

WOMEN'S EXPERIENCES OF PERCEIVED WEIGHT-BASED DISCRIMINATION AND
PSYCHOLOGICAL DISTRESS: A TEST OF SOCIAL IDENTITY THEORY

By

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To my family

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Abstract Of Dissertation Presented To The Graduate School
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This dissertation explores women's experiences of perceived weight-based discrimination within a social identity theory framework to better understand the link between discrimination and adverse psychological consequences. Previous research has demonstrated that identity status within itself is a worse predictor of distress than discrimination associated with that identity status. For women of size, previous research has demonstrated the perception of discrimination based on weight is associated with poorer psychological outcomes such as greater depression, poorer body image, greater isolation, greater suicidal ideation, and lower self-esteem. However, no work to date has examined this phenomenon within a social identity theory framework. Social identity theory postulates that all individuals gain personal self-esteem through the self-esteem they gain by being associated with one or more social groups. This social or collective self-esteem is heightened if the person belongs to a valued group and is lessened if the person belongs to a devalued group. In this dissertation, a structural equation model tested a hypothesized model in which women's reports of weight-based discrimination predict public collective self-esteem, which would then predict private collective self-esteem, which, in turn, would predict personal self-esteem, which finally would predict

psychological distress, operationally defined as disordered eating and depression symptomatology in this dissertation. A weight, socioeconomic, and age diverse but primarily White and heterosexual sample of 216 women completed measures of weight-based discrimination, public collective self-esteem, private collective self-esteem, personal self-esteem, disordered eating and depression. Data obtained from this sample was used to test the hypothesized model through structural equation modeling. Results indicate the model fit the data well, superiorly to alternative logical models, and explained 64% of the variance associated with participants' depression and 25% of participants' disordered eating. Additionally, participants were able to recall various types of weight-based discrimination throughout the past year and their lifetime. Taken together, the results suggest the women sampled do perceive differential treatment based on weight which in turn affects their self-esteem by being reminded they belong to a devalued social group and affects their mental health.

CHAPTER 1 INTRODUCTION AND REVIEW OF THE LITERATURE

Many have begun to explore empirically the effects of discrimination upon marginalized individuals within the greater focus of multiculturalism and social justice in the field of counseling psychology. For example, a growing body of literature has linked experiences of discrimination to distress in samples of women, racial/ethnic minorities, and sexual minorities (e.g., Fischer & Bolton Holz, 2007; Landrine & Klonoff, 1996; Moradi & Subich, 2004; Pascoe & Smart Richman, 2009; Syzmanski & Gupta, 2009; Waldo, 1999). Commonly the foundation and impetus of this work rests on exploring the pervasiveness of racism, sexism, and heterosexism. A growing body of literature suggests weight-based discrimination and anti-fat attitudes have become increasingly common in the United States despite the simultaneous increase in the percentage of overweight and obese persons over the past forty years (Latner & Stunkard, 2003). Recent research describes an alarming high rate of workplace weight-based discrimination, suggesting that in a nationally representative sample, 25% of overweight and obese women have experienced some form of maltreatment based on weight. Further, the heavier an individual is the more likely they are to report experiencing weight-based discrimination, as such overweight individuals are 12 times more likely, obese individuals 37 times more likely, and severely obese individuals 100 times more likely than average weight individuals to experience employment discrimination (Roehling, Roehling, & Pichler, 2007). Given the results of Roehling and colleagues' (2008) study on the pervasiveness of weight discrimination, further inquiry to the psychosocial consequences of experiencing discrimination and mechanisms to such consequences is warranted.

It is important to build upon previous theory-grounded research to better understand not only the link between weight-based discrimination but also the possible mechanisms in which discrimination and distress are linked. A study conducted by Fischer and Bolton Holz (2007) linking gender-based discrimination to psychological distress serves as a guiding theoretical and methodological model to understand the mechanisms linking weight-based discrimination and distress. Grounded in social identity theory, Fischer and Bolton Holz (2007) hypothesized and received subsequent support from their data that public and private collective self-esteem and personal self-esteem would mediate the relationship between experiences of gender-based discrimination and psychological distress. In the current study, I hypothesize public and private collective self-esteem and personal self-esteem will mediate the relationship of weight-based discrimination and psychological distress. Similar to Fischer and Bolton Holz (2007), I use social identity theory to understand how generally negative messages about people of size provide few instances to “bask in reflected glory” (Cialdini et al., 1976, p. 366) and thus diminished personal self-esteem from belonging to a devalued social group. In other words, the experience of mistreatment based on weight (*perceived experiences of weight-based discrimination*) may be understood by people of size as a reflection of the negative societal views of people of size (*public collective self-esteem*), which may further lead to more negative personal views of people of size as a group (*private collective self-esteem*) and subsequently of themselves as individuals (*personal self-esteem*). This poor self-image may ultimately result in an increased risk for psychological distress.

Weightism Research

Fat stigma has received growing attention since the early studies of the 1960s first documented the negative social, occupational, educational, and psychological consequences of being heavy in the United States (e.g., Canning & Mayer, 1966; Goldblatt, Moore, & Stunkard, 1965; Pargman, 1969). This literature encompasses prejudice against people of size, stereotypes about people of size, weight-based discrimination, and victim consequences (Crandall & Biernat, 1990; Hebl, King, & Perkins, 2009; Latner, Wilson, Jackson, & Stunkard, 2009).

Some of the harmful and commonly-held stereotypes about people of size are that these individuals are lazy, lack willpower, are non-hygienic, are less competent, are socially isolated, and are less intelligent (Crandall, 1994; Puhl & Brownell, 2001; Teachman, Gapinski, Brownell, Rawlings, & Jeyaram, 2003). Much like stereotypes about other marginalized groups (e.g., African Americans, Muslims, gays, lesbians), these stereotypes are very powerful in society despite the absence of the empirical evidence to support them (Roehling, Roehling, & Odland, 2008).

Recent literature reviews suggest weight-based discrimination is ubiquitous across many domains of everyday life such as employment, education, health care, interpersonal relationships, and potentially other unexplored domains (see reviews by Puhl & Brownell, 2001; and Puhl & Heuer, 2009). People of size earn lower pay than average weight individuals, even after controlling for other socioeconomic variables (Baum & Ford, 2004; Cawley, 2004; Maranto & Stenoien, 2000). People of size are also more likely to be unemployed, this effect is maintained after controlling for socio-demographic variables, health status, and smoking status (Klarenbach, Padwal, Chuck, & Jacobs, 2006; Tunceli, Li, & Williams, 2006). Recent meta-analyses of the existing

empirical investigations of weight bias and employment consistently demonstrate a link between employer weight bias and employment related decisions such as hiring recommendations, qualification/suitability ratings, disciplinary decisions, salary assignments, placement decisions, and coworker ratings (see Roehling et al. 2007, for review).

Large scale, population-based studies in the United States, Sweden, and United Kingdom indicate obesity is a barrier for higher educational attainment (Karnehed, Rasmussen, Hemmingsson, & Tynelius, 2006; Wardle, Volz, & Jarvis, 2002; Crosnoe, 2007). Importantly, these educational attainment differences may be attributable to several causes. Plausibly, weight bias may be the cause to this disparity; as previous research demonstrated educators endorse weight-based stereotypes and this endorsement has been linked to negative outcomes in children as early as elementary school (Puhl & Latner, 2007). However, weigh-bias may also affect individuals through mediating variables such as lack of popularity or family support as important ways in which weight serves as a barrier to educational attainment (Lawlor, Clark, Smith, & Leon, 2006; Novak, Ahlgren, & Hammarstrom, 2006).

The underrepresentation of people of size on United States college campuses has been documented since the late 1960s (Pargman, 1969). Pargman's research suggested additive, subtle, or covert discrimination must be underlying the underrepresentation of people of size on college campuses. Pargman found that there was no tangible way admissions committees could know the weight of applicants (such as seeing photographs or student medical records) however, the underrepresentation existed. Later research supported Pargman's explanation; in a study by Crandall (1991),

people of size, unlike their thinner counterparts, were found to be less likely to rely on parental financial support during college years and thus are more likely to rely on financial aid, part-time jobs, and personal savings accounts. The inability to rely on parental support limited heavy individuals' ability to afford a college education and inhibited attendance to more expensive and prestigious universities (Crandall, 1991). Later research suggests women are harmed more than men by this phenomenon; heavy collegiate women were significantly less likely to be financially supported by parents through college education than thinner counterparts (Crandall, 1995). Recent research suggests that people of size may also face other ancillary barriers in their quest for educational attainment or occupational advancement. For example, heavy weight college students were more likely to finance their vehicles than their thinner counterparts (Kraha & Boals, 2010).

