6-24-2020

Weight Intention, Stigmatizing Situations, and Coping Response Among Emerging Adults of Varying Sexual Orientation

Amanda Claire Toumayan

WEIGHT INTENTION, STIGMATIZING SITUATIONS, AND COPING RESPONSE AMONG EMERGING ADULTS OF VARYING SEXUAL ORIENTATION

by

Amanda Claire Toumayan

A Thesis

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Science

Major: Psychology

The University of Memphis

May 2020

Abstract

Weight stigma has been shown to influence an individual's perception of and intention to change their weight regardless of objective body mass. Sexual minority individuals are more likely to experience negative health consequences associated with stigma related to their weight status, in addition to their sexuality, regardless of objective weight. While the relationship between weight intention, stigma and coping has been examined, limited literature examines how this varies by sexuality. The present study assessed 574 emerging adults of varying sexual orientation who completed validated measures including the Stigmatizing Situations Inventory, Coping Response Inventory, and one-item assessment of weight intention. Results suggest no significant association between sexual orientation and weight intention ($p > .05$). Sexual orientation was not associated with the frequency of experiencing weight stigma ($p > .05$), but did show association with type of coping used, including greater use of therapy ($p < .000$). Findings suggest the need for tailored supports for individuals of varying sexualities experiencing weight stigma.

TABLE OF CONTENTS

Weight-Related Stigmatizing Situations and Coping Response among Emerging Adults Across Sexual Orientation

Recent reports from the Institute of Medicine (2011) indicate that there is limited research investigating the overall health of sexual minority individuals – those who identify as lesbian, gay and bisexual (LGB). Of the research that has been done, findings show that sexual minority adults experience disproportionately worse health outcomes than their sexual majority (heterosexual) counterparts (Case et al., 2004; Conron, Mimiaga & Landers, 2010). Of note, these disparities are suggested to be associated with numerous factors, such as stigma and stress (Institute of Medicine, 2011; Meyer, 2003). As emerging adulthood often corresponds with an individual's sexual development, and moreover, identity exploration, an examination of experiences of weight-based stigmatization and coping among this population is warranted (Rosario, Schrimshaw, Hunter & Braun, 2006). To date, there is scant literature solely focused on the experiences of weight stigmatization and coping in sexual minority populations, and little to no research on the ways these experiences may differ across emerging adults of varying sexual orientations. As such, this paper aims to examine experiences of weight stigma, how coping is informed by sexual orientation, and how various demographics may associate with a person's intention to lose, gain, or maintain weight.

Weight Stigma

Weight stigma, also referred to as weight-based discrimination, is discrimination or stereotyping based on a person's weight, shape, or size (Douglas & Varnado-Sullivan, 2016; Puhl & Brownell, 2006). This form of stigma refers to the discriminatory acts and ideologies targeted towards individuals because of their physical appearance. Weight stigma results from

weight bias, which refers to the negative ideologies associated with weight status, or even more broadly, body weight and shape that deviates from what is socially considered appropriate and normative – for example, individuals with overweight or obesity, or alternatively, individuals who maintain lower body weight and body mass (Douglas & Varnado-Sullivan, 2016). Stigmatizing beliefs and ideologies can lead to a stigmatizing act, which may then manifest into direct forms of stigmatizing experiences.

Over the last decade, the prevalence of weight discrimination has increased drastically to 66% in adults, making weight stigma comparable in prevalence to racial discrimination in the United States (Andreyeva, Puhl, & Brownell, 2008; Puhl & Heuer, 2010). Unique from other forms of stigma, weight stigma is considered to be a "justifiable stigma" compared to race, gender, sex and sexuality stigma. This is because society perceives weight and body appearance to be controllable, thus, if one's body is not "controlled" people are devalued for not conforming or being able to align with the "norm" (Puhl & Heuer, 2010). This is likely why negative stigmatizing beliefs, such as believing people with overweight or obesity are lazy, unintelligent, and immoral, have come to such prominence. For those who maintain lower body weight or small body size, this stigma can also serve as a barrier to treatment as medical providers may not view weight status as problematic unless body mass index (BMI) is calculated as being very underweight. As the prevalence of weight stigma continues to become a widespread social problem, individuals who deviate from a socially normalized weight have been shown to be evaluated more negatively than a host of other marginalized groups, including sexual minority populations (Vartanian, 2010; Vartanian, Pinkus, & Smyth, 2018).

In particular, individuals may experience negative verbal comments such as teasing or unsolicited advice from strangers or loved ones, physical assault, or less direct discrimination

such as staring, eye rolling or head shaking. Specific examples of weight stigma are being told one's health problems are all due to one's weight; facing discrimination in work, school or a job; being laughed at or harassed because of one's size, or receiving less respect overall because of one's weight or size (Mensinger & Meadows, 2017; Puhl & Brownell, 2006; Tylka et al., 2014). Weight stigma is inherent for many individual's everyday living experience when the environment and social space is implicitly stigmatizing (e.g., not having seats large enough to accommodate one's size, receiving unwelcome comments about one's appearance or health from loved ones or strangers, or not being able to find clothing that fits).

Overall, research indicates that experiences of weight discrimination are associated with overall poorer quality of life (Puhl, Andreyeva & Brownell, 2008; Puhl & Heuer, 2010). Exposure to weight stigma is associated with psychological health consequences, including anxiety and depression; physiological health consequences, such as changes in cortisol production, sleep quantity and quality; social consequences such as social withdrawal or isolation; increased body dissatisfaction and maladaptive coping responses to these weight stigma experiences, such as excessive exercise and avoidant and restrictive eating behaviors (Major, Hunger, Bunyan, & Miller, 2014; Tomiyama et al., 2018; Wu & Berry, 2018). Of particular importance when considering individuals who experience weight discrimination is that body dissatisfaction and endorsement of depressive symptoms increase after exposure to weight stigma *regardless* of actual body mass index (BMI) (Mensinger & Meadows, 2017; Puhl & Heuer, 2010). This suggests that the experience of weight stigma alone can propagate psychological and physiological consequences and correlate to poorer health outcomes and quality of life for all, irrespective of size (Carels et al., 2010; Frank et al., 2018; Wu & Berry, 2018).

Weight-Change Behaviors and Weight Intention

Factors Motivating Weight loss, Maintenance, and Gain

Given numerous psychosocial implications of experiencing weight stigma, it is important to consider the ways in which such discrimination influences a person's weight intentions. Broadly defined, weight change intention is regarded as any attempt to either maintain, lose, or gain weight through physical activity or dietary means (Lee, Kritchevsky, Tylavsky, Harris, Simonsick, Rubin, &Newman, 2005; Sorensen, Rissanen, Korkeila & Kaprio, 2005). Ample literature indicates that there are a number of factors motivating an individual's weight intention, including internalized weight stigma, external social stigma, desire to change ones physical appearance (e.g., develop more muscle tone, reduce fat, gain muscle size), as well as physical and psychological health concerns (Heinberg, Thompson & Matzon, 2001; Mroz, Pullen & Hageman, 2018; O'Brien, Venn, Perry, Green, Aitken, Bradshaw, & Thomson, 2007).

Overall, socialization and cultural values throughout development play a large role in an individual's weight control behaviors and weight intention such that social ties serve as sources of exposure into what is considered "normal" weight and weight control behavior (Christakis & Fowler, 2007; Hruschka, Brewis, Wutich, & Morin, 2011; Leroux, Moore, Richard, & Gauvin, 2012; Marquez, Norman, Fowler, Gans & Marcus, 2018). Thus, it is conceivable that weight intention and associated behaviors depend on the intersectional identity of the individual, such as their age, gender, sexual orientation, race, ethnicity and socioeconomic background, as well as the cultural expectations and norms of their environment.

Coping with Weight-Related Stigma

Distinct types of coping commonly occur in response to weight-related stigmatization – adaptive/positive coping, and maladaptive/negative coping. Coping is conceptualized by Lazarus

as “an effort to manage or overcome demands and critical events that pose a challenge, threat, harm, loss, or benefit to a person” (1991; p. 824). Coping as a response to an event, known as reactive coping, is typically problem, emotion, or socially focused and involves effort to meaningfully engage with the stressful or adverse event (Schwarzer & Knoll, 2003). In response to weight stigmatization, reactive coping may present as support seeking, blame directed at oneself or another, and increased or decreased exercise or food consumption (Myers & Rosen, 1999; Puhl & Brownell, 2006; Vartanian, Pinkus, & Smyth, 2018).

In proactive coping, there is an element of goal direction and personal growth/maintenance whereas in maladaptive coping, there is an inherent absence of this maintenance or growth behavior and instead, an individual may experience exacerbated stigma (Schwarzer & Knoll, 2003). Maladaptive coping behaviors in response to weight-based stigmatization may occur as over-exercising to lose weight or build body mass, engaging in starvation or caloric restriction, social isolation or withdrawal, avoidance of the problem, or expectation adjustment such that one begins to believe that they will always experience this stigma (Myers & Rosen, 1999; Puhl & Brownell, 2003; Vartanian, Pinkus, & Smyth, 2018).

Weight Intention and Weight Stigma and Coping

Obesity presents a significant public health priority in the United States, occurring disproportionately in women, racial, and ethnic minorities (Ogden, Carroll, Kit & Flegal, 2014; Puhl & Huer, 2010). Meanwhile, literature also suggests that implicit preferences for small bodies also drive individuals of all body sizes to engage in potentially harmful weight change behaviors to either lose or gain weight, and specifically individuals of normal BMI to engage in more weight control and maintenance behaviors -- suggesting that the impact of weight stigma impacts individuals of all sizes (Cazatto & Makris, 2018; Stewart & Ogden, 2019). These

experiences of weight stigma – both internal through means of negative self-evaluation or stereotyping, and external via enacted stigma by others and structural environments have demonstrated high rates of both obesogenic (tending to cause obesity) and harmful coping strategies (Himmelstein, Puhl, & Quinn, 2017). Prolonged exposure to weight stigma leads to diverse forms of coping, which ultimately lead to an individual's decision to engage in positive goal-directed coping, or in negative or avoidant behaviors that may continue to reinforce the stigmatization. Depending on the type of coping, as well as a person's frequency of experiencing weight stigma and combined other potentially stigmatizing identities, weight intention could be impacted through the deliberate choice to change or maintain one's weight.

Research indicates that intersectionality – multiple, interconnected social categories – impact coping with weight stigma in unique ways (Crenshaw, 1991; Hargrove, 2018). As all individuals carry more than one social identity, it is important to consider the implications of how multiple marginalized or stigmatized identities influence an individual's experience of stigma and their coping responses. While the conversation about intersectionality in weight stigma exists in literature, there is a notable lack of research addressing this concept of potentially compounding stigmas in sexually diverse populations with specific regard to weight stigmatizing experiences and coping on weight intention.

