

**Overlooked Assets:
Body Size, Body Image, and Sexual Minority Women**

by

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ABSTRACT

While public health literature indicates sexual minority women (SMW) are at risk for obesity, psychological literature suggests SMW possess the health advantage of positive body image. In this dissertation, I bring these two lines of research together to create a more complete picture of SMW's health. First, I conducted a purposeful literature review to identify influential papers in the health sciences that focus on SMW, body size, and health status. Articles in the final analytic sample contained key gaps in the operationalization of body size and its relationship to health. The majority demonstrated a bias towards understanding body size as a marker of disease, ignoring scholarship questioning the link between body size and health. Body image was missing from half the articles, suggesting a privileging of medical metrics like BMI over SMW's beliefs about the status of their bodies. Then, using quantitative survey data from the Michigan Smoking and Sexuality Survey (M-SASS), a cross-sectional study of SMW between the ages of 18 and 24, I conducted two sets of analyses. (1) I evaluated whether aspects of SMW's identities where they departed from heteronormative social roles (i.e., non-traditional gender roles, sexual identity, connection to LGBTQ community) were associated with dimensions of body esteem (i.e., body weight, body attribution, and body shame). The results indicated that connection to the LGBTQ community increased positive feelings about body weight and reduced feelings of body shame. These relationships were amplified among masculine-identified SMW. (2) I assessed whether positive body image can be understood as a

psychological asset available to SMW facing size discrimination. I tested three theoretically informed resilience models of body size, size discrimination, body image, and mental health (i.e., depressive symptoms, self-esteem) and found that SMW who experienced more size discrimination reported more depressive symptoms. Conversely, positive body image was associated with fewer depressive symptoms and more self-esteem. By examining body size and body image in relationship to each other and to mental health, this dissertation underscores that viewing the health of SMW solely through the lens of obesity is limiting and that SMW may have access to unique processes of resilience.

CHAPTER I

Introduction

Different narratives regarding sexual minority women's (SMW) body size and health exist within the scientific literature. One is a narrative of risk: a rapidly developing line of literature identifies sexual minority women as having a higher body mass index (BMI) than heterosexual identified women (Bowen, Balsam, & Ender, 2008; Deputy & Boehmer, 2014; Fredriksen-Goldsen et al., 2013; Hatzenbuehler et al., 2013; Jun et al., 2012; Katz-Wise et al., 2014; Laska et al., 2015). This literature concludes that sexual minority women are at risk for overweight and obesity and calls for intervention on populations of sexual minority women in order to reduce this perceived health disparity. The other narrative is one of advantage: a compendium of psychological studies examining body image in SMW reveals compelling evidence of sexual minority women having more positive body esteem than heterosexual women (Leavy & Hastings, 2010; Owens, Hughes, & Owens-Nicholson, 2003; Peplau et al., 2009; Wagenbach, 2004). It is well documented that poor body image degrades women's mental health (Goldfield et al., 2010; Impett, Henson, Breines, Schooler, & Tolman, 2011). Thus, it would appear that SMW may be experiencing a unique health-related asset related to the psychological perception of their bodies regardless of their body size. For sexual minority women, the literature on obesity continues to grow without due consideration of the role of body image. In this dissertation project, I seek to explore the issue of body image and its relationship to health and wellbeing in sexual minority women. This dissertation's primary aim is to

incorporate mental and social wellness into the discussion of sexual minority women and their body size because to view a woman's health solely in terms of her physicality is limiting. The dissertation's secondary aim is to contribute to research on the strengths and assets of sexual minority women, thus creating a more holistic portrait of sexual minority women within public health research.

Throughout this dissertation, I move between disciplines with different preferred nomenclature for the people and topics at the heart to this discussion. For ease of understanding, a brief note on my chosen terminology. With regard to the population of interest, I use "sexual minority women" as an umbrella term to encompass all women whose sexual identities, sexual behaviors, or sexual attractions deviate from the heterosexual norm. Thus this label includes women with non-heterosexual identities (i.e. lesbian, bisexual, queer, etc.), women who engage in sex with other women, and women with same sex attractions. Young and Meyer (2005) proposed the label sexual minority as an alternative to purely behavioral based terms like WSW (women who have sex with women) or MSM (men who have sex with men) as a way to recognize the centrality of the lived experiences of people who deviate from heterosexuality in their identities and attractions, in particular with regard to the psychological process of minority stress. As women's sexual identities, not their sexual behaviors, are most salient to how issues of body size and body image connect to health, I use sexual minority women or SMW to talk about this population. Additionally, throughout the dissertation, I utilize a variety of terms to characterize the size of women's bodies. Because this dissertation is in conversation with many disciplines, the language of bodies shifts in relationship to the field of study whose literature I am discussing at that juncture. When reviewing Public Health and associated literature, I use the terms overweight and obese to describe larger bodies, as those are the preferred terms of those

fields. When reviewing literature from Fat Studies and related disciplines, I use the term fat, not in the pejorative sense, but as a reclaimed, value-neutral descriptor of individuals with larger bodies.

Sexual Minority Women and the Risk of Obesity

Ample public health literature marks SMW at a heightened risk for obesity when compared to heterosexual women (Bowen et al., 2008; Deputy & Boehmer, 2014; Farmer, Jabson, Bucholz, & Bowen, 2013; Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013; Hatzenbuehler, McLaughlin, & Slopen, 2013; Katz-Wise et al., 2014; Laska et al., 2015). This finding was first foregrounded as a cause for concern within a systematic review on sexual identity and obesity conducted by Bowen and colleagues (2008). This review synthesized health science examining overweight and obesity across sexual orientation within populations of women from the mid-1990's onward, and uncovered a general trend that SMW had a greater likelihood of being classified as overweight or obese (largely indicated by body mass index or BMI) than women who identified as heterosexual. Thus the issue of obesity among SMW became demarcated as a public health priority, and there was a subsequent flourishing of empirical research on this issue. Ongoing research efforts have validated SMW possessing a higher on average BMI than heterosexual women across a multitude of contexts. Evidence supports the presence of this BMI differential over the life course (Jun et al., 2012), in cohorts of youth (Hatzenbuehler et al., 2013; Laska et al., 2015) and elders (Fredriksen-Goldsen et al., 2013), and to varying degrees across racial and ethnic lines (Deputy & Boehmer, 2014; Katz-Wise et al., 2014).

Broadly, the observed difference in BMI between SMW and heterosexual women has been regarded as a significant risk to the health of SMW. Researchers in this area generally note

that higher BMIs found among SMW require intervention (Austin et al., 2013; Deputy & Boehmer, 2014; Struble et al., 2010). With this understanding, efforts have been placed into locating the potential drivers of the BMI differential. Research on explanatory pathways generally echoes the conceptualization of SMW being at risk. Studies seek to measure whether SMW's higher BMIs are the result of a deficit in health behaviors like nutrition and exercise (Boehmer & Bowen, 2009) or due to a disproportionate exposure to social risks like childhood sexual abuse (Katz-Wise et al., 2014; Lehavot & Simoni, 2011). A similar risk frame dominates the literature on the physical health consequences that may be associated with SMW's BMI. For example, recent studies have explored the prevalence of cardiovascular risk (Farmer et al., 2013) and breast cancer (Cochran & Mays, 2012) among SMW as compared to heterosexual women.

Notably, the galvanizing thread throughout this literature is that of risk related to this BMI differential, despite the fact that scholars in public health (Burgard, 2009; Campos, Saguy, Ernsberger, Oliver, & Gaesser, 2006; Lantz, Golberstein, House, & Morenoff, 2010) and *Fat Studies* (Saguy & Ward, 2011; Solovay & Rothblum, 2009; Wann, 2009) question the utility of understanding body size, and the metrics used to assess it, as an accurate proxy for health status. Much epidemiological work has been which destabilizes the conception that as BMIs get higher, health gets worse: some find that only those with extremely high or low BMIs have increased odds for death (Campos et al., 2006), others find a high BMI to be protective at older ages (Lantz et al., 2010), while others find the predictive capability of BMI to be weak when examined alongside other predictors of health (Burgard, 2009). The field of *Fat Studies* takes the debunking of BMI a step further. The field rests on a key premise: weight or body size, like height or skin color, is a human characteristic with a natural amount of variability across the human population (Solovay & Rothblum, 2009; Wann, 2009). As such, *fat* can be thought of as

a value neutral descriptor of larger bodies, much like short or tall would be of height, rather than a pejorative term marking a body as unhealthy or unattractive (Saguy & Ward, 2011; Solovay & Rothblum, 2009; Wann, 2009). The availability of counter-arguments to and critiques of the link between body size and physical health could be used to destabilize the assumption of risk on account of higher average BMI among SMW, though few have taken this perspective. In this project, I explicitly examine critical gaps within the obesity literature on sexual minority women, and point to ways in which these gaps may skew conclusions about health and body size among sexual minority women.

Sexual Minority Women and the Advantage of Body Image

Contrary to the obesity literature which casts SMW as healthy risky, an adjacent literature on body image suggests that SMW may have a health advantage in comparison with heterosexual women (Austin et al., 2004; Morrison, Morrison, & Sager, 2004; Owens et al., 2003; Wagenbach, 2004). *Body image* refers to an individual's "psychological experience of embodiment, especially but not exclusively one's physical appearance" (Cash, 2004, p. 1). In other words, body image is a concept that captures the wide variety of "thoughts, beliefs, feelings, and behaviors" (p.1) that a person may have about their body (Cash, 2004). Over the past decade, several studies point to a pattern of SMW having more positive body image than heterosexual women and placing less value on physical appearance than heterosexual women, regardless of body size (Austin et al., 2004; Morrison et al., 2004; Owens et al., 2003; Wagenbach, 2004). Morrison and colleagues (2004) conducted a meta-analysis of 27 studies of body image the evaluated differences across gender and sexual orientation. This meta-analysis uncovered that lesbians were on average more satisfied with their bodies than heterosexual women (Morrison et al., 2004). This finding was reiterated by Wagenbach (2004) who, in a

comparative study of adult lesbian and heterosexual women, found lesbians to be less concerned with dieting and physical appearance than heterosexual women. Notably, this difference has been uncovered not only in small community samples, but also in large national samples. In an analysis of the *Growing Up Today Study*, Austin and colleagues (2004) found body satisfaction domains among lesbian and bisexual adolescents were higher than heterosexual counterparts: lesbian and bisexual adolescents were happier with the way their bodies looked, less concerned with trying to look like girls and women in the media, less likely to diet, and less likely to say they were worried about being thin. The consistency of these results suggests that sexual minority women are somehow better able to maintain a positive outlook about their bodies than heterosexual women.

So what about the identities of sexual minority women offers protection with regard to their body image? Qualitative methodologies have been used to explore this issue. Evidence suggests that SMW's access to LGBT community spaces may expose them to alternate norms around beauty, which leave greater room for positive body image than heterosexual women (Bergeron & Senn, 1998; Krakauer & Rose, 2002; Myers, Taub, Morris, & Rothblum, 1999; Yost & Chmielewski, 2011). In several studies with sexual minority women, participants expressed that after coming out, they felt less bound to social norms around body size and appearance (Bergeron & Senn, 1998; Krakauer & Rose, 2002). Early work by Myers and colleagues (1999) found that lesbians reported encountering pressures from dominant discourse around feminine beauty but also noted the availability of alternative body norms through the lesbian community. One key difference across dominant and lesbian discourses around beauty that participants discussed was that thinness was prized in the former, but not the latter (Myers et al, 1999). Indeed, some of the work critiquing public health's emphasis on the obesity epidemic has roots

in queer communities (Maor, 2012). In in-depth interviews with lesbian women, Maor (2012) unearthed discussions of how queer culture allowed for women with larger bodies to “assign their fat body with positive meaning specifically as a lesbian body” (p. 182). The possibility of larger bodies being viewed as valuable appears to be a real possibility among lesbian communities, but may much less attainable in mainstream culture. Thus, a sexual minority identity may be a route to positive body for sexual minority women of all body sizes, which may in turn carry implications for mental health. In this dissertation, I test pathways between facets of the identities/ the relationships of SMW and body image in order to push forward empirical understandings of the resources available to SMW which may strengthened their appreciation of their bodies.

Theories of Gender and the Body

Indeed, a woman’s appreciation for her body may be a revolutionary act in the current thin-centric, beauty driven culture. Feminist scholars have heavily theorized the social status of women’s bodies. Bartky (2003), for example, uses Foucauldian theories of power and punishment to examine the ways that the feminine body is culturally disciplined to adhere to strict physical expectations. Femininity is equated to a particular physical aesthetic. One of the characteristics of this aesthetic is a thin, lithe frame that requires constant dieting and exercise in order to be maintained (Bartky, 2003). This construction of the archetypal feminine body type has been dubbed the *thin ideal*, the notion that women are most beautiful when they are most thin (Bergeron & Senn, 1998; Garner, Garfinkel, Schawrtz, & Thomspen, 1980; Grabe, Ward, & Hyde, 2008; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). Where men may exercise to accrue muscle mass and take up space, femininity requires women to exercise to shrink their physical frame and occupy less space (Bartky, 2003; Dworkin & Wachs, 2009).

Women are not only bombarded with messages of what they *should* look like, but when they deviate from the thin aesthetic, they often are granted “helpful” advice of how to lose weight in order to achieve their optimal beauty, and thus are constantly reminded that their bodies are transgressing gender norms (Bartky, 2003).

Objectification theory, developed by psychologists of gender, offers up explicit mechanisms through which cultural messages about women’s bodies come to be internalized by individuals. Fredrickson and Roberts (1997) posited messages about ideal beauty and body types are transmitted through visual media and reinforced via interpersonal interactions with family, friends, and romantic partners. The narrow parameters of the types of acceptable female figures teach young women and men learn from an early age that women exist for the sexual titillation of men and the female body is a product for consumption by the male gaze (Fredrickson & Roberts, 1997). Thus, the broader culture comes to understand that women’s bodies do not exist for their own pleasures, but are objects for the pleasure of others (Bordo, 1999; Dworkin & Wachs, 2009; Fredrickson & Roberts, 1997). Repeated exposure to narrow depictions of female beauty are internalized by individual women, who come to understand their own bodies and attractiveness in relation to these norms (Fredrickson & Roberts, 1997; Lopata, 2006).

Poor body image may be linked to the high expectations around feminine beauty within Western culture. Social scientists have tested the relationship between negative body image in women and gender socialization processes (Fredrickson & Roberts, 1997; Tolman & Porche, 2000; Tolman, Impett, Tracy, & Michael, 2006). For example, several studies point to a relationship between exposure to mainstream media, where highly feminized and sexualized images of women are prevalent, and poor body image in women (Bergeron & Senn, 1998; Garner et al., 1980; Grabe et al., 2008; Thompson et al., 2004). Similarly, interpersonal

interactions validate women's subordinate status in society (e.g., sexual harassment) and have been linked to poor body image in women and girls (Lindberg, Grabe, & Hyde, 2007). Indeed, research on gender and body image finds that women who report adherence to feminine social roles also report worse body image (Tolman & Porche, 2000). There appears to be a strong link between gendered expectations for women and poor body image.

Stigma, body size, and women. With adherence to a thin, feminine beauty at the center of gender expectations of women, fatness gets marked as a breach of a social contract among women. The penalty for being fat and female is harsh. Richmond and colleagues (2012) used ADDHEALTH data to assess interviewer's ratings of attractiveness of research participants and compared these ratings to participant's BMI. They found that participants who had higher BMIs were more likely to be rated unattractive regardless of gender, but the association between lower attractiveness ratings and higher BMI was significantly stronger for women than for men—a finding which emphasizes the critical eye with which fat women may be scrutinized (Richmond, Austin, Walls, & Subramanian, 2012). In studies of discrimination related to body size, fat women encounter size-related discrimination to a degree that far supersedes what fat men experience (Fikkan & Rothblum, 2011; Saguy, 2011). Puhl and colleagues (2008) found that obese women reported *three times* as many discriminatory experiences than obese men. Thus, women who are labeled fat often encounter significant social backlash for being perceived as continuously falling short of the feminine ideal.

Discrimination carries implications for mental health. Ample data suggest that across the life course, girls and women with larger bodies experience disproportionately high mental distress. For example, Asthana (2012) found that “obese adolescent girls” had significantly higher rates of psychological distress, including depression, low self-esteem, social avoidance,

and fear of negative evaluation when compared to their “normal weight” peers. While a pathway between discrimination and mental distress was not explicitly analyzed in this study, the author theorized these mental health indicators related to the discriminatory treatment these young girls endured from their peers. The pathway between weight, discrimination, and mental distress has been empirically validated in samples of adult women. Annis and colleagues (2004) assessed body image, psychosocial adjustment, and experiences of stigma among three groups of women: “stable average weight,” “currently overweight,” and “formerly overweight” women. They found that stable average weight women fared much better on psychosocial adjustment indicators like body dissatisfaction, self-esteem, and life satisfaction; however, both currently overweight and formerly overweight women scored similarly poorly on these indicators (Annis, Cash, & Hrabosky, 2004). Annis and colleagues (2004) found that these two groups had similar experiences of stigmatization over the life course, which statistically explained their equivalent levels of mental distress. These studies point to a process whereby the stigma and discrimination experienced by women with large bodies degrades their mental health and wellness.

The theories of gender and the body indicate that being a fat and female in the Western cultural context is penalized and thus results in poor body image and mental distress, and yet, sexual minority women are simultaneously at greater risk for obesity and at a higher likelihood of positively viewing their bodies than heterosexual women. These seemingly contradictory findings indicate that sexual minority women may have a unique mental health advantage in the face of stigma related to body size.

Differences across sexual minority women. Importantly, the term “sexual minority women” covers a broad range of women with various social backgrounds. Intersectionality theory notes that gender and sexism unfold differently depending on an individual’s social

location along all these axes (Crenshaw, 1991; Mullings & Schulz, 2006). Race is particularly bound to discussions of gender and bodies, as similar discussions of body size and body image have emerged in research examining racial disparities in overweight/ obesity. Notably, Black, White, and Latino are monolithic groups with a great degree of within group heterogeneity. Comparisons of women's experiences across racial identities glosses over the diversity within; however, such comparisons can be a useful analytic tool to thinking about the ways that social group membership structures access to power and privilege (Geronimus, 2003). For example, rates of obesity among Black and Latina women are higher than that of White women (CDC, 2014); however, there is evidence to suggest that body image among Black and Latina women may be better than that of White women (Krauss, Powell, & Wada, 2012; Kronenfeld, Reba-Harrelson, Von Holle, Reyes, & Bulik, 2010). For Black women, racial identity may be protective against body surveillance and poor body image in much the same way that a lesbian identity is hypothesized to buffer against these processes (Watson, Ancis, White, & Nazari, 2013). For Latina women, there is evidence that acculturation processes may be linked with anti-fat attitudes and poorer body image (Pepper & Ruiz, 2007). In both these cases, the variation of how body image and body size operate in groups of women is textured by their social identities.

When race and sexual identity intersect, additional nuances around this topic emerge; yet few have investigated how issues of body size or body image with sexual minority women of color. Two important epidemiological studies report on the intersection of race and sexual identity with regard to obesity. Using data from the California Health Interview Survey, Deputy and Boehmer (2014) found that being a sexual minority women increased the likelihood of having a higher BMI in White and Black women, but not in Latina women. Looking at data

from ADDHEALTH, Katz-Wise (2014) and colleagues found White and Latina bisexual women had higher BMI than same-race/ethnicity heterosexual individuals regardless of age, but this trend was not observed among Black women. This data indicates that sexual identity converges with racial identity around body size in important ways. Given the trends of positive body image in both lesbian and Black communities, Wilson (2009), a scholar of Black lesbian and bisexual women's health, calls for caution when observing the trends BMI among sexual minority women of color. Wilson (2009) notes that her own lived experience in Black lesbian and bisexual communities has demonstrated the positive power of appreciation for larger bodies in these spaces, and recommends against a public health approach that is rooted in BMI and body size as health outcomes of interest. Instead, Wilson (2009) points to a need for targeting structural influences on the health of sexual minority women of color (i.e., racism, anti-fat bias) and looking to holistically understand a woman's health status. Wilson's (2009) suggestions inform my dissertation project. While the data I use (see *Chapters 3 and 4*) is limited in its ability to speak to differences across race and ethnicity, I aim to move away from looking at body size as a health outcome and instead understand body size in relation to health status.

Resilience Theory

Bringing the literature on body size and sexual identity in women together with the literature on body image and mental health in women may provide a unique opportunity to explore a story of positive wellbeing among a sexual minority population. To date, the bulk of health research on sexual minorities emphasizes health risk on account of marginalized identities (Meyer, 2003; IOM, 2011). For example, the Institute of Medicine (2011) released *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*, a report which signaled a prioritization of sexual minority health concerns at the

top most rungs of government in this U.S. The IOM report synthesized the state of the science of LGBTQ health research and identified future opportunities for health research and intervention with sexual minorities. Importantly, this report highlighted the health disparities or deficits faced by LGBTQ people such as HIV/AIDS, mental distress, violence and victimization, yet the lack of discussion of health assets within LGBTQ populations may limit our understanding of sexual minority groups. Given that body image and body size are linked closely with mental health outcomes (Annis et al., 2004; Asthana, 2012; Goldfield et al., 2010; Viborg et al., 2014), examining these two constructs in relation to mental health may be a fruitful place to explore how sexual minority women are thriving. Such an approach is consistent with health research on *resilience*, a theoretical construct that provides a means by which to understand how “at-risk” populations thrive in *spite* and in some circumstances *because* of the adversity they face.

Resilience refers to the positive functioning of individuals who experience hardship (Richardson, 2002). As such, to be *resilient* predicates two things: (1) living through a difficult situation or experience and (2) succeeding or thriving in the face of these obstacles. In a review of the literature on resilience, Richardson (2002) charts the different ways that scholars have theorized resilience over time. Early work on resilience focused on individual *qualities* that allow for people to flourish in trying circumstances (i.e., “protective factors” or “developmental assets”; Richardson, 2002). Some resilience scholars continue with this focus, evaluating dispositional traits like optimism and their relationship to health (Tugade, Fredrickson, & Barrett, 2004). This approach tends to put an onus on the individual to engender traits that allow for “flexibility in response to changing situation demands, and the ability to bounce back from negative emotional experiences” (Tugade et al., 2004 p. 1168). Later, research on resilience segued into conceptualizing resilience as a process, moving away from mapping out individual

qualities to assessing *how* these individual qualities came to be acquired (Richardson, 2002). This model drives much of the current public health research on resilience, and provides a valuable alternative to risk-oriented public health—one that accounts for the context in which marginalized groups may live in day in and day out. For example, Fergus and Zimmerman (2005) point to the ways that utilizing a resilience framework focused on process shifts the dialogue towards *healthy* development despite of risk exposure rather than solely risk. They point to a need for understanding not just how individual *assets* (i.e., personal qualities) contribute to wellbeing in the face of risk, but also how the *resources* (i.e., social and environmental factors) available to an individual may provide a catalyst for overcoming risk (Fergus & Zimmerman, 2005). The identification of such resources becomes a crucial point for public health intervention, as programs and policies can be developed to bolster some of these catalysts for health.