Across health care specialties, providers consistently endorse negative attitudes about treating people of size (Puhl & Brownell, 2001). Physicians reported that obesity was among their least preferable patient conditions, preferred less than alcoholism, drug addiction, and mental illness. Physicians associated obesity with poor hygiene, noncompliance, hostility, and dishonesty (Klein, Najman, Kohrman & Munro, 1982). It does not appear physicians' attitudes have shifted significantly over time. In a study of over 600 primary care physicians approximately 20 years later, more than 50% surveyed reported finding obese patients unattractive, awkward, ugly, and noncompliant. Further, 30% surveyed described obese patients as weak-willed, sloppy, and lazy (Foster et al., 2003). In a sample of nutrition specialists, researchers found that 88% of those surveyed believed obesity was the manifestation of the need for love or

attention, 87% believed that obese persons are indulgent, 74% believed that obese persons have family problems, 70% attributed obesity to emotional disturbances, and 32% believed that obese people lack willpower (Maiman, Wang, Becker, Finlay, & Simonson, 1979). Recent reports indicate some health professionals are explicitly denying people of size medical care. Approximately 15 obstetrics-gynecology practices in the South Florida area refuse to treat women of size (defined at some practices as weighing over 200 pounds). Primary reasons reported by these practices for denying medical care to women of size include that their equipment cannot handle the weight of these women and that women of this weight or more are higher-risk patients (LaMendola, 2011). While it may not be the case that all people of size are confronted with an explicit denial of medical care, it is feasible that people of size receive differential medical care if their medical providers endorse weight bias attitudes.

Although there are fewer studies, evidence suggests mental health professionals also engage in weight bias. In an experiment using hypothetical clients, a diverse sample of mental health professionals rated the heaviest clients as having the worst psychological functioning (Young & Powell, 1985). Further, those sampled viewed heavier clients as possessing more agitation, egocentrism, emotional behavior, hypochondriasis, impaired judgment, inadequate hygiene, inappropriate behavior, intolerance of change, obsessive-compulsive behavior, self-injurious behavior, stereotyped behavior, and suspiciousness than thinner clients. Other research suggests mental health professionals are likely to see heavier clients as less attractive, less motivated for therapy and more embarrassed to be in therapy (Agell & Rothblum, 1991). Another study suggested age and gender of mental health professional may be related

to weight bias. Specifically, in a sample of practicing psychologists, those younger than 40 years old expected less effort from heavy clients and gave them poorer prognoses than older psychologists. Women psychologists assigned more negative provisional diagnoses to heavier clients. Across age and gender, psychologists were more likely to suggest a provisional diagnosis of eating disorder and more likely to assign the treatment goal of “improving body image” to heavy clients (Davis-Coelho, Waltz, & Davis-Coelho, 2000). A recent investigation demonstrated that a sample of mental health professionals endorsed the same level of explicit anti-fat attitudes on a standardized measure as the general population (Locker & Heesacker, 2013). Consistent with previous research, those sampled also rated heavy clients as less attractive. However, the results of this investigation suggest mental health professionals used client weight, race, and gender to inform treatment evaluations. For example, heavy White women were evaluated as the poorest in psychological functioning and motivation for therapeutic change whereas heavy Black women were evaluated as the highest functioning and most motivated. No studies to date have explored whether actual therapy clients believe mental health providers give them differential treatment. However, just as it is likely other medical professionals provide differential treatment due to reported weight bias attitudes; given the findings of these studies it is likely that mental health professionals provide different treatment for people of size due to weight bias.

A growing body of research suggests in addition to employment, educational, and medical discrimination, people of size are likely to experience discrimination in their interpersonal relationships. Women of size appear to be particularly at risk for fat

stigmatization in romantic and sexual relationships; several experimental studies suggest women of size are rated as the least preferable dating or sexual partner (as compared to thinner women, disabled women, women with histories of drug problems, and women with histories of sexually transmitted infections) particularly if the women are described as “obese”, “overweight”, or “fat” instead of “full-figured” or reported height and weight (Chen & Brown, 2005; Sitton & Blanchard, 1995; Smith, Schmoll, Konik, & Oberlander, 2007). Heavy collegiate women are less likely than thinner collegiate women to be in dating relationships and more likely to experience relationship dissatisfaction, particularly if her dating partner has told her to lose weight (Sheets & Ajmere, 2005). In addition to facing stigma in romantic and sexual relationships, people of size also report receiving weight- based criticism from family and friends (Puhl & Brownell, 2006). Again, this stigma may be particularly detrimental to women as heavy women report greater relationship dissatisfaction with family and romantic partners than thinner women (Ball, Crawford, & Kenardy, 2004).

In the past decade, psychologists have demonstrated the link between experiencing forms of discrimination and psychological distress (e.g., Fischer & Bolton Holz, 2007; Landrine & Klonof, 1996; Moradi & Subich, 2004). In this vein, researchers have explored the psychosocial consequences for children, adolescents, and adults who have experienced weight-based stigmatization. Research suggests heavy youth experience greater loneliness (Hayden-Wade et al., 2005), lower self-esteem (Eisenberg, Neumark-Sztainer, & Story, 2003), and report lower life-quality (Schwimmer et al., 2003). In general, heavy youth may have less interpersonal relationship satisfaction than thinner youth, as heavy youth are less likely to spend time with friends

(Falkner et al., 2001) and are less satisfied with romantic relationships (Pearce et al., 2002). Other research suggests heavy youth who experience weight stigmatization also experience symptoms indicative of more severe psychological distress, such as higher rates of suicidal ideation and suicide attempts (Eisenberg et al., 2003), greater endorsement of depressive symptoms (Gray, Janicke, Ingerski, & Silverstein, 2008; Storch et al., 2007), higher levels of body dissatisfaction (Thompson et al., 2007), and increased eating disorder symptomology (e.g., bingeing, dieting, unhealthy compensatory behaviors; Hayden-Wade et al., 2005; Neumark-Sztainer et al., 2002; Thompson et al., 2007). Some studies further suggest heavy girls are at greater risk of weight-based victimization than heavy boys and that weight-based victimization for heavy girls is likely to include relational forms of aggression revolving around name-calling, jokes, and teasing (Neumark-Sztainer, Story, & Faibisch, 1998; Pearce, Boergers, & Prinstein, 2002).

Research with adults suggests similar detrimental outcomes from weight-based discrimination, including increased vulnerability to depression, body image disturbances, psychiatric symptoms, and decreased self-acceptance (Carr & Friedman, 2005; Friedman, Reichmann, & Costanzo, 2005; Myers & Rosen, 1999). Importantly, overall these psychological consequences appear to be similar to the consequences associated with racial, gender, or sexual orientation-based discrimination (Meyer, 2003; Pascoe & Smart Richman, 2009). In addition to the association between psychological health and weight-based discrimination, adverse physical health consequences are hypothesized to be associated with weight-based discrimination. For example, in a study of adult women weight-based discrimination experiences were associated with

greater motivation to avoid physical activity and in turn resulted in engaging in less physical activity (Vartanian & Shaprow, 2008).

In contrast to how the relationship between weight and negative outcomes had previously been conceptualized (e.g., people of size *are* less qualified for employment or people of size *are* less psychologically adjusted), this body of research supports the hypothesis that weight-based stigmatization is the source of detrimental psychosocial and physical outcomes not merely being heavy. However, there is less known regarding how weight-based stigmatization leads to detrimental outcomes. Looking at mediators and moderators of these relationships is important in understanding the processes by which weight-based stigmatization leads to adverse consequences. Research linking racism, sexism, and heterosexism to psychological distress serves as a useful source of several potential mediators and moderators. For example, in a study by Moradi and Hasan (2004), perceived control mediated the link between perceived discrimination and distress in a sample of Arab American persons. In addition, in a sample of African American LGBTQ persons, the link between internalized homophobia and psychological distress was partially mediated by self-esteem (Szymanski & Gupta, 2009). Self-esteem may be a particularly useful mediator to explore in linking weight-based discrimination to negative psychological outcomes as previous research suggests weight-based discrimination experiences were correlated with lower self-esteem in adult women (Annis, Cash, & Hrabosky, 2004).