Weight Intention Among Emerging Adults of Varying Sexual Orientation

Given the prevalence and consequences of weight stigma, it is vital to understand these experiences in all populations. There is ample evidence indicating that individuals who identify as sexual minorities experience stigma at discordant rates (Meyer, 2003). Current research indicates that individuals of diverse sexual orientations have distinct shape and weight presentations and concerns when compared to heterosexual populations that may directly relate

to weight intention outcomes (Laska, VanKim, Erickson, Eisenberg, Lust, & Rosser, 2015). For example, compared to heterosexual males, gay men have been shown to maintain a lower BMI, as well as have decreased odds of overweight or obesity (Blanchard & Bogaert, 1996; Conron, Mimiaga, & Landers, 2010; Kipke et al., 2007). Moreover, sexual minority men are more likely to have decreased BMI later in adolescence when compared with their heterosexual male peers, who, according to national data from the Growing Up Today Study, were found to be more likely to attempt to gain weight during adolescence (Austin et al., 2009; Calzo et al., 2015; Conron, Mimiaga, & Landers, 2010).

Alternatively, the opposite is true of sexual minority women. Compared to their heterosexual female counterparts, lesbian and bisexual adolescents have increased BMI and studies have consistently shown that lesbian and bisexual adults are more likely to have overweight or obesity (Austin et. al, 2009; Boehmer & Bowen, 2009; Bowen, Balsam, & Ender, 2008). With regard to weight presentations, research suggests these differences could be accounted for by different group body ideals (e.g., to be lean and muscular, or to have more muscle mass on certain areas of the body only) and levels of body dis/satisfaction that are socially desired and/or accepted (Deputy & Boehmer, 2013; McArdle & Hill, 2007; Tiggeman et. al, 2007). Much less research has focused on how experiences of weight stigma and coping manifest across sexual orientation, and how weight stigma and coping directly relate to weight intention across varying sexual orientations. However, the research currently available does allude to the need to account for experiences of weight stigma, coping and weight intention across varying sexual orientations and body sizes.

One of the most prominent theoretical frameworks of sexual minority health risk is the Minority Stress Model (Meyer, 2003; see Figure 1)**.** The minority stress model evolved out of

social and psychological theoretical orientations, and proposes that sexual minority health disparities can be explained by experiences of proximal and distal stressors, such as stigma and prejudice in the form of harassment, discrimination, and maltreatment, typically leading to compromised health (Meyer, 2003). Critical to this model is the idea that there are chronic stressors associated with identification as a minority that are likely a byproduct of belonging to a subordinated social group which disproportionately experiences sexual prejudice. Moreover, these individuals are often anticipating and aware of this stress and stressful events, and may internalize the negative perceptions society has of them; all of which could ultimately impede safe, successful engagement in coping and care-seeking, particularly when considering weight stigma and health disparities (Meyer, 2003; Miller & Meyers, 1998). In a 2011 review of the literature on research on the health of lesbian, gay, bisexual, and transgender (LGBT) groups conducted by the Institute of Medicine, findings indicated that overall, LGBT adults experience significantly worse health outcomes when compared to their heterosexual counterparts, possibly due to stigma, stress, and gatekeeping to health services impacting this community (Conron, Mimiaga, & Landers, 2010; Fredriksen-Goldsen, Kim, Barkan, Muraco & Hoy-Ellis, 2013; Institute of Medicine, 2011; Laska et al., 2015).

Minority stress theory posits that the stress experienced by minority or stigmatized individuals is intrinsically related to increased risk for maladaptive weight coping and eating disorders in LGBT individuals of all weight statuses (Mason & Lewis, 2016; Mason, Lewis & Heron, 2017;). Moreover, discrimination is a major contributor to mental health outcomes in LGBT populations. Of particular importance to weight-intention, a recent review by Vartanian and Porter (2016) indicated that in both men and women, weight-related stigma is related to maladaptive eating and compensatory behaviors in experimental and cross-sectional research,

irrespective of reported weight status. In addition to increased risk for maladaptive weight coping, Meyer's minority stress framework also suggests a link between experiences of weight stigma and worse mental health outcomes, such as symptoms of depression and anxiety, due to the compounding effects of concomitant weight-based and sexual stigma, as well as any other stigmatized identity which also have the potential to inadvertently affect weight intention (Hatzenbuehler, McLaughlin, & Nolen-Hoeksema, 2008; Meyer, 2003).

In the Institute of Medicine's 2011 report on Lesbian, Gay, Bisexual and Transgender (LGBT) health, obesity was noted as one of the major health disparities, especially in sexual minority women. Alternatively, eating disorders and low BMI status is a continuing pervasive issue for gay men (Deputy & Boehmer, 2014; Richmond, Walls, & Austin, 2013). This highlights an important consideration for how cultural challenges from mainstream media are often in conflict with the minority group. Much of the research on socialized weight ideals and behaviors has primarily collected data from largely heterosexual (or otherwise non-disclosed) female populations, with little discussion around whether these ideals pertain to sexual minority groups (Lang et. al, 2019). With many of these studies noting that men uphold desires to be larger and more muscular (Richmond, Walls,& Austin, 2013); while women endorse significant pressures to be thin, directly in contrast to the extant literature from lesbian and feminist communities endorsing the notion of accepting all physical bodies as they are – impervious to messages from media, healthcare, family and peers (Eliason, Radix, McElroy, Garbers, & Haynes, 2016). This report and the two discordant messages from majority and minority groups raise questions not only about the role of both gender and sex in health disparities, but also the role sexual orientation has in weight intention.

Consistent with data among male and female heterosexual populations, body image concerns, particularly with respect to weight discrepancy, are consistent predictors of disordered eating and desire to change body weight via weight loss or gain (Watson, Grotewiel, Farrel, Marshik & Schneider, 2015). While some LGB individuals may not prescribe to shape and weight expectations of majority groups, research indicates that there are still cultural expectations within respective sexuality groups which dictate perception of and intentions to change one's body weight.

To date, there have been few empirical studies on general coping in LGB adolescents and young adults. However, research on adolescent coping more broadly focuses on coping responses and coping strategies including support-seeking strategies such as sharing a problem with someone else, or finding resources to help others (Bagwell et al., 2005; Toomey, Ryan, Diaz & Russell, 2018). Problem-solving strategies involve more cognitive processing like reflection or perspective taking (Skinner & Zimmer-Gembeck, 2007). Lastly, distraction strategies such as keeping busy or trying to forget the stressor, and escape strategies like substance use, avoidance, or denial are often endorsed by LGB youth experiencing stressful situations (Skinner & Zimmer-Gembeck, 2007). While it is likely LGB individuals utilize similar coping strategies as heterosexual individuals, there may be differences in effective coping strategies across the sexuality spectrum with respect to weight stigma. Taken collectively, research indicates that both sexual orientation and weight-related discrimination are related to a variety of coping methods, however, more investigation is needed.

Present Study

The present study examined the relationship between weight intention, weight-based stigma, coping responses to weight-based stigmatization and sexual orientation. Guided by previous literature, the goals and hypotheses of this study are:

1. **Aim 1:** Examine the association between sexual orientation and experiences of weight stigma.
    a. Hypothesis 1: Emerging adults of sexual minority status will experience greater frequency of weight stigmatizing experiences than sexual majority individuals.
2. **Aim 2:** Examine the association between sexual orientation and weight intention.
    a. Hypothesis 2: Sexual minority individuals will endorse intention to change weight (through loss or gain) more frequently than sexual majority individuals.
3. **Aim 3:** Examine the association between sexual orientation and coping with weight stigma.
    a. Hypothesis 3: Emerging adults of sexual minority status will utilize more overall coping responses to weight stigmatization than sexual majority individuals.

Post-Hoc Aims

1. **Aim 1:** Examine the association between sexual orientation and experiences with weight stigma across 11 subscales including: comments from children; others making negative assumptions about you; physical barriers; being stared at; inappropriate comments from doctors; nasty comments from family; nasty comments from others; being avoided, excluded, ignored; loved ones embarrassed by your size; job discrimination; and being physically attacked.

2. **Aim 2:** Examine the association between sexual orientation and coping with weight stigma across 10 subscales including: positive self-talk; positive responses; being visible; avoidance; self-love; seeing the situation as the other person's problem; seeking therapy; negative self-talk; negative responses; and crying.

Method

Participants

Following Institutional Review Board approval, 574 participants were recruited from two sources: a university subject pool (N = 210) and Amazon Mechanical Turk (MTurk; N = 364). To be included in the study, participants had to be between 18- to 25-years old, not currently pregnant, currently live in the United States, and have access to the internet (MTurk participants only). The university subject pool was recruited from a Midsouth University and was comprised of undergraduate students taking psychology courses with the option to participate in research for course credit.

A total of 574 young adults (M_{age}= 21.6, *SD*=2.32) aged 18 – 24 participated in the study, with 210 college students from the university subject pool and 364 young adults from MTurk. Overall, participants from both subject pools combined were comprised of primarily female participants (69%), with 59% identifying as White, 18% identifying as Black or African American, 9% identifying as Hispanic, 6% identifying as Asian, 6% identifying as Multiracial, and 1% identifying as "Other." A total of 86% (*n* = 492) identified as mostly or completely heterosexual, and 14% (*n* = 82) of participants identified as bisexual, mostly homosexual, completely homosexual or other. BMI for the sample ranged from 13.93 to 64.15 (M_{BMI}=25.87, *SD*=6.49).

Procedures

For the university subject pool, recruitment announcements were made in psychology courses and via flyering around the university campus. After ensuring eligibility based on the above criteria, subject pool participants came to the research lab, completed a consent form and electronic study questionnaires including an array of study measures as part of a larger study on psychosocial factors contributing to behaviors, relationships and identity in young adults, and were compensated with course credits. At the conclusion of the study, participants were debriefed, and local and national mental health resources were provided.

MTurk participants saw a listing of the study via the online system on the MTurk Marketplace and could choose to participate if they met the eligibility criteria. Participants were compensated $0.75 for their effort on the study, a rate comparable to MTurk projects of similar effort and time commitment (Buhrmester, Kwang, & Gosling, 2011). For MTurk samples, participants completed an electronic consent form before beginning study procedures. Then, participants completed an array of study measures. At the conclusion of the electronic questionnaires, participants were debriefed, and national mental health resources were provided.

Measures

Sociodemographics. The following self-reported demographics were obtained: gender, ethnicity, race, and socioeconomic status. Participants indicated if they were male, female, or transgender. Participants identified their ethnicity as either Hispanic or Latino(a), or not Hispanic/Latino(a) while race was assessed by asking participants to select all that applied among the following options: American Indian or Alaskan Native, African-American or Black, Asian, Native Hawaiian or other Pacific Islander, White, or “Other.” Socioeconomic status was

assessed by asking participants to choose which of the following phrases best described their socioeconomic status: “I live very well,” “I live comfortably,” “I live from paycheck to paycheck,” “I don't have a steady income,” “I have no current income.”

Body Mass Index (BMI). Participant BMI was estimated using participants’ self-reported height (feet) and weight (pounds). BMI was obtained by converting the weight into metric units, then dividing the estimated weight by estimated height to calculate BMI scores in kg/m^2, as per the Centers for Disease and Control and Prevention protocol (2015).

Intention to Lose or Gain Weight. Participants responded to a single question about current weight intention, “Are you currently trying to (Lose weight/Gain weight/Stay the same weight). Each response option was asked separately. Response options were dichotomized so that intention to lose weight or gain weight were grouped together as one outcome, and intention to stay the same weight was the other outcome.

