purpose of this study was to evaluate a weight-related teasing prevention program implemented for both female and male students in a school setting.* ***Methods:*** *Junior High School students (N = 143) in seventh grade were invited to participate in the program. One hundred eighteen participants completed pre- and posttest surveys to assess bullying frequency and to evaluate an efficacy of the 8-week prevention program.* ***Results:*** *Data at posttest revealed the number of students who reported being bullied decreased by 7% (n = 8). The incidence rate of self-reported bullies was reduced from 18% to 14%. The levels of body esteem and self-esteem were statistically higher among the*

participants at posttest. Male participants showed a significant improvement on the Ideal-Body Stereotype Scale-Revised compared to female participants. On the other hand, the difference in mean scores on victimization of weight-related and competency teasing between pretest and posttest was statistically higher among female participants. ***Conclusion:*** *The intervention program helped the participants increase body esteem and self-esteem levels. Although female participants tended to report more victimizations from previous teasing (weight and competency) incidents at posttest period, levels of stereotyped images towards women among male participants were statistically reduced after the intervention program.* ***Recommendations:*** *Body image or weight-related issues are rarely discussed enough for male students in a school setting. One reason is lack of resources for health teachers to address the particular issues for both female and male students. Simply, many teachers may feel uncomfortable or less confident to discuss the particular issues. Therefore, more research and resources for teachers are necessary to reduce weight-related teasing and other issues in a school setting.*

Keywords: bullying, self-esteem, body esteem, obesity

INTRODUCTION

Obesity epidemic is a significant public health concern associated with economic burden in the United States (Hammond & Levine, 2010). As obesity tends to be associated with negative social image, individuals with higher body mass index (BMI) may experience being judged based on weight, body size and shape, and appearance in our society. Similar to other "isms," weightism or weight bias refers to a discriminatory or prejudicial behavior toward individuals in a particular social category (Miyairi & Reel, 2011). Weightism has been defined as stigmatization toward individuals based on size, shape and appearance (Ata & Thompson, 2010; Bissell & Hays, 2011; Haines & Neumark-Sztainer, 2009; Puhl & Latner, 2007). This size-related bias reinforces stereotypes and common misperceptions that individuals with higher BMI should simply stop eating and begin exercising to "fix the problem" (Geier, Schwartz, & Brownell, 2003). As a result of this stigma, individuals with higher BMI continue to be marginalized in society (Neumark-Sztainer, 2005).

Bullying behaviors targeted at individuals with higher BMI are often normalized in the wake of the highly publicized, obesity epidemic (Quick, McWilliams, & Byrd-Bredbenner, 2013). Jokes about appearance and bringing attention to one's size are largely accepted which undermines an acceptance of diverse body types and promotes size-related stereotypes. By contrast, being thin is often associated with being disciplined and other positive qualities with no consideration given for genetic or biological determinants of weight and size. Weight bias will continue to exist until weight-related stereotypes are challenged (Bromfield, 2009). In reality one's size is determined by numerous factors, both genetic and behavioral, which makes these black-and-white associations inadequate to explain body weight (Reel & Stuart, 2012).

According to previous studies, attitudes of weightism can develop at early age. For example, preschool children exhibited biased attitudes toward their overweight peers as early three years old (Cramer & Steinwert, 1998). Haines and Neumark-Sztainer (2009) also found that three-year-old children associated negative characteristics, such as "lazy," "dirty," "stupid," "ugly," "liar," and "cheat" with their overweight peers. Moreover, Puhl and Latner (2007) asserted that biases toward obese children have worsened among 10- and 11-year-old children since the 1960s.

It is obvious that children do not learn how to discriminate others based on weight on their own. Possible prediction is that children may be vulnerable to messages from media, peers, family members, and teachers that reinforce weight-related discrimination (e.g., Ata & Thompson, 2010; Bissell & Hays, 2011). Even at the adolescent stage, weightism is problematic in our society. Another study found that 26% of female and 22% of male adolescents were previously being teased about their bodies (Neumark-Sztainer, et al., 2002).