Social Identity Theory

According to social identity theory, people are thought to have two distinct aspects of their self-concepts. One aspect is personal identity, or the individual's attributes, skills, values, and traits. The other aspect is one's social identity, or "that part

of the individual's self-concept which derives from his knowledge of this membership in a social group (or groups) together with the value and emotional significances attached to that membership" (Tajfel, 1981, p. 255). Social identity theorists highlight the importance and influence an individual's social group or groups have on the individual's self-concept and social behaviors (e.g., Tajfel, 1982; Tajfel & Turner, 1979; Turner, 1982). One's social group, or individuals who see themselves as members of the same social category, serves as a source of positive or negative social identity. In this proposal, I will use Luhtanen and Crocker's (1992) terminology. In the remainder of the paper I will refer to social identity as collective identity. The difference between these terms was well-articulated by Luhtanen and Crocker, who describe a mismatch in the differences between European and American conceptualizations of social identity. In the United States, social psychologists generally use the term social identity in reference to an individual's social roles and interpersonal relationships. Collective identity "denotes those aspects of the self-concept that relate to race, ethnic backgrounds, religion, feelings of belonging in one's community, and the like" (Luhtanen & Crocker, 1992, p. 302). Turner and Tajfel used the term social identity to mean what Luhtanen and Crocker's called collective identity. Social groups provide opportunities to acquire positive or negative collective identity. For example, social groups that are valued and compare favorably to other similar groups provide positive collective identity.

Collective identity and personal identity are both key aspects of the self-concept and both feed into an overall sense of self-worth or self-esteem (Tajfel & Turner, 1986). Previous research suggests both collective identity and personal identity influence personal self-esteem (e.g., Luhtanen & Crocker, 1992). Identifying a limitation in this

research, Luhtanen and Crocker (1992) built upon social identity theory and research on self-esteem by defining the constructs of public collective self-esteem and private collective self-esteem, creating a measure to assess public collective self-esteem, private collective self-esteem, membership esteem, and importance of identity. Researchers have explored how these constructs work in different groups of individuals, such as African Americans, Asian Americans, White Americans, and women (Corning, 2002; Crocker, Luhtanen, Blaine, & Broadnax, 1994; Fischer & Bolton Holz, 2007). In general, this line of research suggests collective self-esteem (both public collective self-esteem and private collective self-esteem) is correlated positively to better psychological well-being. Further, individuals who a) believe their group is devalued and who b) themselves devalue their social group are likely to have lower self-esteem and potentially lower well-being (Luhtanen & Crocker, 1992). These studies also suggest that group-specific (e.g., based on race/ethnicity or gender) investigations of collective self-esteem are appropriate and potentially more informative than studies attempting to assess a global measure of collective self-esteem (Crocker et al. 1994). Building upon Crocker and colleagues' work linking collective public self-esteem and collective private self-esteem to personal self-esteem and well-being, Fischer and Bolton Holz (2007) hypothesized collective public self-esteem and collective private self-esteem and personal self-esteem (conceptualized consistently with Luhtanen & Crocker, 1992) may serve as mediators between adult women's experiences of sex discrimination and depression and anxiety. The mediational model was supported in a sample of women (Fischer & Bolton Holz, 2007).

Current Study

Testing public collective self-esteem and private collective self-esteem as mediators in the relationship between weight-based stigmatization and detrimental outcomes is a promising next step in this line of research. As previous work has suggested children and adults who experience weight-based maltreatment are at risk for lower personal self-esteem and psychological distress (e.g., Carr & Friedman, 2005; Eisenberg, Neumark-Sztainer, & Story, 2003; Friedman, Reichmann, & Costanzo, 2005; Myers & Rosen, 1999), examining collective self-esteem may shed light on the pathways through which weight-based stigmatization translates to distress. Social identity theory is ideally suited as a theoretical grounding as the theory posits individuals garner self-esteem through the identification with others in their in-group. A vast body of research suggests people of size are consistently portrayed in the media in negative ways such as being the objects of ridicule and humor, or shown overeating (Greenberg, Eastin, Hofshire, Lachlan, & Brownell, 2003). It is likely people of size lack prominent, positive examples of others in their social group from which to garner positive self-esteem. Moreover women of size are unlikely to be portrayed in positive ways in the media. Results of a content analysis of women in U.S. primetime television shows highlight that heavy women are likely to receive negative feedback about body weight from others, while thinner women are likely to receive positive body feedback (Fouts & Burggraf, 1999; Fouts & Burggraf, 2000). Given the potential lack of positive, heavy women role models in which to gain positive self-esteem and the growing body of research that suggests weight-based discrimination is likely more detrimental to women than to men; this study will focus on the experiences of women of size.

The current study is unique in that the investigator found no published investigations that measured perceived weight-based discrimination using measures specifically designed to share a theoretical foundation with other discrimination literatures (i.e., sexism, racism; Klonoff & Landrine, 1995; Landrine & Klonoff, 1996). Published conceptualizations that bridge different discrimination literatures are largely absent. The current proposal is an attempt to use the literature on race and sex discrimination as the grounding to understand weight-based discrimination.

Hypotheses

In summary, the purpose of this proposal is to investigate a model of perceived weight-based discrimination with psychological distress in women. A structural equation model will test the hypothesized model in which women's reports of weight-based discrimination would predict public collective self-esteem, which would then predict private collective self-esteem, which, in turn, would predict personal self-esteem, which finally would predict psychological distress, operationally defined as disordered eating and depression symptomatology in this current investigation. Further it is hypothesized that the chain of self-esteem variables will mediate the relationship of reports of weight-based discrimination on psychological distress (disordered eating and depression symptomatology). This model is presented in Figure 1-1.

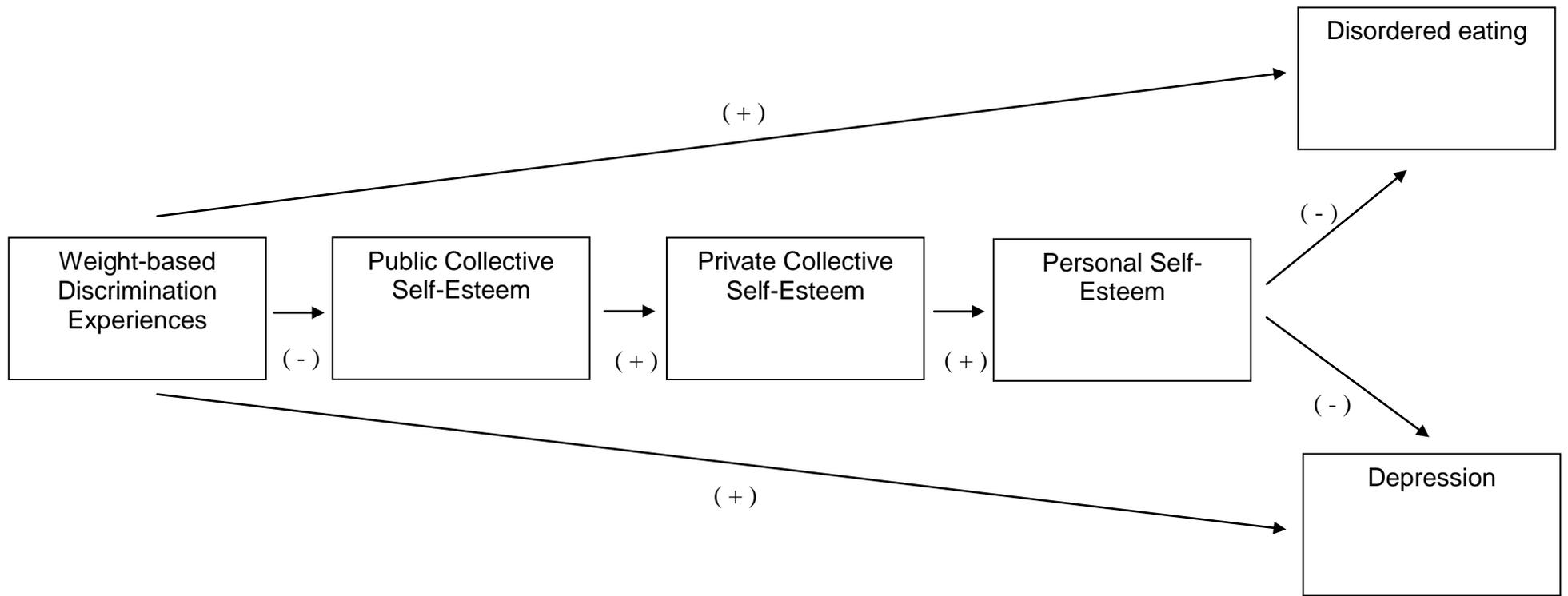


Figure 1-1. Hypothesized model with signs indicating predicted directions of paths.

All variables are latent variables.