Stigmatizing Situations Inventory (SSI). Weight-based stigma was measured with the Stigmatizing Situations Inventory, a 50-item measure assessing participants’ frequency of experiencing stigmatizing situations (Myers & Rosen, 1999). The SSI has been commonly used in community populations to measure the frequency of experiencing 50 stigmatizing situations (Barber et. al. 2011; Seacat, Dougal, & Roy, 2016; Puhl & Brownell, 2006). Items were measured on a 4-point Likert scale from zero to three (0 = Never; 1 = Once in my life; 2 = More than once in my life; 3 = Multiple times). The SSI includes eleven subscales that highlight various types of weight-related stigmatizing experiences, these subscales include: comments from children; others making negative assumptions about you; physical barriers; being stared at; inappropriate comments from doctors; nasty comments from family; nasty comments from others; being avoided, excluded, ignored; loved ones embarrassed by your size; job

discrimination; and being physical attacked. Modified scoring was used (0 to 3 scale) per Puhl and Brownell (2006), where higher scores indicate greater frequency of stigmatizing experiences. The alpha in the current study was .96.

Coping Response Inventory (CRI). The CRI (Myers & Rosen, 1999) is a 54-item measure assessing various coping responses toward specific weight-related stigmatizing experiences; modified scoring was used (0 to 3 scale; 0 = Never; 1 = Once in my life; 2 = More than once in my life; 3 = Multiple times) per Puhl & Brownell (2006), where higher scores reflect greater frequency of coping responses used in response to stigmatizing experiences. The CRI includes 10 subscales indicating types of coping responses, which include: positive self-talk; positive responses; being visible; avoidance; self-love; seeing the situation as the other person's problem; seeking therapy; negative self-talk; negative responses; and crying. The alpha in the current study was .95.

Sexual Orientation. Sexual orientation was assessed on a continuum by participants describing their attraction as: completely heterosexual (attracted only to persons of the opposite sex), mostly heterosexual (mainly attracted to persons of the opposite sex and slightly attracted to persons of the same sex), bisexual (equally attracted to men and women), mostly homosexual (mainly attracted to persons of the same sex and slightly attracted to persons of the opposite sex), completely homosexual (gay/lesbian, attracted to persons of the same sex), not sure, or other. In the current study, sexual orientation was dichotomized such that individuals who identified as completely heterosexual and mostly heterosexual were categorized as Sexual Majority, while individuals who identified as bisexual, mostly homosexual and completely homosexual were categorized as Sexual Minority. Individuals who responded, "not sure" or "other" (n = 3) were not included in these analyses; leaving 574 participants assessed this study.

Data Analytic Strategy

Statistical analyses were conducted using IBM SPSS Statistics 25. Means, standard deviations, and Pearson correlations were obtained for all study variables (see Table 1). Examination of assumptions were performed, including assessing for skewness and kurtosis, homogeneity, and outliers. Normality was tested using the Shapiro-Wilk test of normality. Chronbach's alphas were calculated for each measure to ensure scale reliability. Initial analyses were completed comparing basic demographics between the university subject pool and MTurk participants to determine any significant differences between the samples prior to analyses. To assess group differences by sexual orientation on overall experiences of weight stigma (Aim 1), an independent samples t-test was conducted to explore group differences by sexual orientation. To assess Aim 2, whether intentions to maintain weight versus lose/gain weight differed by sexual orientation status, a Pearson Chi Square test was conducted. For Aim 3, an independent samples t-test was conducted to explore group differences by sexual orientation on overall use of coping responses to weight stigmatizing situations. For all independent samples t-tests conducted, Cohen's d was calculated and reported to assess effect sizes. Cohen's (1988) convention for effect sizes were used to interpret the magnitude of effects with $d = 0.20$ indicating a small effect, $d = 0.50$ a medium effect, $d = 0.80$ a large effect, and $d = 1.20$ a very large effect.

Post Hoc Analyses

Following the initially proposed analyses outlined above, several post-hoc analyses were run to better assess associations of the study's descriptive, predictor, and outcome variables. Specifically, 11 independent samples t-tests were conducted to explore differences by sexual orientation on the eleven subscales of the Stigmatizing Situations Inventory. Next, 10 independent samples t-tests were conducted to examine group differences by sexual orientation

on the ten subscales of the Coping Response Inventory. Due to multiple comparisons, Bonferroni correction was used on alphas were used to evaluate weight stigmatization subscales and coping responses to experiences of weight stigmatization subscales. The independent samples t-tests run for experiences of weight stigmatization subscales were evaluated for significance with a corrected alpha of 0.004; while the independent samples t-tests run for coping responses to experiences of weight stigmatization subscales were assessed for significance with a corrected alpha value of 0.005. Additionally, correlations and demographic characteristics were run on sociodemographic and study variables stratified by sexual orientation.

Results

The correlations between study variables provided several notable avenues for investigation. Table 1 below provides means, standard deviations, and correlations for all continuous variables. Consistent with previous research, weight intention was significantly positively correlated with experiences of stigmatizing situations (SSI), and coping response (CRI). Specifically, the group who reported intention to lose or gain weight was associated with more frequency of experiencing stigmatizing situations and utilizing coping as a response to those experiences. Additionally, experiences of stigmatizing situations (SSI) significantly positively correlated with coping response (CRI), and was significantly negatively associated with sexual majority orientation.

When examining sociodemographic information specifically by sexual orientation, there are several notable pieces of information. Particularly, for sexual minority participants, BMI and experiences of stigmatizing situations (SSI), as well as use of coping (CRI), had significant, positive correlations ($r = .37$, $p < .001$ and $r = .42$, $p < .000$, respectively). Similarly, for sexual majority participants, BMI and experiences of stigmatizing situations (SSI), and use of coping

(CRI) had significant, positive correlations (r = .42, p < .000 and r= .34, p < .000, respectively). Overall, indicating that higher BMI was associated with more frequency of experiencing stigmatizing situations, as well as more use of coping in both sexual majority and sexual minority participants, which is consistent with existing literature that individuals with higher body mass are more likely to experience weight stigma more frequently. Additional information on sociodemographic variables by sexual orientation can be found in Table 2.

For Aim 1, results of the t-test examining associations between experiences of weight stigmatization and sexual orientation was not significant. Specifically, sexual minority participants did not endorse significantly more experiences of weight-stigma (M = 22.84, SD = 26.17) than sexual majority participants (M = 16.90, SD = 21.52), $t(572) = 2.24$, $p = 0.06$; d = 0.25.

For Aim 2, a chi-square test examining the relation between sexual orientation and weight intention was performed to examine the association between sexual orientation and intention to either maintain weight or lose/gain weight. The relation between these variables was not significant, $X^2(1) = .01$; $p = 0.94$. Thus, indicating that sexual minority participants did not endorse greater intentions to lose/gain weight (73.2%) relative to sexual majority participants (73.6%). Relatedly, sexual minority participants did not endorse greater intentions to maintain weight (26.8%) relative to sexual majority participants (26.4%).

For Aim 3, results of the t-test examining the associations of engagement in coping responses after experiencing weight stigma showed that sexual minority individuals did not significantly differ in overall frequency of utilizing coping responses (M = 56.82, SD = 28.66) relative to sexual majority participants (M = 51.90, SD = 29.43), $t(572) = 1.41$, $p = 0.51$; d = 0.17.

Post Hoc Analyses Results

Additional post-hoc analyses were run on items pertaining to the eleven subscales of the Stigmatizing Situations Inventory. Examination of subscale scores demonstrated differences between sexual minority and majority participant's frequency of experiencing several stigmatizing situation subscales. Specifically, sexual minority individuals reported experiencing greater perception of negative assumptions being made about them as being related to their weight (M = 0.95, SD = 1.71) relative to their sexual majority peers (M = 0.60, SD = 1.25), t(95.8) = 1.77, p = 0.001; d = 0.23. Sexual minority individuals also reported significantly more experiences of receiving inappropriate comments from doctors about their weight (M = 1.98, SD = 3.28) relative to their sexual majority peers (M = 1.26, SD = 2.39), t(95.82) = 1.89, p < 0.000; d = 0.25. The last subscale of experiences of weight stigma that differed by group occurred with sexual minority individuals reporting experiencing having loved ones express embarrassment of their weight (M = 0.68, SD = 1.49) at higher rates relative to their sexual majority peers (M = 0.38 , SD = 0.98) who reported they had this happened with significantly less frequently, t(93.15) = 1.77 , p < 0.000; d = 0.24.

In addition to exploring overall use of coping responses to weight stigmatization, post-hoc analyses also included evaluation of the ten subscales of coping responses from the Coping Response Inventory. However, there was only one subscale in which sexual minority emerging adults were significantly more likely to endorse the use of therapy as a coping response to weight-stigmatizing situations (M = 1.15, SD = 1.89) relative to their sexual majority peers (M = 0.62, SD = 1.32), t(94.57) = 2.44, p < 0.000; d = 0.28. Two other subscales approached significance (alpha for CRI subscale analyses was set at .005), where avoidant coping was reportedly used more frequently by sexual minority individuals (M = 4.03, SD = 4.55) compared

to sexual majority individuals (M = 2.90, SD = 4.09), t(103.97) = 2.11, $p < 0.05$; d = 0.26. The crying subscale also indicated sexual minorities utilized that particular coping response more frequently (M = 2.56, SD = 2.14) than sexual majority participants (M = 1.77, SD = 1.86), t(102.31) = 3.14, $p < 0.01$, d = 0.39, however, did not reach alpha values relevant for this study.

Discussion

The current study examined associations between sexual majority and sexual minority emerging adults on experiences of weight stigmatization and coping response to weight stigmatizing experiences, as well as the relationship between sexual orientation and intention to change or maintain one's weight. Although prior research has investigated the relationship between weight-stigma and coping response, little research has previously highlighted how experiences and subsequent coping varies by sexual orientation. Guided by Minority Stress theory and research indicating sexual minority adults are not only more likely to experience overall negative health consequences associated with stigma surrounding their weight, as well as cope differently than sexual majority individuals, this study sought to examine how significantly sexual orientation is or is not associated to direct experiences of weight based stigmatization and engagement with a variety of coping responses to this stigma. Specifically, this study compared sexual minority and sexual majority individuals across endorsement of intention to change weight, experiences of weight stigmatization, and coping to experiences of weight stigma.

Interestingly, the results for Aim 1 of this study are not consistent with previous literature suggesting that sexual minority individuals may be at a greater likelihood of experiencing weight stigma when compared to their sexual majority counterparts, as sexual minority participants did not significantly differ in overall experiences of weight stigmatizing situations (Friedman et al., 2005; Mereish, 2014; Rainey, Furman, & Gearhardt, 2018). This finding could suggest that

because sexuality is not a visible identity, there may be other intersectional factors that affect experiences of weight stigmatization not covered in this particular analysis. Another point of interest in this result is that research has consistently linked obesity differently to sexual orientation, where lesbian and bisexual women are at an increased likelihood of having overweight or obesity compared to heterosexual women, gay and bisexual men report the inverse relationship (Deputy & Boehmer, 2013). This link has been shown to associate to overall experiences of weight-based stigmatization in examining reinforcement of specific group body ideals and norms, thus the logical trajectory would be that for individuals who identify as a sexual minority, they would be likely to incur weight based stigmatization from ingroup and outgroup interactions with relative frequency (Azagba, Shan, & Latham, 2019; Laska, VanKim, Erickson, Lust, Eisenberg, & Rosser, 2015). Overall, the study's results for Aim 1 suggest that there is a not a significant difference in frequency of experiences of weight stigma between sexual majority and sexual minority individuals broadly, however, as addressed in post-hoc evaluations of subscale items, it may be that sexual majority and minority individuals report experiencing various forms of weight stigma or that when sexual minority folks experience weight stigma they are not attributing the experience to their weight but rather to their minoritized sexual orientation.