Another important concept that comes out of the resilience theory is that of *positive marginality*. In brief, positive marginality refers to unique assets or benefits possessed or experienced by members of marginalized groups that directly result from their social position of marginalization (Meyer et al., 2011; Unger, 2000). Positive marginality is a concept that connects to the process-oriented branch of resilience theory; however, it moves a step beyond characterizing success *despite* adversity, and underscores the means by which individuals thrive *because of* adversity. Where resilience literature trends toward a narrative that places marginalized groups at an inherent disadvantage to the cultural majority, positive marginality highlights that marginalized groups may be able to cultivate assets not readily available to the cultural majority (Meyer et al., 2011; Unger, 2000). Feminist psychologist Unger (2000) originally outlined this concept, pointing to the ways in which activists and social change makers

frequently emerge from culturally marginalized groups. Unger's (2000) theory is that experience of being socially marginalized may also free the individual from some of the negative aspects of culture at large, and thus social marginality "permits the individual to deviate from normative practices, since she or he is already free from some aspects of societal control" (p. 167). By being excluded from the cultural mainstream, marginalized social groups may be free to incorporate or reject norms from the dominant culture as they see fit. Indeed, such groups may develop a unique ability to critique the construction of mainstream culture, and actively work to cultivate ideologies and identities that run counter to these master narratives—ideologies and identities which may be tangibly beneficial. Examining socially marginalized groups, like sexual and gender minorities, through the lens of positive marginality opens up the possibility that owning these identities can be beneficial to an individual's wellbeing.

The frameworks of resilience and positive marginality can be readily imported into the conversation around body size, body image, and SMW. Positive body image among SMW may be an example of positive marginality, as some of the social pressures placed on the physical appearance of women mainstream culture may be avoid due to mechanisms related to a sexual minority identity. Indeed, body image may be implicated as a health promotive factor in a process of resilience. In this project, I examine whether body image may disrupt the relationship between size-related discrimination and poor mental health in SMW.

Description of Studies

Within my dissertation, I bridge the literatures on body size and body image among SMW in order to create a more complete picture of SMW's health related to their body size, one that moves beyond the issue of BMI and size to SMW's lived experience of their bodies. In so doing, I trouble the notion that SMW are at risk due to their bodies while examining processes of

resilience or flourishing. My dissertation uses a three paper approach. Below I present abstracts for each of the three papers of my dissertation in order to orient the reader as to their individual contributions to the overall project.

Chapter II—Sizeable Gaps: What are the limitations of the current literature on sexual minority women and body size?

In my first paper, I examine the ways in which current empirical work on SMW and body size is limited in its ability to account for the health status of SMW. Informed by the Fat Studies literature, which critiques the assumption that larger bodies are necessarily sicker bodies and emphasizes the importance of the individual's lived experiences within their bodies, this paper serves three functions. First, I orient the reader to critical theoretical gaps in the scientific evaluation of health and body size among SMW. Second, I critically evaluate the theorization and operationalizing of body size within ten of the most influential studies in this field in the last 6 years (i.e., since Bowen's (2008) seminal literature review), assessing the degree to which they acknowledge these theoretical gaps. Finally, I lay out recommendations for the scientific study of SMW and body size in order that research may be conducted in a way that does not inadvertently stigmatize this population.

Chapter III—Positive Marginality: What aspects of the social identities of sexual minority women contribute to positive body image?

In my second paper, I assess the concept of positive marginality in relation to body image among SMW. Given that body image appears to be an advantage uniquely afforded to this population, further research on *what* about the identities of SMW contributes to better body image is critical. Researchers have addressed this question in many qualitative studies on sexual minority identities and body image (Krakauer & Rose, 2002; Maor, 2012; Yost & Chmielewski,

2011), and these inquiries have isolated theoretically useful domains of the social identities of SMW which may contribute to better body image, specifically gender and LGBTQ community connection. Using data from the Michigan Smoking and Sexuality Study (M-SASS), I test the relationship between aspects of sexual minority identities (i.e., minority identity salience, gender identity/ role, LGBTQ community connection) to positive body image (i.e., body esteem). The results of this study provide empirical evidence of the routes through which SMW may improve their body image.

Chapter IV—Resilient Minds and Bodies: To what extent does body image buffer against mental distress connected to size-discrimination?

In my third paper, I seek to explore whether body image among SMW may serve as a health promotive factor for those experiencing discrimination due to their body size. The literature on stigma and body size has established that individuals with larger bodies frequently face size-related discrimination which degrades mental health, and that the level of size-related discrimination is higher among women than men (Fikkan & Rothblum, 2011; Owen, 2012; Puhl & Brownell, 2001; Saguy, 2011). Interestingly, literature on SMW suggests that they maintain a more positive body image across all body sizes than heterosexual women (Hadland et al., 2014; Polimeni et al., 2009). Yet current research has not explored the degree to which the positive body image of SMW may offset the risk to mental health for those women who face size-discrimination. Using data from the Michigan Smoking and Sexuality Study (M-SASS), I evaluate body image as part of a resilience model of body size, discrimination, and mental health. The results of this study speak of the utility of SMW having access to positive body image.

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CHAPTER II

Sizeable Gaps: What are the limitations of the current literature on sexual minority women and body size?

Sexual minority women (i.e., SMW, women who identify as lesbian, bisexual, or other identity labels other than heterosexual) are a priority population for research on overweight and obesity. In 2008, Bowen and colleagues published a review of the health literature from the mid-1990's to the current day (at that time) and reported that on average SMW were at a greater likelihood of being classified as overweight or obese, usually indicated by greater body mass index (BMI), than heterosexual women. Since that review, health scientists have sought out explanations for SMW's elevated BMI through evaluating potential differences in health behaviors like nutrition and exercise (Boehmer & Bowen, 2009) and assessing differential exposures to social risks like childhood sexual abuse (Katz-Wise et al., 2014; Lehavot & Simoni, 2011). Some scientists have explored potential negative side effects of elevated BMIs in SMW through examining their prevalence of cardiovascular risk (Farmer, Jabson, Bucholz, & Bowen, 2013) and breast cancer (Cochran & Mays, 2012) as compared to heterosexual women. Broadly, observed differences in BMI across sexual identity in populations have ushered in a flood of research designed to assess the level of risk SMW incur due to their body size.

Yet, some academics and activists voice concern with the trajectory of research on body size and SMW, pointing to the potential of this research to further exacerbate stigma experienced by an already marginalized group (Brighe, 2014; McPhail & Bombak, 2014). Certainly, fatness

in Western culture has been cast as both unhealthy and undesirable, and critics of obesity research on SMW note that designating SMW as at risk for obesity aligns suspiciously close to the common stereotype of lesbians as fat and undesirable to men (Brighe, 2014; Lesley, 2014). Rather than contributing to knowledge that may aid in the overall wellbeing of SMW, critics contend that obesity research buttresses heterosexist understandings of what it means be lesbian or bisexual (Brighe, 2014; Lesley, 2014). Others argue that a focus on body size and labels like overweight and obese invalidate how SMW *feel* about their bodies, placing medical diagnostic criteria at a higher premium than the self-perception of individual lesbian or bisexual women, who may not believe their bodies to be at risk due to their size (Brighe, 2014; Lesley, 2014; McPhail & Bombak, 2014). These critiques raise important questions about the study of body size and sexual identity within populations of women: does a difference in BMI necessitate a difference in health risk, and does assumed physical risk trump a woman's self-perception of her body? Or more broadly, to what extent does the scientific study of body size of SMW allow the answer to either of those two questions to be anything other than "Yes"?

Public health has a long history of charting of group level differences in order to identify health *disparities*. This approach is part and parcel with prevention based public health—identify where a disease or condition impacts the population and invest resources toward the elimination of the problem. Health *disparities* are defined by *Healthy People 2020*, an ongoing federal health equity project, as

health difference[s ...] closely linked with social or economic disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater social or economic obstacles to health based on their racial or ethnic group, religion, socioeconomic status, gender, mental health, cognitive, sensory, or physical disability, sexual orientation, geographic location, or other characteristics historically linked to discrimination or exclusion (HHS, 2008).

Thus a difference thought to result from social or structural inequities gets labeled a *disparity*. For those invested in obesity research, SMW's average higher BMI than heterosexual women, a characteristic marked by federal health agencies as indicative of disease, may get labeled a disparity *because* of the social marginalization of this group without consideration of how such a label might *contribute to* social marginalization. In this framework, to not invest into further research of this disparity would be an ethical failure, as it is the research enterprise which provides evidence for the development of interventions which eliminate health disparities.

Yet not all differences are necessarily disparities, and there is cause for caution in the rush to label observed high BMI a disparity within populations of SMW. In seeking out differences across demographic groups, researchers may inadvertently manufacture or imbue erroneous meaning into differences. Feminist psychologists have noted this issue within the scientific psychological study of gender (Hyde, 2005). In the discussion of the *Gender Similarities Hypothesis*, Hyde (2005) remarked that by continuously studying the differences between men and women, science inevitably builds up a compendium of "proof" of such differences. The infamous "file drawer" problem (i.e., non-significant findings not being published within academic journals) ensures studies that do not find group differences rarely gain publicity. Scientifically validated gender differences then get interpreted through the lens of the mainstream cultural narrative about the distinct roles of men and women. Thus, the ways in which men and women are similar, or the differences *within* groups of men and women, are overlooked in favor of weaving this story of difference that aligns with the authoritative knowledge about fundamental differences between men and women (Hyde, 2005). In seeking to understand how social marginalization affects the health of SMW, public health science will inevitably unveil areas of difference between sexual minority and heterosexual women. What is

critical is how these differences get interpreted. When differences between SMW and heterosexual women align neatly with common cultural narratives about SMW, in this case higher BMI and the stereotype of the fat lesbian, there may be cause for scientists to pause and posit alternate explanations for the observed difference.

Given public health science's investment in documenting group difference as a means to understanding disparity, how should health researchers and practitioners engage with the issue of body size differences between sexual minority and heterosexual women? In this paper, I take a closer look at this issue and propose that health research on SMW and body size could be strengthened by accounting for the dominant criticisms of scholars with similar investments in the wellbeing of women and sexual minorities. In particular, there are two academic conversations which health scientists with a focus body size and SMW should be made aware: (1) the theory that the difference in BMI may not indicate a physical health risk, and (2) the importance of positive body image to health and wellbeing regardless of body size. A lack of familiarity with these scholastic conversations may invite theoretical gaps into the scientific study of SMW and body size--these gaps may bias the analytic approaches used to study SMW, and lead to a replication of the finding that a body size difference between SMW and heterosexual women denotes sickness. Inclusion or engagement with these two content areas might inform analytic approaches in such a way that alternate explanations for the size differential become possible.

In this paper, I provide an overview of these two areas to familiarize the reader with the content of these arguments. Then, through a purposeful review of the literature on SMW and body size, I examine the degree to which the analytic approaches of recent, well-regarded public health articles on these topics account for these critiques. Specifically, I focus my analytic

efforts on those articles published within health journals with the highest impact factors, as the prestige of such journals imbue their published studies with a heightened degree of medical authority which may influence their readership's approach to the study of SMW and body size. Finally, I make recommendations as to how public health science can better fill these gaps within the structure of research. A good faith engagement with the critics of obesity research on SMW will strengthen public health science's ability to build knowledge that benefits SMW's health and wellbeing.

Potential Gap 1: Larger Bodies May Not be Sicker Bodies

One of the key points of contention from critics of research on SMW and obesity is that this research presumes larger bodies are sick--that as an individual's body weight increases their health decreases. In fact, this connection between weight and disease has been routinely challenged, and several well-regarded counter-narratives reject overweight and obesity as health risks or negative health outcomes.

Scholars from across the disciplines of Public Health, Psychology, Sociology, and Women's Studies have for years pointed to the social construction of the obesity epidemic, arguing that the institution of medical science inflicts harm by prescribing that a body must look a specific way and weigh a particular amount in order to be healthy (Campos, 2004; Saguy & Ward, 2011; Solovay & Rothblum, 2009; Wann, 2009). The disciplinary field of *Fat Studies* emerged as a direct response to mainstream medical discussions of obesity and its theories deconstruct the assumptions embedded in obesity discourse (Solovay & Rothblum, 2009; Wann, 2009). *Fat Studies* resides on a key premise: weight or body size, like height or skin color, is a human characteristic with a natural amount of variability across the human population (Solovay & Rothblum, 2009; Wann, 2009). As such, "fat" can be thought of as a value neutral descriptor

of larger bodies, much like short or tall would be of height, rather than a pejorative term marking a body as unhealthy or unattractive (Saguy & Ward, 2011; Solovay & Rothblum, 2009; Wann, 2009). These discourses problematize the construction of obesity as a health concern and interrogate the stereotypes, assumptions, and stigma that surround people with fat bodies (Solovay & Rothblum, 2009; Wann, 2009).

Historically, the premise of large bodies as unhealthy is a relatively recent cultural phenomenon, which the medical field has helped to establish. Boero (2012), a leading sociologist on the social construction of obesity, maps out a historical trajectory of the medicalization of the *characteristic* of fatness into the *disease* of obesity in her book *Killer Fat*. Boero (2012) describes the origins of this process as rooted in work by health reformers in the 19th century who linked fatness to the sin of gluttony. Boero (2012) argues this bias got affirmed through the popularization of a slim aesthetic for middle class White women with the flappers of the 1920's, and then progressed further to a cultural distaste for fat bodies via their medicalization during the World War II era with the increasing status of the medical field and the expansion of bariatrics. Each of these historical moments helped to entrench the cultural belief that fatness is itself an illness. Boero (2012) notes that a natural extension of the medicalization of larger bodies was the quantification of body size, a process that resulted in the development of the BMI. Like many others (Bacon, 2010; Campos, Saguy, Ernsberger, Oliver, & Gaesser, 2006; Miller & Jacob, 2001), Boero (2012) argues that the BMI itself is an unstable marker. In 1998, the NIH moved the threshold for overweight from a BMI of 27.8 in men and a BMI of 27 in women down to a threshold of 25 across the board. This move "caused more than thirty million Americans to move from normal to overweight overnight" (Boero, 2012, p. 11). By plotting the emergence of obesity as an unstable marker of the health of human health, Boero makes a case

against the utility of labeling any one group “obese.” Thus, when viewed through an obesity-as-social-construct lens, research finding that one group of people has a higher average BMI than another does not actually convey information about the *health* of that group, but rather describes physical characteristics that are prevalent within it.

While the central narrative in public health is that “obesity kills,” there are several thriving offshoots of modern health research validating the instability of the link between body size and health. For example, BMI has both come under fire as a measure and been used to show that the convention that bigger equates to sicker is not supported in the evidence (Bacon, 2010; Campos et al., 2006; Miller & Jacob, 2001). The BMI, roughly approximating an individual’s body fat percentage, is used to categorize a person as underweight (below 18.5), normal (18.5 – 24.9), overweight (25 – 29.9), and obese (30 and above) (CDC, 2011; 2012). Under this rubric, the relationship between BMI and health is presumed to be linear with an individual’s risk of poor health increasing as their BMI does. Critics of the utility of BMI challenge the clarity of this relationship. One study found the relationship between excess mortality and BMI to be a U-shaped curve, wherein individuals with the lowest and highest BMIs (i.e., the extremes) accounted for the bulk of excess deaths (Campos et al., 2006). Another study by Lantz and colleagues (2010) looked at longitudinal data on aging and mortality from the American’s Changing Lives survey, and found that after controlling for socioeconomic and other behavioral risk factors for mortality, there was no significant relationship between overweight/ obesity and increased risk for mortality (Lantz, Golberstein, House, & Morenoff, 2010). On the contrary, for those older than 55, categorization as overweight or obese was related to a *decreased* risk of mortality (Lantz et al., 2010). The findings of both Campos and colleagues (2006) and Lantz and colleagues (2010) suggest that the relationship between body size and health is not as neat as

the dominant cultural story would have us believe. Others have debunked BMI all together, finding it to be a junk metric for predicting health. For instance, Burgard (2009) looked across multiple epidemiological studies and found the “correlation between health problems and BMI are typically at most $r = .3$ [that is] about 9% of [the] outcome of whether someone has a health problem [relates] to BMI. [...] 91% of what accounts for a health outcome has nothing to do with BMI” (Burgard, 2009, p. 43). Taken together, these researchers point to the notion that to assume *anything* about an individual from their body size is fallacious, as the connection between the two is much more nuanced than commonly believed. Thus investigations into body size within a particular population carry little meaning if done descriptively. In order to construct knowledge that illuminates the health of a population, scientists must examine body size within a larger context: examining root causes of potential size differences (i.e., poverty, food accessibility) or testing the degree to which variations in body size across groups predicts health outcomes (i.e., CVD, diabetes).

Critics of the robust endeavor to sleuth out causes and consequences of high BMI in SMW as compared to heterosexual women call upon these arguments deflating the importance of body size in relation to the health of populations. Under this rubric, the connection between elevated BMI and a sexual minority identity among women does not necessitate the level of concern currently conjured by the public health discourse around the bodies of SMW. In fact, the level of scrutiny of the bodies of SMW raises suspicion and concern given the stigmatized social status of fat women in the Western cultural context (Fikkan & Rothblum, 2011; Owen, 2012; Puhl & Brownell, 2001). Critics contend that by labeling SMW as a population at risk for obesity, and then investing in discovering the root causes of this risk, public health researchers may inadvertently pathologize SMW, and build up a case for lesbian culture as inherently sick

(McPhail & Bombak, 2014). These broader arguments deconstructing the understanding of obesity as a disease may be a place for public health researchers to reflect on the structure and content of research focused on SMW and body size. Do researchers categorize fat bodies as ipso facto sick, or do study designs and research questions leave room for the possibility that body size may be a characteristic that can be associated to varying degrees with disease?

Potential Gap 2: Body Image Matters to Wellbeing Regardless of Body Size

Another critique of the study of obesity and SMW is that such work largely ignores how SMW may *perceive* their bodies, despite the fact that there is strong evidence that self-perception of the body influences health. This connection has been mapped out within the body image literature. Body image refers to an individual's subjective appraisal and experience of their bodies, and has been found to be deeply connected to an individual's psychosocial wellbeing (Cash, 2004). Poor body image or a negative appraisal of one's body connects to outcomes like depression and eating disorders (Cash, 2004; Goldfield et al., 2010; Viborg, Wangby-Lundh, & Lundh, 2014). This connection is particularly salient for women in western culture, as there is a premium placed on women's adherence to a narrow aesthetic of beauty, largely defined by a slender physique (Bergeron & Senn, 1998; Fredrickson & Roberts, 1997; Garner, Garfinkel, Schawrtz, & Thomspen, 1980; Grabe, Ward, & Hyde, 2008; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). Thus, research that focuses solely on women's external characteristics without examining their internal evaluations of their physicality does not portray a complete portrait of bodies and wellness.

This omission is especially problematic within research on body size and health among SMW. While obesity literature casts SMW as health risky, literature on body image suggests that SMW may be at a health advantage in comparison to heterosexual women, as SMW

frequently report more positive body image (Austin et al., 2004; Morrison, Morrison, & Sager, 2004; Owens et al., 2003; Wagenbach, 2004). While there remains some conversation as to the degree of protection experienced by SMW (McPhail & Bombak, 2014; Peplau et al., 2009), the observation that SMW may make a more positive appraisal of their bodies than heterosexual women appears frequently in the scientific literature. Morrison and colleagues (2004) conducted a meta-analysis of 27 studies of body image examining differences by gender and sexual orientation. This meta-analysis uncovered that lesbians were on average more satisfied with their bodies than heterosexual women (Morrison et al., 2004). That same year Wagenbach (2004) re-emphasized the finding in a comparative study of adult lesbian and heterosexual women that found lesbians to be less concerned with dieting and physical appearance than heterosexual women. Notably, this difference has been uncovered not only in small community samples, but also in large national samples. In an analysis of the Growing Up Today Study, Austin and colleagues (2004) found body satisfaction among lesbian and bisexual adolescents present in many psychosocial domains: compared to heterosexual counterparts, lesbian and bisexual adolescents were happier with the way their bodies looked, less concerned with trying to look like girls and women in the media, less likely to diet, and less likely to say they were worried about being thin. Such findings are theoretically intriguing when considered alongside the obesity risk literature. In a culture that puts a premium on women maintaining a thin, feminine ideal of beauty at any cost (Bartky, 2003; Bordo, 1999; Dworkin & Wachs, 2009; Fredrickson & Roberts, 1997), the repeated observation of SMW positively assessing their bodies may be viewed as an asset that protects health. Not examining body image along body size invalidates the role that SMW's appraisal of their bodies may have in contributing to the overall health of this population.

The body image advantage among SMW appears to remain true regardless of a woman's body size (i.e., whether individuals are thin, fat, or somewhere in between), which is notable given the intense pressure women in western culture experience in relation to their bodies. Owens and colleagues (2003) found lesbians to be more satisfied with their bodies *and* to have slightly higher BMI than heterosexual women—a finding which implies that SMW may be able to maintain a greater degree of positive body image regardless of the size of their bodies. Recently Hadland and colleagues (2014) examined data from the Massachusetts Youth Risk Behavior Survey, and found that among the adolescents in this survey, lesbian and bisexual girls were more likely to perceive themselves as healthy and underweight when they fell into the BMI categories of overweight or obese than heterosexual girls. In a culture where feminine beauty is so intimately intertwined with thinness, and girls are taught from an early age that to be a woman means to exist for the viewing pleasure of others (Bordo, 1999; Dworkin & Wachs, 2009; Fredrickson & Roberts, 1997), the consistency of SMW's better body image at any size and in many different studies suggests they may have access to *something* that heterosexual women do not which affords the ability to feel positively about the female body.

To leave body image out of investigations of SMW and their bodies is to overlook an asset many women report being afforded as a result of their sexual minority identity. Such an erasure limits the cultural understanding of the experience of SMW to a story of risk (i.e., “lesbian and bisexual women are dying of obesity!”) rather than one of strength (i.e., “lesbian and bisexual women love their bodies!”). Gender and sexuality scholar Gayle Rubin stated that in “lesbian sexual culture [...] there truly is an appreciation of the beauty in a wider range of body types. [...] a very profound countertendency to celebrate a diversity of body types” (Gomez, Hollibaugh, & Rubin, 2000, p. 156). SMW may have access to a women-centered sub-

culture that adheres to different norms around gender and body type, leaving room for positive body image to exist across a wider range of body sizes than permissible within mainstream heterosexual culture. Social science research on beauty norms among SMW supports this claim. In several studies with SMW, participants expressed that after coming out, they felt less bound to social norms around body size and appearance (Bergeron & Senn, 1998; Krakauer & Rose, 2002). One older study that conducted focus groups with lesbians about beauty norms had a participant share, "Lesbian beauty is a release. We are not tied to the beauty of dominant culture—the 36-24-36 Barbie ideal. There is more of a freedom and ease" (Cogan, 1999, p. 26). A more recent qualitative study of lesbian women's body image concerns found that women discussed their connections to other lesbian women and the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community more broadly as integral to learning to appreciate their bodies (Yost & Chmielewski, 2011). In all these studies, the openness to a celebration of beauty at a variety of sizes is met with excitement and relief by SMW. This openness is perceived as an asset unique to SMW, one which warrants further investigation in relationship to SMW's overall health.