CHAPTER 2 METHODS

Participants

A sample of women ($n = 216$) was recruited from Internet sites such as yahoogroups, facebook.com, craigslist.org, and myspace.com and was analyzed in this study. Recruitment was made from a variety of websites, such as ones valuing fat acceptance and others valuing weight loss to obtain a diversity in perspectives about personal body weight. Participants ranged in age from 18 to 72 years old ($M = 32.74$, $SD = 12.09$, $Mdn = 29.00$). When asked to report their ethnic or racial background, 82% of participants identified as White or Caucasian, 2% as Black or African American, 7% as Hispanic, 2% as Asian or Pacific Islander, 2% Biracial or Multiracial, 1% East Indian, Indian American, or Middle Eastern, and 4% as “Other”. When to report country of origin, the majority of participants (82%) identified the United States of America as their country of origin with Canada (3%), United Kingdom (3%), Australia (3%), New Zealand (1%), and Greece (1%) representing a small portion of the sample. Other countries in which one participant reported as country of origin include: Turkey, Trinidad, Sweden, Russia, Mexico, Ireland, and the Czech Republic. Four participants did not report country of origin. In addition to country of origin participants were asked what country they resided in at time of participation and the majority of participants endorsed living within the United States of America (91%). Fifteen participants reported living outside of the United States of America at time of survey and five participants did not report. When asked how they identified their sexual orientation, 70% of participants selected exclusively straight or heterosexual, 16% selected mostly straight or heterosexual, 8% selected bisexual, 1% mostly lesbian or homosexual, 2% exclusively lesbian or

homosexual and less than 2% selected “Other” and typed in other sexual orientations including pansexual and asexual. When asked how much income participants had annually in their household 24% of participants selected less than \$25,000, 25% selected between \$25,001-\$50,000, 13% selected between \$50,001-\$75,000, 20% selected between \$75,001-\$100,000, 15% selected more than \$100,000 and 3% did not report income.

Given that weight discrimination was a central aspect of the study attempts were made to recruit a weight diverse sample by targeting weight related women’s forums, websites and listservs. Participants ranged in BMI from 15.45 to 72.04 ($M = 29.57$, $SD = 10.60$, $Mdn = 26.04$). Approximately 62% of participants could recall the age at which they first experienced weight discrimination. Age of first weight-discrimination experienced was reported by participants as early as 3 years old and as late in life as age 50 ($M = 11.26$, $SD = 6.60$, $Mdn = 10.00$). Some kinds of discrimination were reported as occurring more rarely, such as about 10% of participants reported being forced to take drastic steps (such as filing a grievance, filing a lawsuit, quitting your job, moving away, and other actions) to deal with some weight-discriminatory thing that was done to the participant at some point in her lifetime, approximately 26% reported being treated unfairly by neighbors and approximately 27% reported being denied a job, raise, or promotion. Importantly, results obtained in this study demonstrate a similar trend as the results obtained in a study of sex discrimination with a sample of collegiate women (Fischer & Bolton Holz, 2007) in that the same kinds of discrimination were rated as occurring less frequently. However the current study suggested a larger proportion of the sample endorsed these kinds of discrimination that the Fischer and Bolton Holz

study. The kinds of discrimination endorsed as happening more frequently in the Fischer and Bolton Holz study were also endorsed as happening more frequently (once in a while or more during their lifetime) in the current study. For example, 93% of participants reported hearing people tell weight discriminatory or degrading jokes, 80% of participants reported wanting to tell someone off for something weight discriminatory they have done, 70% of participants reported failing to receive deserved respect from their family because of being a person of size, and 70% of participants reported being called weight discriminatory names.

Procedure

Internet recruitment was used to reach a variety of women. Specifically, contacts were made to sites such as yahoogroups, facebook.com, craigslist.org, and myspace.com with a request for participants. Participants received a link to the survey that they completed at their convenience. After consent was obtained, participants were asked to complete several measures related to experiences of weight stigmatization/discrimination, psychological distress, private and public collective self-esteem, and demographic information. All measures, with the exception of the demographics section, were randomized to avoid order effects. The demographic questionnaire was always seen last by participants.

Instruments

Weight-based Discrimination

Experiences of weight-based stigmatization will be assessed through an adapted version of the Schedule of Sexist Events (Klonoff & Landrine, 1995). The Schedule of Sexist Events (SSE; Klonoff & Landrine, 1995) a 20-item measure of lifetime and recent discriminatory events scored on a 6-point scale (1 = *the event has never happened*, 6 =

the event happened almost all [i.e., more than 70%] of the time) was re-worded to reflect weight-based hostility instead of gender-based hostility. Example items include “How many times have you been treated unfairly by *teachers or professors* because of your weight?” and “How many times have people *failed to show you the respect that you deserve* because of your weight?” Klonoff and Landrine’s original measure has been adapted in various ways to assess race-based discrimination (DeBlaere & Moradi, 2008; Landrine & Klonoff, 1996). Race and sex-based discrimination versions of this measure demonstrate acceptable reliability (.90, .94, .88) and validity through correlations with measures of daily hassles and psychological distress. Using the same re-worded measure to reflect weight-based hostility, Locker (2013), obtained high internal consistency estimates in a sample of college students, Lifetime: $\alpha = .90$, Recent: $\alpha = .89$, Appraisal: $\alpha = .93$. Higher scores indicate higher prevalence of weight-based discrimination. In the current sample, similar internal consistency estimates were obtained, Lifetime: $\alpha = .95$, Recent: $\alpha = .92$, Appraisal: $\alpha = .95$.

Public and Private Collective Self-esteem

Public and private collective self-esteem will be measured using the Collective Self-Esteem Scale (CSES; Luhtanen & Crocker, 1992). The CSES is a 16-item measure assessing feelings of self-worth and self-respect related to one’s self-concept as a member of a social group. The CSES has four subscales (Membership CSE, Identity CSE, Private CSE, and Public CSE), each of which contains 4 items. For the purposes of this study, only the Public CSE and Private CSE subscales will be used; items will be worded to as the social group of interest, women of similar weight and size. The Public CSE subscale assesses one’s evaluations of how positively the public views one’s social group (example item: “Most people consider my weight and/or size group,

on the average, to be more ineffective than other social groups.”). The Private CSE subscale assesses one’s personal evaluations of one’s social group (example item: “I feel good about the weight and/or size group I belong to.”). Participants are asked to respond to all items using a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher mean scores reflect greater levels of CSE. Luhtanen and Crocker (1992) reported acceptable internal reliability in college student samples, alphas .71 to .80 for the Private CSE subscale and alphas .78 to .80 for the Public CSE subscale. Fisher & Bolton Holz (2007) reported internal reliability estimates of .69 and .63 in sample of undergraduate women for Private CSE and Public CSE respectively when the social group was identified as “women” by the researchers. Construct validity has been assessed by low to moderate correlations with personal self-esteem measures. In the current sample an internal consistency of .90 was obtained for Private CSE and .93 for Public CSE.

Personal Self-esteem

An individual’s belief of their personal value will be assessed through the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). This 10-item instrument uses a 4-point scale ranging from *strongly disagree* to *strongly agree*. Example items include “All in all, I am inclined to feel that I am a failure” and “I wish I could have more respect for myself.” Rosenberg (1965) reported in the initial validation study strong internal consistency for the measure, .93. The RSES has demonstrated construct and discriminant validity through relations between depression, anxiety, and self-efficacy. In the current sample an internal consistency of .93 was obtained.

Depression

Depression will be measured with the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977), which is a 20-item self-report inventory that measures depressive symptoms over the past week. Example items are “I had trouble keeping my mind on what I was doing” and “I felt that I could not shake off the blues even with help from my family or friends.” Items are rate on a 4-point scale that ranges from 0 (*never to rarely less than 1 day*) to 3 (*most or all of the time 5-7 days*). Total scores can range from 0 to 60 with higher scores indicating more depressive symptomatology. The CES-D has been shown to be a reliable measure with acceptable internal consistency across racial, gender, and age categories (Knight, Williams, McGee & Olaman, 1997; Radloff, 1977; Roberts, Vernon, & Rhoades, 1989). Concurrent validity by clinical and self-report criteria, as well as substantial evidence of construct validity have been demonstrated (Radloff, 1977). In the current sample an internal consistency of .93 was obtained.

Eating Disorder Symptomatology

Disordered eating attitudes and behaviors will be assessed by The Eating Attitudes Test—26 (EAT—26; Garner, Olmstead, Bohr & Garfinkel, 1982). The EAT-26 has 26 items and is rated on a 6-point scale 1 (never) to 6 (always). Example items include “I vomit after I have eaten” and “Am terrified about being overweight.” Construct validity have been supported by correlations between the EAT-26 and other common measures of bulimia and other eating disorder symptoms, body esteem, internalization of the thin ideal, and appearance satisfaction (Mazzeo, 1999; Tylka & Hill, 2004; Tylka & Subich, 2004). Acceptable internal consistency has been demonstrated in sample of

women (Kashubeck-West et al. 2001). In the current sample an internal consistency of .90 was obtained.