Aim 2 of the study was to assess the association of sexual orientation on an individual's weight intention, hypothesizing that sexual minority individuals would endorse more intention to change their weight (through loss or gain) than sexual majority individuals. The study hypothesis was not supported. This finding is particularly compelling given that prior research on weight stigma and weight bias has found that a consequence of stigma, and more specifically weight stigma, can contribute to physical health outcomes including unhealthy weight control practices,

binge-eating, and avoidance or over-engagement in physical activity (Puhl & Brownell, 2006). Additionally, when specifically accounting for sexual orientation, literature has shown that sexual minority individuals are at a higher likelihood of engaging in unhealthy weight control behaviors due to both misperception of weight status (i.e., over or under assessing) and social pressures in attaining ideal physical appearance (Hadland, Austin, Goodenow & Calzo, 2015; Katz-Wise, Blood, Milliren, Calzo, Richmond, Gooding & Austin, 2014). Prior research posits that disparities in body image concerns, as well as engagement in unhealthy weight control behaviors regardless of objective BMI stem from various notions of ideal physical appearance. For example, gay and bisexual men may experience greater pressure to emulate thin frames compared to their sexual majority counterparts (Hadland, Austin, Goodenow & Calzo, 2015). Thus, these (mis)appraisals of body perception are thought to associate with engagement in weight change behaviors.

Aim 3 of the study was to assess the association of sexual orientation on an individual's engagement in coping tactics after experiencing weight stigmatization. The study hypothesized that sexual minority individuals would utilize coping tactics more than their sexual majority counterparts. The study hypothesis was not supported, and results indicate that sexual majority and minority groups do not differ in how frequently coping responses of any kind are utilized. Overall, the study's results for Aim 3 suggest that there is a not a significant difference in use of coping with weight stigmatization between sexual majority and sexual minority individuals broadly, however, as addressed in post-hoc evaluations of subscale items, it may be that sexual majority and minority individuals may report utilizing various forms of weight stigma coping differently. Not only does this finding raise discussion about the relationship between weight stigma and coping in sexually diverse populations, but also warrants a more critical analysis of

the implications of weight stigma on treatment seeking and usefulness of particular methods of coping.

Post-Hoc Analyses Discussion

After completion of the initial analyses proposed in the data analytic plan, the non-significant results for the three study goals were ultimately not consistent with what prior research has shown about the relationships between sexual orientation, and more broadly, stigmatized identities and use of coping and perception of experiences of stigmatizing events. As such, several post-hoc t-tests were run on subscale items for both the Stigmatizing Situations Inventory and Coping Response Inventory to more closely assess group differences. Moreover, results were conducted on the different subscale items between groups to more directly point to which aspects of weight stigma are more and less pertinent to sexual minority versus majority groups.

With regard to the finding from the subscale evaluations of the Stigmatizing Situations Inventory, results indicate that sexual minority individuals experience more perception of negative assumptions being made about them related to their weight, more reporting of reception of inappropriate comments from doctors about their weight, and more instances of loved ones expressing embarrassment due to weight status. With regard to findings about experiencing more inappropriate comments from doctors about weight, previous literature does support that overall sexual minorities report more frequency of receiving discrimination and inappropriate comments from doctors than their sexual majority counterparts. Much of the literature suggests this may be informed primarily by sexual stigma (Brooks et. al, 2018). Interestingly, as seen from the link between overweight or obesity in lesbian and bisexual women, and the trend toward lower body weight in bisexual and gay men, this reported discrimination and reception of inappropriate

comments may offer an explanation as to why there is a significant disparity between sexual minority individuals, who inherently carry more than one stigmatized identity, and majority individuals with regard to public health issues around weight. Essentially, this finding may allude to gatekeeping practices from health care providers in providing assessible, discrimination and stigma free experiences for their patients. Consistent with prior literature, the perception of more negative assumptions being made, and more expression of embarrassment about weight from loved ones for sexual minority participants may be supported from literature surrounding experiences of discrimination, social support, and internalized stigma where research does suggest that negative assumptions, whether explicitly made or not, are perceived more frequently by stigmatized identities and moreover, the more stigmatized an individual is, the less likely they are to report higher perceived (Herek, Gillis, & Cogan, 2009).

Additionally, the study's results indicate that coping responses to weight stigmatizing situations on various subscales do significantly differ between sexual minority and sexual majority individuals, with sexual minority individuals indicating more use of therapeutic services. While the crying and avoidance subscales did not reach significance, each approached significance, which is more consistent to literature on coping for stigmatized groups where avoidance and emotional coping (i.e., distraction, crying or meditation) are frequently cited (Della, Wilson & Miller, 2002). It would be remiss, however, not to note that much of the literature that does exist surrounding LGBTQ+ specific coping methods is heavily inculcated in the realm of coping with a stigmatized identity and identity disclosure. Numerous studies have identified group differences between sexual majority and sexual minority populations in coping behaviors where sexual minority groups have been found to have higher instances of experiential coping (e.g., alienation, isolation, self-reflection) than sexual majority counterparts (Flowers &

Buston, 2001; McDavitt, Iverson, Kubicek, Weiss, Wong, & Kipke, 2008). These group differences allow insights into how certain emerging adults may choose to utilize different forms of coping based on their sexual orientation, and how to effectively manage experiences of stigma.

Ultimately, the results of post-hoc analyses posit potential questions regarding stigma reduction, and overall ramifications on physical and mental health outcomes to be considered in future projects addressing weight intention, experiences of weight stigma, and coping. Moreover, the analyses within this study highlight that a variety of intersectional and individual factors may uniquely associate with a specific individual experience with weight stigmatization and subsequent coping.

Study Limitations

There are several notable strengths to this study, including a relatively diverse population of young adults aged 18-25 across demographics, a relatively large sample size, and more specifically a relatively large sexual minority sample. However, there are also limitations to the study, most notably that the study utilized a cross sectional design, and as such both temporality and directionality of the data cannot be determined. Moreover, using a cross sectional design does not allow for causal relationships to be proposed. As such, the current study may only suggest significant relationships between specified variables and groups. Additionally, due to issues of power related to group size, the study was not able to inspect certain associations of variables across multiple demographics (e.g., outcome on the CRI for White females who identified as a sexual minority compared to outcomes for Black or African American females who identified as a sexual minority).

Outside of the study design, there are limitations surrounding use of specific measures. Notably, in the initial proposal of this study, a moderation analysis was proposed to examine the relationship between sexual orientation and weight-intention, but no significant interaction was found. There are several limitations inherent to this: the first being how weight intention was measured and whether or not it appropriately assessed intention, or if there was a potential limitation in the measurement of the construct, such that weight intention may inadvertently act as a potential proxy for body satisfaction. Secondly, we did not utilize any follow up questions to assess why individuals were engaging in potential weight change behaviors, which is where much of the literature suggesting differences in sexual minority weight intention originate (e.g., shape and weight ideals). Lastly, a rather large limitation of the study is that sexuality and sexual stigma specific to each sexual identity is not specifically assessed or addressed. Rather, sexual orientation was dichotomized as part of the analytic plan and as such, combined all sexual minority identities which could potentially impact the group differences reported. This study also did not explicitly address asexuality in its assessment options, which leaves more to be desired in parsing out how sexual orientation and sexuality, not just sexual attraction, may or may not have associations on weight intention, experiences of weight stigma, and coping.

Future Directions

The first future direction research should engage in is recruiting greater samples of sexual minority individuals (lesbian, gay, bisexual, queer, questioning, asexual, etc.) in order to assess group differences across the LGBTQ+ spectrum. Specifically, rather than dichotomizing sexuality into sexual majority and sexual minority groups, future research should strive to investigate experiences of weight stigmatizing situations and coping responses in each of the sexual orientations. Secondly, another future direction would be to see if accruing a larger and

more diverse sexual minority sample would yield a significant interaction for weight intention and sexual orientation such that a moderation model by subcommunities within the LGBTQ+ population could be examined and could then explore several outcomes related to weight stigma, sexual orientation stigma, and coping. These future directions could provide incredibly insightful quantitative data that could further direct current and future mental and physical healthcare.

Lastly, utilizing a qualitative study to explore sexual minority experiences with weight stigma, coping and ultimately, weight intention would provide rich data that could inform development of more specified, culturally sensitive measures of assessment within the LGBTQ+ community. Moreover, this data could lead to the development of novel interventions that target both sexual orientation stigma and weight stigma concurrently.

Clinical Implications

Although research indicates that experiencing weight stigma is associated with myriad psychological and physical health outcomes, such as intention and actions to change weight, little currently available research has been conducted to understand factors associated with weight stigma, coping and weight intention among emerging adults of varying sexual orientations. Currently, there is scant available research that has been conducted solely to understand factors associated with weight stigma and weight stigma coping among emerging adults of varying sexual orientation, despite the acknowledgement that minority individuals experience poorer health outcomes overall and sexual minority populations are at increased risk of weight stigma. The results of this study reveal that while there is not a significant association between weight intention and sexual orientation, there is a significant difference in several coping methods and experiences of weight stigma between sexual majority and sexual minority individuals, as well varying demographic backgrounds. Moreover, results from this study could

be indicating that assessment of stigmatizing experiences and coping using the Stigmatizing Situations Inventory and Coping Response Inventory is not specific enough; such that the SSI and CRI can be used by sexually diverse populations, but the measure may not account specifically for sexual orientation, nor do the measures account for how these experiences may present in stigmatized sexual identities versus general populations. Thus, suggesting the need for the development of a more culturally sensitive assessment tool for assessing weight-based stigmatization and coping in varying sexual orientations. The current study contributed in addressing this gap in order to inform the development of culturally responsive, preventive interventions addressing negative health outcomes, as well as furthering the use of adaptive coping – all of which are valuable pieces of information in providing mental and physical healthcare in emerging adults.

Conclusion

The current study addressed a literature gap by examining variables associated with experiences weight stigmatization and coping with weight stigma among emerging adults of varying sexual orientation. The results further suggest the need for tailored supports for sexual minority emerging adults who experience weight stigma, as sexual orientation may influence the type of coping responses used in the context of these stigmatizing situations – including greater therapy seeking. Additionally, the results of this study indicate experiences of weight stigmatization that are disproportionately aimed at either sexual majority or minority individuals could potentially utilize coping resources differently dependent on the particular stigmatizing situation. This information would be useful in evaluating potential risk and resiliency factors for emerging adults of varying sexual orientations and body sizes. The results of the current study suggest there is room for improvement in exploration of the role sexual orientation, as well as

other relevant demographic factors, have in experiencing and reacting to weight stigmatization and provides a path for future research to explore mechanisms driving the differences in coping and stigma experiences between sexual majority and sexual minority emerging adults.