Victims of bullying tended to experience psychological and physical health consequences such as anxiety, sadness, sleep difficulties, low self-esteem, headaches, stomach pain, and general tension (Houbre, Tarquinio, Thuillier, &

Hergott, 2006) as well as increased aggressive tendencies and post-traumatic stress (Pellegrini, 1998; Pellegrini, Bartini, & Brooks, 1999). Bullies may also suffer health consequences including poor self-concept and psychosomatic symptoms (Houbre, Tarquinio, Thuillier, & Hergott, 2006)

In addition, studies have shown that the negative effects of bullying can extend into adulthood. Olweus (1992) discovered that former bullies had 4-fold increases in criminal behavior at the age of 24 years, with 60 % of former bullies having at least one conviction and 35% to 40% of former bullies having three or more convictions. Conversely, bullied individuals (i.e., victims) struggled with higher levels of depression and poorer self-esteem as late as age 23 years old even though they were no longer harassed or socially isolated in their adulthood (Olweus, 1994).

Low self-esteem and feelings of insecurity are common characteristics among individuals who tease, discriminate and judge others based on size and weight (Haines & Neumark-Sztainer, 2009; Puhl & Latner, 2007). It is important to provide education such as developing empathy and to understand the consequences of bullying behaviors in order to prevent future bullying behaviors. According to La Guardia (2009), the definition of "who we are" blossoms in early years around defined roles (e.g., class leader), initial competencies (e.g., academically performing well), and available opportunities to try on different interests and stretch these capacities (e.g., both in terms of access to resources such as music, arts, and technology as well as social support to explore these). The K-12 school education system may play a critical role besides parental influence on developing one's identity such as "who we are."

PURPOSE

Health class is probably an ideal class time to cover a series of prevention strategies to stop bullying in the school setting. On the other hand, there are few training and curriculum resources for weight bias and weight-related teasing available in addition to health teachers. Therefore, the current project designed an intervention program that focused on weight bias and weight-related teasing and examined an efficacy of the intervention program at Junior High School.

METHODS

Study Procedure and Participants

The present study was conducted from October 2012 to December 2012 in Utah after the current research team received approval from the Institutional Review Boards at the University of Utah and the School District in Utah. Seventh graders at a middle school located in a suburban area of Utah were selected by the school district for the study. One hundred forty three students (male = 63, female = 80) in seventh grade health classes were asked to participate in the study. Prior to data collection (i.e., pretest measurement), school counselors sent a letter to students' parents to explain the study purpose and request assent and consent forms. One hundred twenty seven students (males = 53, females = 74) returned signed assent and parental consent forms for study participation. Individuals who opted out of the study (17 students) worked on alternative assignments during pre- and posttest evaluations in the classroom. However, all students in participating health classes received exposure to the intervention curriculum. No incentive was given to participate in the study.

Program Implementation

Program participants attended weekly 45-minute sessions for 8 weeks. The intervention program consisted of lessons and accompanied activities from an evidence-based program (i.e., Full of Ourselves [FOO]) that promotes healthy peer interactions, self-esteem, and healthy behaviors (e.g., healthy relationship, leadership skills) (Steiner-Adair & Sjostrom, 2006). A theoretical framework of the Social Cognitive Theory [SCT] (Bandura, 1986) guided the current program to stretch the capacity of participants' self-identity and assess how perceptions of teasing, weight bias, and self-esteem change after program implementation. Program lessons and accompanying activities were carefully selected to match SCT key concepts such as psychological determinants of behavior (Bandura, 1997), observational learning, environmental determinants of behavior (Bandura, 2002), self-regulation, and moral disengagement (Bandura, 1999) from the FOO program.

The FOO program (Steiner-Adair & Sjostrom, 2006) was originally designed to target female participants only. However, the current study culturally tailored the FOO lessons and activities

(e.g., language, gender-specific examples) as necessary for use for both male and female students. Participants were taught how to build a sense of strength and self-worth in addition to how to develop coping and problem-solving and leadership skills (Table 1). Each lesson included a didactic teaching method as well as group discussion and activities including role-plays. In order to maximize participant's experience, pedagogical teaching approach was a main method for this project.