This discussion around body image and SMW presents another opportunity for health researchers invested in the wellbeing of this population. For example, to what extent does the scientific study of obesity account for body image? Or, more broadly, to what extent are markers of mental wellbeing and life satisfaction examined as relevant to research on body size with SMW? In order to create a holistic portrait of wellness with regard to body size, research on SMW and body size must include these domains within the content of this research. By not including body image as an important facet of the health of SMW, the research on body size of this population may overemphasize their health risk.

Assessing the Current Empirical Literature on SMW and Body Size

A lack of acknowledgement of these two theoretical conversations may bias the ways in which researchers approach the study of SMW and body size. Without understanding that the link between body size and health has been contested, scientists may design studies that situate larger bodies as definitively sick. Without familiarity with research on SMW and positive body image, researchers may overlook key psychological pathways which connect to health in this group.

Analytic approach. To understand how the current literature on SMW and body size attends to these two potential gaps, I reviewed literature published between January 2009 and January 2015 on SMW and body size. I sought to examine the ways in which quantitative health scientists empirically assessed the issue of body size and SMW in the time since the landmark review by Bowen and colleagues (2008). As such, I investigated the ways in which body size is operationalized and tested within recent empirical research on SMW and body size in order to understand the extent to which current health researchers' account for both the critiques of the obesity epidemic and the findings of positive body image among SMW. In so doing, I aimed to glean a better picture as to whether there is enough evidence to understand body size differences between SMW and heterosexual women as truly a *disparity*, a difference in health resulting from systematic inequalities.

To achieve these aims, I selected a purposeful sample of peer-reviewed articles on SMW and body size published in the years since the Bowen and colleagues (2008) review. I chose to conduct the literature search for these articles in PubMed, the official search engine of the *US National Library of Medicine National Institutes of Health*, and the gold standard for scholars working in the health sciences. Given its highly regarded status as a go-to search engine for

health, PubMed provides an ideal site for uncovering literature that health scientists view as respected and foundational to the understanding of SMW and body size. Notably, my selection of PubMed for this search is not meant to indicate that the quality of articles indexed in PubMed is better than articles indexed in other social science or humanities search engines; rather, my focus on PubMed reflects the reality that articles indexed in this search engine are widely read and heavily cited by health scientists. In seeking to understand how health scientists approach the issue of body size and SMW, I limited my search to PubMed to focus on this particular discipline's approach to this research topic.

In order to select relevant empirical articles, I conducted a search on the intersection of two concept areas: SMW and body size (see *Figure II.1*). A concept area refers to the relevant population, intervention, comparison, or outcome of interest to a researcher within a particular literature review (Higgins & Green, 2011). These concept areas guided the vocabulary and keywords used to structure the PubMed search. *Figure II.1* also displays the final list of keywords utilized in the PubMed search. These keywords returned 97 articles published between January 1, 2009 and February 1, 2015.

The study sample was further narrowed via an abstract review. Abstracts were reviewed in accordance to inclusion and exclusion criteria to limit the sample to quantitative studies focused explicitly on the concept areas of SMW and body size. For a list of full inclusion and exclusion criteria for the abstract review, please see *Table II.1*. After the abstract review, 43 articles remained in the sample. As a final step, in order to focus the full text review to those articles with the greatest circulation and greatest potential influence on the developmental direction of the health sciences, a top ten list of publications was created. Publications from journals with the highest relative impact factors were selected for a full text review. Journal

impact factor was chosen as a metric for an article's relative influence in the health sciences rather than the number of times each article had been cited. Given the recency of some of the publications located in the search, not enough time had passed for other scholars to cite the works. In order to provide a cross-section of publications from the health sciences, a maximum of two articles from the same journal could be included. This final analytic sample, as well as the key dimensions of interest are presented in *Table II.2*.

I aimed to assess the degree to which the structure of current health research on SMW and body size accounts for the two potential gaps noted by critics and expanded on above: (1) that difference in BMI may not indicate a physical health risk, and (2) that positive body image matters to health and wellbeing regardless of body size. In particular, I examined the following components of the articles in the analytic sample: the research question, predictors, outcomes, operationalization of body size, results related to SMW and body size, and author's recommendations.

To what extent does influential health literature on SMW and body size allow for larger bodies to be interpreted as anything other than sick? In order to answer this question, articles were categorized according to the way in which authors operationalized body size and the ways in which authors framed their research questions and statistical analyses. In particular, did the authors conceptualize body size as health an *outcome* or a *predictor* (i.e., independent, mediator, or moderator variable) in their analyses? This distinction provides insight to whether the authors viewed body size as a health state (i.e., outcome) or a proxy for health (i.e., predictor). Additionally, the centrality of body size within the analysis was noted—was body size the primary construct of interest or one of many constructs of interest? The centrality of body size in the analyses revealed whether it was constructed as a key indicator of health and

wellness or simply one component in a greater tableau of health and wellness. Using this logic, all the publications were categorized as falling into one of four categories laid out in a 2x2 table (*Table II.3*).

In the sample of ten publications examined in this analysis, three of the articles fell into the first category (i.e., body size as one of many outcomes of interest; Boehmer, Miao, & Ozonoff, 2012; Lehavot & Simoni, 2011; Strutz et al., 2015) and four of the articles fell into the second category (i.e., body size as primary outcome of interest; Austin et al., 2009; Deputy & Boehmer, 2014; Katz-Wise et al., 2014; Laska et al., 2015). What these seven articles share is their designation of body size, and more specifically overweight and obese bodies, as a marker of disease. By situating body size as the outcome in analyses, the authors indicate their bias that that body size as a characteristic that needs explanation. Given that 70% of the articles take this approach, it can be inferred that health literature on SMW largely ignores the possibility that high BMI means anything other than unhealthiness.

Where these two categories are distinct is in their broader purpose. Articles looking at body size as one of many health outcomes of interest aim to assess the presence of health disparities related to sexual orientation. They seek to map out the extent to which being a sexual minority puts an individual at risk for poor health, broadly defined. For example, Strutz and colleagues (2015) aimed to assess the “various health related characteristic of sexual minorities [...] in comparison with those of the majority” (p. 77) and examined rates of conditions and behaviors as diverse as headaches, STIs, and frequency of health care across sexual identity in young adults. Indeed, this article typifies an exploration designed to uncover health disparities between a cultural majority and a marginalized group, and while the inclusion of BMI as one such outcome reinforces the idea that larger bodies are sicker bodies, the authors do not

explicitly identify it as an issue of critical importance to SMW. Conversely, articles which examine body size as the primary outcome of interest are more directly engaged in the science of obesity. They single out the presence of high BMI as a grave danger to SMW and one which warrants intensive scientific scrutiny. For example, both Katz-Wise and colleagues (2014) and Deputy and Boehmer (2014) sought to understand differences in BMI across gender, sexual identity, and race, and used those difference to mark which social groups were at the highest risk (i.e., the groups with the highest BMIs). Articles in this second category are more directly implicated in the cultural construction of the fat, sick lesbian due to the specific scrutiny into the size and scope of differences in body size across sexual identity.

Of the remaining three articles in this analytic sample of ten, two analyze body size as a primary predictor of interest (i.e., category 3; Hatzenbuelher et al., 2013, Peplau et al., 2009). By situating body size as the *predictor*, these articles do not assume body size is a disease, but ask *to what extent* body size is associated with health outcomes. What results is a much more nuanced discussion of relationship between SMW, their body size, and their general health and wellbeing. For example, Hatzenbuelher and colleagues (2013) tested biological markers of cardiovascular disease (CVD), and found that while SMW reported higher BMIs than heterosexual women, they actually had *fewer* biomarkers of CVD than heterosexual women—results which call into question the assumption that the bodies of SMW are too big to be healthy. Peplau and colleagues (2009) examined how gender, sexual orientation, and body size influenced body image and sexual satisfaction. They found more similarities than differences between SMW and heterosexual women in these domains, with a few exceptions: “healthy weight” (i.e., those women who fell in the range of “healthy” BMI: 18.5 – 25) lesbians were less comfortable in a swim suit than heterosexual women, and overweight and obese lesbians were less likely to

hide their stomach during sex than heterosexual women. These findings point to the utility of examining how ideals around body size may influence how women think and feel about their bodies, but do not find a clear link between sexual orientation, weight, and health among women. By making body size a predictor rather than an outcome within statistical models, scientists open up their results to discovering alternate narratives around the link between body size and health.

The final article of the ten included in this analytic sample falls outside of all these categories of analysis--the authors of this study measured BMI and included it in descriptive tables, but did not include it in any of their analyses (Yean et al., 2013). It is unclear what the analytic intent of this inclusion of BMI by these authors was, but given the article's focus on sexual orientation, social norms of body, and eating disorder symptomatology, the presence of BMI in this discussion may indicate the broader scientific community's unwillingness to publish any article about the bodies of SMW that does not contain measures of size.

To what extent does the influential health literature on SMW and body size acknowledge the relevance of body image to health? Two aspects of these articles pointed to whether scientists had an awareness of body image as a critical piece of understanding differences in body size among SMW as compared to heterosexual women: (1) did body image or related construct appear as a predictor or an outcome in the article, and (2) was body image speculated about in the recommendations or discussion section of the paper?

Of the ten articles in the sample, only Yean and colleagues (2013) sought to examine constructs related to body image (e.g., body dissatisfaction, drive for muscularity) as predictor variables; however that was in relation to eating disorder symptomatology, not body size. No top ranked article evaluated whether body image or cultural ideals of body might influence body size, suggesting the sociocultural standards of ideal beauty among SMW are not commonly

conceived of as an essential driver of this difference. However, two articles did include body image as an outcome (Laska et al., 2015; Peplau et al., 2009). In the study by Laska and colleagues (2015), both body satisfaction and BMI were outcomes in an exploration of differences in weight and weight behaviors across college students of different genders and sexual orientations. While high BMI denoted poor health in this article, it was part of a larger constellation of outcomes that jointly presented a portrait of women's health and health behaviors. The authors created a more comprehensive tableau of the health of young women across sexual orientation in this sample, one which included the perceived experience of one's body, not only BMI. Peplau and co-authors' (2009) study was unique in the centrality of body image as a construct of interest. Rather than concern for body size as a health outcome, this article highlighted how inhabiting a large body affects one's psychology and sexual satisfaction in negative ways due to the negative cultural ideals around larger bodies. This article's inclusion of body image presented a different story: one about fat bodies as stigmatized identities, rather than sick. In all these articles, the inclusion of psychological constructs related to body image emphasized SMW's personal appraisal of their bodies, rather than relying solely on the de-personalized metric of BMI to tell the story.

While seven articles did not assess body image or related constructs within their research questions, two of these articles brought up body image in their discussion section (Deputy & Boehmer, 2014; Katz-Wise et al., 2014). Deputy and Boehmer (2014) pointed to differences in body image as potentially explaining some of the differences in body size observed across gender, race/ethnicity, and sexual orientation. This framing identifies positive appraisals of larger bodies as a risk factor for obesity. Conversely, Katz-Wise and colleagues (2014) discussed body image within the context of obesity interventions, naming body image as a

critical component of any intervention targeting weight among adolescents. Their discussion emphasized that health scientists should not overlook the personal relationship SMW have with their bodies when designing health interventions.

Notably, the remaining five articles in the analytic sample do not acknowledge body image, downplaying these personal relationships women have with their bodies leaving health to be constructed solely in relationship to physical characteristics while ignoring other dimensions of wellbeing. Two of these articles (Boehmer et al., 2012; Strutz et al., 2015) aim to paint a broad picture of health across sexual identity within populations of women, and the exclusion of body image limits the conclusions to only external characteristics and health behaviors, rather than the subjective bodily experience of participants. One article (Austin et al., 2009) follows changes in body size over time by sexual identity, but omits body image, thus emphasizing the importance of external characteristics of bodies over internal attributions. Two articles (Hatzenbuehler et al., 2013; Lehavot & Simoni, 2011) have specific research questions which have analytic goals which may make the inclusion of body image as a construct inappropriate (i.e., prevalence of biomarkers CVD risk and consequence of childhood sexual abuse, respectively).

Conclusions and Recommendations for Ongoing Research on the Relationship between SMW, Bodies, and Health

While research on SMW, obesity, and its consequences continues to expand (Farmer et al., 2013; Katz-Wise et al., 2014; Lehavot & Simoni, 2011), so too do the criticisms of these lines of research with regard to the potential damage they may cause if done uncritically (Brighe, 2014; Lesley, 2014; McPhail & Bombak, 2014). In this paper, I zeroed in on two gaps which may be problematic if ignored in the conceptualization of this thread of research: (1) the

assumption that larger bodies are always sick, and (2) the relevance of body image to women's wellbeing regardless of body size. In analyzing ten high ranked articles published on the topic of SMW and obesity since 2008, I revealed the degree to which these gaps pervade research on the bodies of SMW. Little room is granted to the possibility that the BMI difference between sexual minority and heterosexual women indicates anything other than illness. Most studies (7 of 10) situated BMI as an outcome in need of explanation, highlighting the absence of more nuanced understandings of body size within this literature. The prevalent construction of fat bodies within the research on SMW and body size is one of disease. With regard the second potential area of deficit, body image was included in half the articles: evaluated empirically in three and discussed theoretically in two. The lack of consistent inclusion of body image in this research points to the continuing supremacy of biological metrics of health above individual perceptions of wellness. In terms of mapping a true health disparity experienced by SMW, the review of these articles points to a greater lack of evidence for categorizing BMI differences between SMW and heterosexual as a disparity.

Of course, the articles within this purposeful review do not represent the sum total of research on body size and SMW. In particular, the inclusion of body image alongside examinations of SMW and body size occurs with frequency in the broader literature (Alvy, 2013; Koff, Lucas, Migliorini, & Grossmith, 2010). Yet, the rarity of these types of analyses among recent publications in high impact journals belies the priorities of the field. Their absence suggests that the obesity framework, which designates physical size as a marker of disease regardless of other factors, is still the dominant understanding of the bodies of SMW within the health sciences. Internal appraisals of and comfort with body size are ranked as less relevant to assessing health than the physical characterization of bodies.

With an eye toward the future, I present five central recommendations for moving forward the empirical study of sexual identity, bodies, and health in women in a manner that both accounts for the structural marginalization of SMW and honors the potentially unique relationship SMW may have with their bodies.

1. **Explain body size difference between SMW and heterosexual women.** Results are fairly consistent and compelling that SMW in the US report higher BMI than heterosexual women. Replicating these results, inferring obesity risk, and then recommending more research does not illuminate the social or structural mechanisms at work behind this trend. From an ontological perspective, repeatedly ask and answering this question further entrenches the idea high BMI among SMW denotes sickness, despite the lack of any clear empirical evidence of conclusion beyond the circular logic of the observed differences in body size across sexual orientation. For researchers with continued concern about this BMI differential, proposing novel pathways to explain it is an important next step. For example, SMW and their families are more likely to be living in poverty than either the families of heterosexuals or sexual minority men (Albelda, Badgett, Schneebaum, & Gates, 2009). Evaluating whether structural deprivation has a role to play (or not) in these observed BMI differences would make the case for disparity far more than the repeated discovery of difference.
2. **BUT, be open to the idea that the difference might not be due to risk.** One consequence of viewing fat bodies as sick is that explanatory pathways may only get constructed in relationship to deprivation or trauma; however, fat bodies may not always indicate distress. In order to avoid building a compendium of evidence that supports the biases of the culture at large (i.e., fat is always bad), it may be a fruitful enterprise to

examine the degree to which protective factors explain the larger bodies of SMW. For example, long term relationships and cohabitation have been linked to increases in BMI (Averett, Sikora, & Argys, 2008), yet on balance healthy relationships are thought to benefit individual health. The relationship statuses of SMW and the dynamics within this relationships may be one underexplored explanation this observed difference.

Alternatively, perhaps the cultural norms which contribute to positive body image in SMW also contribute to the BMI difference between SMW and heterosexual women.

There are norms that SMW report as contributing positively to their lives in many important ways (Bergeron & Senn, 1998; Cogan, 1999; Krakauer & Rose, 2002; Yost & Chmielewski, 2011). Our understanding of the BMI difference across women of different sexual orientations would benefit from hypothesizing causal factors that included protective mechanisms available to SMW. The testing and validating of such pathways might shed a new, more positive light onto the interpretations of this BMI differential.

3. **Account for diversity within SMW.** Sexual minority women cannot be understood as a monolith. Within sexual minority women, there exists a great diversity of sexual identities (e.g., lesbian, bisexual, pansexual), racial identities, gender identities (e.g., butch, femme, gender queer), class backgrounds, and ages. Each of these dimensions carries implications for body size and body image. As research in this area progresses, scientists must strive to incorporate identities and structures beyond simply women's sexual minority status in order to understand the full complexity of the relationship SMW have with their bodies and health.

4. **Examine body size as a predictor.** The two articles in the review testing body size as a predictor elicited more nuanced information about the relationship between BMI and health than the other studies (i.e., SMW had both higher BMI and lower CVD risk than heterosexual women, and being overweight or obese may result in negative feelings about one's body that impact sexual satisfaction). Framing body size as predictor rather than an outcome allows observation of variation in health status related to body size, and creates a more complex portrait of the role of body size in the lives of individuals. As Lantz and colleagues (2010) found, larger bodies can be health protective for individuals in particular contexts, but our knowledge of the extent to which larger bodies benefit or perhaps contribute nothing to the overall health of SMW will not develop if body size remains solely an outcome in studies of the health of this population.
5. **Consider the role of stigma.** Only conceptualizing body size as a health state limits the scope of research on this topic. There are other conceptualizations of body size which may shed light on its connection to health. For example, the theoretical and empirical literature from *Fat Studies* and related fields acknowledges that body size is a physical characteristic, one which gets stigmatized when that characteristic is fatness (Solovay & Rothblum, 2009; Wann, 2009). Body size has the potential to impact an individual's sense of self, her interpersonal relationships, the treatment she receives at work, school, in her community (Puhl & Brownell, 2001). In this way, body size is a characteristic which structures an individual's social reality, and may become a characteristic which contributes to health disparity. This is a subtle shift in the construction of the relationships between body size and SMW: the marginalization experienced by SMW does not cause obesity, but rather, SMW with fat bodies may endure increased

marginalization with implications for health. Further research is needed to examine the role of stigma influencing the health of SMW across various body sizes, and its impact on health.

Incorporation of these recommendations into the empirical study of SMW, bodies, and health will diversify the potential conclusions that can be drawn from this science and deepen the types of knowledge it generates. Naming BMI differences between sexual minority and heterosexual women a health disparity without examination of the causes and consequences of the BMI difference inadvertently reifies the marginalization of this population. Critics of obesity research on SMW point to its uncanny resemblance to heterosexist narratives about lesbian and bisexual women that label them fat and erase the positive appraisal many carry for their bodies (Brighe, 2014; Lesley, 2014; McPhail & Bombak, 2014). The recommendations here are designed to carve out new intellectual space within this empirical conversation by viewing larger bodies through a lens that does not presuppose sickness, holding up that women's perceptions of their bodies matter, and recognizing that to be labeled "overweight" or "obese" in the current culture carries social baggage.

In sum, examining the health of minority populations like SMW remains a critical endeavor for health scientists invested in health equity and social justice; however, the health research community cannot assume every example of difference is an example of disparity. The move from a difference to a disparity must be proven by a thorough examination of the social realities of priority populations, paying homage to the unique ways that identities structure individuals' relationships to their bodies. The scientific study of SMW and bodily health need not be abandoned, but rather moved forward in a manner which recognizes these conditions.

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Figure II.1: Concept Areas and Keywords Included in PubMed Search

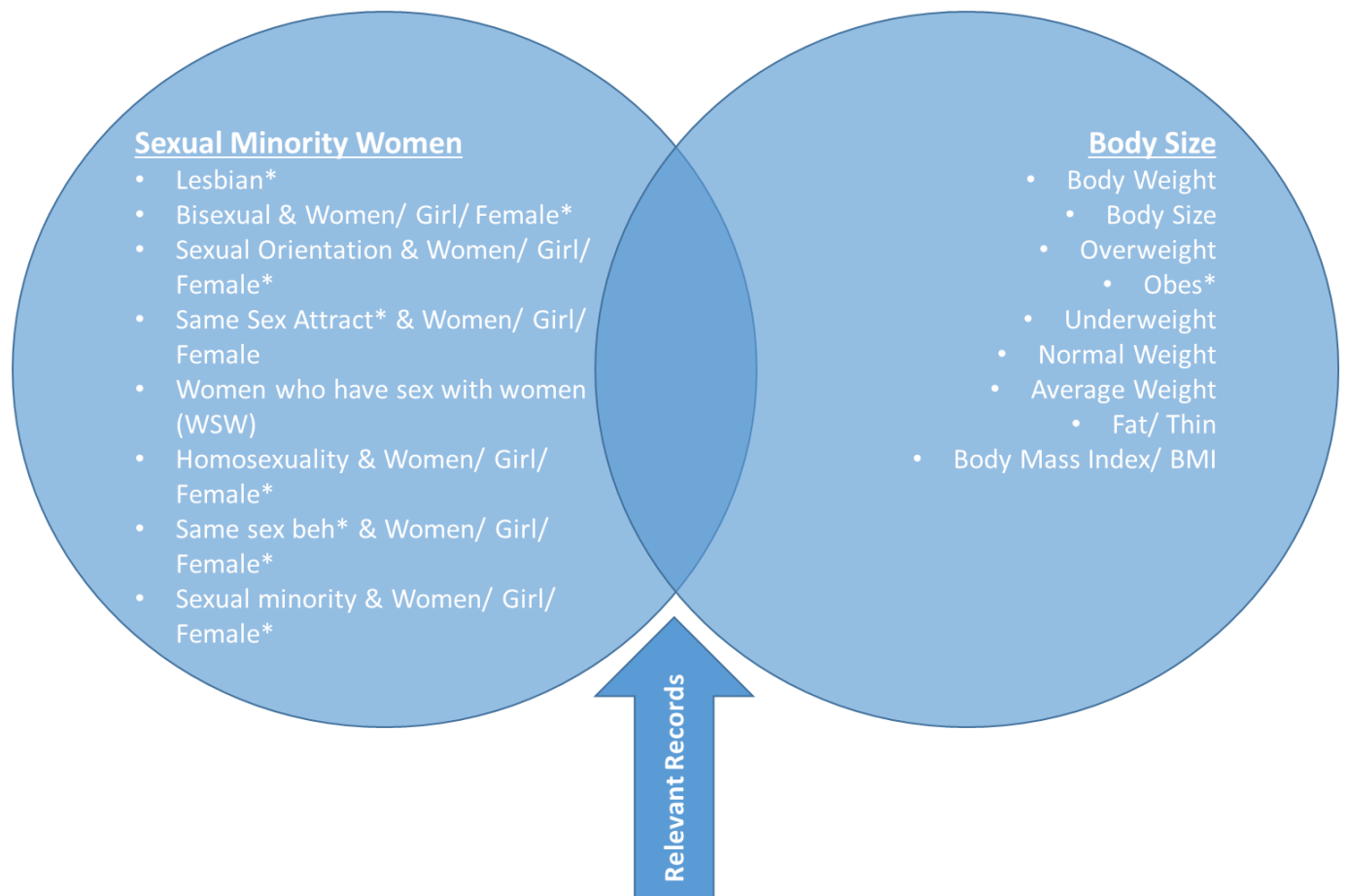


Table II.1: Inclusion and Exclusion Criteria Utilized in Abstract Review

Inclusion Criteria	Exclusion Criteria
<p><i>Included articles must</i></p> <ul style="list-style-type: none"> • Explicitly identify sexual minority women as a population of interest • Measure and include body size in analyses • Be a quantitative analysis (i.e., that is any study utilizing statistics to understand the relationship between variables or constructs) • Be peer reviewed • Focus on the United States • Be written in English 	<p><i>Included articles must not</i></p> <ul style="list-style-type: none"> • Pose research questions with an outcome unrelated to health • Focus on international populations • Be a meta-analysis • Be a qualitative inquiry • Be a commentary or editorial • Be a dissertation • Be from the gray literature • Be an animal study • Be an international study