References

Andreyeva T, Puhl R.M., & Brownell K.D. (2008). Changes in perceived weight discrimination among Americans: 1995–1996 through 2004–2006. *Obesity (Silver Spring)*;16(5):1129–1134.

Austin, S. B., Ziyadeh, N. J., Corliss, H. L., Haines, J., Rockett, H. R., Wypij, D., & Field, A. E. (2009). Sexual orientation disparities in weight status in adolescence: Findings from a prospective study. *Obesity (Silver Spring, Md.)*, *17*(9), 1776–1782. https://doi.org/10.1038/oby.2009.72

Azagba, S., Shan, L., & Latham, K. (2019). Overweight and Obesity among Sexual Minority Adults in the United States. *International Journal of Environmental Research and Public Health*, *16*(10). https://doi.org/10.3390/ijerph16101828

Bagwell, C., Bender, S., Andreassi, C., Kinoshita, T., Montarello, S., & Muller, J. (2005). Friendship quality and perceived relationship changes predict psychosocial adjustment in early adulthood. *Journal of Social and Personal Relationships*, *22*, 235–254. https://doi.org/10.1177/0265407505050945

Barber, J., Palmese, L., Reutenauer, E. L., Grilo, C., & Tek, C. (2011). Implications of weight-based stigma and self-bias on quality of life among individuals with Schizophrenia. *The Journal of Nervous and Mental Disease*, *199*(7), 431–435. https://doi.org/10.1097/NMD.0b013e318221403d

Blanchard, R.., & Bogaert, AF. (1996). Biodemographic comparisons of homosexual and heterosexual men in the Kinsey Interview Data. *Archive of Sex Behavior*, *25*(6):551–579.

Boehmer, U., & Bowen, D. J. (2009). Examining factors linked to overweight and obesity in women of different sexual orientations. *Preventive Medicine*, *48*(4), 357–361. https://doi.org/10.1016/j.ypmed.2009.02.003

Bowen, D.J., Balsam K.F., & Ender S.R. (2008). A review of obesity issues in sexual minority women. *Obesity (Silver Spring)*, 16(2):221–228.

Brooks, H., Llewellyn, C. D., Nadarzynski, T., Pelloso, F. C., De Souza Guilherme, F., Pollard, A., & Jones, C. J. (2018). Sexual orientation disclosure in health care: A systematic review. *The British Journal of General Practice*, *68*(668), e187–e196. https://doi.org/10.3399/bjgp18X694841

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*(1), 3-5. doi:10.1177/1745691610393980

Calzo, J. P., Masyn, K. E., Corliss, H. L., Scherer, E. A., Field, A. E., & Austin, S. B. (2015). Patterns of body image concerns and disordered weight- and shape-related behaviors in heterosexual and sexual minority adolescent males. *Developmental Psychology*, *51*(9), 1216–1225. https://doi.org/10.1037/dev0000027

Carels, R. A., Wott, C. B., Young, K. M., Gumble, A., Koball, A., & Oehlhof, M. W. (2010). Implicit, explicit, and internalized weight bias and psychosocial maladjustment among treatment-seeking adults. *Eating Behaviors*, *11*(3), 180–185. https://doi.org/10.1016/j.eatbeh.2010.03.002

Case, P., Austin, S. B., Hunter, D. J., Manson, J. E., Malspeis, S., Willett, W. C., & Spiegelman, D. (2004). Sexual orientation, health risk factors, and physical functioning in the Nurses' Health Study II. *Journal of Women's Health (2002)*, *13*(9), 1033–1047. https://doi.org/10.1089/jwh.2004.13.1033

Cazzato, V., & Makris, S. (2019). Implicit preference towards slim bodies and weight-stigma modulate the understanding of observed familiar actions. *Psychological Research*, *83*(8), 1825–1835. https://doi.org/10.1007/s00426-018-1030-7

Christakis, N. A., & Fowler, J. H. (2007). The Spread of Obesity in a Large Social Network over 32 Years. *New England Journal of Medicine*, *357*(4), 370–379. https://doi.org/10.1056/NEJMsa066082

Cohen, Jacob (1988). *Statistical Power Analysis for the Behavioral Sciences*. Routledge. ISBN 978-1-134-74270-7.

Conron, K. J., Mimiaga, M. J., & Landers, S. J. (2010). A population-based study of sexual orientation identity and gender differences in adult health. *American Journal of Public Health*, *100*(10), 1953–1960. https://doi.org/10.2105/AJPH.2009.174169

Crawford, D., & Campbell, K. (1999). Lay definitions of ideal weight and overweight. *International Journal of Obesity*, *23*(7), 738–745. https://doi.org/10.1038/sj.ijo.0800922

Centers for Disease Control and Prevention. (2012). Adult overweight and obesity. Retrieved from http://www.cdc.gov/obesity/adult/index.html.

Crenshaw, K. W. (1991). Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color. *Stanford Law Review*. https://doi.org/10.2307/1229039

Della, Wilson & Miller (2002). Strategies for Managing Heterosexism Used among African American Gay and Bisexual Men. Journal of Black Psychology - J BLACK PSYCHOL. 28. 10.1177/009579802237543.

Deputy, N. P., & Boehmer, U. (2013). Weight Status and Sexual Orientation: Differences by Age and Within Racial and Ethnic Subgroups. *American Journal of Public Health*, *104*(1), 103–109. https://doi.org/10.2105/AJPH.2013.301391

Douglas, V., & Varnado-Sullivan, P. (2016). Weight stigmatization, internalization, and eating disorder symptoms: The role of emotion dysregulation. *Stigma and Health*, *1*(3), 166–175. https://doi.org/10.1037/sah0000029

Eliason, M. J., Radix, A., McElroy, J. A., Garbers, S., & Haynes, S. G. (2016). The "Something Else" of Sexual Orientation: Measuring Sexual Identities of Older Lesbian and Bisexual Women Using National Health Interview Survey Questions. *Women's Health Issues*, *26*, S71–S80. https://doi.org/10.1016/j.whi.2016.03.012

Flowers, P., & Buston, K. (2001). "I was terrified of being different": Exploring gay men's accounts of growing-up in a heterosexist society. *Journal of Adolescence*, *24*(1), 51–65. https://doi.org/10.1006/jado.2000.0362

Frank, R., Claumann, G. S., Felden, É. P. G., Silva, D. A. S., & Pelegrini, A. (2018). Body weight perception and body weight control behaviors in adolescents. *Jornal De Pediatria*, *94*(1), 40–47.

Fredriksen-Goldsen, K. I., Kim, H.-J., Barkan, S. E., Muraco, A., & Hoy-Ellis, C. P. (2013). Health disparities among lesbian, gay, and bisexual older adults: Results from a population-based study. *American Journal of Public Health*, *103*(10), 1802–1809. https://doi.org/10.2105/AJPH.2012.301110

Friedman, K. E., Reichmann, S. K., Costanzo, P. R., Zelli, A., Ashmore, J. A., & Musante, G. J. (2005). Weight Stigmatization and Ideological Beliefs: Relation to Psychological Functioning in Obese Adults. *Obesity Research*, *13*(5), 907-916. doi:10.1038/oby.2005.105

Hadland, S. E., Austin, S. B., Goodenow, C. S., & Calzo, J. P. (2014). Weight Misperception and Unhealthy Weight Control Behaviors Among Sexual Minorities in the General Adolescent Population. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine*, *54*(3), 296–303. https://doi.org/10.1016/j.jadohealth.2013.08.021

Hargrove, T. W. (2018). BMI Trajectories in Adulthood: The Intersection of Skin Color, Gender, and Age among African Americans. *Journal of Health and Social Behavior*, *59*(4), 501–519. https://doi.org/10.1177/0022146518802439

Hatzenbuehler, M. L., McLaughlin, K. A., & Nolen-Hoeksema, S. (2008). Emotion regulation and internalizing symptoms in a longitudinal study of sexual minority and heterosexual adolescents. *Journal of Child Psychology and Psychiatry*, *49*(12), 1270-1278. doi:10.1111/j.1469-7610.2008.01924.x

Heinberg, L. J., Thompson, J. K., & Matzon, J. L. (2001). Body image dissatisfaction as a motivator for healthy lifestyle change: Is some distress beneficial? In *Eating disorders: Innovative directions in research and practice* (pp. 215–232). https://doi.org/10.1037/10403-011

Herek, G. M., Gillis, J. R., & Cogan, J. C. (2009). Internalized stigma among sexual minority adults: Insights from a social psychological perspective. *Journal of Counseling Psychology*, *56*(1), 32–43. https://doi.org/10.1037/a0014672

Himmelstein, M. S., Puhl, R. M., & Quinn, D. M. (2017). Weight stigma and health: The mediating role of coping responses. *Health Psychology: Official Journal of the Division*

of Health Psychology, American Psychological Association, *37*(2), 139–147. https://doi.org/10.1037/hea0000575

Hruschka, D., Brewis, A., Wutich, A., Morin, B. (2011) Do Shared Body Norms Account for Social Clustering of Obesity? *American Journal of Public Health. 101*(S1): S295-S300.

Institute of Medicine (US) Committee on Lesbian, Gay, Bisexual, and Transgender Health Issues and Research Gaps and Opportunities. (2011). *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK64806/

Katz-Wise, S. L., Blood, E. A., Milliren, C. E., Calzo, J. P., Richmond, T. K., Gooding, H. C., & Austin, S. B. (2014). Sexual Orientation Disparities in BMI among US Adolescents and Young Adults in Three Race/Ethnicity Groups. *Journal of Obesity*, *2014*. https://doi.org/10.1155/2014/537242

Kipke, M. D., Kubicek, K., Weiss, G., Wong, C., Lopez, D., Iverson, E., & Ford, W. (2007). The health and health behaviors of young men who have sex with men. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, *40*(4), 342–350. https://doi.org/10.1016/j.jadohealth.2006.10.019

Lang, B., Ahlich, E., Verzijl, C. L., Thompson, J. K., & Rancourt, D. (2019). The role of drive for thinness in the association between weight status misperception and disordered eating. *Eating Behaviors*, *35*, 101319. https://doi.org/10.1016/j.eatbeh.2019.101319

Laska, M. N., VanKim, N. A., Erickson, D. J., Lust, K., Eisenberg, M. E., & Rosser, B. R. S. (2015). Disparities in Weight and Weight Behaviors by Sexual Orientation in College Students. *American Journal of Public Health*, *105*(1), 111–121. https://doi.org/10.2105/AJPH.2014.302094

Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, *46*(8), 819–834. https://doi.org/10.1037/0003-066X.46.8.819

Lee, J. S., Kritchevsky, S. B., Tylavsky, F., Harris, T., Simonsick, E. M., Rubin, S. M., … Health ABC Study. (2005). Weight change, weight change intention, and the incidence of mobility limitation in well-functioning community-dwelling older adults. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, *60*(8), 1007–1012. https://doi.org/10.1093/gerona/60.8.1007

Leroux, J. S., Moore, S., Richard, L., & Gauvin, L. (2012). Physical Inactivity Mediates the Association between the Perceived Exercising Behavior of Social Network Members and Obesity: A Cross-Sectional Study. *PLOS ONE*, *7*(10), e46558. https://doi.org/10.1371/journal.pone.0046558