Planned Analyses

A latent-variable structural equation model (see Figure 1-1) will be tested using Amos 19.0 (Arbuckle, 2011). Following recommendations to use a two-step procedure for structural equation modeling (Kline, 2005; Weston & Gore, 2006), the adequacy of the observed indicators in measuring the latent constructs will be evaluated by first testing the fit of the measurement model. Then the structural equation model will be tested in order to evaluate the hypothesized relations between variables. Indicators of the latent variables will be created from item parcels. Item parcels will be constructed from first conducting an exploratory factor analysis of each measure, then rank ordering the items according to their factor loadings, and finally assigning items to parcels in countervailing order to maximize the equality of average factor loadings between parcels. For each latent variable, three item parcels will be created and for latent variables measured by fewer than 6 items, each item will serve as manifest variable (i.e., Collective Public Self Esteem, Collective Private Self-Esteem). The measurement model and subsequently the structural equation model are predicted to be supported by generally-accepted fit indices such as comparative fit index (CFI) $\geq .90$, root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) indices of $\leq .10$ (e.g., Weston & Gore, 2006). The target sample size of 200 participants will be more than adequate for the proposed analysis, as 5 – 10 cases per parameter is generally advised (Bentler & Chou, 1987; Kline, 2005; Weston & Gore, 2006). Logical alternative models will be tested for fit as well such as weight-based discrimination as a mediator of the relationship of self-esteem and psychological

distress and a non-mediational model in which personal self-esteem, public collective self-esteem, private collective self-esteem, and weight-based discrimination predict psychological distress. However, based on previous research with similar models and variables (Fischer & Bolton Holz, 2007) it is hypothesized the model in Figure 1-1 will best fit the data. To examine mediation in the model I will use a bootstrap procedure with 1,000 bootstrap samples from the original data which will be used to compute bias-corrected 95% CIs for indirect effects. Indirect effects are considered significant if the 95% CI does not include zero (Mallinckrodt, Abraham, Wei, & Russell, 2006). Full or partial mediation will be determined by the change in significance of the direct effects of weight-based discrimination on disordered eating and depression with and without the mediating variables of personal self-esteem, public collective self-esteem, and private collective self-esteem.

CHAPTER 3 RESULTS

Data Screening and Preliminary Analysis

Before proceeding with planned analysis, I examined the data for appropriateness of the analysis. Given the nature of the study men and women under 18 years old were excluded from analysis, resulting in one participant being excluded from analysis. Additionally, participants were excluded from analysis if there were more than 20% missing data on any measure. Eight participants were deleted due to excessive missing data (greater than 20%). The remaining missing data were estimated through the use of multiple imputation (Schafer, 1999; Schafer & Graham, 2002).

Bivariate correlations and descriptive statistics for the sample's scores on measures of interest are presented in Table 3-1. The patterns of the bivariate correlations demonstrate statistically significant correlational relationships for the variables of interest, with the exception of a non-significant bivariate correlation between the EAT and Public CSES. The distribution of each measure met guidelines for univariate normality (i.e. skewness indices ≤ 3 , kurtosis indices ≤ 10 ; Chou & Bentler, 1995; Kline, 2005.). There were no concerns for multicollinearity given all correlations between measures were less than $r = .85$ (Kline, 2005). Regarding multivariate normality, Mardia's coefficient was 33.1. Seven cases were deleted prior to analysis as each case emerged as a multivariate outlier with Mahalanobis distances significant at $p < .001$, resulting in the final sample of 216. Prior evidence and recommendations suggest a sample size of 200 is adequate for structural equation modeling (Kline, 2005; Quintana & Maxwell, 1999; Weston & Gore, 2006), thus I deemed the current sample size of 216 to be sufficient for this analysis.

Measurement Model and Hypothesized Structural Model

As discussed in the previous chapter, to model most of the latent variables, I constructed three indicators per latent construct (Weston & Gore, 2006). For latent constructs assessed by scale or subscale with less than 6 items, the items served as indicators in the model. To create item parcels, I conducted exploratory factor analysis of data from each measure and/or subscale and rank ordered each measure's items from the highest to the lowest loading item. In order to maximize the equality of average factor loadings between parcels, I assigned items to parcels in countervailing order (Tebbe & Moradi, 2012). Using this procedure, I created three parcels each for disordered eating, depression, personal self-esteem, and perceived weight discrimination. For personal collective self-esteem and public collective self-esteem which was measured by the Collective Self-Esteem Scale (Luhtanen & Crocker, 1992), had only 4 items per subscale and thus each item in the subscale was an indicator for the latent variable.

Given that the data conforms to most of the standard recommendations for conducting a structural equation model with the exception of achieving multivariate normality I decided to use maximum likelihood estimation which is robust to moderate multivariate nonnormality (McDonald & Ho, 2002; Muthén & Kaplan, 1985; Weston & Gore, 2006) particularly when univariate normality is achieved (Muthén & Kaplan, 1985). Following recommendations to use a two-step procedure for SEM (Kline, 2005; Muthén & Muthén, 1998–2010; Weston & Gore, 2006), I evaluated the adequacy of our observed indicators in measuring their latent constructs by first testing the fit of the measurement model. The measurement model was supported as having adequate fit based on generally-accepted fit indices such as, CMIN/DF = 1.857, $p = .001$; the

comparative fit index (CFI) = .970, root mean square error of approximation (RMSEA) = .063, and standardized root mean square residual (SRMR) = .0409

Next, I tested the structural model in order to evaluate the hypothesized relations. The measurement model allowed for all latent variables to covary whereas the hypothesized structural model predicted direct and indirect paths. The hypothesized structural equation model was supported as having adequate fit based on generally-accepted fit indices such as, CMIN/DF = 2.297, $p < .001$, the comparative fit index (CFI) = .953, root mean square error of approximation (RMSEA) = .078, and standardized root mean square residual (SRMR) = .078. The structural model accounted for 25% of the variance in disordered eating and 64% of the variance in depressive symptoms.

To examine the existence of mediation, I examined the indirect paths from weight-based discrimination to disordered eating and depression individually. Weight-based discrimination had a significant indirect link with disordered eating through the mediating role of personal self-esteem, public collective self-esteem, private collective self-esteem ($b = .107$, 95% CI [.080,.199], $\beta = .131$). Given the significant indirect link of weight-based discrimination with disordered eating through the mediating role of personal self-esteem, public collective self-esteem, private collective self-esteem and the non-significant direct effect of weight-based discrimination with disordered eating through the mediating role of personal self-esteem, public collective self-esteem, private collective self-esteem ($\beta = .42$, $p = ns$) a full mediation is supported. Weight-based discrimination had a significant indirect link with depression through the mediating role of personal self-esteem, public collective self-esteem, private collective self-esteem ($b = .163$, 95% CI [.153,.264], $\beta = .204$). Given the significant indirect link of weight-based

discrimination with depression through the mediating role of personal self-esteem, public collective self-esteem, private collective self-esteem and the significant direct effect of weight-based discrimination with depression through the mediating role of personal self-esteem, public collective self-esteem, private collective self-esteem ($\beta = .12, p < .05$) a partial mediation is supported

Testing Alternative Models

The parcels used in the structural model were also used to test alternative models. The first logical alternative model tested was a model in which weight-based discrimination as a mediator of the relationship of self-esteem and psychological distress. This model yielded poorer fit than the measurement model and structural model, CFIM/DF = 3.69, comparative fit index (CFI) = .900, root mean square error of approximation (RMSEA) = .112, and standardized root mean square residual (SRMR) = .199. A chi-squared nested test examining the differences in fit of the models is significant, (χ^2 difference = 234.99, df difference = 2, $p < .001$ indicating the structural model is a superior fit than the first logical alternative model.

The second logical alternative model tested was a non-mediational model in which personal self-esteem, public collective self-esteem, private collective self-esteem, and weight-based discrimination predict psychological distress. This model also yielded poorer than the measurement and structural models, CFIM/DF= 3.89, comparative fit index (CFI) = .985, root mean square error of approximation (RMSEA) = .116, and standardized root mean square residual (SRMR) = .312. A chi-squared nested test examining the differences in fit of the models is significant, (χ^2 difference = 285.66, df difference = 0, $p < .001$ indicating the structural model is a superior fit than the second logical alternative model.

Results Summary

Using a univariate and multivariate normal sample of 216 women, the best fitting model to explain the variance of the data was the hypothesized structural model. This model hypothesized women's reports of weight-based discrimination would predict public collective self-esteem, which would then predict private collective self-esteem, which, in turn, would predict personal self-esteem, which finally would predict psychological distress, operationally defined as disordered eating and depression symptomatology in this current investigation. Further there was support for public collective self-esteem, private collective self-esteem, and personal self-esteem as mediators of the relationship of weight-based discrimination with depression (partial mediation) and disordered eating (full mediation).