A program facilitator had previously implemented educational program for patients with eating disorders and provided workshops for elementary to college students. She trained an undergraduate research assistant (RA) who also assisted data collection for this study based on the FOO training manual. Although each lesson in the study followed selected activities' manual from the FOO program, wording and contents were adjusted to be more suitable for both female and male participants. In addition, students received handouts to work on during the class time or at home as an assignment. The following are specific descriptions of the weekly activities:

Week 1: This program was started as part of health class at the study site. The first author and her RA were introduced as guest speakers for the next 8 weeks. Objectives of the first lesson were to introduce program facilitators, ground rules during each lesson, and body-centered activities aiming to explore confidence and power. Students were not informed that the current program was a weight bias and weight-related teasing prevention program. Instead, students' health teacher introduced the program facilitators as guest speakers providing a general health program. The program facilitators delivered clear messages that the classroom was a safe place to share thoughts and opinions with being judged by others. In addition, it was noted that all comments made by students needed to be respectful to others. Students' health teacher monitored the program in the classroom.

Week 2 and 3: The primary focus during week 2 and 3 was to discuss social norms and stereotypes towards women and men in our society. Fashion industry's limited views on female and male body types, digitally enhanced images, and societal stereotyped images for men and women were examples for group discussion in order to identify admirable qualities in oneself and others, learn how to focus on positive self-talk, and feel an embodied sense of strength.

Week 4 and 5: Participants were encouraged to practice standing up for oneself and others when they saw anyone who was verbally bullied. Role-play activities introduced helped the participants put themselves in different shoes of bullies, targets, bystanders, followers, and activists. The goal was to understand the courage required to be an activist who intervenes on someone else's behalf.

Week 6 and 7: The last two weeks included multiple discussions and activities to help the participants understand that healthy relationships within themselves and others are a key aspect of overall well-being. Participants also practice conflict resolution through activities and group pledge to apply the FOO principles in daily life.

Week 8: Participants created group posters to raise awareness of bullying at school. They took a leadership role to be an activist to stop bullying in their school environment. Their posters were displayed at the common area at school.

Assessment Tools

Measurements used for the evaluation portion of the study included the Perception of Teasing Scale (Thompson, Cattarin, Fowler, & Fisher, 1995), Body Esteem Scale-Children (Mendelson & White, 1982), Ideal-Body Stereotype Scale-Revised (IBBS-R: Stice, Shaw, Burton, & Wade, 2006), Rosenberg Self-Esteem Scale (RSES: Rosenberg, 1965), and School Life Survey (Chan, Myron, & Crawshaw, 2005).

The Perception of Teasing Scale (POTS) (Thompson et al., 1995) assessed students' perceptions related to teasing was originally designed for youth between 17 and 24 years old. POTS is an 11-item scale with a 5-likert format ranging from 1 = never to 5 = very often. POTS includes two subscales that have demonstrated internal consistency: (1) general weight teasing (α = .90), and (2) teasing about abilities/competencies (α = .85) (Thompson et al., 1995).

The Body Esteem Scale for Children (BES-C) (Mendelson & White, 1982), a 20-item questionnaire, measures body esteem of program participants before and after the intervention. BES-C was developed for children from 7 to 17 years old and has been recognized as a valid measure for the attitudinal component

of body image (i.e., body esteem) in children (Smolak & Levine, 2001). The BES-C examines how a child values his or her appearance based on yes or no responses to 20 items such as "I wish I were thinner." Adding the number of responses indicating high esteem determines a final score. According to a recent study that tested the reliability of BES-C (Duncan, Al-Nakeeb, & Neill, 2009), correlation coefficients for 2-week test-re-test reliability (r = .81) among 8 years old participants were acceptable and internal consistency was supported (α = .89).

A 6-item subscale (i.e., thin-ideal internalization) from the Ideal-Body Stereotype Scale – Revised (IBSS-R: Stice, Shaw, Burton, & Wade, 2006) assessed participants' thin-ideal internalization using a 5-point Likert response format ranging from 1 = strongly disagree to 5 = strongly agree. The internal consistency (α = .91) and test-retest reliability (r = .80) have been demonstrated for this subscale.