Table II.2: Top 10 Articles from High Impact Journals on the Topic of Sexual Minority Women and Body Size from 2009 - 2015

Author, Year, Journal Impact Factor	Research Question	Predictors	Outcomes	Operationalization of Body Size	Results related to SMW & Body Size	Recommendations related to SMW & Body Size
Austin et al., 2009, 4.389	What differences across sexual orientation and gender emerge in weight patterns over time?	Sexual orientation, age, race, gender, time	Body mass index (BMI), BMI z-score, Overweight (Y/N)	Category 2 - Body Size is Primary Outcome of Interest	LB women had higher BMIs during adolescent years than het women. L and Mostly Het women were more likely to be overweight in early 20's.	Considerations of potential causal mechanisms, namely sexual minority stress and negative coping mechanisms. More research needed.
Boehmer et al, 2012, 2.961	Do differences exist in the "health lifestyle behaviors" of cancer survivors of different sexual orientations?	Sexual orientation, gender, age, race, education, annual household income, nativity	Overweight (BMI > 25), alcohol use, current smoker, physical activity level, fruit & vegetable consumption, doctor visits	Category 1 - Body Size is One of Many Outcomes of Interest	Women did not differ in likelihood of being overweight across sexual orientation.	Not sexuality specific. Because 50% of all female cancer survivors are overweight, recommend health interventions for survivors broadly.
Deputy & Boehmer, 2014, 4.229	To what extent does weight differ across sexual orientation and race? Do	Sexual orientation, gender, race/ethnicity, nativity, education,	Overweight (BMI > 25) at age 18, Overweight at current age, Change in weight	Category 2 - Body Size is Primary Outcome of Interest	White and African American LB women were more likely to be overweight at age 18 than het women	Authors suggest early intervention with White and African American lesbian and bisexual adolescents to prevent becoming overweight.

	these differences exist in adolescence, or do they emerge in adulthood?	income, insurance status, age	status from 18 to current age		of same race. White lesbian women were more likely to be overweight at current age than White het women. Asian bisexuals had greater BMI increase over time than Asian het women. No other differences by race and sexual orientation.	They consider body image differences as a potential mechanism for observed differences; however, their data did not support the existence of such differences.
Hatzenbuelher et al, 2013, 4.281	To what extent does sexual orientation predict individual differences in biomarkers of cardiovascular risk?	sexual identity, age, race/ethnicity, SES (income, education), health behaviors (smoking, regular physical activity, alcohol consumption); and BMI	C-reactive protein, glycosylated hemoglobin, systolic and diastolic blood pressure, and pulse rate	Category 3 – Body Size is Primary Predictor of Interest	Despite having more risk factors for cardiovascular disease, including smoking, heavy alcohol consumption, and higher BMI, lesbians and bisexual women had lower levels of C-reactive protein than heterosexual women in fully adjusted models.	Authors reflect on apparent discrepancy between the finding that lesbian and bisexual women appear to have more risk factors for cardiovascular disease (i.e., high(er) BMIs, smoking) but the fewer biomarkers of CVD risk found in this group. A call is made for more research.

Katz-Wise et al, 2014, 4.389	What disparities exist in BMI over time across gender, sexual orientation, and race/ethnicity?	Sexual orientation, age, gender, race	BMI trajectories over time	Category 2 - Body Size is Primary Outcome of Interest	BMI was higher among bisexual non-Latina white and Latina females compared to same race/ethnicity heterosexual females, but difference across sexual orientation not found within other sexual minority female subgroups by race	Authors suggest that obesity prevention and intervention needs inclusion of health body image and weight management for all youth, regardless of sexual orientation, and should be relevant for all races and ethnicities.
Laska et al., 2015, 4.229	What differences exist in weight and weight behaviors across sexual orientation amongst college students?	Sexual orientation, gender, school type, race/ethnicity, age, student status, relationship status, living arrangement, hour worked per week, credit card debt, international student	Weight status (i.e., body mass index), weight behaviors (e.g., fruit and veggie consumption, fast food consumption, moderate/strenuous physical activity, binge eating, body satisfaction)	Category 2 - Body Size is Primary Outcome of Interest	Lesbian and bi women more likely to be obese than het and discordant het women. Bi women more likely to skip breakfast than het women. Lesbian and bi women ate more frequently at restaurants than het women. Bi women less likely to engage in strengthening activities than het women. Bi and discordant	Authors identify bisexual and discordant heterosexual women as groups at risk. They hypothesize that experience with male and female partners may reflect psychological prediction for experimenting with new or risky behaviors. They also reflect that bisexual exclusion from both hetero and lesbian communities may reduce the social support available to b

					heterosexual women most likely to report unhealthy weight control and binge eating.	women which may influence their health behaviors.
Lehavot & Simoni, 2011, 3.621	What relationships exist “among childhood abuse, adult sexual assault, smoking, and chronic physical health problems in a large, national internet sample of SMW”?	Sexual identity, childhood abuse (i.e., emotional, physical, or sexual abuse; emotional or physical neglect), adult sexual assault (i.e., oral, vaginal, anal), age, education	Smoking, arthritis, diabetes, heart disease, chronic respiratory condition, hypertension, and high cholesterol, body mass index	Category 1 - Body Size is One of Many Outcomes of Interest	Sexual minority women who experienced childhood abuse had higher BMIs	Authors call for development of obesity prevention programs which account for the social context, including experiences of trauma which create barriers to health.
Peplau et al., 2009, 2.783	Study 1: How does body dissatisfaction differ across gender and sexual orientation, and how does body satisfaction impact sexual satisfaction?	Study 1: gender, sexual orientation, covariates (i.e., age, BMI) Study 2: gender, sexual orientation, covariate (i.e., age), moderator (i.e., BMI)	Study 1: Appearance evaluation scale, overweight preoccupation scale, body image quality of life inventory, body image quality of sex life items Study 2: Self-rated attractiveness,	Category 3 – Body Size is Primary Predictor of Interest	Study 1: More heterosexual than lesbian women scored high on overweight preoccupation, otherwise generally similar across sexual orientation Study 2: Healthy weight lesbians less comfortable in a	The authors reflect that they find little support for the idea that lesbian women have better body image than het women. They note that the only consistent difference was that lesbians were less preoccupied with weight, and called for more research on how

	Study 2: Same question as study 1, with follow up: how does BMI predict body satisfaction, and to what extent are heavy lesbian women more satisfied with their bodies than heavy heterosexual women?		comfort in a swimsuit, satisfaction with weight, body concealment during sex		swimsuit than het women, More het women than lesbians reported hiding parts of their body during sex, Overweight and obese lesbians less likely to hide stomach during sex than same weight het women, otherwise similar across sexual orientations	lesbian cultural norms effect body image.
Strutz et al., 2015, 4.281	What are the “various health related characteristic of sexual minorities [...] in comparison with those of the majority”?	Gender, sexual minority status, age, race/ethnicity, educational attainment, income, urbanicity, region of residence	BMI, medication use, single item health status, asthma/chronic bronchitis, migraine headaches, high blood cholesterol/ triglycerides/ lipids, hypertension, depression, anxiety/panic disorder, ADHD/attention problems, STIs, depression,	Category 1 - Body Size is One of Many Outcomes of Interest	Measured BMI did not differ significantly between sexual minority women and “the majority.”	None. The authors more generally call for public health programs that mitigate stigma among sexual minority women.

			insurance status, frequency of health care (several indicators)			
Yean et al., 2013, 2.843	What differences exist by gender and sexual orientation on social norm internalization, body image, and eating disorders?	Sexual orientation, gender, internalization (of body norms), body dissatisfaction, drive for thinness, drive for muscularity, self esteem	Eating disorder symptomatology	Other – Body Size Included as Descriptive Statistic Only	LB women reported more drive for muscularity, lower internalization of thin ideal, & lower self-esteem than het women. L women were more likely to be overweight or obese than het women.	None. Focus explicitly on eating disorders and equivalent risk profiles for LB and het women.

Table II.3: Categorization of Articles by Operationalization of Body Size

Is Body Size the...	One of Many Constructs of Interest	Primary Construct of Interest
Outcome	1	2
Predictor	4	3

Note: Category 4 could not be adequately examined in this review, as many studies not captured by this purposeful literature review include BMI as a demographic control.

CHAPTER III

Positive Marginality: What aspects of the social identities of sexual minority women contribute to positive body image?

Poor body esteem is a ubiquitous problem among women in United States (Homan, 2010; Impett, Henson, Breines, Schooler, & Tolman, 2011; Kroon van Diest & Perez, 2013; Mendelson, McLaren, Gauvin, & Steiger, 2002). *Body esteem* refers to an individual's self-evaluation of their body or appearance (Mendelson, Mendelson, & White, 2001; Mendelson et al., 2002). Scholars studying body esteem, or related constructions like body image and body satisfaction, largely attribute women's poor evaluation of their bodies to the process of gender socialization and objectification, namely that women in Western cultures are continuously asked to measure up to unattainable standards of beauty, which degrades their opinions of their physical bodies (Fredrickson & Roberts, 1997). The bulk of research on body dissatisfaction discusses this process within heterosexual samples without substantial attention paid to the role of sexual identity (Bergeron & Senn, 1998; Garner, Garfinkel, Schawrtz, & Thompspon, 1980; Grabe, Ward, & Hyde, 2008; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). This oversight has left the literature on body esteem without an understanding of how sexual minority women (SMW), or women who identify their sexual orientation as something other than heterosexual (Young & Meyer, 2005), may experience this process of gender and body esteem.

When studies of young women and body esteem do include sexual identity, the results frequently indicate that SMW may have better body esteem or less distress related to their physical appearance than heterosexual women (Morrison, Morrison, & Sager, 2004; Owens, Hughes, & Owens-Nicholson, 2002; Share & Mintz, 2002). While this trend exists, only a small group of researchers have examined body esteem within groups of SMW to explore potential mechanisms behind this difference. Recent work on body esteem and SMW has identified LGBTQ community ties as potential pathway through which this population may develop more positive beliefs about their bodies (Alvy, 2013). Informed by the concept of *heteronormativity* (Jackson, 2006), this study seeks to contribute to this developing line of research by exploring how the gender and sexual identities of young SMW and their relationship to the LGBTQ community contribute to improved body esteem. To set the stage for these analyses, I begin with a discussion of the current state of the science of body esteem and young women, address the role of gender socialization in body esteem, and discuss the role of the LGBTQ community as a place where young SMW have access to alternate forms of gender socialization.

Research on Body Esteem

Body esteem refers to an individual's self-evaluation of their body or appearance (Mendelson et al., 2001; 2002). *Body esteem* is distinct from similar constructs such as body image or body satisfaction, in that it accounts for the multidimensionality of an individual's perception of their body (i.e., body esteem is comprised of an individual's satisfaction with or evaluation of their body across different domains rather than an overall assessment; Franzoi & Herzog, 1986; Mendelson et al., 2001; 2002). The dimensions of body esteem have been mapped across multiple populations—for example, body esteem has been studied among US adults (Green & Pritchard, 2003), adolescent girls (Lieberman, Gauvin, Bukowski, & White,

2001), and transgender youth (Grossman & D'Augelli, 2007) to name a few. The construct of body esteem has been measured and modified depending on a researcher's and population's needs. Early work by Franzoi and Herzog (1986) differentiated between men's and women's experiences of body esteem: women's body esteem related to sexual attractiveness, weight concern, and physical condition, while men's body esteem related to physical attractiveness, upper body strength and physical condition. This work pointed to perceptions of one's body being gendered. In contrast, Mendelson and colleagues' (2001) *Body Esteem Scale for Adolescents and Adults (BESAA)* discovered three unique, orthogonal dimensions of body esteem that converged regardless of gender: *body weight* (i.e., an individual's satisfaction with their weight), *body appearance* (i.e., an individual's general feelings about their physical appearance), and *body attribution* (i.e., an individual's perception of how others evaluate their body and appearance). As a construct, body esteem has been found to be associated with several key health outcomes such as depression (Goldfield et al., 2010) and eating disorders (Viborg, Wangby-Lundh, & Lundh, 2014). As such, body esteem and its multidimensional approach provides a conceptually rich starting point for understanding how individuals' evaluations of their body relate to health and wellbeing.

Body esteem and its connection to gender socialization. Generally, poor body esteem (or related constructs such as poor body image or body dissatisfaction) is a particular issue for the mental health of women (Jackson et al., 2014; Menzel et al., 2010). Several studies document how women who suffer from poor body image report higher rates of related health outcomes like depression and eating disorders (Jackson et al., 2014; Menzel et al., 2010). Feminist social scientists for years have connected the issue of poor body esteem in young women to gender socialization (Fredrickson & Roberts, 1997; Tolman & Porche, 2000; Tolman,

Impett, Tracy, & Michael, 2006). *Gender socialization* is the process by which human infants come to learn the “system of social rules and customs” ascribed to women and men within their cultural context (Fagot, Rodgers, & Leinbach, 2000, p. 65). The gender socialization process has been found to have implications for mental and physical health. Gender socialization plays an essential role in the ways in that women come to view their bodies, particularly with regard to their perceived attractiveness (Fredrickson & Roberts, 1997; Lopata, 2006). Scholars examining how gender influences body esteem frequently situate their work in relation to *Objectification Theory* (Fredrickson & Roberts, 1997; Impett et al., 2011; Moradi, 2010). Fredrickson and Roberts (1997) argue that both women and men received messages from visual media and interpersonal interactions about their respective roles, and as a result, learned from an early age that women exist for the sexual titillation of men and the female body is a merely a product to be consumed by the male gaze. In response to this cultural ethos, women come to view themselves “as bodies that exist for the use and pleasure of others” (Fredrickson & Roberts, 1997, p. 175).

Subsequently, researchers examining body esteem and related constructs in this framework consistently find that internalization of gender roles and norms by young women is associated with poor body esteem (Bergeron & Senn, 1998; Gillen & Lefkowitz, 2006; Homan, 2010; Tolman & Porche, 2000). Multiple studies point to the conclusion that greater exposure to mainstream media is associated with worse body esteem for young women, likely due to the glamorization of the *thin ideal* (i.e., portrayals of women as most beautiful when they are at their most thin; Bergeron & Senn, 1998; Garner et al., 1980; Grabe et al., 2008; Thompson et al., 2004). Additionally, exposure to interpersonal interactions that validate the sexualized, subordinate role of young women have been linked to poor body esteem (Lindberg, Grabe, & Hyde, 2007). Longitudinal survey research with early adolescents supports the supposition that

as young girls enter puberty, they increasingly encounter unwanted sexual attention from male peers, and these experiences are associated with increased levels of body surveillance and body shame (Lindberg et al., 2007). Researchers argue that media exposure and peer harassment cultivate poor body esteem in young women (Bergeron & Senn, 1998; Garner et al., 1980; Grabe et al., 2008; Lindberg et al., 2007; Thompson et al., 2004).

Furthermore, these sexist beliefs and attitudes about the role of women in society become internalized with negative consequences for young women's body esteem. The degree to which women internalize these norms varies, and this may be one juncture that the demands of larger society and women's perceived need to adhere to them may be severed. Tolman and Porche (2000) worked to measure degrees of internalization of gender roles through their study of *femininity ideology*, a term they use to characterize the beliefs about women's roles that are held by women and maintain their subordinate social status. The study of the construct of femininity ideology revealed the depths at which gender processes relate to young women's relationship with their bodies (Tolman & Porche, 2000). In one study, they found that young women who reported greater adherence to feminine personality characteristics (i.e., inauthenticity, deference to others in social situations) demonstrated worse body esteem than those who are less committed to femininity and femininity ideologies (Tolman & Porche, 2000). For young women in their sample, striving to meet the demands of femininity predicted negative beliefs about their bodies. Thus, literature on gender and body esteem in young women reflects the premise that restrictive feminine gender norms appear to be a mechanism driving poor body esteem among this population. Notably, the bulk of research investigating the processes that inform young women's body esteem have been done with samples of heterosexual women. Far fewer studies have sought to examine how gender norms and the internalization of these norms may influence

to body esteem of young SMW. This construct of femininity ideology may offer an important conduit through which young SMW access more positive body esteem.

Body Esteem and SMW

Several studies indicate that body esteem (and related constructs) may operate differently for SMW, thus warranting more investigation to the predictors of body esteem in this population. SMW consistently report less distress and fewer negative attitudes about their bodies than heterosexual women (Owens et al., 2003; Peplau et al., 2009; Wagenbach, 2004). In comparing sexual minority and heterosexual women, Owens and colleagues (2003) found that lesbians fared better than heterosexual women on two domains: they indicated less distress on a body image index and reported fewer negative attitudes toward eating and weight. Similarly, Peplau and colleagues (2009) evaluated body esteem in a web-based sample of adults through four distinct scales: appearance evaluation, overweight preoccupation, body image quality of life, and body image quality of sex. The results of this study indicated no difference in women's appearance evaluation, body image quality of life, or body image quality of sex; however, they did find that SMW had less preoccupation of being overweight (Peplau et al., 2009). Wagenbach (2004) used a multidimensional scale of body esteem, which measured participants' evaluation and orientation toward their appearance, fitness, and health. This study found no differences between SMW and heterosexual women, except that SMW rated their physical appearance as less important than heterosexual women, perhaps suggesting that for SMW, body image may be less connected to overall self-concept than for straight-identified women. More recently, Alvy (2013) found that lesbian women reported less body dissatisfaction and higher ideal body weight than heterosexual women. Taken together, these findings suggest that the experience of being a SMW may lead toward better or improved body esteem. Notably, some studies comparing

women across sexual identity do *not* find significant differences between the groups (Beren, Hayden, Wilfley, & Grilo, 1997; Davids & Green, 2011; Feldman & Meyer, 2007). The heterogeneity of the results around the role of sexual identity and body esteem call for more in depth examinations of how body esteem operates within groups of SMW, in order to understand whether the processes that inform body esteem in this populations are unique or mirror what is experienced by heterosexual women.

Several researchers have begun to fill this gap in the literature with more recent studies utilizing qualitative methodologies to explore some of the possible processes that account for SMW's assessment of their bodies. For example, Leavy and Hastings (2010) conducted in depth interviews with college women who identified as lesbian, bisexual, or heterosexual. They found that lesbian women's "rejection of dominant femininity," access to "validated alternative femininities" and their "place w/ in a subculture" all appeared to contribute to a more positive appraisal of their bodies above and beyond what was experienced by heterosexual or bisexual women (Leavy & Hastings, 2010). Similarly, Yost and Chmielewski (2011) conducted one-on-one interviews with lesbians residing in rural areas about their body image, and these women cited the LGBTQ community as a haven from dominant heterosexist scripts about their bodies and behaviors. Alternatively, Huxley and colleagues (2014) found in their one-on-one interviews with lesbian and bisexual women that the women did express a degree of body dissatisfaction but that there was a "focus on physical fitness and health, rather than thinness as a beauty ideal" (p. 9), and that attachments to the LGBTQ community aided in shaping these reprioritized needs. In qualitative research studies like these, gender roles and access to alternative identities provide two important sites of contributors to positive body esteem for SMW.

Heteronormativity, gender roles, and lesbian identities. The theoretical lens of *heteronormativity* may aid in explaining this apparent departure from traditional modes of femininity that appears to be shaping the body esteem of SMW. The concept of *heteronormativity* generally refers to the social order in which heterosexuality is prized as the only *normative* sexual identity, marking any and all non-heterosexual identities (e.g., lesbian, gay, bisexual, queer) as socially deviant (Jackson, 2006). Indeed, social scientists interrogating lesbian identities find that lesbian-identified women report a degree of opting in or out of the dominant socio-cultural systems. Fingerhut and colleagues (2005) classified this phenomenon as the dual identity framework. Through qualitative interviews with lesbian identified women, they codified their participants into four categories based on their relationships with lesbian or mainstream cultures: *assimilationists* who identify strongly with mainstream culture and weakly with lesbian culture; *separatists* who do not identify with mainstream culture and strongly identify with lesbian culture; *integrationists* who strongly identify with both mainstream and lesbian cultures; and *marginalized* who do not identify with either. Central to this categorization system is the assumption that there are two competing constellations of cultural attitudes and beliefs: those available to lesbian women and those of the mainstream culture.

Gender may be a central part of these two scripts of cultural attitudes and beliefs available to SMW. Because of the availability of alternative cultural norms, SMW may enjoy a degree of social distance from the prescriptive gender roles that are so central to the conversation around heterosexual women and body esteem. Of course, the degree to which young SMW opt in or opt out of these gender roles may vary depending on her sexual minority identity (i.e., lesbian, bisexual, queer, etc.) and how central her sexual minority identity is to her self-concept. Still, any deviation from these gender roles may have implications for the body esteem of young

SMW. Indeed, the empirical social science literature suggests that young SMW may embody gender in ways that fall outside the boundaries of heteronormative gender roles. Some have found that the transgression of traditional gender roles is an integral part of the coming out process for SMW (Krakauer & Rose, 2002; Striepe & Tolman, 2003). As young women “come out” as sexual minorities, some may begin to adopt less traditionally feminine styles of clothing and dress, and report less concern with meeting the demands of femininity (Krakauer & Rose, 2002). These may be the “alternative femininities” Leavy and Hastings (2010) found to be so important to the body esteem of lesbian college women; and yet the predictive power of gender roles and gender role adherence has not been tested quantitatively in relation to body esteem.

SMW and the LGBTQ community. A potential site through which SMW may come in contact with these alternative sociocultural norms is the LGBTQ community. Within the context of a heteronormative social structure, YSMW may rely on access to the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community as a source of support and affirmation (Herek, 2009). Not a community in a geographical sense, the LGBTQ community is a community of identity—sexual (e.g., lesbian, gay, bisexual, queer) or gender (e.g., trans*, genderqueer) minorities may strive to build social and relational ties to one another in the face of sexual stigma and heteronormativity (Ferris, 2006; Herek, 2009). Indeed, the building up of a connection to the broader LGBTQ community has been shown to be protective of the psychosocial wellbeing of sexual minorities (Johns et al., 2013; Kertzner, Meyer, Frost, & Stirratt, 2009; Rosario, Hunter, Maguen, Gwadz, & Smith, 2001). In an examination of social stress, for example, Kertzner and colleagues (2009) found that a reported connection to the LGBTQ community buffered the deleterious effects of owning a marginalized identity on participants’ psychosocial wellbeing. Interacting with the LGBTQ community may provide YSMW with an alternative

“social” space to escape some of the pressures of other more heteronormative spaces they occupy in their daily lives.