Table 3-1. Descriptive statistics and zero-order correlations among scale and subscale scores.

Variable	1	2	3	4	5	6	7	8	9
1. SWE YEAR	—								
2. SWE LIFE	.88**	—							
3. SWE APPRAISAL	.76**	.86**	—						
4. PUBLIC CSES	-.59**	-.69**	-.65**	—					
5. PRIVATE CSES	-.43*	-.41**	-.45**	.63**	—				
6. PERSONAL RSES	-.41**	-.40**	-.42**	.42**	.60**	—			
7. EAT	.24**	.16**	.23**	.06	-.42**	-.45**	—		
8. CES-D	.41**	.39**	.46**	-.30**	-.42**	-.75**	.54**	—	
9. BMI	.54**	.65**	.57**	-.81**	-.47**	-.26**	-.06	.18**	—
<i>M</i>	1.73	2.25	2.56	4.00	4.00	2.93	2.47	1.88	29.57
<i>SD</i>	.68	.92	1.23	1.83	1.64	.62	.66	.61	10.57
Possible range	1-6	1-6	1-6	1-7	1-7	1-4	1-6	1-4	—
Cronbach's α	.95	.92	.95	.93	.90	.93	.90	.93	—

Note. Higher scores indicate higher levels of the construct assessed. SWE YEAR = Schedule of Weightist Events, Year Subscale; SWE LIFE = Schedule of Weightist Events, Lifetime subscale; SWE STRESS = Schedule of Weightist Events, Appraisal subscale; PUBLIC CSES = Collective Self-Esteem Scale, Public subscale; PRIVATE CSES = Collective Self-Esteem Scale, Private subscale; PERSONAL RSES = Rosenberg Self-Esteem Scale; EAT = Eating Attitudes Test-26; CES-D = Center for Epidemiological Studies Depression Scale.

* $p < .05$. ** $p < .001$.

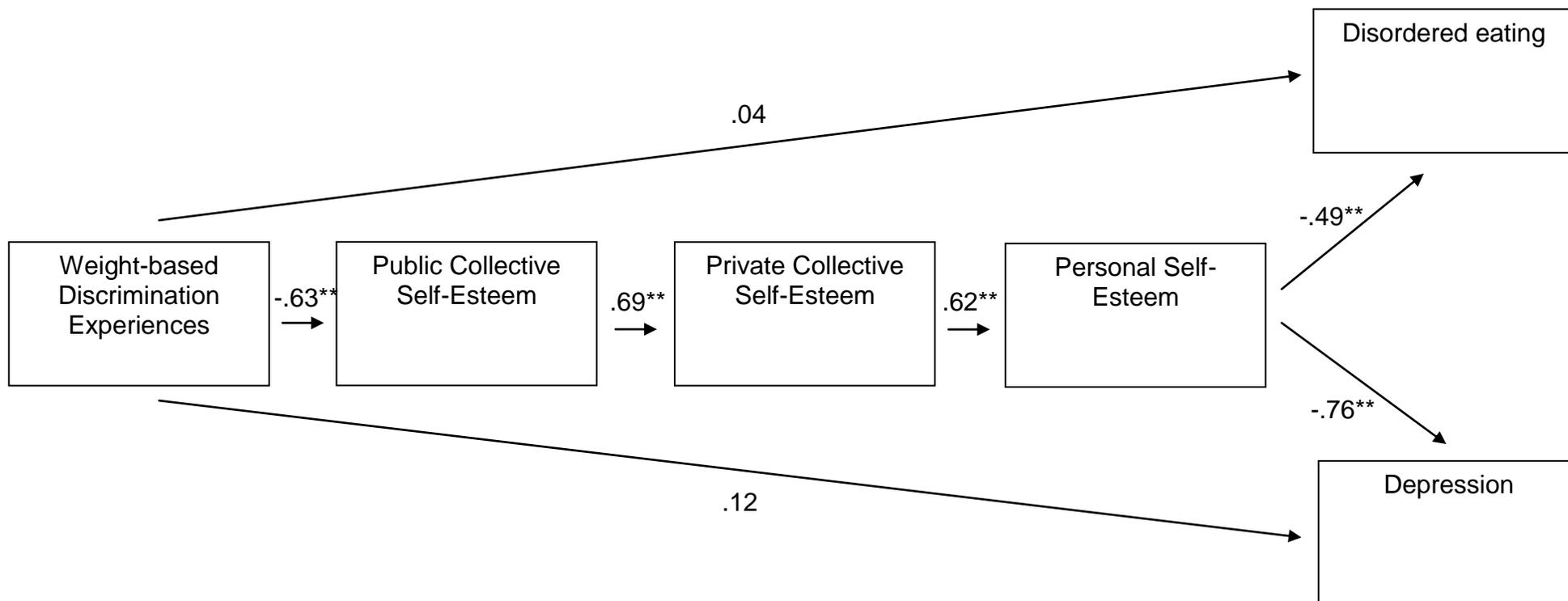


Figure 3-1. Structural Model.

All variables are latent variables. $** p < .001$

CHAPTER 4 DISCUSSION

The findings from the present dissertation advance the field's understanding of weight-based discrimination in several ways. First, women sampled for this study did indeed report the experience of weight-based discrimination. Second, findings from this study are consistent with previous research supporting a relationship between the experience weight-based discrimination and detrimental psychosocial outcomes. Third, findings from this study provide a framework to understand mechanisms by which experiencing weight-based discrimination may lead to disordered eating and depressive symptoms, as two examples detrimental personal outcomes.

Of the women in the current study, 93% reported hearing weight discriminatory or degrading jokes, 80% reported wanting to tell someone off for something weight discriminatory they did, 70% reported failing to receive deserved respect from their family because of their weight, and 70% reported being called weight discriminatory names. As discussed in Chapter 2, these percentages are similar to those collegiate women reported in their experiences of sex discrimination (Fischer & Bolton Holz, 2007). Consistent with data from a nationally representative sample, which found that 25% of overweight and obese women experienced work place discrimination (Roehling, Roehling, & Pichler, 2007), 27% of the women in the current sample reported being denied a job, raise, or promotion because of their weight. Interestingly, not all women who reported experiencing differential treatment based on weight labeled it weight-based discrimination. For the question, "If you believe you have experienced weight-based discrimination, approximately at what age is your earliest recollection of experiencing weight-based discrimination?" 13 participants indicated that they had not

experienced weight-based discrimination by writing phrases such as “did not happen to me,” or “none.” However, eight of those same participants did endorse experiences of differential treatment based on weight on the SWE (either lifetime or in the past year) and 12 of the 13 participants reported hearing others make weight-based discriminatory jokes. In addition the current study demonstrating high prevalence of weight-based discrimination experiences, findings also support that women experience some forms of discrimination more frequently than other forms. For example, in the current study about 10% of participants reported being forced to take drastic steps (such as filing a grievance, filing a lawsuit, quitting a job, moving away) to deal with some weight-discriminatory action that was done to the participant at some point in her lifetime. Taken together, the current study provides strong support for the assertion that weight-based discrimination is ubiquitous across several domains of life.

As demonstrated in the current study, the experience of perceived weight-based discrimination is significantly related to increased disordered eating and depression and to decreased self-esteem (see Table 3-1 for bivariate correlations). These findings are consistent with previous research suggesting those who experience weight-based discrimination are at increased risk for depression, body image disturbances, decreased self-acceptance, and psychiatric symptoms (Carr & Friedman, 2005; Friedman, Reichmann, & Costanzo, 2005; Myers & Rosen, 1999). The practical and clinical implications of these findings are important as popular media often portrays psychopathology, such as depressive symptoms and low self-esteem, as consequences of *weight* not of weight-based *discrimination*. In the current findings, there is no statistically significant relationship between body mass index (BMI) and disordered

eating symptoms ($r = -.06, p = .36$). Although statistically significant, the relationship between BMI and depressive symptoms is smaller in magnitude than the relationship between weight-based discrimination and depressive symptoms ($r = .183, p = .008; r = .414, p < .001$). A similar pattern holds for the relationship between BMI and private self-esteem which is statistically significant yet smaller in magnitude than the relationship between weight-based discrimination and self-esteem ($r = -.255, p < .001; r = -.414, p < .001$). Taken together, these findings suggest that weight-based discrimination is a better predictor than BMI for these three variables of interest.