Major, B., Hunger, J. M., Bunyan, D. P., & Miller, C. T. (2014). The ironic effects of weight stigma. *Journal of Experimental Social Psychology*, *51*, 74–80. https://doi.org/10.1016/j.jesp.2013.11.009

Marquez, B., Norman, G., Fowler, J., Gans, K., & Marcus, B. (2018). Weight and weight control behaviors of Latinas and their social ties. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, *37*(4), 318–325. https://doi.org/10.1037/hea0000597

Mason, T. B., & Lewis, R. J. (2016). Minority Stress, Body Shame, and Binge Eating Among Lesbian Women: Social Anxiety as a Linking Mechanism. *Psychology of Women Quarterly*, *40*(3), 428–440. https://doi.org/10.1177/0361684316635529

Mason, T. B., Lewis, R. J., & Heron, K. E. (2017). Indirect pathways connecting sexual orientation and weight discrimination to disordered eating among young adult lesbians. *Psychology of Sexual Orientation and Gender Diversity*, *4*(2), 193–204. https://doi.org/10.1037/sgd0000220

McArdle, K. A., & Hill, M. S. (2007). Understanding Body Dissatisfaction in Gay and Heterosexual Men: The Roles of Self-Esteem, Media, and Peer Influence. *Men and Masculinities*, *11*(5), 511–532. https://doi.org/10.1177/1097184X07303728

McDavitt, B., Iverson, E., Kubicek, K., Weiss, G., Wong, C. F., & Kipke, M. D. (2008). Strategies Used by Gay and Bisexual Young Men to Cope with Heterosexism. *Journal of Gay & Lesbian Social Services*, *20*(4), 354–380. https://doi.org/10.1080/10538720802310741

Mensinger, J. L., & Meadows, A. (2017). Internalized weight stigma mediates and moderates physical activity outcomes during a healthy living program for women with high body mass index. *Psychology of Sport and Exercise*, *30*, 64–72. https://doi.org/10.1016/j.psychsport.2017.01.010

Mereish, E. H. (2014). The weight of discrimination: The relationship between heterosexist discrimination and obesity among lesbian women. *Psychology of Sexual Orientation and Gender Diversity*, *1*(4), 356-360. doi:10.1037/sgd0000056

Meyer, I. H. (2003). Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence. *Psychological Bulletin*, *129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Miller, C. T., & Myers, A. M. (1998). Compensating for prejudice: How heavyweight people (and others) control outcomes despite prejudice. In J. K. Swim, C. Stangor, J. K. Swim, C. Stangor (Eds.). *Prejudice: The target's perspective* (pp. 191-218). San Diego, CA, US: Academic Press. doi:10.1016/B978-012679130-3/50044-2

Mroz, J. E., Pullen, C. H., & Hageman, P. A. (2018). Health and appearance reasons for weight loss as predictors of long-term weight change. *Health Psychology Open*, *5*(2). https://doi.org/10.1177/2055102918816606

Myers, A., & Rosen, J. C. (1999). Obesity stigmatization and coping: Relation to mental health symptoms, body image, and self-esteem. *International Journal of Obesity*, *23*(3), 221–230. https://doi.org/10.1038/sj.ijo.0800765

O'Brien, K., Venn, B. J., Perry, T., Green, T. J., Aitken, W., Bradshaw, A., & Thomson, R. (2007). Reasons for wanting to lose weight: Different strokes for different folks. *Eating Behaviors*, *8*(1), 132–135. https://doi.org/10.1016/j.eatbeh.2006.01.004

Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of childhood and adult obesity in the United States, 2011-2012. *Journal of the American Medical Association*, *311*(8), 806–814. https://doi.org/10.1001/jama.2014.732

Puhl, R. M., Andreyeva, T., & Brownell, K. D. (2008). Perceptions of weight discrimination: Prevalence and comparison to race and gender discrimination in America. *International Journal of Obesity*, 32, 992e1000. http://dx.doi.org/10.1038/ijo.2008.22.

Puhl, R., & Brownell, K. D. (2003). Ways of coping with obesity stigma: Review and conceptual analysis. *Eating Behaviors*, *4*(1), 53–78. https://doi.org/10.1016/S1471-0153(02)00096-X

Puhl, R. M., & Brownell, K. D. (2006). Confronting and coping with weight stigma: An investigation of overweight and obese adults. *Obesity*, 14, 1802e1815. http://

dx.doi.org/10.1038/oby.2006.208.

Puhl, R. M., Himmelstein, M. S., & Quinn, D. M. (2018). Internalizing weight stigma: Prevalence and sociodemographic considerations in US adults. *Obesity*, *26*(1), 167–175. https://doi.org/10.1002/oby.22029

Puhl, R. M., & Heuer, C. A. (2010). Obesity Stigma: Important Considerations for Public Health. *American Journal of Public Health*, *100*(6), 1019–1028. https://doi.org/10.2105/AJPH.2009.159491

Rainey, J. C., Furman, C. R., & Gearhardt, A. N. (2018). Food addiction among sexual minorities. *Appetite, 120*16-22. doi:10.1016/j.appet.2017.08.019

Richmond, T. K., Walls, C. E., & Austin, S. B. (2012). Sexual orientation and bias in self-reported Body Mass Index. *Obesity (Silver Spring, Md.)*, *20*(8). https://doi.org/10.1038/oby.2012.9

Rosario, M., Schrimshaw, E. W., Hunter, J., & Braun, L. (2006). Sexual Identity Development among Gay, Lesbian, and Bisexual Youths: Consistency and Change Over Time. *Journal of Sex Research*, *43*(1), 46–58. https://doi.org/10.1080/00224490609552298

Sawilowsky, S (2009). "New effect size rules of thumb". Journal of Modern Applied Statistical Methods. ***8*** *(2): 467 474. doi:10.22237/jmasm/1257035100.*http://digitalcommons.wayne.edu/jmasm/vol8/iss2/26/

Schwarzer, R., & Knoll, N. (2003). *Positive coping: Mastering demands and searching for meaning.* https://doi.org/10.1037/10612-025

Seacat, J. D., Dougal, S. C., & Roy, D. (2016). A daily diary assessment of female weight stigmatization. *Journal of Health Psychology*, *21*(2), 228–240. https://doi.org/10.1177/1359105314525067

Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The Development of Coping. *Annual Review of Psychology*, *58*(1), 119–144. https://doi.org/10.1146/annurev.psych.58.110405.085705

Sørensen, T. I. A., Rissanen, A., Korkeila, M., & Kaprio, J. (2005). Intention to Lose Weight, Weight Changes, and 18-y Mortality in Overweight Individuals without Co-Morbidities. *PLoS Medicine*, *2*(6). https://doi.org/10.1371/journal.pmed.0020171

Stewart, S.-J. F., & Ogden, J. (2019). The Role of BMI Group on the Impact of Weight Bias Versus Body Positivity Terminology on Behavioral Intentions and Beliefs: An Experimental Study. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.00634

Tiggemann, M., Martins, Y., & Kirkbride, A. (2007). Oh to be lean and muscular: Body image ideals in gay and heterosexual men. *Psychology of Men & Masculinity, 8*(1), 15–24. https://doi.org/10.1037/1524-9220.8.1.15

Tomiyama, A. J., Carr, D., Granberg, E. M., Major, B., Robinson, E., Sutin, A. R., & Brewis, A. (2018). How and why weight stigma drives the obesity 'epidemic' and harms health. *BMC Medicine, 16*(1), 123. https://doi.org/10.1186/s12916-018-1116-5

Toomey, R. B., Ryan, C., Diaz, R. M., & Russell, S. T. (2018). Coping with Sexual Orientation-Related Minority Stress. *Journal of Homosexuality*, *65*(4), 484–500. https://doi.org/10.1080/00918369.2017.1321888

Tylka, T. L., Annunziato, R. A., Burgard, D., Daníelsdottir, S., Shuman, E., Davis, C., et al. (2014). The weight-inclusive versus weight-normative approach to health: Evaluating the evidence for prioritizing well-being over weight loss. *Journal of Obesity*, 983495. http://dx.doi.org/10.1155/2014/983495.

Vartanian, L. R. (2010). Disgust and perceived control in attitudes toward obese people. *International Journal of Obesity (2005)*, *34*(8), 1302–1307. https://doi.org/10.1038/ijo.2010.45

Vartanian, L. R., & Porter, A. M. (2016). Weight stigma and eating behavior: A review of the literature. *Appetite, 102*, 3–14. https://doi.org/10.1016/j.appet.2016.01.034

Vartanian, L. R., Pinkus, R. T., & Smyth, J. M. (2018). Experiences of weight stigma in everyday life: Implications for health motivation. *Stigma and Health, 3*(2), 85–92. https://doi.org/10.1037/sah0000077

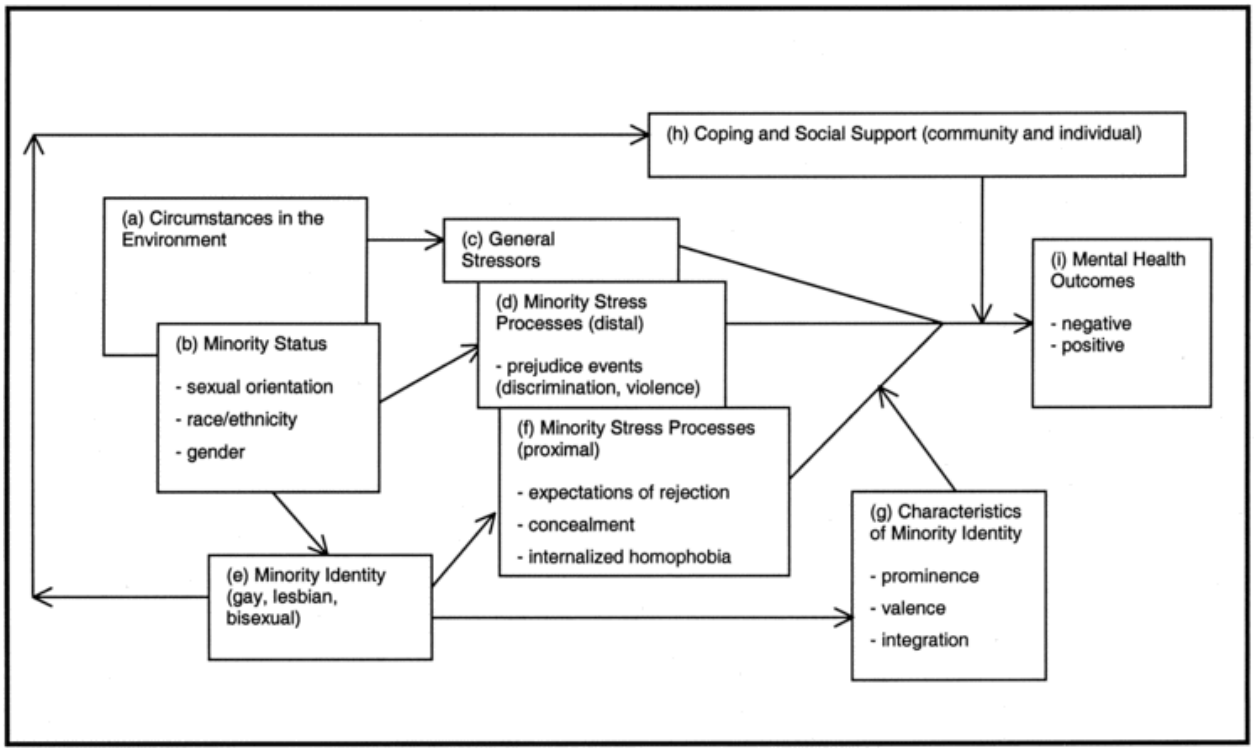
Watson, L. B., Grotewiel, M., Farrell, M., Marshik, J., & Schneider, M. (2015). Experiences of sexual objectification, minority stress, and disordered eating among sexual minority women. *Psychology of Women Quarterly*, *39*(4), 458–470. https://doi.org/10.1177/0361684315575024

Wu, Y.-K., & Berry, D. C. (2018). Impact of weight stigma on physiological and psychological health outcomes for overweight and obese adults: A systematic review. *Journal of Advanced Nursing*, *74*(5), 1030–1042. https://doi.org/10.1111/jan.13511

Figures & Tables

Figure 1.