LGBTQ community and body esteem. As the psychosocial literature supports that connecting with a community of peers may offset some of the social pressures associated with a marginalized identity, conceivably a connection to the LGBTQ community may offer such benefits to SMW’s body esteem. This hypothesis becomes even more plausible when viewed in the context of lesbian beauty norms. Scientific literature supports the idea that lesbian communities may offer SMW access to a standard of female beauty that deviates from the thin ideal and allows for greater freedom to appreciate bodies of diverse sizes and shapes (Cogan, 1999; Krakauer & Rose, 2002; Rothblum 2004), findings that empirically extend Rich’s (1980) theory that lesbian identities and lesbian spaces offer benefits to women not found in mainstream heterosexual society. In Krakauer and Rose’s (2002) study with young women during the “coming out” process, participants reported that through coming out they were able to eschew traditional femininity and develop less concern about their body weight. The women in this study credited these changes to interacting with an alternate standard of beauty in lesbian spaces (Krakauer & Rose, 2002). Other studies validate this idea that lesbian beauty norms are more expansive than those allotted to heterosexual women by hegemonic standards of female beauty. In Cogan’s (1999) focus groups with lesbians about beauty, one participant shared, “Lesbian beauty is a release. We are not tied to the beauty of dominant culture—the 36-24-36 Barbie ideal. There is more of a freedom and ease” (p. 26).

Notably, the bulk of these studies discuss connections with *lesbian* communities as the key to this undoing of gender, while less work has been done with bisexual women. One study conducted by Chmielewski and Yost (2012) used in depth interviews to explore how lesbian and

LGBTQ communities related to bisexual women's feelings about their bodies. Their results revealed that bisexual women also cited LGBTQ communities as an important place to find bodily self-acceptance; however, their relationship to these communities was complicated by lesbian mistrust of bisexual women (Chmielewski & Yost, 2012). These results point to LGBTQ communities being an important access point to alternate understandings of the female body for all SMW, but the degree of acceptance into the LGBTQ community may vary across sexual identity.

Of course, all SMW still encounter the pressures of mainstream beauty standards. Qualitative interviews with SMW find that SMW do report feeling the pressures of the thin ideal (Huxley et al., 2014; Yost & Chmielewski, 2011). SMW experience and interact with mainstream, hegemonic understandings of female beauty, but interactions with lesbian and other sexual minority communities provide an avenue to learning to understand themselves as beautiful or to being exposed to alternative bodily ideals like health and fitness (Yost & Chmielewski, 2011; Huxley et al., 2014). Through their identities and the community relationships these foster, SMW may have greater access to alternative gender roles or beliefs about the ideal female body; however, access to these alternative cultural norms is not the same as belief and identification with these alternative cultural norms. Thus, there may be a great deal of variation across groups of SMW and their internalization of these concepts that may benefit their body esteem; however, to date, few studies have sought to quantitatively examine the within group variation of belief in these alternative cultural messages and their relationship to body esteem among SMW (Alvy, 2013). Quantitative inquiries allow the assessment of predictive pathways of these relationship between gender, sexual identity, LGBTQ communities and body esteem within groups of SMW, as well as the evaluation of within group heterogeneity

of these pathways. As such, the mechanisms which shape women's body esteem can be more explicitly understood.

Current Study

In order to understand key drivers of body esteem among young SMW, I examined the unique contributions of women's sexual identity, gender role identification, adherence to gender norms, and connection to the LGBTQ community in relation to their body esteem. Given the previous literature on these constructs, I had several driving hypotheses.

H1: Due to the role that a sexual minority identity may play in protecting women against cultural constraints around body norms, I hypothesized that women with greater identity saliency of their sexual minority identities would have more positive body esteem.

H2: Due to the connection between gender roles and poor body esteem found in heterosexual women, I hypothesized that women who identified as masculine and/ or reported less adherence to feminine roles would have more positive body esteem.

H3: Informed by the literature that suggests the LGBTQ community may be a potential site where women are exposed to alternative body norms, I hypothesized that those women with a greater degree of connection to the LGBTQ community would have more positive body esteem.

Additionally, I sought to explore whether these constructs interacted with one another to affect women's body esteem, and so I tested whether there were any significant interaction effects between these constructs on a woman's body esteem. I believe that the focus on gender, identity, and community in this study provides a unique contribution to the growing literature on SMW's experiences of the body esteem.

Methods

Sample

These analyses were conducted using data from the Michigan Smoking and Sexuality Survey (M-SASS; Johns et al., 2013), a cross-sectional, observational study examining young SMW and their smoking behaviors conducted in the summer of 2011 (n=481). The original sample contained regional diversity; however, in order to control for regional variation on the constructs of interest, I focused the analytic efforts on the Michigan only subsample (n=232). Women in our sample ranged in age from 18 to 24 with a mean age of 20.9 (SD=1.88). The study team recruited women that identified as sexual minorities or had “sexual experiences with a woman” in the past year. When asked to report sexual identity, 36.2% of women in the sample identified as lesbian, 41.4% as bisexual, and 22.4% as some other identity (i.e., queer, pansexual, no label, heterosexual). In terms of demographic composition of the sample, 81% identified their race or ethnicity as White/ European-American, 6.1% identified as Black/ African American, 3.9% as Latino/ Hispanic, and 9.1% identified as some other racial category. The survey also asked women to characterize the area or neighborhood in which they lived—42.5% reported they lived in an urban environment, 25% said suburban, 19% said rural, and 3% said other. See *Table III.1* for a summary of participants’ sociodemographic characteristics.

Procedure

The study team recruited a convenience sample of participants through advertisements on Facebook, a social network site which allowed for our study advertisements to be displayed only to those women who identified themselves as between the ages of 18 and 24 and romantically interested in women (or women and men). Use of social networks for recruitment of young sexual minorities is common, and provides a mechanism for reaching out to sexual minorities

who might not frequent LGBTQ-specific venues, either offline or online (Bauermeister et al., 2012). All promotional materials displayed a synopsis of eligibility criteria, a mention of a \$25 electronic gift card incentive, and the survey's website.

For participant privacy, all study data were protected with a 128-bit SSL encryption and kept within a University of Michigan firewalled server. Upon entering the study site, participants were asked to enter a valid and private email address, which served as their survey username. This allowed participants to save their answers and complete their survey in more than one sitting if necessary. Participants were asked eight questions to determine their eligibility, specifically concerning their age, assigned sex at birth, current gender, sexual identity, and area of residence. If eligible, participants read a detailed consent form that explained the purpose of the study (i.e., exploring how participants choose whether or not to smoke cigarettes) and their rights as participants. Our study consent asked participants to acknowledge that they read and understood each section of the consent form (i.e., participation involvement, protection of privacy, uses of data, potential benefit, compensation, terms of the Certificate of Confidentiality, and who to contact if they had questions).

Consented participants completed a 45-60 minute survey covering topics such as sociodemographic characteristics, smoking attitudes and behaviors, alcohol and drug (AOD) use, sexuality, discrimination, and psychosocial wellbeing. Upon completing the survey, participants received an email from the University of Michigan containing a link to a secured website that provided them with a credit card number good for \$25. If the participants chose to pay a small fee (deducted from the \$25), the incentive could be deposited directly into their bank account or a printed gift card could be mailed to their home address. Within the final dataset, the study team removed duplicates and falsified entries by examining participants' email and IP addresses

from the final sample, using best practices for web-based research (Bauermeister et al., 2012). Study data were protected by a Certificate of Confidentiality. All study procedures were approved by the Institutional Review Board of the University of Michigan, Ann Arbor.

Measures

Demographics. The survey asked women to identify their sexual orientation, and provided the response options *Heterosexual, Lesbian or gay, Bisexual, Queer, Other (please specify)*, and *I do not use a label*. To control for differences across sexual identity groups in regression analyses, I collapsed these identities into three categorical variables *Lesbian or gay, Bisexual*, and *Other*. *Lesbian or gay* served as the referent group given that the literature on body esteem and SMW suggests that lesbian-identified women may be the most readily exempt from traditional gender role structures. Participants were also asked to indicate their race and ethnicity. Response options for race were *Black or African-American, Asian or Pacific Islander, White or European American, Native American*, or *Other*. A follow up question asked, “Are you Hispanic or Latina” to which participants could respond *Yes* or *No*. Because our sample was predominantly *White or European American* identified, I recoded race/ ethnicity into a 0/ 1 dummy variable with *White or European American, not Hispanic* serving as the referent group. The survey also asked participants to characterize the area where they lived as urban, suburban, rural, or other. To control for regional variation in our constructs within our sample, I restructured this into a 0/1 dummy variable with 0 indicating residence in any non-urban area (suburban, rural, other) and 1 indicating residence in urban areas. Lastly, participants reported their age in years, treating it as an ordinal covariate in our analyses.

Sexual identity salience. To assess the saliency of women’s sexual identities, I used a 4-item scale developed by Quinn and Chaudoir (2009) to assess the salience of stigmatized social

identities. This scale includes such items as “Being [participant’s sexual identity label] is an important part of my self-image” and “Overall, being [participant’s sexual identity label] has very little to do with how I feel about myself.” Participant response options ranged from 1 (*Strongly disagree*) to 4 (*Strongly agree*). I created a composite measure of sexual identity importance by mean scoring these 4 items. Participant scores had a mean score of 2.75 (0.70). The scale had high reliability with a Cronbach’s alpha of $\alpha = .82$.

Gender role. To measure women’s gender role identification, I used the numeric response to the question, “On a scale from 1 to 9, where 1 is extremely feminine and 9 is extremely masculine, how would you describe yourself at this point in your life?” In the web survey, response options were displayed as a scale from 1 – 9 with the included the anchors 1 (*Extremely feminine*), 5 (*Equally feminine/ masculine*), and 9 (*Extremely masculine*). Mean average on this item was 4.22 (1.66) with the full range of participant responses spanning from 1 to 9. While the gender role item was continuous on a scale from 1 to 9, for the purposes the bivariate analyses and reporting of descriptive statistics, I recoded this variable into three categories (See *Table III.1* for full descriptive statistics). The categories were feminine (gender role self-report score 1 – 3), androgynous (gender role self-report score 4-5), and masculine (gender role self-report score 6-9), and cut offs were created to maintain a roughly normal distribution across the three categories. During regression analyses, women’s gender role score were standardized, in order to appropriately calculate the main effect of gender role on body esteem (Aiken & West, 1991).

Femininity ideology. To test participant adherence to femininity ideology an important indicator of the degree to which a woman has internalized mainstream messages about gender roles, I used women’s response to the *Inauthentic Self in Relationship* (ISR) scale developed by

Tolman and Porche (2000). This scale was one of two subscales developed as part of the *Adolescent Femininity Ideology Scale*, a scale designed measure “internalization of two negative aspects of femininity ideology” (Tolman & Porche, 2000). Tolman and Porche (2000) explain that in the context of sexism, femininity ideologies are those cultural beliefs that maintain women’s subordinate status. One of these pervasive beliefs is that women should defer to the needs and desires of others rather than being true to their authentic needs, thus continually rendering women in a subordinate status to those around them. Originally developed and validated with samples of young girls and women ranging from middle school to college age, the ISR 10 item scale was designed to assess the degree to which young women suppress their own ideas and within interpersonal relationships (Tolman & Porsche, 2000) and has been validated in studies with young adult samples (Theran & Han, 2013). Example items included “I would tell a friend she looks nice, even if I think she shouldn’t go out of the house dressed like that” and “Often I look happy on the outside in order to please others, even if I don’t feel happy on the inside.” Response options ranged from 1 (*Strongly disagree*) to 6 (*Strongly agree*). Studies using this scale have consistently found ISR to be linked to poor body esteem and poor psychological well-being (Theran & Han, 2013, Tolman et al., 2006; Tolman & Porche, 2000).

Because the ISR scale had yet to be used specifically with SMW, an initial confirmatory factor analysis was conducted in SPSS to validate its use in this sample (IBM Corp., 2013). Using principal axis factoring to remove cross loading or poorly loading items, three of the original 10 items were excluded for having less than a .4 factor loading onto the scale (i.e., “I would not change the way I do things in order to please someone else”, “I tell my friends what I honestly think even when it is an unpopular idea”, and “I usually tell my friends when they hurt my feelings”). As such, the final feminine ideology score for each participant was derived from

the mean score of the 7 remaining items. The modified scale had acceptable reliability with a Cronbach's alpha of .77. Mean score on this composite measure was 3.52 (.94), and participant scores ranged from 1.57 to 6. In the regression analysis, I standardized this variable for ease of interpretation; high scores on this scale represented high levels of inauthenticity in relationships or high adherence to femininity ideology.

LGBT community connectedness. To assess women's connectedness to the LGBTQ community, a single item measure "How much do you see yourself personally as being part of the national LGBTQ community?" was used. Response options ranged from 0 (Not at all) to 3 (A lot). The mean average on this item in our sample was 1.15 (0.99). In the regression analysis, I used a standardized version of this variable, consistent with the best practices for measuring the main effects of a variable in an interaction model (Aiken & West, 1991).

Body esteem. The outcome of interest in this study was body esteem. This construct was measured by responses to Mendelson and White's (1997) *Body-Esteem Scale for Adolescents and Adults* (BESAA), as it had previously been used in studies with LGBTQ samples (Meanley et al., 2014). A confirmatory factor analysis using principal axis factoring was done to ensure the scale's structure and validity with the study sample (IBM Corp., 2013). Due to the fact that several of the items cross loaded on factors or had factor loadings under .4, I iteratively refined the factor structure through an exploratory factor analytic process (Hurley et al., 1997). Our final factor structure included 13 of the original 23 BESAA items, decomposed into three factors. The first factor *body weight* included those items related to women's impressions of their weight or body size (e.g., "I am satisfied with my weight"; "Weighing myself depresses me"). The *body weight* factor explained 32.4% of the total variance and had strong reliability (6 items; $\alpha = .93$). Higher scores on the *body weight* subscale indicated a

greater appreciation for one's weight or size. The second factor, *body attribution*, included items that conveyed how women attributed to external reactions to their bodies (e.g., "People my own age like my looks"; "My looks help me to get dates"). The *body attribution* factor explained 20.6% of the overall variance in body esteem and had strong reliability (4 items; $\alpha = .82$). Higher scores on this sub-scale indicated a greater belief that one's body or appearance was judged positively by others. The final factor in our sample deviated from the generalized *body appearance* scale outlined originally by Mendelson and company (2001) in that it only included items that characterized women's disappointment or disapproval in their physical appearance (e.g., "I wish I could look like someone else"; "I worry about the way I look"). As such, I have entitled this factor, *body shame*. The *body shame* factor explained 12.7% of the overall variance and had high reliability (3 items; $\alpha = .78$). Higher scores on the *body shame* subscale indicated more disappointment with one's body. These three factors were mean scored in order that I could use each as a separate outcome of body esteem in regression models. See *Table III.2* for Cronbach's alphas of each factor, final factor loadings of all scale items, mean scores, and standard deviations.

Data Analytic Plan

I began the analyses by confirming the factor structure of the BESAA in the sample (see Methods section above). Principal axis factoring with varimax rotation was utilized for this task, as it assesses factor structures based on shared variance between scale items and minimizes correlation between constructs, useful features for unearthing psychosocial constructs (Warner, 2008). Given that body esteem is a psychological construct theorized to capture a person's self assessment of their body or appearance, the three subscales (Body Weight, Body Attribution, Body Shame), would likely share some variance (i.e., those with more positive assessments of

their bodies would score in one direction across the three scales, while those with more negative assessments would likely score in another direction); however the three dimensions tap into different domains of this assessments.

Preliminary examinations of the relationships between independent predictors (i.e., gender role, adherence to femininity, sexual identity salience, LGBTQ community connectedness) and the outcomes (i.e., three dimensions of body esteem: body weight, body attribution, body shame) were done through standard bivariate statistical methodologies (i.e., ANOVAs, t-tests, chi-square). Then, for each of the three body esteem outcomes, I tested two multivariate ordinary least squares regression models. The first model (i.e., main effects), examined the relationship between each body esteem construct and demographic characteristics, gender role, adherence to femininity, sexual identity importance, and LGBTQ community connectedness. Then, because gender and sexual identities are intertwined within the heteronormative social structure, I estimated a set of interaction models that examined the additive influence of the intersections between gender and sexual identity variables.

For example, I assessed the relationship between Gender Role and LGBTQ community connectedness on body esteem, which allowed an exploration of whether protective effects of LGBTQ community connectedness varied by a women's gender role. I expected that women's gender role might be associated with their degree of connectedness to the LGBTQ community. During data analysis, I also tested a third interaction model with Gender Role Adherence and LGBTQ community connectedness, as I expected that women with greater connection to the LGBT community might be less adherent to gender roles; however, these models were insignificant so they were omitted from the data presented in this manuscript. For all models, I

conducted appropriate regression diagnostics to make sure that the assumptions of regression (linearity, normality, homoscedasticity) were met.

Results

Bivariate associations

Within the bivariate analyses, an association between gender role category and sexual identity was found ($\chi^2(4, N = 224) = 23.183, p < 0.001$; See *Table III.1*). Lesbian women were more likely to identify in the masculine category than bisexual women or women who used another identity label. A significant relationship between gender role and importance of sexual identity was also found ($F(2, 221) = 3.442, p = 0.034$). Those who identified with the masculine category rated sexual identity as more important than the other two gender role categories. Finally, there was an association between gender role category and LGBTQ community connectedness ($F(9, 213) = 3.783, p = 0.021$). Women who identified with the masculine category reported higher levels of community connectedness than women in the other two gender role groups.

Body Weight

The explanatory regression model of *body weight* with the predictors of demographic characteristics, gender roles/ adherence, and LGBTQ community connection was significant ($F(9, 213) = 2.295, p = 0.018$; See *Table III.3*). Feminine ideology was marginally associated with fewer positive feelings toward one's body weight ($b = -0.13, t(213) = -1.77, p < .1$). Participant's connection to the LGBTQ community was significantly related to positive feelings about their body weight ($t(213) = 2.31, p < .05$). A one standard deviation increase in reported sense of connectedness to the local LGBTQ community was associated with a .18 increase in their score on the *body weight* scale. In terms of demographic predictors, there were marginally

significant relationships between the independent predictors of age, urbanicity, and feminine ideology and body weight. Older age was associated with fewer positive feelings about one's body weight ($b = -0.07$, $t(213) = -1.85$, $p < .1$), while living in an urban area was associated with more positive feelings about body weight ($b = 0.26$, $t(213) = 1.71$, $p < .1$).

Interaction model. The interaction model for *body weight* remained significant ($F(10, 212) = 3.025$, $p < 0.001$; See *Table III.3*), and the interaction term of Gender Role and LGBTQ community connectedness was also significant ($b = 0.22$, $t(212) = 2.97$, $p < .01$). By graphically representing this interaction effect, I noted that the positive association between LGBTQ community connectedness and *body weight* was amplified for women who rated their gender role as more masculine (See *Figure III.1*).

Body Attribution

The regression model of *body attribution* by demographic characteristics, gender roles/adherence, and LGBTQ community connection was not significant ($F(9, 213) = 1.650$, $p = 0.103$; See *Table III.3*), and neither was the interaction model ($F(10, 212) = 1.557$, $p = 0.121$).

Body Shame

The model of *body shame* by demographic characteristics, gender roles/adherence, and LGBTQ community connection was significant ($F(9, 213) = 3.677$, $p < 0.001$; See *Table III.3*). Both identifying as bisexual and LGBTQ community connectedness were marginally related to *body shame*. Bisexual women were more ashamed of their bodies than lesbian identified women ($b = 0.26$, $t(213) = 1.674$, $p < .1$), and higher scores on the LGBTQ community connectedness scale were associated with lower scores on the *body shame* subscale ($b = -0.115$, $t(213) = -1.69$, $p < .1$). Feminine ideology was significantly associated with *body shame* ($b = 0.272$, $t(213) =$

4.17, $p < .001$). A one standard deviation increase on feminine ideology was associated with a .272 point increase on YSMW's score on the *body shame* subscale.

Interaction model. The interaction model for *body shame* remained significant ($F(10, 212) = 3.958, p = 0.001$; See *Table III.3*), and the interaction term of Gender Role and LGBTQ community connectedness was also significant ($b = -0.15, t(212) = -2.40, p < .05$). By graphically represented the interaction effect, I identified that the protective association between body shame and LGBTQ community connectedness was stronger for those who reported more masculine gender role (See *Figure III.2*).

Discussion

Feminist theorist Adrienne Rich (1980) stated that “lesbian existence [is a] source of knowledge and power available to women” (p. 633). This primary investment of this study was contributing to the literature on body esteem by assessing aspects of young SMW's identities where they may depart from heteronormative social roles (i.e., non-traditional gender roles, sexual identity, connection to the LGBTQ community) and examining whether these dimensions of identity linked to more positive body esteem. I began with three primary hypotheses (1) that women who placed great importance on their sexual identity would have better body esteem, (2) that women who deviated from traditional gender norms (i.e., identified as masculine or reported less adherence to feminine roles) would have better body esteem, and (3) that women with a greater connection to the LGBTQ community would have better body esteem. These hypotheses were tested in relation to three different domains of body esteem: *Body Weight*, or satisfaction with one's weight, *Body Attribution*, or the perception that others appreciate one's physical appearance, and *Body Shame*, or a sense of disappointment with one's physical appearance. The results provide support for the idea that women's deviations from heteronormativity are

connected with more positive beliefs about their bodies. In other words, the less women identified with femininity and the more closely they identified with the LGBTQ community, the more positive their body esteem. I expand on the meaning of these results below.

Body Esteem and SMW

The results revealed that not all SMW experience body esteem equivalently—their diversity in social roles directly connected to experiences of body esteem. Two of the dimensions of Mendelson and colleagues (2001) *BESAA*—*body weight* and *body shame*—had complimentary patterns that indicated departures from heteronormativity were associated with more positive body esteem. The results for *body weight* demonstrated that SMW who reported a greater degree of adherence to femininity (i.e., as measured by the *Inauthentic Self in Relationships* scale) were less satisfied with their weight. Additionally, high levels of adherence to femininity ideology were associated with higher rates of *body shame*. This pattern is consistent with Tolman and Porche’s (2001) study of heterosexual young women and points to a connection between striving to meet the demands of femininity and being unsatisfied with one’s body, even among SMW. This trend is consistent with the idea that femininity and female beauty in Western culture are associated with the *thin ideal*, which makes the standard of acceptable body weight very narrow for young women (Homan, 2010; Kroon van Diest & Perez, 2013).