The Rosenberg Self-Esteem Scale (RSES: Rosenberg, 1965) was used to determine self-esteem of participants before and after the 8-week program. The RSS uses a 10-item scale with a 4-likert format ranging from strongly agree to strongly disagree. This scale has shown internal consistency (α = .77 to .88) and test-retest reliability (r = .82 to 88) (Rosenberg, 1965).

Lastly, the School Life Survey (SLS: Chan, Myron, & Crawshaw, 2005) was used to identify the depth of bullying incidents among participants. SLS includes 24 items with two sections assessing the frequency of physical, verbal, and relational bullying as both the perpetrator and the victim. The first part of the SLS assesses whether an individual has bullied others and uses a "Yes" or "No" scale. The second part of the SLS includes questions about whether respondent has been bullied in a certain situation. An example of a SLS item is as follows, "This student told others not to be my friend". The 1-week test-retest reliability for bully perpetration items (r = .84) and the entire survey (r = .94) and the internal consistency for victimization items (α = .83) have been supported for this measure.

Data Analysis

In addition to descriptive analysis on demographics, an independent t-test was used at baseline to determine whether there were any statistically significant differences between female and male participants at the start of the study. To examine the effects of the intervention between male and female participants, repeated measures analysis of variance (ANOVA) was conducted on all outcome measures (i.e., BES-C, IBBS-R, RSS, and POTS) except for the SLS. By using univariate tests of within-group change scores, significant interaction effects were observed. We assessed statistical significance at a P level of less than 05.

RESULTS

Total number of seventh graders who completed the program and pre- and posttest measurements was 118 (94% return rate). Data for twelve students were removed from the data set due to multiple numbers of missing answers. Overall, the total number of participants who completed the pre- and posttest was 106 participants. The majority of participants were Caucasian (79.7%), with the others being Latino/Hispanic (13.6%), Asian (2.5%), African-American (1.7%), Native Hawaiian (1.7%) and American Indian (0.8%).

Pretest

In the demographic section, participants responded to what forms of bullying they had experienced in the past. Participants were allowed to mark multiple bullying forms if they had experienced different forms of bullying. Overall, 48% of participants had experienced being bullied in the past. The findings revealed that verbal bullying (47%) was the most frequent form of bullying experienced among participants compared to other types of bullying. Twenty-seven percent of participants had experienced emotional bullying such as being isolated or excluded from games, lunch tables, or other group activities or/and being spread rumors in order to be ostracized. The least bullying types reported among the participants were physical (12%) and cyber (11%) bullying. Table 2 shows prevalence rates of bullying among participants.

Female mean scores on all subscales from POTS were higher than male mean scores on those variables. There were statistically significant gender differences in scores on weight-related teasing effect, $t(88) = 2.71$, $p = .008$, competency teasing, $t(116) = 2.49$, $p = .014$, and competency teasing effect, $t(113) = 4.18$, $p < .001$) with female participants reporting more experiences and victimizations of being

teased than male participants. On the other hand, male mean scores on IBSS and RSS were significantly higher than female mean scores, $t(114) = -3.641$, $p < .001$, $t(112) = -2.53$, $p = 0.013$, respectively.

Posttest

The SLS (Chan, Myron, & Crawshaw, 2005) was used to assess frequencies of bullying incidents (from perspective of both bully and victim) over the past four weeks before the posttest period. Results showed that the number of participants who were bullied was reduced by 7% (from 42% to 35%) after participating in the intervention. The number of self-reported bullies also decreased from 18% to 14%. Additionally, victims of bullying among the participants tended to be verbally bullied (39.2% to 48%) more than physically (27% to 27%) or relationally (34% to 24%) bullied at both pretest and posttest.

Sex was also evaluated to examine the effect of gender on to the program outcome. The Time (pretest vs. posttest) main effect and Sex x Time interaction effect were tested using the multivariate criterion of Wilks's lambda (Λ). The Time main effect was significant, $\Lambda = .65$, $F(7, 98) = 9.14$, $p < .001$, as well as the Sex main effect, $\Lambda = .75$, $F(7, 98) = 4.74$, $p < .001$. Sex x Time interaction effect was nonsignificant, $\Lambda = .95$, $F(7, 98) = 0.69$, $p = .68$.