Meyer's Minority Stress Model



Meyer, I. H. (2003). Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence. *Psychological Bulletin*, *129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Table 1.

Means, Standard Deviations, and Correlations among Study Variables

	1	2	3	4
1. Weight Intention (Intention to Gain/Lose)	-			
2. Stigmatizing Experiences (SSI)	.19***	17.75(22.31)		
3. Coping Response (CRI)	.25***	.60***	52.60(29.36)	
4.Sexual Orientation (Sexual Majority)	.00	-.09*	-.06	-

Note. Diagonal of table provides means (and standard deviations) for continuous variables. $N = 574$.

*$p < .05$. **$p < .01$. ***$p < .001$

Table 2.

Sociodemographic Characteristics and Continuous Study Variables by Sexual Orientation

Variables		Sexual Majority (N = 492)	Sexual Minority (N = 82)	Total (N = 574)
Race	Non-Hispanic Black	89(18.09%)	12(14.63%)	101(17.60%)
	Non-Hispanic White	286(58.13%)	50(60.98%)	336(58.54%)
	American Indian or Alaskan Native	3(0.61%)	1(1.22%)	4(0.70%)
	Asian	29(5.89%)	5(6.10%)	34(5.92%)
	Native Hawaiian or Pacific Island	1 (0.20%)	-	1 (0.17%)
	Hispanic	46(9.35%)	8(9.76%)	54(9.41%)
	Other	7(1.42%)	1 (1.22%)	8(1.39%)
	Multiracial	31(6.30%)	5(6.10%)	36(6.27%)
SES	I live very well	43(8.74%)	5(6.10%)	48(8.36%)
	I live comfortably	259(52.64%)	30(36.56%)	289(50.35%)
	I live from paycheck to paycheck	130(26.42)	28(34.15%)	158(27.53%)
	I don't have a steady income.	33(6.71%)	11(13.41%)	44(7.67%)
	I have no current income.	26(5.28%)	8(9.76%)	34(5.92%)
BMI		25.65 (6.29)***	27.24 (7.46)***	25.87(6.49)**
CRI		51.9(29.44)	56.8(28.66)	52.6(29.36)

Table 2(Continued)

Variables	Sexual Majority (N = 492)	Sexual Minority (N = 82)	Total (N = 574)
SSI	16.9 (21.52)	22.84 (26.17)	17.75(22.31)

Note. Numbers and percentages provided for categorical variables while means and standard deviations are provided for continuous variables. SES = Socioeconomic status, SSI = Stigmatizing Situations Inventory, CRI = Coping Response Inventory, BMI = Body Mass Index.

Appendix A

Consent to Participate in a Research Study

Behaviors, Relationships, and Identity Development

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about how people think about themselves and the things that are important to who they are. If you volunteer to take part in this study, you will be one of about 800 people to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Kristina Decker, M.A., of the University of Memphis, Department of Psychology. She is supervised by Idia B. Thurston, Ph.D., of University of Memphis, Department of Psychology. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this study is to learn how people think about themselves and the things that are important to who they are. Furthermore, we're interested in learning about participants' health habits and lifestyle choices.

By doing this study, we hope to learn how different experiences and perspectives affect a person's self-perception.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?

You should not take part in this study if you are under 18 years of age, over the age of 25, or pregnant.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research procedures will be conducted at The University of Memphis. You will need to come to Room 361 of the University of Memphis Psychology Building two times during the study. The first visit will take approximately 1 and 30 minutes. The second visit will take place approximately 2 weeks after the first session and will last about 30 minutes. The total amount of time you will be asked to volunteer for this study is 2 hours over the next 2 weeks.

WHAT WILL YOU BE ASKED TO DO?

You will be asked to complete questionnaires with a number of questions regarding your beliefs, experiences, lifestyle habits, height and weight. Upon completion of these questionnaires, a research assistant will measure your height and weight.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life. You may find some questions we ask you to be upsetting or stressful. If so, we can tell you about some people who may be able to help you with these feelings. In addition to the risks listed above, you may experience a previously unknown risk or side effect.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

There is no guarantee that you will get any benefit from taking part in this study. However, some people may gain motivation to continue or begin developing a healthier lifestyle. Your willingness to take part, however, may, in the future, help society as a whole better understand this research topic.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering. As a student, if you decide not to take part in this study, your choice will have no effect on your academic status or grade in class.

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, there are no other choices except not to take part in the study.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

You will receive a total of 2 research credits for taking part in this study; 1.5 research credits for the first session and .5 credit for the second session.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law. To protect your privacy, electronic files containing identifying information will be password protected, and only approved study personnel may access the password and files. All study materials will remain in a locked filing cabinet locked in room 361 of the Psychology Building. Only approved study personnel will have access to these materials.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. Individual information will be number coded in our databases to ensure anonymity. Any personal information provided will be directly entered into the computer and only associated with your identification number that will not be traced back to you. We will keep private all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. For example, the law may require us to show your information to a court to tell authorities if you report information about a child being abused or if you pose a danger to yourself or someone else. Also, we may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the University of Memphis.

CAN YOUR TAKING PART IN THE STUDY END EARLY?

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.

The individuals conducting the study may need to withdraw you from the study. This may occur if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you, or if the agency funding the study decides to stop the study early for a variety of scientific reasons.

ARE YOU PARTICIPATING OR CAN YOU PARTICIPATE IN ANOTHER RESEARCH STUDY AT THE SAME TIME AS PARTICIPATING IN THIS ONE?

You may not take part in this study if you are currently involved in another research study that directly affects your weight status. It is important to let the investigator know if you are in another research study. You should also discuss with the investigator before you agree to participate in another research study while you are enrolled in this study.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Kristina Decker, M.A., at kdecker@memphis.edu or the faculty advisor, Idia B. Thurston, Ph.D. at bthrston@memphis.edu. If you have any questions about your rights as a volunteer in this research, contact the Institutional Review Board staff at the University of Memphis at 901-678-2705. We will give you a copy of this consent form to take with you.

WHAT IF NEW INFORMATION IS LEARNED DURING THE STUDY THAT MIGHT AFFECT YOUR DECISION TO PARTICIPATE?

If the researcher learns of new information in regards to this study, and it might change your willingness to stay in this study, the information will be provided to you. You may be asked to sign a new informed consent form if the information is provided to you after you have joined the study.

What happens to my privacy if I am interviewed?

Any information gathered during the height and weight measuring portion of the study will be separated from any identifying information using code numbers. The study staff is also trained to maintain confidentiality while conducting research.

By clicking "yes" to the following statement, you are affirming that you are at least 18 years old and are agreeing to be in this study. You will receive a printed copy of this document for your records and a copy will also be kept with the study records. Be sure to contact Kristina Decker with any questions you have about what you are being asked to do. You may also contact her if you think of questions at a later date. Ms. Decker's email address is: kdecker@memphis.edu.

- ❍ *I have read, understood, and received a printed copy of the above consent form and desire of my own free will to participate in this study.*

Appendix B

Demographics

Participant ID: _____

Today's Date: _____

Please indicate your date of birth: _____

How old are you? _____

Gender: (please only check one)

- ☐ Male
- ☐ Female
- ☐ Transgender
  - If transgender: (please check)
    - ☐ (MTF)
    - ☐ (FTM)
    - ☐Other (_____)
- ☐Other (_____)

Are you Spanish/Hispanic/Latino(a)?

- ☐Hispanic or Latino
- ☐Not Hispanic or Latino

What is your race/ethnic heritage? (please select all that apply)

- ☐American Indian or Alaska Native

☐African-American or Black

☐Asian

☐Native Hawaiian or Other Pacific Islander

☐White

☐Other (please indicate): _____

Which one of the following best describes your feelings?

☐Completely heterosexual *(attracted only to persons of the opposite sex)*

☐Mostly heterosexual

☐Bisexual *(equally attracted to men and women)*

☐Mostly homosexual

☐Completely homosexual *(gay/lesbian, attracted to persons of the same sex)*

☐Not sure

☐Other (please describe) _____

Which of these phrases best describes your socioeconomic status?

☐ I live very well.
☐ I live comfortably.
☐ I live from paycheck to paycheck.
☐ I don't have a steady income.
☐ I have no current income.

DIRECTIONS: Please respond to these questions to the best of your knowledge.

How much do you weigh (pounds)? _____

How do you currently think of yourself in terms of weight:

- ❍ Very Underweight
- ❍ Underweight
- ❍ Healthy weight
- ❍ Overweight
- ❍ Very Overweight/Obese

How tall are you (feet and inches)? Example: If you are 5 feet 4 inches, enter 5 for feet and 4 for inches.

Feet _____

Inches _____

Are you currently trying to:

- ❍ Lose weight
- ❍ Gain weight
- ❍ Stay the same weight

Stigmatizing Situations Inventory (SSI)

DIRECTIONS: Below is a list of situations that people encounter because of their weight. Indicate whether, and how often, each of these situations had happened to you.