The replication of this pattern within a sample of SMW points to the consistency of this relationship: women who modify their interpersonal interactions to be more deferential to peers (i.e., a pattern of behavior consistent with a feminine, subservient role in a heteronormative society) appear to have more disregard for their bodies, regardless of sexual identity. On the flip side, women who reject these deferential, hegemonic conceptions of feminine attitudes and

behavior patterns may be better equipped to embrace their bodies. If, as noted by Krakauer and Rose (2002), SMW possess a greater freedom to reject the trappings of hegemonic femininity than heterosexual women, this may be a key focal point of resilience among SMW with regard to body esteem. Future research should comparatively examine the rates at which sexual minority and heterosexual women adhere to femininity ideology in order to further examine this hypothesis.

Participants' sense of belonging to the LGBTQ community was also found to be protective in terms of body esteem. Women who expressed a greater degree of connection to the LGBTQ community reported more satisfaction with their *body weight* and less *body shame*. These results may indicate that a connection to the LGBTQ community is associated with a route toward better body esteem. The results connect previous literature examining LGBTQ community connection as route through which YSMW learn less restrictive ideas of female beauty (Cogan, 1999; Krakauer & Rose, 2002; Rothblum, 2004). Indeed, this interpretation is further supported by the finding that LGBTQ community connectedness and its relationship to positive body esteem was amplified for masculine-identified women.

The protective relationship between LGBTQ community connectedness and body esteem (i.e., both *body weight* and *body shame*) was strongest for women who identified their gender role as more masculine and weakest for those women who identified their gender role as more feminine. Indeed, our bivariate analyses indicated that masculine identified women had the highest expressed rates of LGBTQ community connection. There are two plausible explanations for these relationships. Potentially, because masculine women deviate from heteronormative gender roles more significantly than feminine-identified women, they may be seeking out the support of the community to a greater degree. Alternatively, the higher rates of LGBTQ

community connectedness among masculine-identified women may be a product of the weakening of SMW's ties to femininity through exposure to the LGBTQ community over time, as noted by lesbian participants in Krakauer and Rose's qualitative study (2002). The relationship between LGBTQ community connectedness and gender in these results may link back to the idea that as women become more involved in the LGBTQ community, they may be released from heteronormative gender scripts, a process that results in both identifying more with masculinity *and* having less concern with their body weight (Krakauer & Rose, 2002). Longitudinal research that follows YSMW through their coming out process may help to address this issue of directionality.

Notably, the models for *body attribution* were not significant, suggesting that in this sample the relationships between gender roles, LGBTQ community connection, and *body attribution* were not strong. This absence of a relationship is important given that *body attribution* is an assessment of external judgments about one's body. Future research is needed to address whether there alternate measures of *body attribution* might better tap into the experiences of SMW. Potentially, the dueling scripts around female beauty that SMW contend with from the heterosexual mainstream culture and the lesbian counter-culture (Fingerhut, Peplau, & Ghavami, 2005; Huxley et al., 2014; Yost & Chmielewski, 2011) make questions about unspecified "people's" attributions about the bodies of SMW meaningless. Survey measures may need to be developed that identify who SMW believe these external attributors to be in order to accurately assess this domain of body esteem. Scales developed for heterosexual youth may miss this nuance and thus be rendered useless for assessing *body attribution* in populations of SMW.

Limitations and Strengths

This study had a few limitations. First, the sample was a convenience sample, which does not allow for generalization of these findings to SMW broadly. In particular, this sampling strategy resulted in a final analytic sample of predominately SMW who identified their race or ethnicity as White, restricting any ability to draw conclusions about how gender, LGBTQ community connectedness, and body esteem may intersect with racial identities in populations of sexual minority women. This concern is particularly relevant given that racial identity has been identified as informing women's body image (Krauss, Powell, & Wada, 2012; Kronenfeld, Reba-Harrelson, Von Holle, Reyes, & Bulik, 2010; Wilson, 2009). However, web-based recruitment has been identified as a useful means for recruiting diverse samples of sexual minority youth (Bauermeister et al., 2012), and likely as a result of using web-based techniques, this sample did include a wide degree of geographical diversity within Michigan and allowed for recruitment of young women not currently enrolled in college. Thus, while this sample may not be generalizable across racial groups, the generalizability of these findings does extend beyond only urban or collegiate youth. Another limitation of the current study is that the study design was cross-sectional, which prohibits analyzing the directionality of some of the trends noted across gender role, LGBTQ community connection, and body esteem; however, the findings provide a useful preliminary snapshot into these relationships that will aid in constructing future longitudinal efforts to best understand how these domains relate to one another. Finally, the measurement of gender identity was uni-dimensional (i.e., a single scale ranging from masculine to feminine), which may pose limits to the degree to which the gender measure represented the full diversity of gender identities; however, the wide spread of normally distributed responses on this item indicates that a good degree of diversity around gender identity within the sample.

Future research may want to investigate how multidimensional measures of gender connect to body esteem in this population.

Despite these limitations, this study also possesses several notable strengths. Importantly, it is one of few to quantitatively test the correlates of body esteem within a sample of SMW. As such, this study provides information on key pathways which contribute to positive body esteem within this population. Second, the study focuses on potentially health protective aspects of the identities of SMW. The psychosocial literature overflows with areas of deficit for SMW, whether that be mental health (Cochran, Sullivan, & Mays, 2003), health behaviors like smoking (Johns et al., 2013) or alcohol use (Blosnich, Jarrett, & Horn, 2010; Cochran et al., 2001; Pizacani et al., 2009), or suicide (Hatzenbuehler, 2011). While researching areas of health disparity is crucial to serving marginalized populations, so too is adequately addressing areas of apparent resiliency or success within such groups (Herrick et al., 2011). By better understanding places in which SMW thrive, health scholars may be able to leverage these assets when addressing areas of disparity; not to mention, such resiliency research paints a more balanced picture of at-risk populations. Finally, our research points to a compelling new area of research. Namely, the role of gender identity as a focal point of resilience for SMW. Future research should expand on how gender identity in SMW connects to other psychosocial mechanisms and health outcomes (Gordon & Meyer, 2008; Lehavot & Simoni, 2011).

Conclusion

Poor body esteem among women has been linked to socially rigid standards of female beauty and to young women's socialization to view their bodies as objects for the consumption of men (Fredrickson & Roberts, 1997). The finding of this analysis that masculine-identified SMW and those who did not adhere to feminine gender norms reported the greatest body esteem

is important in two regards: (1) these results emphasize the detrimental effects of feminine gender scripts, regardless of women's sexual identities, and (2) they put forth the wide range of diversity in social identities and their differential consequences among SMW. Moving forward, it will be essential to continue to explore the role that gender identities play in shaping SMW's relationship with their bodies and how differences in these processes may connect to health outcomes related to body esteem.

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Table III.1: Descriptive Statistics by Gender Role

	Total (n = 224)	Feminine (n=85)	Equally fem/ masc (n=95)	Masculine (n=44)	χ^2 / F Statistic	Sig.
<i>Sexual Identity</i>					23.18	***
Lesbian	82 (36.61%)	23 (27.06%)	32 (33.68%)	27 (61.36%)		
Bisexual	95 (42.41%)	49 (57.65%)	38 (40.00%)	8 (18.18%)		
Other	47 (20.98%)	13 (15.29%)	8 (8.24%)	9 (20.45%)		
<i>Race Ethnicity</i>					0.232	
White/ Euro-American	182 (81.25%)	70 (82.35%)	78 (82.11%)	34 (77.27%)		
Other Race/ Ethnicity	41 (18.30%)	15 (17.65%)	17 (17.89%)	9 (20.45%)		
<i>Urbanicity</i>					0.08	
Urban	90 (40.18%)	35 (41.18%)	38 (40.00%)	17 (38.64%)		
Not Urban	134 (59.82%)	50 (58.82%)	57 (60.00%)	27 (61.36%)		
<i>Age</i>	20.97 (1.87)	20.94 (1.88)	21.09 (1.86)	20.77 (1.88)	0.47	
<i>Imp of Sexual Identity</i>	2.76 (0.70)	2.70 (0.72)	2.69 (0.65)	3.00 (0.74)	3.442	*
<i>Gender Role</i>	4.22 (1.66)	2.51 (0.68)	4.61 (0.49)	6.68 (0.71)	--	
<i>Femininity Ideology</i>	3.52 (0.95)	3.54 (1.03)	3.51 (0.91)	3.50 (0.86)	0.03	
<i>LGBTQ Com Connect</i>	1.15 (1.00)	1.05 (0.90)	1.07 (1.03)	1.52 (1.02)	3.92	*
<i>Body Esteem</i>						
Body Weight	2.81 (1.10)	2.73 (1.19)	2.76 (1.00)	3.07 (1.13)	1.54	
Body Attribution	3.12 (0.80)	3.13 (0.82)	3.14 (0.72)	3.05 (0.92)	0.23	
Body Shame	2.72 (0.99)	2.79 (1.06)	2.68 (0.91)	2.64 (1.01)	0.46	

† p < .1; * p < .05; ** p < .01; *** p < .001

Table III.2: Body Esteem Factor Items

	Factor Loading	Mean (SD)
<i>Body Weight</i> ($\alpha = .93$)		
I really like what I weigh.	.853	2.81 (1.12)
I am satisfied with my weight.	.842	2.57 (1.28)
I feel I weight the right amount for my height.	.811	2.66 (1.22)
My weight makes me unhappy.*	-.757	2.65 (1.32)
Weighing myself depresses me.*	-.749	2.91 (1.31)
I am preoccupied with trying to change my body weight.*	-.633	3.11 (1.44)
<i>Body Attribution</i> ($\alpha = .82$)		
People my own age like my looks.	.836	2.95 (1.22)
Other people consider me good looking.	.726	3.10 (0.99)
My looks help me to get dates.	.683	3.29 (0.96)
I like what I look like in pictures.	.555	3.36 (0.92)
<i>Body Shame</i> ($\alpha = .78$)		
I wish I could look like someone else.	.738	2.81 (1.18)
I feel ashamed of how I look.	.617	2.91 (0.96)
I worry about the way I look.	.566	2.73 (0.99)

*Reverse coded in composite score. Reported mean corresponds to reverse coded item.

Table III.3: Multivariate Regression Analysis of Body Esteem

	Body Weight				Body Attribution				Body Shame			
	Main Effects Model		Interaction Effects Model		Main Effects Model		Interaction Effects Model		Main Effects Model		Interaction Effects Model	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE
Age	-.073 [†]	.039	-.077*	.039	-.024	.029	-.025	.029	.028	.034	.031	.034
Non-White	.205	.187	.203	.184	-.108	.135	-.108	.136	.059	.163	.061	.161
Urban	.256 [†]	.150	.256 [†]	.147	.145	.108	.145	.108	-.199	.130	-.199	.129
Bisexual	-.179	.178	-.175	.175	.257*	.128*	.257	.129	.259 [†]	.155	.256 [†]	.153
Other Sexual Identity	-.032	.200	-.002	.197	.203	.145	.209	.145	-.052	.174	-.073	.172
Importance of Sexual Identity	-.057	.078	-.059	.076	-.033	.056	-.033	.056	.098	.068	.100	.067
Gender Role Feminine Ideology	.051	.077	.040	.076	-.028	.056	-.030	.056	.006	.067	.013	.067
LGBTQ Com Connectedness	-.133 [†]	.075	-.155*	.074	-.087	.054	-.091 [†]	.054	.272***	.065	.288***	.065
GR * LCC	.181*	.078	.157*	.077	.122*	.056	.117*	.057	-.115 [†]	.068	-.098	.068
			.217**	.073			.046	.054			-.153*	.064
R-Square		.088		.125		.065		.068		.134		.157
F-Statistic		2.295*		3.025**		1.650		1.557		3.677***		3.958***

† p < .1; * p < .05; ** p < .01; *** p < .001

Figure III.1: Interaction Effect of Gender Role***LGBTQ Community Connectedness** on Body Weight

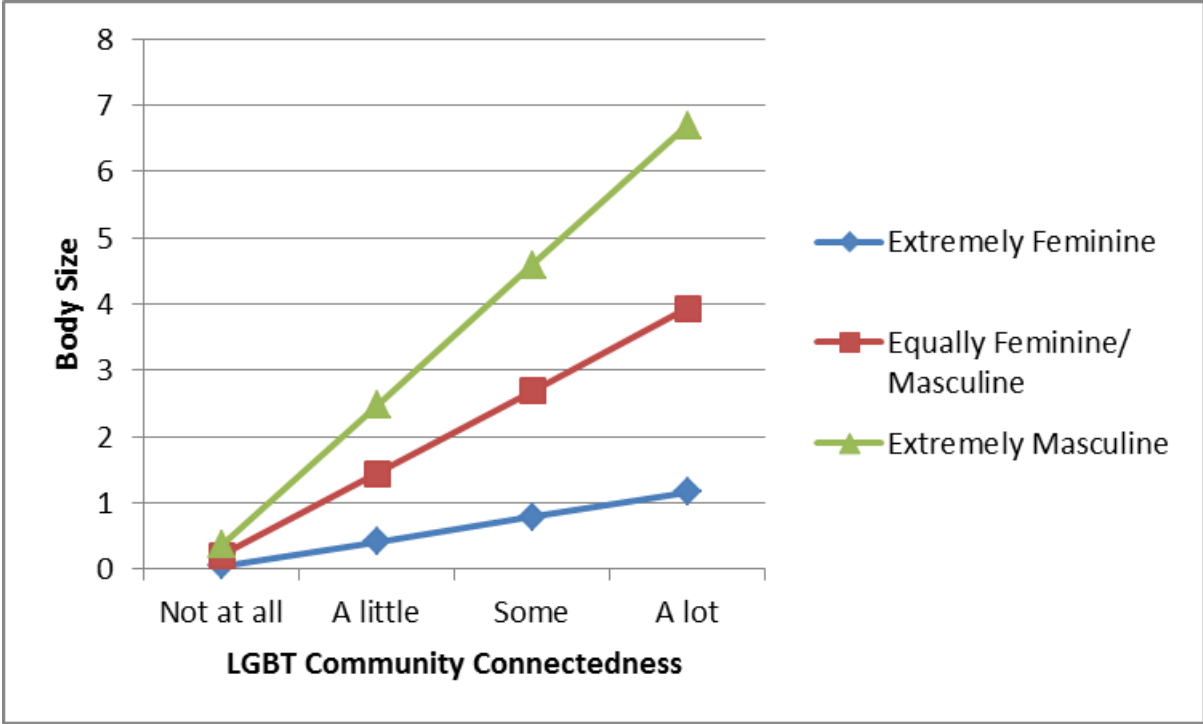
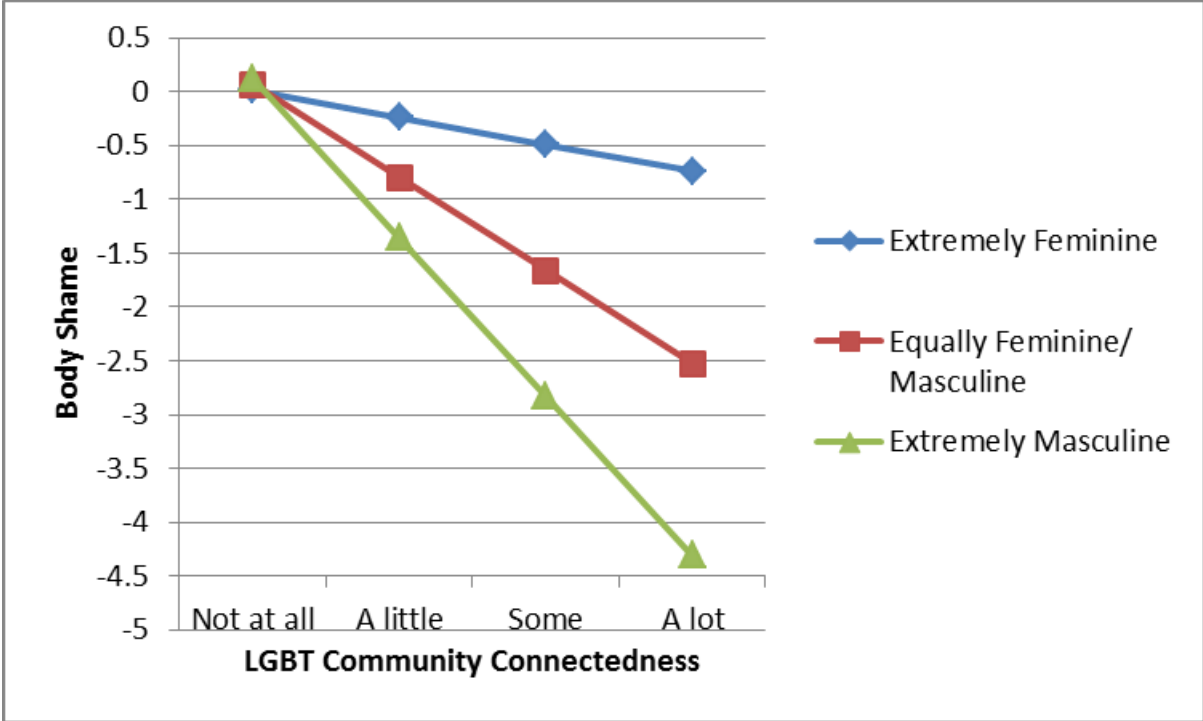


Figure III.2: Interaction Effect of Gender Role***LGBTQ Community Connectedness** on Body Shame



CHAPTER IV

Resilient Minds and Bodies: To what extent does body image buffer against mental distress connected to size-discrimination?

Body Mass Index (BMI), the ratio of height to weight, is a common public health measure of body size and health in public health science (CDC, 2011; 2012). According to this metric, sexual minority women (i.e., SMW, women who identify as lesbian, bisexual, or some other non-heterosexual identity) have been acknowledged as being at an elevated risk for overweight or obesity (Bowen, Balsam, & Ender, 2008). Multiple studies identify SMW as having a higher body mass index (BMI) than heterosexual women (Bowen et al, 2008). The trend of SMW having on average a higher BMI than heterosexual women has been observed across the life course (Jun et al., 2012), in cohorts of youth (Hatzenbuehler, McLaughlin, & Slopen, 2013; Laska et al., 2015) and elders (Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013), and to varying degrees across racial and ethnic lines (Deputy & Boehmer, 2014; Katz-Wise et al., 2014). This trend of high BMI among SMW has been met with alarm about the physical wellbeing of SMW, as researchers explore whether SMW are subsequently at increased risk of diseases associated with overweight and obesity such as cardiovascular disease (Farmer, Jabson, Bucholz, & Bowen, 2013; Hatzenbuehler et al., 2013) and breast cancer (Cochran & Mays, 2012). Yet less attention has been paid to how these higher BMIs may exacerbate SMW's experiences of stigma and the potential toll such experiences may take on their mental health. The link to mental health is particularly relevant for SMW when viewed in relationship to

research which finds them to possess more positive body image than heterosexual women (Leavy & Hastings, 2010; Morrison, Morrison, & Sager, 2004; Owens, Hughes, & Owens-Nicholson, 2003; Peplau et al., 2009; Wagenbach, 2004). In this paper, I am interested in advancing the scientific understanding of body size and the health of SMW in two capacities: (1) evaluating how stigma related to body size may impact the mental health of SMW, and (2) assessing whether positive body image affords SMW the ability to be resilient in the face of such a threat.

Being overweight or obese is linked to mental health disorders such as depression and anxiety (Annis, Cash, & Hrabosky, 2004; Scott et al., 2008). This connection between body size and mental health disorders appears to be driven by stigma experienced by people marked as overweight or obese: people falling into these categories experience higher levels of daily discrimination which in turn erodes mental health (Annis et al, 2004; Asthana, 2012; Puhl & Brownell, 2001; Puhl et al., 2008; Weinstock & Krehbiel, 2009). While many researchers point to stigma as a potential *cause* of the higher average BMI among SMW (Austin et al., 2009; Laska et al., 2015), an assessment of what the *effects* of being labeled as overweight or obese has for the mental wellbeing of SMW has been absent from the health literature on SMW and body size. The term *body size* is employed throughout this manuscript to refer to a broad spectrum of body weights and shapes from “underweight” or “thin” to “obese” or “fat,” in order to encompass all points on this spectrum in a manner that is descriptive rather than evaluative.

Living in a heterosexist culture damages the mental and physical wellbeing of sexual minorities (Herek, 2009; Meyer, 2003; Meyer & Frost, 2013). Structural and interpersonal disadvantage and discrimination aimed at sexual minorities creates a climate that may compromise their health (Herek, 2009; Meyer, 2003; Meyer & Frost, 2013). Meyer (2003)

adapted the stress-process model to highlight how environmental constraints and prejudice events related to the social identities of sexual minorities create a state of stress which contributes to poor health outcomes among sexual minorities (Meyer, 2003; Meyer & Frost, 2013). Herek (2009), in a related framework, introduced the concept of *sexual stigma*, defined as the collective disregard for people who are not heterosexual which permeates every level of society from the individual to policy. Frames such as these emphasize that the social status of sexual minorities presents a barrier to health and wellbeing.

Processes of minority stress and sexual stigma are particularly harmful to mental health. Mental health broadly refers to individual's emotional wellbeing, the freedom from mental disorders, and the receipt of treatment for mental disorders once diagnosed (WHO, 2015). Minority stress and sexual stigma disrupt the individual's ability to achieve these facets of mental health. Science has long supported the fact that sexual minorities report more experiences of discrimination than heterosexuals, and that perceiving discrimination increases the likelihood of experiencing psychological distress broadly, as well as having been diagnosed with a specific psychiatric condition (Mays & Cochran, 2001). The harmful effects of bullying on mental wellbeing show this relationship to be particularly true for sexual minority youth (Almeida, Johnson, Corliss, Molnar, & Azrael, 2009). Sexual minority youth who experience discrimination related to their sexual identity report more depressive symptoms and an increased risk for self-harm and suicide (Almeida et al., 2009). Stigma appears to be at the heart of mental health disparities for sexual minorities.

Stigma also frames the conversation around the social experiences of being fat in the current Western cultural context. Here the term *fat* is not used pejoratively, but as a value-neutral alternative to the medicalized terms of "overweight" or "obese" which imply a larger body is

inherently sick (Wann, 2009). Notably, fat stigma is largely absent from research on SMW and body size, despite the fact that theories of stigma and health guide much of the scientific study of health disparities affecting LGBT populations (Hatzenbuehler, Phelan & Link, 2013). In the way that sexual minorities endure identity related stigma, fat individuals experience stigma connected to their body size. To be fat in the Western world is to be marked as unhealthy, ugly, and in need of change (Wann, 2009). This cultural image of fatness is insidious and permeates the daily experiences of fat people. Fat people encounter discrimination in multiple sectors of society. Individuals thought to be “overweight” or “obese” are routinely passed over for jobs by employers, receive poor or antagonistic treatment from medical providers who harbor anti-fat bias, and encounter fat-related harassment from peers at nearly every life stage (Puhl & Brownell, 2001). The makeup of the built environment itself can be a microaggression as public transportation frequently does not accommodate larger bodies, clothing available in stores often does not fit larger bodies, and even a standard sized shower can be difficult to manage in a larger body (Owen, 2012). The intensity of this discrimination is magnified for youth and women. In playground bullying, fat youth are frequent targets of painful harassment (Weinstock & Krehbiel, 2009). For women contending with feminine gender expectations equating a woman’s worth to her physicality and beauty, fatness may be perceived a breach of the social contract (Fikkan & Rothblum, 2011; Saguy, 2011). Puhl and colleagues (2008), for example, found that women who fell into the medical category of “obese” reported *three times* as many discriminatory experiences than obese men. In that SMW appear to be more likely to fall into these categories of “overweight” and “obese” than heterosexual women, it is highly plausible that they are enduring fat stigma as a consequence.