The univariate test associated with Time indicated that body esteem and self-esteem were significant, $F(1, 104) = 4.05$, $p = .047$, $F(1, 104) = 54.93$, $p < 0.001$, respectively. The sex main effect revealed that mean scores on weight teasing effect, $F(1, 104) = 5.68$, $p = .019$, competency teasing effect, $F(1, 104) = 15.48$, $p < .001$, and the IBSS, $F(1, 104) = 10.07$, $p = .002$, were statistically significant. In other words, the differences in mean scores on victimizations of weight-related and competency teasing between pretest and posttest were significantly higher among female participants compared to male participants. On the other hand, the difference in mean scores on the IBSS between pretest and posttest among female participants was significantly lower than male participants (Table 3).

DISCUSSION

The purpose of this study was to examine the efficacy of an intervention program designed to reduce weight bias and weight-related teasing, and to improve body image in adolescents. Overall, the bullying incidents were reduced by 7% after the 8-week intervention program. This result suggests that the program played a positive role in bullying education and awareness in the school setting.

Interestingly, similar to the second national data on bullying (Wang, Iannotti, & Nansel, 2009), participants in the current study reported more verbal and emotional bullying than physical or cyber bullying. Due to the pretest data, the intervention program activities for this project addressed verbal and emotional bullying behaviors more than physical and cyber bullying.

Overall, the intervention program helped the participants increase body esteem and self-esteem levels at posttest. Also, results illustrated that levels of stereotyped images towards women among male participants was statistically reduced after the intervention program. On the other hand, although bullying incident rates were reduced at posttest, female participants tended to report more victimizations from previous teasing (weight and competency) incidents for the posttest period. A possible explanation about this conflicted result could be due to learning effect bias. Simply, awareness towards participants' feelings and emotions about weighism could be increased after being educated about topics given during the intervention programs.

Self-esteem plays a significant role in bullying prevention (Houbre, Tarquinio, Thuillier, & Hergott, 2006). As Michaud (2009) has asserted, bullying prevention programs tend to focus on victims even though studies have shown a significant percentage of individuals involved in bullying are both perpetrators as a bully and victims. From this perspective, the present study successfully targeted all spectrum of bullying by approaching bullies, victims, and bystanders. Furthermore, all participants had opportunities to experience each role (bullies, victims, and bystanders) during the lesson activities in the intervention program. Role-play experiences represented important activities for participants to actually practice leadership and conflict resolution skills. In the current study, participants spent two sessions for role-plays. In each session, three to four participants in each group were handed a bullying scenario and performed their solutions of the scenario and

other classmates evaluated their solution. Participants openly expressed their thoughts, feelings, and emotions to reflect on their own or other's role-plays. The exchange of nonjudgmental discussion also helped participants learn how to assertively express own opinions in front of their peers. These experiences might help participants gain insightful experiences to increase self-efficacy among participants.

There were two significant benefits of this program. First, as a previous study indicated (Reel et al., 2011), the cost of our program implementation was minimum (<$300) compared to other bullying prevention programs. Second, this program expanded the target population. The FOO program was originally designed to target female participants to promote positive body image, health, and females' leadership. In order to address issues of weight bias and weight-related teasing among adolescents, we tailored the lesson activities to reach both genders. Stereotyping women was an important discussion topic in the current intervention program. This particular topic was intended to eliminate teasing based on appearance or body shape towards women. In other words, the prevention program educated participants to avoid objectifying their own and others' bodies. Surprisingly, the current study found more significant reductions on stereotyping women among male than female participants. Therefore, given this transformation among male adolescents, this study shows promise for promoting anti-bullying and weight-related teasing between both genders in health classes.

Limitations

There were several limitations to this study. Longitudinal studies including a comparison group are needed to confirm the predictive influences of this program over time. Second, all of the measures required self-reported responses from the participants. Some questions were difficult for the participants to answer. For example, the response format for the BES was "Yes" or "No" choices. Some participants expressed difficulty to choose one answer because their body image might be temporal (i.e., changing throughout the day). In addition, questions for the weight-related teasing subscale on POTS were designed with the assumption that individuals who are overweight or obese will be targeted for weight-related teasing. In order to include individuals who are underweight, future studies may consider modifying the POTS items to be more inclusive of all types of size discrimination. More importantly, testing information from multiple sources (e.g., teachers, coaches, parents, etc…) is recommended for future studies. Another recommendation is to standardize the number of participants in the program. Our classes ranged from 18 to 35 participants that are much larger than the intended size for the FOO program (i.e., 15 participants). This could have affected the depth of discussion or the ability of some shy participants to actively participate. A final limitation was the lack of racial/ethnic diversity of our program participants with 79.7% of participants self-identifying as white. Future studies should seek a more diverse sample to maximize impact.