	Never	**Once in my life**	**More than once in my life**	**Multiple Times**
1. A child coming up to you and saying something like, "You're fat!"	○	○	○	○
2. A doctor blaming unrelated physical problems on your weight.	○	○	○	○
3. A parent or other relative nagging you to lose weight.	○	○	○	○
4. A spouse/partner calling you names because of your weight.	○	○	○	○
5. A spouse/partner telling you to lose weight in order to be more attractive.	○	○	○	○
6. As an adult, having a child make fun of you.	○	○	○	○
7. Being called names, laughed at, or teased by other children when you were young.	○	○	○	○
8. Being glared at or harassed by bus passengers for taking up "too much" room.	○	○	○	○
9. Being hit, beaten up or physically attacked because of your weight.	○	○	○	○
10. Being offered fashion advice from strangers.	○	○	○	○
11. Being passed up for a promotion, given bad assignments, or otherwise discriminated against at work.	○	○	○	○
12. Being sexually harassed (cat-calls, wolf-whistles, etc.) because of your weight.	○	○	○	○
13. Being singled out as a child by a teacher, school nurse, etc. because of your size.	○	○	○	○
14. Being stared at in public.	○	○	○	○
15. Being the only heavy person, or the heaviest person, at a family gathering.	○	○	○	○
16. A doctor saying that your weight is a health problem, even when you are in good health.	○	○	○	○
17. Being told, "All you really need is a little willpower."	○	○	○	○
18. Being unable to get a date because of your size.	○	○	○	○

19. Children loudly making comments about your weight to others.	○	○	○	○
20. Friends, acquaintances, co-workers, etc. making fun of your appearance.	○	○	○	○
21. Groups of people pointing and laughing at you in public.	○	○	○	○
22. Having a doctor make cruel remarks, ridicule you, or call you names.	○	○	○	○
23. Having a doctor recommend a diet even if you did not come in to discuss weight loss.	○	○	○	○
24. Having a romantic partner exploit you, because s/he assumed you were "desperate" and would put up with it.	○	○	○	○
25. Having a spouse or partner be ashamed to admit to being with you.	○	○	○	○
26. Having family members feel embarrassed by you or ashamed of you.	○	○	○	○
27. Having friends not notice weight loss, or not encourage your efforts to lose weight.	○	○	○	○
28. Having people assume that you overeat or binge-eat because you are overweight.	○	○	○	○
29. Having people assume you have emotional problems because you are overweight.	○	○	○	○
30. Having strangers suggest diets to you.	○	○	○	○
31. Having strangers take photographs of you, as if you were an exhibit.	○	○	○	○
32. Having your children tease or insult you because of your weight.	○	○	○	○
33. In the supermarket, having people criticize or make comments about your food choices.	○	○	○	○
34. Losing a job because of your size.	○	○	○	○
35. Not being able to find clothes that fit.	○	○	○	○
36. Not being able to find medical equipment in a size that works for you.	○	○	○	○
37. Not being able to find sports equipment in a size that fits you.	○	○	○	○
38. Not being able to fit into bus or airplane seats, into small cars, or into standard seatbelts.	○	○	○	○

39. Not being able to fit into seats at restaurants, theaters, and other public places.	○	○	○	○
40. Not being able to fit through turnstiles, on amusement park rides, or other places not already mentioned.	○	○	○	○
41. Not being hired because of your weight, shape, or size.	○	○	○	○
42. Other people having low expectations of you because of your weight.	○	○	○	○
43. Overhearing other people making rude remarks about you in public.	○	○	○	○
44. Parents or other relatives telling you how attractive you would be, if you lost weight.	○	○	○	○
45. People telling you that you will never find a partner if you don't lose weight.	○	○	○	○
46. Seeing bumper stickers, t-shirts, advertising, etc. that ridicules fat people.	○	○	○	○
47. Strangers asking intrusive, personal questions about your weight.	○	○	○	○
48. Strangers making abusive remarks to you (e.g. saying you are disgusting, or that you don't deserve to live).	○	○	○	○
49. When eating in public, being told “You really shouldn't be eating that."	○	○	○	○
50. When walking outside, having people drive by and laugh or shout insults.	○	○	○	○

Coping Response Inventory (CRI)

DIRECTIONS: The following are some strategies people use in order to deal with negative situations related to their weight. For example, someone who hears an insult about his/her appearance may make him/herself feel better by insulting the person back. Using the scale below, please indicate whether, and how often, you have used each of the following strategies to cope with the sorts of situations listed above.

	Never	**Once in my life**	**More than once in my life**	**Multiple times**
1. I act polite to everyone, even if they are not polite to me.	O	O	O	O
2. I avoid going out in public because I am afraid people will make comments about my size.	O	O	O	O
3. I avoid looking in the mirror so that I don't have to think about my weight.	O	O	O	O
4. I avoid places where I might have a hard time finding a place to sit because of my size.	O	O	O	O
5. I challenge negative thoughts that I have about myself.	O	O	O	O
6. I change doctors in order to find one who is more sensitive about my weight.	O	O	O	O
7. I cry about it, then get over it.	O	O	O	O
8. I divorce/break up with spouses/partners who are critical of my size.	O	O	O	O
9. I do physical activity in order to feel more comfortable in my body.	O	O	O	O
10. I do something nice for myself to make me feel better.	O	O	O	O
11. I feel really bad about myself.	O	O	O	O
12. I get depressed and isolate myself.	O	O	O	O
13. I get rid of clothing that I have outgrown.	O	O	O	O
14. I go to therapy to get help dealing with these situations.	O	O	O	O
15. I hang up on people who are being rude on the telephone.	O	O	O	O
16. I just say hello and am friendly.	O	O	O	O
17. I let people know that I am a good person who does not deserve their unkind remarks.	O	O	O	O
18. I love myself, even when it seems like other people don't.	O	O	O	O

19. I make a point of not hiding my body.	O	O	O	O
20. I politely tell people when they hurt my feelings.	O	O	O	O
21. I do something to prove to people that I am just as worthy and capable as they are.	O	O	O	O
22. I put myself and my needs before other people's.	O	O	O	O
23. I quit jobs where I encounter stigma or discrimination.	O	O	O	O
24. I refuse to restrict my activities just because I might not fit in or might attract attention.	O	O	O	O
25. I regard people who have problems with overweight as small-minded and childish.	O	O	O	O
26. I remind myself that I am a good person and people like me just the way I am.	O	O	O	O
27. I remind myself that I am trying to lose weight, and better days are ahead.	O	O	O	O
28. I think, "I don't care what others think of me; it only matters that I like myself."	O	O	O	O
29. I remind myself that I have not done anything wrong; my size is not my fault.	O	O	O	O
30. I remind these people that I am a human being.	O	O	O	O
31. I try to shame them with a statement like, “Do you have a staring problem?"	O	O	O	O
32. I stop associating with people who put me down because of my size.	O	O	O	O
33. I swear at people or give them "the finger".	O	O	O	O
34. I talk to a counselor or social worker.	O	O	O	O
35. I tell people it's not right to make remarks about my size.	O	O	O	O
36. I tell the other person off.	O	O	O	O
37. I think that the situation proves I am really unattractive.	O	O	O	O
38. I think that no one has the right to judge me.	O	O	O	O
39. I think that no one will ever love me because of my weight.	O	O	O	O

40. I think these other people are very insecure about themselves if they need to insult me.	O	O	O	O
41. I think to myself that it is my fault that I am fat.	O	O	O	O
42. I think to myself: "It's who I am on the inside that matters."	O	O	O	O
43. I treat myself to new clothes that look good on me.	O	O	O	O
44. I try to make friends with people who are making fun of me.	O	O	O	O
45. I try to think about good things that have happened to me.	O	O	O	O
46. I work at home or out of public view in order to avoid people who might be critical.	O	O	O	O
47. I yell at people who try to humiliate me.	O	O	O	O
48. If my spouse/partner is being critical, I ask him/her, "Then why don't you leave?"	O	O	O	O
49. If people do not like me because of my size, I see it as their loss, not mine.	O	O	O	O
50. If someone has a problem with how I look, I see it as their problem, not mine.	O	O	O	O
51. If someone is staring at me, I stare back.	O	O	O	O
52. If someone tries to make me feel inferior, I remind myself that I do not deserve this.	O	O	O	O
53. I shock people by doing things “Fat people shouldn't do."	O	O	O	O
54. When I feel hurt or down, I tell myself it won't last forever.	O	O	O	O

Appendix C

Mechanical Turk Debriefing Form (Time 1)

Thank you for your participation in this research project. The purpose of this study is to learn how people think about themselves and the things that are important to who they are. As such, the current study utilized a large number of questionnaires in order to understand behavior, attitudes, and identity development across various domains.

Remember, this is a two-part study. Therefore, you will be asked enroll via Mechanical Turk for a follow-up session, which needs to occur in approximately 2 weeks. All of your questionnaire responses will remain strictly confidential. The second part will last approximately 30 minutes, and you will receive $.25. A reminder message will be sent to you via Mechanical Turk's website, which will include access to part 2 of this study.

If you are concerned about the study questions asked and wish to speak with a professional, please contact one of the following resources:

National Alliance on Mental Illness (NAMI) Helpline
800-950-NAMI
info@nami.org

National Suicide Prevention Lifeline
800-273-TALK
24 hrs/day; 7 days/week
http://www.suicidepreventionlifeline.org

Centers for Disease Control (CDC) INFO
800-CDC-INFO
24 hrs/day; 7 days/week
http://www.cdc.gov

Subject Pool Debriefing Form

Thank you for your participation in this research project. The purpose of this study is to learn how people think about themselves and the things that are important to who they are. As such, the current study utilized a large number of questionnaires in order to understand behavior, attitudes, and identity development across various domains.

Remember, this is a two-part study. Therefore, you will be asked to enroll via SONA for part 2, which will occur in approximately 2 weeks. Session 2 will last 30 minutes in Psychology Bldg Room 361, and you will receive .5 credit. All of your questionnaire responses will remain strictly confidential.

A reminder email will be sent to you in the days prior to your scheduled Session 2 time. Please indicate your preferred email .

Preferred email address: _____

If you have any further questions regarding the nature of this study, or would like to request details of the results of the study, please feel free to contact:

Graduate Researcher: Kristina Decker (Mentor: Dr. Idia Thurston)
Psychology Building – Office 361
kdecker@memphis.edu

If you have concerns about the study questions asked and wish to speak with a professional, please contact one of the following resources:

University of Memphis Resources

Counseling Center (CCPC)
Wilder Tower, Room 214
(901) 678-2068

Psychological Services Center
Psychology Building, Room 126
400 Innovation Dr.
(901) 678-2147

The University of Memphis
Student Health Services
200 Hudson Health Center
(901) 678-2287

Community Resources

Shelby County Health Department
814 Jefferson Avenue
Memphis, TN 38105
(901) 544-7600

Memphis Sexual Assault Resource Center
1750 Madison Ave #102
Memphis, TN 38104
(901) 272-2020

Planned Parenthood
2430 Poplar Avenue #100
Memphis, TN 38112
(901) 725-1717

Appendix D

Hello,

The University of Memphis Institutional Review Board, FWA00006815, has reviewed and approved your submission in accordance with all applicable statuses and regulations as well as ethical principles.

PI NAME: Kristina Decker
CO-PI:

PROJECT TITLE: Behaviors, Relationships, and Identity Development
FACULTY ADVISOR NAME (if applicable): Idia Thurston

APPROVAL DATE: 1/22/2016

EXPIRATION DATE: 1/22/2017
LEVEL OF REVIEW: Expedited

Please Note: Modifications do not extend the expiration of the original approval

Approval of this project is given with the following obligations:

1. If this IRB approval has an expiration date, an approved renewal must be in effect to continue the project prior to that date. If approval is not obtained, the human consent form(s) and recruiting material(s) are no longer valid and any research activities involving human subjects must stop.

2. When the project is finished or terminated, a completion form must be completed and sent to the board.

3. No change may be made in the approved protocol without prior board approval, whether the approved protocol was reviewed at the Exempt, Exedited or Full Board level.

4. Exempt approval are considered to have no expiration date and no further review is necessary unless the protocol needs modification.

Approval of this project is given with the following special obligations:

Thank you,

James P. Whelan, Ph.D.

Institutional Review Board Chair

The University of Memphis.

Note: Review outcomes will be communicated to the email address on file. This email should be considered an official communication from the UM IRB.