The final important finding from this study is support for the theory-grounded framework I tested on the mechanisms underlying the impact of weight-based discrimination on psychosocial functioning. Building from Social Identity Theory (e.g., Tajfel, 1982; Tajfel & Turner, 1979; Turner, 1982), the current study proposed a model for understanding how weight-based discrimination influences psychosocial functioning through collective self-esteem and personal self-esteem. Previous research has demonstrated that collective identity and personal identity influence personal self-esteem (Luhtanen & Crocker, 1992). Using social identity theory as foundation and previous research on sex discrimination and self-esteem by Fischer and Bolton Holz (2007) as a theoretically similar research guide, I tested a structural equation model to assess whether women's reports of weight-based discrimination would predict public collective self-esteem, which would then predict private collective self-esteem, which, in turn, would predict personal self-esteem, which finally would predict psychological distress, operationally defined as disordered eating and depression symptomatology. This hypothesized structural equation model provided an adequate fit for the data and

this model provided a superior fit to all alternative models tested. Importantly, although this is a correlational study, the superior fit of the hypothesized model over alternative models provides important information about causal relationships. Further, the full and partial mediation of weight-based discrimination with disordered eating and depression, respectively, through public collective self-esteem, private collective self-esteem, and personal self-esteem support the use of social identity as a mechanism underlying the impact of weight-based discrimination on psychosocial functioning.

In summary, the current dissertation informs the field's knowledge about the consequences of weight discrimination for women, such as disordered eating and depressive symptoms. Further, the findings suggest the operation of one important psychosocial mechanisms by which weight discrimination affects disordered eating and depressive symptoms; that is through its impact on collective and personal self-esteem. Importantly, the findings conform well to the initial hypotheses. Moreover, as structural equation models demonstrated, alternative models failed to explain the variance better than the proposed model.

Study Limitations and Future Directions

Although there are several important findings and implications of these findings, they should be interpreted in light of the limitations of the study. For example, the demographics of the sample are a limitation in generalizing these findings. The sample was predominately White or Caucasian (82%) and predominately identified as exclusively or mostly straight or heterosexual (86%). However, nonracial demographic variables such as age, income, and weight were more diverse and potentially the findings from this study are more generalizable across those variables. Future research would benefit from more diverse samples of women, to improve generalizability. Studies

looking more specifically at the experiences of weight-based discrimination in samples of women of color and/or sexual minority women would be beneficial in estimating prevalence rates in these populations and in understanding how women with other identity statuses experience weight-based discrimination and.

Another potential limitation to this study is that there were no exclusions for participants based on weight, thus women with lower body mass indices (BMI) were included in all analyses. The distribution of BMI in the study was normal, with a range from 15.45 to 72.04 ($M = 29.57$, $SD = 10.60$, $Mdn = 26.04$) and with low values of skewness (1.29, $SE = .17$) and kurtosis (1.68, $SE = .33$). It is important to note that BMI did predict both past year and lifetime perceived weight-based discrimination experiences ($r = .55$, $p < .001$; $r = .65$, $p < .001$), albeit not perfectly. This finding suggests that women of greater BMI status were more likely to report experiences of weight-based discrimination. However, women of lower BMI status may still perceive themselves as being treated differently as a result of their weight and women of greater BMI status may not perceive differential treatment based on weight. Future research looking at these relationships may elucidate whether there are moderators or buffers that protect women from experiencing weight-based discrimination or whether there are factors associated with an inability to identify accurately when weight-based discrimination is happening. Interestingly, many of the women (62%) in the study, regardless of their current weight status, could remember the earliest age during which they experienced weight-based discrimination (range: 3 – 50; $M = 11.26$, $SD = 6.60$, $Mdn = 10.00$).

Another potential limitation to this study is the focus exclusively on women, raising questions regarding the generalizability to men. Previous research suggests women may face greater social and psychological penalties for having greater weight than men, such as worse interpersonal relationships, less financial support from family for college, and more workplace discrimination (Crandall, 1995; Judge & Cable, 2010; Puhl & Brownell, 2006). Although women appear to face greater consequences for weight than men, further research aimed at understanding the contexts of weight-based discrimination in diverse samples of men and the consequences of perceiving weight-based discrimination in men would improve the field's understanding of the intersection of gender and weight.

Conclusion

Results of this study support the pervasiveness of weight-based discrimination and document some of its consequences using a social identity theory framework in an online sample of women. The results of this study support the utility of understanding disordered eating and depression as consequences of weight-based discrimination that triggers decreases in public, private, and personal self-esteem. These results suggest that society's diminished value of women of size has been internalized by a significant number of the women sampled. Future research that identifies buffers between one's experience of weight-based discrimination and adverse consequences would be helpful in inoculating women against weight discrimination's adverse consequences. Future research should also focus on understanding resiliency in the face of weight discrimination and explore how resiliency can develop and be sustained in members of this population. Further, research focused on weight and size discrimination should be incorporated into diversity and multiculturalism training for psychologists, mental health

professionals, and other health care professionals, as weight-based discrimination clearly has adverse effects on well-being.

APPENDIX A
SCHEDULE OF WEIGHTIST EVENTS

Please think carefully about your life as you answer the questions below. For each question, read the question and then answer it FOUR TIMES; once for what your ENTIRE LIFE (from when you were a child until now) has been like, once for what the PAST YEAR has been like, once for HOW STRESSFUL having this happen to you was on a scale from

1 = not at all stressful to 6 = extremely stressful, and once for HOW MUCH YOU FELT YOU COULD DO SOMETHING about the situation. Please choose the number that best describes events in YOUR ENTIRE LIFE, and in the PAST YEAR, using these rules:

Circle 1 = If the event has *NEVER* happened to you

Circle 2 = If the event happened *ONCE IN A WHILE* (less than 10% of the time)

Circle 3 = If the event happened *SOMETIMES* (10-25% of the time)

Circle 4 = If the event happened *A LOT* (26-49% of the time)

Circle 5 = If the event happened *MOST OF THE TIME* (50-70% of the time)

Circle 6 = If the event happened *ALMOST ALL OF THE TIME* (more than 70% of the time)

1. How many times have you been treated unfairly by *teachers or professors* because of your weight?

How many times IN YOUR ENTIRE LIFE? 1 2 3 4 5 6

How many times IN THE PAST YEAR? 1 2 3 4 5 6

How stressful was this for you? Not at all stressful 1 2 3 4 5 6 Extremely stressful

Did you feel that you could do something about these situations?

Not at all 1 2 3 4 5 6 Extremely

2. How many times have you been treated unfairly by *your employer, boss, or supervisors* because of your weight?

How many times IN YOUR ENTIRE LIFE? 1 2 3 4 5 6

How many times IN THE PAST YEAR? 1 2 3 4 5 6

How stressful was this for you? Not at all stressful 1 2 3 4 5 6 Extremely stressful

Did you feel that you could do something about these situations?

Not at all 1 2 3 4 5 6 Extremely

1 2 3 4 5 6

3. How many times have you been treated unfairly by *your co-workers, fellow students or colleagues* because of your weight?

How many times IN YOUR ENTIRE LIFE? 1 2 3 4 5 6

How many times IN THE PAST YEAR? 1 2 3 4 5 6

How stressful was this for you? Not at all stressful Extremely stressful
1 2 3 4 5 6

Did you feel that you could do something about these situations?

Not at all Extremely
1 2 3 4 5 6

4. How many times have you been treated unfairly by *people in service jobs (by store clerks, waiters, bartenders, waitresses, bank tellers, mechanics and others)* because of your weight?

How many times IN YOUR ENTIRE LIFE? 1 2 3 4 5 6

How many times IN THE PAST YEAR? 1 2 3 4 5 6

How stressful was this for you? Not at all stressful Extremely stressful
1 2 3 4 5 6

Did you feel that you could do something about these situations?

Not at all Extremely
1 2 3 4 5 6

5. How many times have you been treated unfairly by *strangers* because of your weight?

How many times IN YOUR ENTIRE LIFE? 1 2 3 4 5 6

How many times IN THE PAST YEAR? 1 2 3 4 5 6

How stressful was this for you? Not at all stressful Extremely stressful
1 2 3 4 5 6

Did you feel that you could do something about these situations?

Not at all Extremely
1 2 3 4 5 6

6. How many times have you been treated unfairly by *people in helping jobs (by doctors, nurses, psychiatrists, case workers, dentists, school counselors, therapists, pediatricians, school principals, gynecologists, and others)* because of your weight?

	Not at all						Extremely
	1	2	3	4	5	6	

10. How many times have you been treated unfairly by *your family* because of your weight?

How many times IN YOUR ENTIRE LIFE?	1	2	3	4	5	6
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How many times IN THE PAST YEAR?	1	2	3	4	5	6
----------------------------------	---	---	---	---	---	---

	Not at all stressful			Extremely stressful		
How stressful was this for you?	1	2	3	4	5	6

Did you feel that you could do something about these situations?