This possibility is an issue for which public health should be concerned, as the stigmatization of fat bodies harbors implications for individual mental health, particularly for women. Multi-national studies of obesity and mental illness find obesity to be associated globally with mental illness like depression and anxiety (Scott et al., 2008). Asthana (2012) found that “obese adolescent girls” report significantly higher rates of psychological distress, including depression, low self-esteem, social avoidance, and fear of negative evaluation when compared to their “normal weight” peers. Asthana (2010) theorizes that poor mental health directly resulted from the discriminatory treatment these young girls endured from their peers (Asthana, 2012). The pathway between weight, discrimination, and mental distress has been empirically validated in samples of adult women. Annis and colleagues (2004) assessed body image, psychosocial adjustment, and experiences of stigma among three groups of women: “stable average weight,” “currently overweight,” and “formerly overweight” women. They found that stable average weight women fared much better on psychosocial adjustment indicators like body dissatisfaction, self-esteem, and life satisfaction; however, both “currently overweight” and “formerly overweight” women scored similarly poorly on these indicators (Annis et al., 2004). Annis and colleagues (2004) found that these two groups had similar experiences of stigmatization over the life course, which statistically explained their equivalent levels of mental distress. Again, as observed with sexual minorities, experiences of stigma and discrimination related to body size damage mental health. The clarity of this connection certainly elevates the premise that SMW may be at risk for encountering mental health issues resulting from fat stigma.

SMW and Body Image

Examinations of SMW and body image paint a portrait distinct from one of severe mental distress. While the link between body size and mental health has been understudied among SMW, a rich literature exists examining how SMW *perceive* and *evaluate* their physical bodies (Austin et al., 2004; Hadland et al., 2014; Morrison et al., 2004; Owens et al., 2003; Wagenbach, 2004). A compelling amount of evidence points to SMW potentially having better body image, or at least less of a preoccupation with weight status, than heterosexual women. Body image refers to an individual's wide variety of "thoughts, beliefs, feelings, and behaviors" (p.1) that a person may have in relationship to their body (Cash, 2004). These can be positive or negative, but generally body image accounts for how individuals assess, evaluate, and interact with their bodies. In a meta-analysis of 27 studies of body image examining differences by gender and sexual orientation, Morrison and colleagues (2004) uncovered that SMW were on average more satisfied with their bodies than heterosexual women (Morrison et al., 2004). This finding was reiterated by Wagenbach (2004) who, in a comparative study of adult lesbian and heterosexual women, found lesbians to be less concerned with dieting and physical appearance than heterosexual women. Austin and colleagues (2004) found that compared to their heterosexual counterparts, lesbian and bisexual adolescents were happier with the way their bodies looked, less concerned with trying to look like girls and women in the media, less likely to diet, and less likely to say they were worried about being thin. These findings suggest that SMW may have a more positive body image than heterosexual women.

This pattern appears regardless of body size. Owens and colleagues (2003) found SMW to be more satisfied with their bodies than heterosexual women, even though they reported having slightly higher BMI than heterosexual women. Recently, Hadland and colleagues (2014)

found that among the adolescents, lesbian and bisexual girls were more likely to perceive themselves as healthy and underweight despite falling into the BMI categories of “overweight” or “obese” than heterosexual girls. Even in youth, SMW report a more positive perceptual relationship with their bodies than heterosexual women (Austin et al, 2004; Hadland et al, 2014). Given what is known about the role of stigma and discrimination deteriorating the mental wellbeing of those categorized as “overweight” and “obese” (Annis et al., 2004; Asthana, 2012), I am interested in evaluating whether positive body image among SMW provides a mechanism to disrupt or lessen the negative impact of fat stigma on mental health. While several have investigated why this positive body image exists among SMW (Huxley et al., 2014; Leavy & Hastings, 2010; Yost & Chmielewski, 2011), I seek to move this literature forward to explore what additional health advantages positive body image may afford SMW.

A Question of Resilience

In light of the persistent finding that SMW possess more positive body image and less regard for body size than heterosexual women (Austin et al., 2004; Hadland et al., 2014; Morrison et al., 2004; Owens et al., 2003; Wagenbach, 2004), I argue that this pattern may be evidence of psychological resilience within this group. This point is critical to understand because with the predominant focus on risk SMW endure on account of their body size (Bowen et al., 2008; Deputy & Boehmer, 2014; Fredriksen-Goldsen et al., 2013; Hatzenbuehler et al., 2013; Jun et al., 2012; Katz-Wise et al., 2014; Laska et al., 2015), public health science may be overlooking a key health advantage experienced by SMW. Indeed, it may be possible to understand positive body image among young SMW with fat bodies as a mechanism within a process of resilience. *Resilience* as a concept or theory refers to the positive functioning of individuals who experience hardship (Richardson, 2002). To be *resilient* predicates two things:

(1) living through a difficult situation or experience and (2) succeeding or thriving in the face of these obstacles (Richardson, 2002). In the case of young SMW who fall into these categories of “overweight” or “obese”, the difficult experience in question is living in a society which denigrates and discriminates against their body size and shape. As such, the next question to ask is, to what extent does positive body image promote mental health in the face of such obstacles? If body image is implicated within such a process, this relationship between size-discrimination, body image, and mental health may be best understood as one of resilience.

Fergus and Zimmerman (2005) provide a useful framework for thinking through processes of resilience. They point to the existence of individual *assets* (i.e., personal qualities) and contextual *resources* (i.e., social and environmental factors) as providing the catalyst for overcoming risk (Fergus & Zimmerman, 2005). These *assets* and *resources* may disrupt the relationship between a risk factor and a negative health outcome in several ways that are able to be empirically evaluated. At the most fundamental level, Fergus and Zimmerman (2005) explain that resilience is a process involving a health risk, a health outcome, and an asset or resource which offsets the ill effects of the health risk (Fergus & Zimmerman, 2005). The authors propose multiple ways to conceptualize these relationships theoretically and statistically. An asset or resource may be *compensatory* if it has a unique positive effect on a health outcome that operates independently from the risk factor (Fergus & Zimmerman, 2005). This relationship can be statistically modeled through ordinary least squares regression by examining the main effect of both the risk and the asset on the health outcome. If these relationships move in opposite directions that is evidence that the asset or resource is *compensatory*. Alternatively, Fergus and Zimmerman (2005) note that an asset or resource may be *protective*. A protective factor moderates the intensity of the relationship between the risk factor and the outcome. In other

words, the presence of a protective factor may reduce the severity of the negative effect of the risk on the health outcome. This constellation of relationships can be statistically modeled by examining the interaction effect between the risk and the asset.

Study Objectives

Guided by Fergus and Zimmerman's (2005) framework for understanding resilience, the objective of the current study is to evaluate the utility of understanding positive body image as an asset available to SMW experiencing discrimination relating to body size. This analysis is guided by three primary questions:

1. What is the relationship between size discrimination and mental health among SMW?
2. To what extent does positive body image lessen the effects of size discrimination on mental health among SMW?
3. How does positive body image function (i.e., as a mediator/ compensatory asset or moderator/ protective asset) in this process?

To answer these questions, I examine the relationship between body size, discrimination, body image, and mental health outcomes in a sample of SMW. All statistical tests were structured using Fergus and Zimmerman's (2005) framework of resilience.

Methods

Methods

Sample. Data for this paper come out of the Michigan resident sub-sample of the Michigan Smoking and Sexuality Survey (M-SASS; Johns et al., 2013; analytic sample n=223). M-SASS is a cross-sectional, observational study examining young SMW and their smoking behaviors. Data collection took place in the summer of 2011. Women in the sample ranged in age from 18 to 24 with a mean age of 20.98 (sd=1.87). Women that identified as sexual

minorities or had “sexual experiences with a woman” in the past year were eligible to participate in the study. When asked to report on their sexual identity, 36.8% of women in the sample identified as lesbian, 42.6% as bisexual, and 20.6 % as some other identity (i.e., queer, pansexual, no label, heterosexual). In terms of demographic composition of the sample, 81.2% identified their race or ethnicity as White/ European-American, 5.4% identified as Black/ African American, 4.0% as Latino/ Hispanic, and 9.4% identified as some other racial category. As a community sample of young SMW, M-SASS is uniquely suited for examining how processes of resilience related to body size and mental health may play out for this population.

Measures.

Body Size. I used body mass index as a proxy for body size. M-SASS participants reported their height and weight within the questionnaire. Responses on these items were used to calculate participant body mass index (BMI) according to the formula provided by the Centers for Disease Control (CDC, 2011; $\text{weight in pounds} / [(\text{height in inches})^2 \times 703]$). Within the sample, BMI was normally distributed with a mean score of 26.69 (sd=8.03).

Size discrimination. Items from the *Everyday Discrimination Scale* designed by Williams and colleagues (1997) were used to assess experiences of discrimination related to body size. Participants were asked whether they had experienced nine different forms of discrimination in the past year, followed by discriminatory experiences in the past 30 days. Examples of these types of events included “been treated with less courtesy than others?” and “been called names or insulted”. For every event which occurred in the last 30 days, participants were asked to state what reason they ascribed as being the cause of the experience of discrimination—options included “gender,” “race/ ethnicity,” “sexual orientation,” “age,” “religion,” “physical appearance,” and “income level/ social class.”

Given that this particular project theoretical investment in discrimination related to body size, I calculated a sum score of number of events in the past 30 days that participants attributed as related to their physical appearance. Scores on this item ranged from 0 to 9 with 41.3% of the sample reporting at least one form of discrimination related to physical appearance in the last 30 days. Given the right skew on this variable, I recoded it as categorical, and placed participants into three distinct groups related to the number of discriminatory experiences they reported in the past month: Group 1 – No discriminatory experiences (58.7%), Group 2 – One or two discriminatory experiences (22.9%), and Group 3 – Three or more discriminatory experiences (18.4%). In regression analyses, these groups were entered into models as dummy variables with Group 1 (i.e., no discrimination) as the referent.

Body image. As a measure of positive body image, I utilized Mendelson and colleagues' (2001) *Body-Esteem Scale for Adolescents and Adults* (BESAA). In previous analyses with this sample (see *Chapter III*), I conducted a factor analysis of the scale items to determine their goodness of fit within a sample of SMW. From that analysis, I derived thirteen items that comprised three separate latent factors. For this study, I created a composite measure of body esteem in its entirety by mean-scoring across these thirteen items. The sample mean was 3.00 with a standard deviation of 0.83. Higher scores on this metric indicated better body esteem. The scale held together well—the reliability of these thirteen items was $\alpha = 0.92$.

Mental health. In order to examine both negative and positive mental health states, I used two different outcomes in these analyses: depressive symptoms and self-esteem.

Depressive Symptoms. To assess participants' degree of depressive symptoms, women in this study filled out the Center for Epidemiologic Studies Depression (CES-D) scale (Radloff, 1977). The CES-D scale contains ten items designed to characterize symptoms of depression

(e.g., “I felt fearful” and “I could not ‘get going’”). Participants rated on a scale from 1 (rarely or none of the time) to 4 (most or all of the time), how frequently they had experienced these feelings over the last week. High scores on this scale indicated more depressive symptoms. Women in this sample had a mean score of 2.29 with a standard deviation of 0.58. The scale held together with good reliability ($\alpha = .82$).

Self-esteem. To measure self-esteem, participants completed the Rosenberg (1979) Self-esteem scale, a ten item metric in which participants rated their level of agreement regarding a series of statements designed to assess their feelings of self-worth on a scale from 1 (strongly disagree) to 4 (strongly agree). Higher scores indicated better self-esteem. Women in this sample had a mean score of 2.83 with a standard deviation of 0.55. The scale held together with strong reliability ($\alpha = .88$).

Analytic Strategy

I examined three different models of resilience based upon Fergus and Zimmerman’s (2005) statistical approaches, which are visually depicted in *Figures IV.1 -3*. In all three of these models, discrimination was the risk factor, mental health status was the health outcome, and body esteem was the asset.

Figure IV.1 presents body image as a *compensatory* asset. I statistically tested these relationships using a series of ordinary least squares regressions. To begin, I assessed univariate characteristics of, and the bivariate relationships between, my predictors of interest (i.e., discrimination, body esteem), demographic covariates (i.e., BMI, sexual identity, race), and outcomes (i.e., depressive symptoms, self-esteem). I then built three OLS models in a stepwise fashion for each of the mental health outcomes. Model 1 included the demographic controls including body size. Model 2 introduced the risk factor of discrimination due to physical

appearance. Model 3 added body esteem as a compensatory factor. In this final model, I assessed the significance of the beta weights of discrimination and body esteem to assess if they were both significant and moving in opposite directions, as this would provide evidence that body esteem is a compensatory factor.

I also examined body image as a *protective* asset through two distinct statistical configurations modeled in *Figure IV.2* and *Figure IV.3* respectively. *Figure IV.2* depicts a moderation effect where the asset (i.e., body image) is represented as a continuous variable interacting with the risk factor, while *Figure IV.3* depicts an interaction term wherein the relationship between the risk and the health outcome is strengthened or diminished depending on different *levels* of exposure to the asset (i.e., body image is categorical).

To examine whether body esteem operates in the manner depicted in *Figure IV.2*, I used the guidelines put forth by Aiken and West (1991) for creating an interaction term between a continuous (i.e., body esteem) and a categorical (i.e., discrimination) variable. I mean-centered body esteem and multiplied it by the indicators of the non-referent groups for discrimination (i.e., one to two experiences of discrimination, three or more experiences of discrimination). These new terms were then z-scored to create the interaction terms. These interaction terms were then modeled alongside the demographic controls and z-scored body esteem and categorical discrimination variables (*Table IV.5*). I looked at the individual p-value of each of these interaction terms as well as their overall significance of their effect on the R^2 of the model to assess the presence of an interaction effect.

To examine whether body esteem's moderation of the relationship between discrimination and poor mental health is better understood as a group effect (See *Figure IV.3*), I created three body esteem groups: low body esteem, average body esteem, and high body

esteem. To create these groups, I began by z-scoring the body esteem variable. Participants with a z-score of -0.5 or less (i.e., one half standard deviations or more below average) were designated “Low Body Esteem” (n = 67). Participants with a z-score between -0.5 and 0.5 were designated “Average Body Esteem” (n = 85). Participants with a z-score greater than 0.5 (i.e., one half a standard deviation or more above average) were designated “High Body Esteem” (n=71).

Then, in a stepwise fashion I tested two models: a main effects and an interaction model. The main effects model included the demographic controls, discrimination, and dummy variables for the Average and High Body Esteem groups--Low Body Esteem was left out as the referent group. The interaction model included the interaction terms for the body esteem groups—these were also created using Aiken and West’s (1991) guidelines for creating an interaction term between two categorical variables. The dichotomous indicators for the body esteem and discrimination groups that were *not* referent groups were multiplied by one another, creating four interaction terms (i.e., (1) One or Two Experiences of Discrimination * Average Body Esteem, (2) One or Two Experiences of Discrimination * High Body Esteem, (3) Three or More Experiences of Discrimination * Average Body Esteem, (2) Three or More Experiences of Discrimination * High Body Esteem). I looked at the individual p-value of each of these interaction terms as well as their overall significance of the four items’ combined effect on the R² of the model to assess the presence of an interaction effect.

Results

Compensatory (Main Effects) Model (See *Table IV.3*)

Depressive symptoms.

Model 1. Overall, model 1, which included the demographic controls of BMI, race, and sexual identity, was significant [$F(4, 218) = 3.52, p < .01$]. A positive association existed between BMI and depressive symptoms—as BMI increased, so did reported symptoms of depression [$\beta = .15, t = 2.23, p = .027$]. Bisexual-identified women reported more depressive symptoms than lesbian women [$\beta = .21, t = 2.88, p = .004$]. There were no significant differences between women who identified as something other than lesbian or bisexual and lesbian-identified women in reported depressive symptoms, nor were there differences between White women and women of color in depressive symptoms.

Model 2. In Model 2, the variable for experiences with discrimination related to body size was added. The overall model fit was highlight significant [$F(6, 216) = 5.28, p < .001$]. The main effects of both discrimination were significant. Individuals falling into the group experiencing one or two discriminatory experiences related to physical appearance in the last 30 days and individuals who had experienced three or more experiences of discrimination in the past 30 days both reported greater levels of depressive symptoms than women who had not experienced any size discrimination [$\beta = .22, t = 3.26, p = .001$ and $\beta = .2, t = 3.39, p = .001$, respectively]. Once discriminatory experiences were entered into the model, BMI was no longer significantly associated with depressive symptoms, while bisexual identity remained significantly associated.

Model 3. In Model 3, body esteem was added to the model. The overall model fit remained significant [$F(7, 215) = 7.58, p < .001$]. Body esteem was negatively associated with

depressive symptoms [$\beta = -.32, t = -4.33, p = .000$]. Both discrimination variables and bisexual identity remained significantly associated with the outcome of depressive symptoms.

Self-esteem.

Model 1. To begin, I examined a model including only the demographic controls as predictors. None of these predictors were statistically significant, and indeed the overall model fit was also insignificant [$F(4, 2180) = 1.33, p = .258$]

Model 2. Model 2 added discrimination experiences due to physical appearance as a predictor. The main effect of experiencing three or more discriminatory events was significant [$\beta = -0.19, t = -2.52, p = .013$]; however, the overall model fit remained insignificant [$F(6, 2160) = 2.12, p = .052$].

Model 3. With the addition of body esteem into the model, the overall model fit achieved significance [$F(7, 215) = 15.44, p = .000$]. In this model, BMI achieved significance and was positively associated with self esteem [$\beta = .28, t = 4.13, p = .000$]. Having experienced one or two discriminatory events in the past 30 days was associated with less self esteem [$\beta = -.14, t = -2.30, p = .022$], while experiencing 3 or more discriminatory experiences was no longer significantly associated with self esteem. Body esteem was positively associated with self-esteem [$\beta = .64, t = 9.49, p = .000$].

Protective Model with Body Esteem as Continuous Variable (See Table IV.4)

Depressive symptoms.

Model 1. Model 1 is the main effects model and this thus identical to compensatory model 3.

Model 2. This model presents the inclusion of the interaction terms for body esteem and both the included discrimination variables. While the overall model fit remained significant [F

(9, 213) = 6.00, $p < .001$], the interaction terms were not significantly associated with the outcome of depressive symptoms and did not improve the model fit [$\Delta R^2 = 0.004$, $p = .565$].

Self-esteem.

Model 1. Model 1 is the main effects model and this thus identical to compensatory model 3.

Model 2. The interaction terms for body esteem and the categorical discrimination variables are added to this model. While the overall model fit remained significant [$F(9, 2130) = 11.99$, $p < .001$], the interaction terms were not significantly associated with the outcome of self-esteem and did not improve the model fit [$\Delta R^2 = 0.002$, $p = .771$].

Protective-Stabilizing Model with Body Esteem as Categorical Variable (See Table IV.5)

Depressive symptoms.

Model 1. Model 1 a main effects model with body esteem as a categorical predictor [$F(8, 214) = 7.61$, $p = .000$]. Consistent with earlier analyses, bisexual identity and both discrimination variables were significantly related to depressive symptoms. With the introduction of the body esteem categories, women in the High Body Esteem Group reported fewer depressive symptoms than the Low Body Esteem group [$\beta = -.35$, $t = -4.06$, $p = .000$], but there was no significant difference between low and average body esteem groups.

Model 2. Four interaction terms were introduced to this model: one to two experiences of discrimination by average body esteem, one to two experiences of discrimination by high body esteem, three or more experiences of discrimination by average body esteem, three or more experiences of discrimination by high body esteem. None of the individual interaction indicators nor the overall change to the fit of the model were significant ($\Delta R^2 = 0.003$, $p = .943$).

Self-esteem.

Model 1. Consistent with earlier analyses, the overall model fit was significant [$F(8, 214) = 11.11, p = .000$], and the main effect of both discrimination variables were significantly associated with self-esteem. With body esteem recoded into categories, both average [$\beta = .21, t = 2.65, p = .009$] and high [$\beta = .65, t = 7.86, p = .000$] body esteem groups reported more self-esteem than those in the low body esteem group. As seen in earlier main effects models, BMI remained significantly related to the outcome.

Model 2. Four interaction terms were introduced to this model: one to two experiences of discrimination * average body esteem, one to two experiences of discrimination * high body esteem, three or more experiences of discrimination * average body esteem, three or more experiences of discrimination * high body esteem. None of the individual interaction indicators nor the overall change to the fit of the model were significant [$\Delta R^2 = 0.002, p = .955$].

Discussion

SMW have been marked as being at an increased health risk due to their body size, namely their higher likelihood of being categorized as “overweight” or “obese” than heterosexual women in community and population-based comparisons of BMI (Bowen et al., 2008; Deputy & Boehmer, 2014; Fredriksen-Goldsen et al., 2013; Hatzenbuehler et al., 2013; Jun et al., 2012; Katz-Wise et al., 2014; Laska et al., 2015). Parallel to these studies focused on higher BMI as risky to the physical body, literature on fat stigma suggests that the marginalization and discrimination of individuals with larger bodies deteriorates mental health (Annis et al., 2004; Asthana, 2012). Despite this pathway’s applicability to the frameworks of minority stress and sexual stigma which guide much of the inquiry into disparities in LGBT health (Herek, 2009; Meyer, 2003; Meyer & Frost, 2013), few have sought to examine how

discrimination due to body size may contribute to poor mental health among young SMW. This study aimed to fill this gap by testing models of size discrimination and mental health in a sample of young SMW. The results of this study suggest that body size and related discrimination magnify the depressive symptoms of young SMW; however, this study also found evidence that body image can be understood as compensatory asset which may aid in young SMW's coping with experiences of fat stigma. I expand on the implications of these results below.

Body Size and Mental Health for SMW

The results of this study support the idea that body size is associated with mental health among young SMW. In demographic models, high BMI predicted elevated levels of depressive symptoms. This finding is consistent with research on the connection between categorization as “overweight” or “obese” and rates of depression (Annis et al., 2004; Scott et al, 2008). This relationship, however, was not observed for self-esteem. The lack of an association between body size and self esteem may be attributable to SMW feeling less of a preoccupation with weight, and thus delinking their self-concept from their body size (Austin et al., 2004; Hadland et al., 2014; Owens et al., 2003).

The literature on fat stigma argues that the root cause of poor mental health among women with fat bodies is marginalization and discrimination (Asthana, 2012; Puhl & Brownell, 2001). This pathway is supported by the results of this study. When size discrimination was added to the predictive model of depressive symptoms, BMI was no longer significantly predictive. For the young SMW in our sample, the relationship between body size and depressive symptoms appeared to be entirely explained by size-related discriminatory experiences. This finding supports the idea that BMI is only deleterious to mental health in so

far as it elicits critical evaluation from others. Negative treatment due to body size degrades the mental health of young SMW with fat bodies—a clear example of the stress process.