CONCLUSIONS

Size is often the focus of teasing as part of bullying behavior among adolescents. Verbal bullying was found to be the most frequent type of bullying among middle school participants in the current study. Female participants were significantly more likely to report bullying than male participants. Conducting a mixed gender intervention based on the evidence-based FOO program was a first start to educate male and female participants in health classes about weightism and empathy for peers. Further research is necessary to identify an age and gender appropriate intervention program to reduce weight bias and weight-related teasing.

RECOMMENDATIONS

This project received tremendous support from the selected school district and school administrators and teachers including school principal, school counselors, and health teachers. Prior to the program implementation, the primary investigator had multiple meetings with the school district and school counselors who took significant responsibility to get consent and assent forms from participants and their parents. This pre-program implementation process as part of needs assessment was critical for this project's success.

Another critical point for this type of prevention program implementation is to find an evidence-based program and proper training for program facilitators. If health teachers run this

type of program, it is recommended for them to receive training on weight bias and weight-related teasing from an expert first. In addition, school counselors need to be involved and work with health teachers as a team. When health teachers notice any bullying incident, it is suggested that health teachers should make a report to school counselors as well as school principal immediately. Ideally, this type of school policy is implemented and understood among teachers and school administrators.

Lastly, health teachers who implement any bullying prevention program are encouraged to collect pre- and posttest data to earn evidence of prevention program. Program concepts of bullying prevention programs tend to include sensitive contents that may cause emotionally difficult process among participants. Therefore, it is particularly important to assess an efficacy of program implementation when health teachers implement bullying prevention or any related programs. If health teachers feel uncomfortable to manage program evaluation process, following guidelines of program evaluation from a selected evidence-based program such as the FOO program or contacting researchers in obesity, bullying, or a related health field is recommended.

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Table 1. Program Lessons

Week	Program Lesson Topics
Week 1	Introduction/Ground Rules
Week 2	Claiming Our Strengths (Core values)
Week 3	Countering the Media Culture (Media Literacy)
Week 4 & 5	Standing Our Ground (Assertiveness Training)
Week 6 & 7	The Power of Healthy Relationships (Role-play)
Week 8	Making anti-bullying posters

Table 2: The Frequencies of Different Forms of Bullying (N = 18)

	Percent (%)
Physical Bullying	11.8%
Verbal Bullying	46.5%
Emotional Bullying	27.6%
Cyber Bullying	11.0%
Never	47.2%

Table 3. Means (Standard Deviations [SD]) for Pretest and Posttest

	Pretest (N = 106)		Posttest (N = 106)		
Variable	Male (n = 41)	Female (n = 65)	Male (n = 41)	Female (n = 65)	P-value
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	
Weight-related Teasing	6.45 (1.04)	6.63 (1.68)	6.75 (2.63)	6.69 (1.71)	NS
Weight-related Teasing Effect	1.07 (.33)	1.38 (.97)	1.05 (.24)	1.45 (1.11)	0.019
Competency Teasing	7.41 (2.11)	8.61 (3.23)	8.23 (3.28)	9.02 (4.01)	NS
Competency Teasing Effect	1.41 (.65)	2.07 (1.09)	1.45 (.68)	2.01 (1.11)	< .001
Body Esteem	17.16 (3.29)	16.39 (4.37)	18.05 (2.92)	16.61 (4.57)	NS
IBSS	3.06 (.51)	2.61 (.76)	2.93 (.71)	2.52 (.89)	0.002
Self-Esteem	21.5 (3.90)	20.06 (4.31)	24.39 (3.72)	23.15 (4.36)	NS

Note: NS = non significance