	Not at all						Extremely
	1	2	3	4	5	6	

11. How many times have people *made inappropriate or unwanted sexual advances to you* because of your weight?

How many times IN YOUR ENTIRE LIFE?	1	2	3	4	5	6
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How many times IN THE PAST YEAR?	1	2	3	4	5	6
----------------------------------	---	---	---	---	---	---

	Not at all stressful			Extremely stressful		
How stressful was this for you?	1	2	3	4	5	6

Did you feel that you could do something about these situations?

	Not at all						Extremely
	1	2	3	4	5	6	

12. How many times have people *failed to show you the respect that you deserve* because of your weight?

How many times IN YOUR ENTIRE LIFE?	1	2	3	4	5	6
-------------------------------------	---	---	---	---	---	---

How many times IN THE PAST YEAR?	1	2	3	4	5	6
----------------------------------	---	---	---	---	---	---

	Not at all stressful			Extremely stressful		
How stressful was this for you?	1	2	3	4	5	6

Did you feel that you could do something about these situations?

	Not at all						Extremely
	1	2	3	4	5	6	

13. How many times have you *wanted to tell someone off for being weight-discriminatory?*

How many times IN YOUR ENTIRE LIFE?	1	2	3	4	5	6
-------------------------------------	---	---	---	---	---	---

1 = The same as it is now, 2 = A little different, 3 = Different in a few ways, 4= Different in a lot of ways, 5= Different in most ways, 6 = Totally different

IN THE PAST YEAR?

1 = The same as it is now, 2 = A little different, 3 = Different in a few ways, 4= Different in a lot of ways, 5= Different in most ways, 6 = Totally different

APPENDIX B
THE EATING ATTITUDES TEST – 26

For each of the following questions, please select the response that best describes you.
1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Usually 6 = Always

1. Am terrified about being overweight.
2. Avoid eating when I am hungry.
3. Find myself preoccupied with food.
4. Have gone on eating binges where I feel that I may not be able to stop.
5. Cut my food into small pieces.
6. Aware of the calorie content of foods that I eat.
7. Particularly avoid food with a high carbohydrate content (i.e., bread, rice, potatoes, etc.)
8. Feel that others would prefer if I ate more.
9. Vomit after I have eaten.
10. Feel extremely guilty after eating.
11. Am preoccupied with a desire to be thinner.
12. Think about burning up calories when I exercise.
13. Other people think that I am too thin.
14. Am preoccupied with the thought of having fat on my body.
15. Take longer than others to eat my meals.
16. Avoid foods with sugar in them.
17. Eat diet foods.
18. Feel that food controls my life.
19. Display self-control around food.
20. Feel that others pressure me to eat.
21. Give too much time and thought to food.
22. Feel uncomfortable after eating sweets.
23. Engage in dieting behavior.
24. Like my stomach to be empty.
25. Enjoy trying new rich foods. (R)
26. Have the impulse to vomit after meals.

APPENDIX C
COLLECTIVE SELF-ESTEEM SCALE

INSTRUCTIONS: We are all members of different social groups or social categories. We would like you to consider women of your weight and/or size when responding to the following statements. There are no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully, and respond by using the following scale:

1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neutral, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree

- ___1. I am a worthy member of the weight and/or size group I belong to.
- ___2. I often regret that I belong to the weight and/or size groups I belong to.* (R)
- ___3. Overall, my weight and/or size group is considered good by others.
- ___4. Overall, my group membership have very little to do with how I feel about myself. (R)
- ___5. I feel I don't have much to offer to the weight and/or size group I belong to. (R)
- ___6. In general, I'm glad to be a member of the weight and/or size group I belong to.
- ___7. Most people consider my weight and/or size group, on the average, to be more ineffective than other social groups. (R)
- ___8. The weight and/or size group I belong to is an important reflection of who I am.
- ___9. I am a cooperative participant in the weight and/or size group I belong to.
- ___10. Overall, I often feel that the weight and/or size group of which I am a member is not worthwhile.* (R)
- ___11. In general, others respect the weight and/or size group that I am member of.
- ___12. The weight and/or size group I belong to are unimportant to my sense of what kind of a person I am. (R)
- ___13. I often feel I'm a useless member of my weight and/or size group.
- ___14. I feel good about the weight and/or size group I belong to. *(R)
- ___15. In general, others think that the weight and/or size group I am a member of is unworthy. (R)
- ___16. In general, belonging to my weight and/or size group is an important part of my self-image.

* indicates these items make up the Private Collective Self-Esteem Subscale

APPENDIX D
CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE

Instructions for questions: Below is a list of the ways you might have felt or behaved.
Please tell me how often you have felt this way during the past week.

Rarely or none of the time (<1 day)

Some or a little of the time (1-2 days)

Occasionally or a moderate amount of the time (3-4 days)

Most or all of the time (5-7 days)

1. I was bothered by things that don't usually bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with the help of my family or friends.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people disliked me.
20. I could not get "going."

APPENDIX E
ROSENBERG SELF-ESTEEM SCALE

Please mark the option that best represents how you feel:
Strongly Agree (4) Agree (3) Disagree (2) Strongly Disagree (1)

1. I feel that I am a person of worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.*
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.*
6. I take a positive attitude toward myself.
7. On the whole, I am satisfied with myself.
8. I wish I could have more respect for myself.*
9. I certainly feel useless at times.*
10. At times I think I am no good at all.*

* = reverse scored

APPENDIX F
DEMOGRAPHICS

Age: (free response)
Sex: (Male, Female, TransM2F, TransF2M, Other)
Race/Ethnicity: African American/Black
Asian American/Pacific Islander
American Indian/Native American/Alaskan Native
Arabic-American/ Middle Eastern
Hispanic/Latina/o-Black
Hispanic/Latina/o-White
East Indian/Indian American
White/Caucasian American
Biracial/Multiracial (please specify:)
Other (please specify:)

Country or countries of origin (what do you consider you be your home country?): (Free response)

What country (or state if in the United States) do you currently live?: (Free response)

Sexual Orientation: Exclusively heterosexual/straight
Mostly heterosexual/straight
Bisexual
Mostly homosexual/gay/lesbian
Exclusively homosexual/gay/lesbian
Other (*with open response box*)

What is your family income: Less than \$25,000
\$50,000 - \$75,000
\$75,000 - \$100,000
More than \$100,000

What is your weight in pounds: (free response)

What is your height in inches: (free response)

What is your waist or pant size: (free response)

If you believe you have experienced weight-based discrimination, approximately at what age is your earlier recollection of experiencing weight-based discrimination?: (free response)

APPENDIX G
RECRUITMENT EMAIL FORMAT

Subject: Request to post information to (group name).

Hello (group leader),

I am a psychology researcher at the University of Florida in Gainesville, FL. I am conducting a study to better understand women's experiences of weight-based discrimination and possibly that experiencing discrimination may affect aspects of mental health. For the purposes of the study, I am recruiting women with larger body sizes. However the only requirements for participating in the study are to be a woman and to be over the age of 18. This study has received approval by the University of Florida Institutional Review Board (XXXX-X-XXX). Given your group's title I thought your members would be a great source of data (as they may have time and be willing to complete the survey). I wanted to avoid being rude and ask your permission to post the information below.

I respect your decision to either allow or deny this request.

Thank you in advance for your time,

Taylor K. Locker, M.S.
Counseling Psychology Doctoral Candidate
University of Florida
Gainesville, FL 32611-2250

"Greetings,

I am a counseling psychology researcher at the University of Florida in Gainesville, FL. I am seeking women to complete an anonymous web-based survey focusing on the experience of weight-based discrimination and aspects of mental health. For the purposes of the study, I am recruiting women with larger body sizes. However the only requirements for participating in the study are to be a woman and to be over the age of 18.

If you choose to participate in this study, you will be asked to complete an online survey about your experience of weight-based discrimination, your current mental health, and to provide demographic information describing you.

The study should take approximately 20 – 30 minutes. Your answers will be kept completely anonymous. There are no known risks and you can withdraw at any time without penalty. You will not be asked to provide your name on the inventory. Demographic information gathered from the survey will be used simply to describe the group of individuals who completed the survey and your email address and other personal information will **not** be linked to your responses in anyway.

We thank you in advance for participating.

Thank you,

Taylor K. Locker, M.S

Please Click Below to begin this Study

[insert survey link here]

University of Florida
Department of Psychology
P.O. Box 112250
University of Florida
Gainesville, FL 32611-2250

IRB Approval: The University of Florida; Institution Review Board
Protocol Number: XXXXX-U-XXXX; Period of Approval: XX/XX/XXXX to XX/XX/XXXX"

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