The broader literature on body image suggests that young SMW have access to positive body image (Austin et al., 2004; Hadland et al., 2014; Morrison et al., 2004; Owens et al., 2003; Wagenbach, 2004). I also sought to examine whether possessing positive body image provided any benefit to the mental health of young SMW, particularly in the face of fat stigma. The results of this study indeed indicate that positive body image, here measured as body esteem, did benefit the mental health of young women in our sample. In the model of the depressive symptoms, body esteem was significant in the opposite direction of the discrimination variables. Further, the effect size of the body esteem variable was greater than the discrimination variables, indicating young SMW's internal appraisal of their body was more salient to their mental health than the external criticisms they might encounter. This finding lends support to the consideration of body image as a compensatory asset, which may be cultivated for SMW to offset fat stigma. Similarly, body image related to self-esteem in a health promotive direction; however, given that the model of the relationship between body size, discrimination, and self-esteem was not significant, it may not be theoretically appropriate to label body image as a compensatory asset for self-esteem. Instead, it may be a component of a young SMW's broader self-concept, which may not be significantly impacted by discrimination related to body size.

Taken together, the findings in this study suggest that young SMW's internal appraisal or assessment of their body is critically intertwined with their mental health. This implication is particularly compelling when viewed in relationship to pattern of young SMW having a more positive assessment of their bodies than heterosexual women (Austin et al., 2004; Hadland et al., 2014). The compensatory asset of body esteem may be something uniquely advantageous to

young SMW, a potential *benefit* to being a sexual minority. Such a finding provides an important counterpoint to a larger public health narrative surrounding young SMW as being at a grave health risk due to their body size (Bowen et al., 2008; Cochran & Mays, 2012; Farmer et al., 2013)

This study sought to explore not only *if* positive body image provided a benefit to the mental health of young SMW experiencing fat stigma, but also *how* this relationship operated within a process of resilience. As noted, there was strong evidence that body image can be conceptualized as a compensatory asset as defined by Fergus and Zimmerman (2005); body esteem had a unique main effect on depressive symptoms in the opposite direction of experiences of discrimination. None of the moderation models tested were significant. These lack of relationships discounts body image as a protective asset, that is a factor which if present may diminish or even erase the harmful effects of a health risk (Fergus & Zimmerman, 2005).

Why the lack of a moderation effect? Fergus and Zimmerman (2005) note that there are two types of factors that may enable resilience: *assets* (i.e., personal qualities) and *resources* (i.e., social and environmental factors). Body image is an example of an asset, a personal quality; however, experiences of discrimination are external to the individual. Perhaps only contextual *resources* have the potential to provide young SMW with a protective reduction of the harmful association between discrimination and mental health, as they, like discrimination, occur outside the individual. Future research should explore whether contextual resources like community norms of beauty (Gomez, Hollibaugh, & Rubin, 2000) or exposure to social marketing campaigns which promote acceptance of all body sizes (Unilever, 2015) might offer protective benefits to young SMW encountering fat stigma.

Limitations and Strengths

This study contains a few limitations. First, the analyses were conducted using data from a convenience sample, which does not allow for generalization of these findings to SMW broadly. In particular, this sampling strategy resulted in a final analytic sample of predominately SMW who identified their race or ethnicity as White, restricting any ability to draw conclusions about how body size, body image, discrimination, and mental health may intersect with racial identities in populations of SMW. This concern is particularly relevant given the differences in both body size and body image have been identified across racial identity within populations of women (Deputy and Boehmer, 2014; Krauss, Powell, & Wada, 2012; Kronenfeld, Reba-Harrelson, Von Holle, Reyes, & Bulik, 2010; Wilson, 2009). Still, the web-based recruitment technique provided geographical diversity within Michigan, and the final sample included women who lived outside of metropolitan areas, thus expanding the scope of beyond urban areas, which increases the generalizability of the findings. Second, the study design was cross-sectional, which inhibits the ability to test the directionality of the relationship between body size, discrimination, body image, and mental health. Future longitudinal research is needed to examine how these constructs shift in relationship to one another over time.

Despite these limitations, this study also possesses a few notable strengths. Importantly, this study contributes to a largely underdeveloped line of inquiry: that is, how body size may increase experiences of stigma for young SMW, and whether body image can be an influential asset available to SMW to offset some of the consequences of this stigma. While the literature on body size and SMW is substantial (Bowen et al., 2008; Deputy & Boehmer, 2014; Fredriksen-Goldsen et al., 2013; Hatzenbuehler et al., 2013; Jun et al., 2012; Katz-Wise et al., 2014; Laska et al., 2015), the focus has been primarily on thinking of fat bodies in the terms of disease, not as

a characteristic which may shape the social experience of young SMW in important ways. By focusing on this theoretical understanding of the bodies and identities of SMW, the current study may open up further explorations of these health influential processes of fat stigma and resilience among populations of YSMW.

Conclusion

Literature on fat stigma and mental health points to the fact that being young, fat, and female puts the individual at the crux of body scrutiny and discrimination, which wears away at mental health (Annis et al., 2004; Asthana, 2012). While the results of this study support this link between body size, discrimination, and depressive symptoms as present among young SMW, they also point to positive body image as being a compensatory asset available to young SMW to offset the harmful effects of fat stigma. Given the large effects of body esteem across all our models on the mental health of young SMW, our findings point to the reality that interventions focused on the health of young SMW must support and foster positive body image of this population in order to promote mental health among this group. This suggestion is particularly important for those scholars aiming to design interventions focused on weight loss in this population. By focusing on weight loss as a goal, such interventions may compound fat stigma and damage the mental health of young SMW. As such, the recommendation derived from this study is that public health interventionists critically examine the messages they present around body size and health, so as not to undermine the mental health of young SMW.

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Figure IV.1: Compensatory (Main Effects) Model

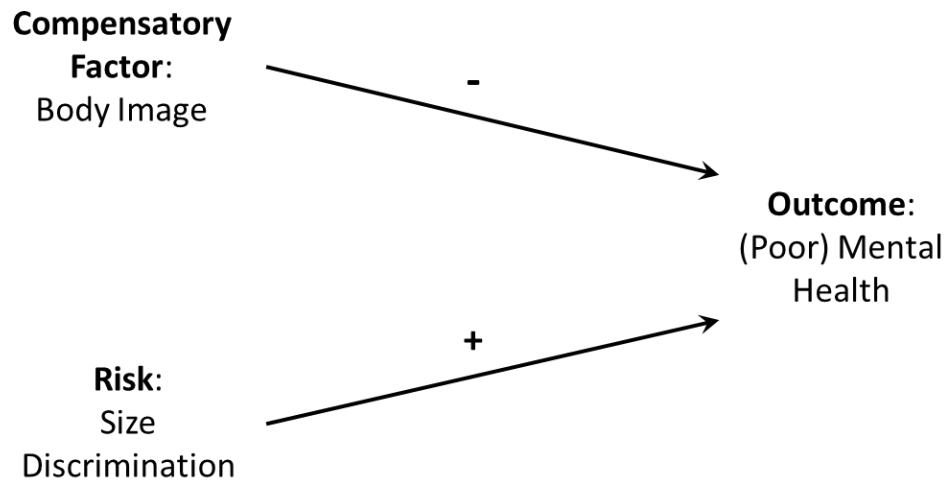


Figure IV.2: Protective Model with Body Image as a Continuous Variable

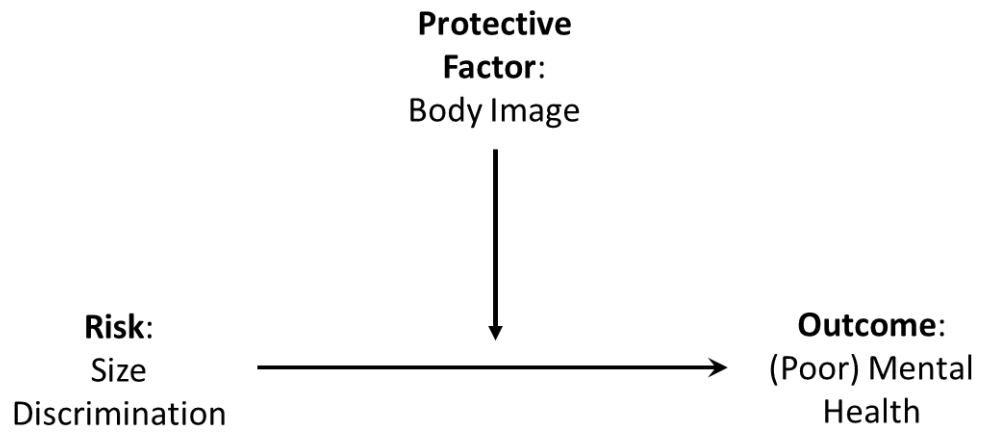


Figure IV.3: Protective-Stabilizing (Stratified) Model of Body Image

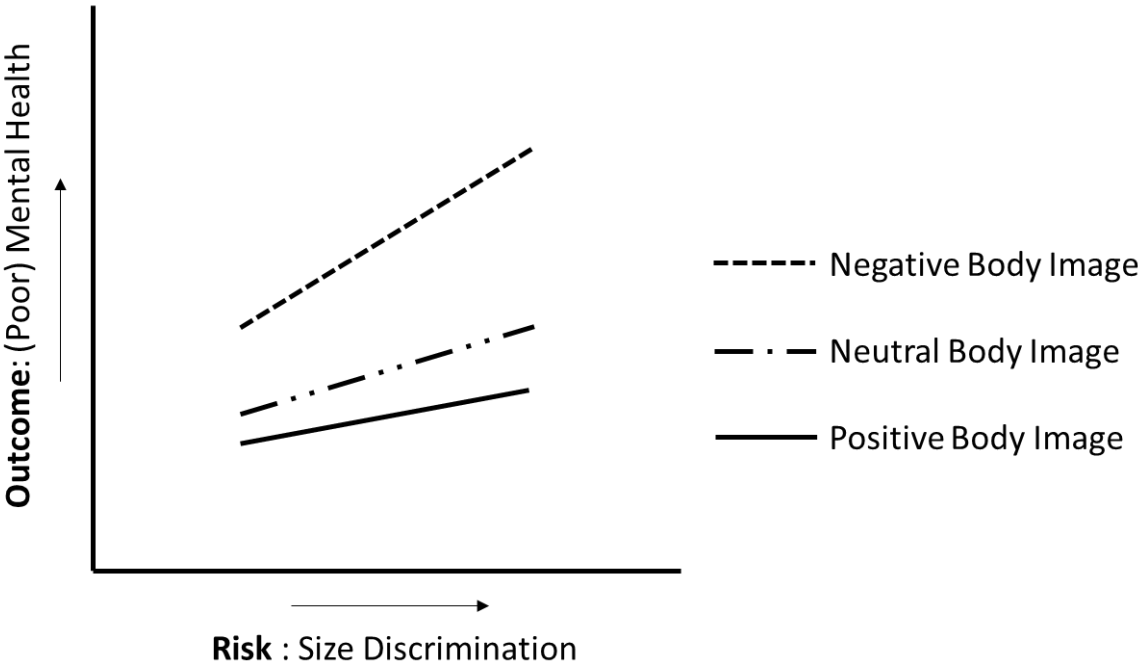


Table IV.1: Descriptive Statistics by Level of Body Esteem¹

Variables	Total (n = 223)	Low Body Esteem (n= 67)	Average Body Esteem (n = 85)	High Body Esteem (n =71)	<i>X</i> ² / <i>F</i> - <i>statistic</i>
	#(%)	#(%)	#(%)	#(%)	
Race					
<i>White</i>	181 (81.2%)	56 (30.9)	67 (37.0)	58 (32.0)	.574
<i>PoC</i>	42 (18.8%)	11 (26.2)	18 (42.9)	13 (31.0)	
Sexual Identity					
<i>Lesbian</i>	82 (36.8)	18 (22.0)	40 (48.8)	24 (29.3)	8.653 [†]
<i>Bisexual</i>	95 (42.6)	36 (37.9)	30 (31.6)	29 (30.5)	
<i>Other</i>	46 (20.6)	13 (28.3)	15 (32.6)	18 (39.1)	
Discrimination ²					
<i>No Experiences</i>	131 (58.7)	31 (23.7)	53 (40.5)	47 (35.9)	18.07**
<i>One or Two</i>	51 (22.9)	13 (25.5)	24 (47.1)	14 (27.5)	
<i>Three or More</i>	41 (18.4)	23 (56.1)	8 (19.5)	10 (24.4)	
	\bar{x} (sd)	\bar{x} (sd)	\bar{x} (sd)	\bar{x} (sd)	
BMI	26.69 (8.03)	32.85 (7.22)	25.26 (8.07)	22.34 (4.45)	42.95***
Body Esteem	3.00 (0.83)	2.03 (0.41)	2.98 (0.21)	3.95 (0.39)	--
Depression	2.29 (0.58)	2.47 (0.54)	2.38 (0.56)	2.01 (0.53)	14.47***
Self Esteem	2.83 (0.55)	2.57 (0.50)	2.73 (0.45)	3.20 (0.49)	33.55***

[†] $p < .1$ * $p < .05$; ** $p < .01$; *** $p < .001$

1 Descriptive statistics reflect unstandardized values on all scales.

2 *Note:* Experiences of discrimination include only those that both occurred in the last 30 day and were attributed to physical appearance.

Table IV.2: Correlation Matrix of Continuous Variables

	BMI	Body Esteem	Depression
BMI	--		
Body Esteem	-0.52***	--	
Depression	0.136*	-0.33***	--
Self Esteem	-1.00	0.52***	-0.56***

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

Table IV.3: Compensatory (Main Effects) Models of Body Esteem¹

Depressive Symptoms						
Predictors	Model 1		Model 2		Model 3	
	b(se)	β	b(se)	β	b(se)	β
BMI	.15 (.07)*	.15	.05 (.07)	.05	-.11 (.08)	-.11
PoC	-.15 (.17)	-.06	-.11 (.16)	-.04	-.08 (.16)	-.03
Bisexual ²	.43 (.15)**	.21	.36 (.14)*	.18	.32 (.14)*	.16
Other Sexual ID	.13 (.18)	.05	-.01 (.18)	-.01	.06 (.17)	.03
Disc (1-2 Exp) ³			.53 (.16)***	.22	.55 (.16)***	.23
Disc (3+ Exp)			.62 (.18)***	.24	.50 (.18)**	.20
Body Esteem					-.32 (.07)***	-.32
Intercept	-.18 (.11)		-.37 (.12)		-3.02 (.00)	
R ²		.06		.13		.20
F-statistic		3.52**		5.28***		7.58***

Self Esteem						
Predictors	Model 1		Model 2		Model 3	
	b(se)	β	b(se)	β	b(se)	β
BMI	-.10 (.07)	-.12	-.04 (.07)	-.04	.28 (.07)***	.28
PoC	-.11 (.17)	-.04	-.13 (.17)	-.05	-.18 (.14)	-.07
Bisexual	-.23 (.15)	-.11	-.18 (.15)	-.09	-.09 (.13)	-.04
Other Sexual ID	.01 (.18)	.00	.12 (.19)	.05	-.04 (.16)	-.02
Disc (1-2 Exp)			-.30 (.17) [†]	-.12	-.33 (.14)*	-.14
Disc (3+ Exp)			-.48 (.19)*	-.19	-.25 (.16)	-.10
Body Esteem					.64 (.07)***	.64
Intercept			.23 (.13)		.20 (.11)	
R ²		.02		.06		.34
F-statistic		1.334		2.12 [†]		15.44***

[†] $p < .1$ * $p < .05$; ** $p < .01$; *** $p < .001$

1 Note: Continuous Predictors in these models have been z-scored.

2 Lesbians served as the referent group for sexual identity.

3 No experiences of discrimination served as the referent group for discrimination related to physical appearance.

Table IV.4: Protective Model with Body Esteem as Continuous Variable¹

Depressive Symptoms				
Predictors	Model 1		Model 2	
	b(se)	β	b(se)	β
Body Mass Index	-.11 (.08)	-.11	-.12 (.08)	-.12
PoC	-.08 (.16)	-.03	-.09 (.16)	-.04
Bisexual	.32 (.14)*	.16	.31 (.14)	.15
Other Sexual ID	.06 (.17)	.03	.06 (.17)	.02
Disc (1-2 Exp)	.55 (.16)***	.23	.56 (.16)	.23
Disc (3+ Exp)	.50 (.18)**	.20	.51 (.19)	.20
Body Esteem	-.32 (.07)***	-.32	-.27 (.09)	-.27
Disc 1-2 * Body Esteem			-.07 (.07)	-.07
Disc 3+ * Body Esteem			-.04 (.08)	-.04
Intercept	-3.02 (.00)		-3.35 (.12)	
R ²		.20		.20
F-statistic		7.58***		6.00***

Self Esteem				
Predictors	Model 1		Model 2	
	b	se	b	se
Body Mass Index	.28 (.07)***	.28	.29 (.07)***	.29
PoC	-.18 (.14)	-.07	-.18 (.14)	-.07
Bisexual	-.09 (.13)	-.04	-.08 (.13)	-.04
Other Sexual ID	-.04 (.16)	-.02	-.04 (.16)	-.02
Disc (1-2 Exp)	-.33 (.14)*	-.14	-.34 (.14)*	-.14
Disc (3+ Exp)	-.25 (.16)	-.10	-.24 (.17)	-.09
Body Esteem	.64 (.07)***	.64	.61 (.08)***	.61
Disc 1-2 * Body Esteem			.04 (.06)	.04
Disc 3+ * Body Esteem			.04 (.07)	.04
Intercept	.20 (.11)		.20 (.11)	
R ²		.34		.34
F-statistic		15.44***		11.99***

* p < .05 ; ** p < .01; *** p < .001

¹ Note: Continuous Predictors in these models have been z-scored.

Table IV.5: Protective (Stratified/ Moderation) Model 2 of Body Esteem

	Depressive Symptoms			
	Model 1		Model 2	
	b(se)	β	b(se)	β
Body Mass Index	-.08 (.08)	-.08	-.09 (.08)	-.09
PoC	-.10 (.16)	-.04	-.11 (.16)	-.04
Bisexual	.36 (.14) *	.18	.35 (.14)*	.18
Other Sexual ID	.08 (.17)	.03	.08 (.17)	.03
Disc (1-2 Exp)	.53 (.16) **	.23	.70 (.30)*	.30
Disc (3+ Exp)	.62 (.18)***	.24	.75 (.26)**	.29
Average Body Esteem	-.05 (.17)	-.03	.04 (.22)	.02
High Body Esteem	-.75 (.18)***	-.35	-.64 (.23)**	-.30
Disc (1-2 Exp)* Avg Body Esteem			-.18 (.37)	-.06
Disc (3+ Exp) * Avg Body Esteem			-.25 (.43)	-.05
Disc (1-2 Exp)* High Body Esteem			-.29 (.41)	-.07
Disc (3+ Exp) * High Body Esteem			-.21 (.41)	-.04
Intercept	-.13 .17		-.20 (.19)	
R ²		.22		.23
F-statistic		7.61***		5.06***
	Self Esteem			
	Model 1		Model 2	
	b(se)	β	b(se)	β
Body Mass Index	.23 (.07)**	.23	.25 (.08)**	.25
PoC	-.17 (.15)	-.07	-.16 (.15)	-.06
Bisexual	-.12 (.13)	-.06	-.12 (.13)	-.06
Other Sexual ID	-.01 (.16)	-.01	-.02 (.17)	-.01
Disc (1-2 Exp)	-.34 (.15)*		-.33 (.29)	-.14
Disc (3+ Exp)	-.44 (.17)**		-.48 (.24)*	-.19
Average Body Esteem	.43 (.16)**		.44 (.21)*	.21
High Body Esteem	1.38 (.18)***		1.36 (.22)***	.64
Disc (1-2 Exp)* Avg Body Esteem			-.01 (.36)	-.00
Disc (3+ Exp) * Avg Body Esteem			-.11 (.41)	-.02
Disc (1-2 Exp)* High Body Esteem			-.04 (.40)	-.01
Disc (3+ Exp) * High Body Esteem			.23 (.39)	.05
Intercept	-.359 .157		-.36 (.18)	
R ²		.29		.30
F-statistic		11.11***		7.35***

* p < .05 ; ** p < .01; *** p < .001

1 Note: Continuous Predictors in these models have been z-scored.

CHAPTER V

Conclusion

This dissertation's overall objective was to create a more complete portrait of the health of sexual minority women (SMW) with regard to their body size. Two bodies of literature informed the research questions throughout this study: (1) SMW's risk for obesity in the health sciences (Bowen, Balsam, & Ender, 2008; Deputy & Boehmer, 2014; Fredriksen-Goldsen et al., 2013; Hatzenbuehler et al., 2013; Jun et al., 2012; Katz-Wise et al., 2014; Laska et al., 2015), and (2) SMW's advantage of positive body image in the psychological literature (Leavy & Hastings, 2010; Owens, Hughes, & Owens-Nicholson, 2003; Peplau et al., 2009; Wagenbach, 2004). By examining these two areas of inquiry alongside one another, this dissertation indicates that SMW may experience unique health benefits to their health via body image regardless of their body size, thus opening up a conversation about the positive consequences to ownership of a sexual minority identity.

Summary of Results

In *Chapter II*, I conducted a purposeful literature review to identify influential papers in the health sciences where the primary objective of the research was to examine the relationship between SMW, their body size, and their health status. By examining 10 influential papers published in top ranked health journals, I found evidence of key gaps in the operationalization of body size and its relationship to health. The majority of these top ranked papers framed body size as an outcome in their statistical analyses, indicating a bias towards understanding body size

as a marker of disease, namely that fat bodies are sick bodies. Additionally, acknowledgement of body image was missing from half the articles in the final analytic sample, a surprising finding given research pointing to SMW possessing more positive appraisal of their bodies than heterosexual women (Leavy & Hastings, 2010; Owens et al, 2003; Peplau et al., 2009; Wagenbach, 2004). The absence of women's appraisal of their own bodies in these studies indicates a privileging of medical metrics like BMI over women's own beliefs about the status of their bodies. The results of *Chapter II* point to important areas of future research which must be addressed if health science is to paint an accurate portrait of the health status of SMW.

In *Chapter III* I used data from the Michigan Smoking and Sexuality Survey (M-SASS) to test theoretically informed pathways between components of women's social identities and their body esteem. Guided by the concept of heteronormativity, I evaluated whether aspects of young SMW's identities where they departed from heteronormative social roles (i.e., non-traditional gender roles, sexual identity, connection to the LGBTQ community) were associated with dimensions of body esteem (i.e., body weight, body attribution, and body shame). The results of this study indicated that connection to the LGBTQ community related to more positive feelings about body weight and reduced feelings of body shame. These relationships were amplified for SMW who reported their gender role identification as more masculine. Additionally, women who reported they adhered to feminine norms in their interpersonal relationship had worse feelings about their body weight and a greater sense of body shame. These results point to movement away from traditional, heteronormative gender roles as potentially having a positive benefit to women's body esteem.

In *Chapter IV* I assessed whether positive body image in SMW might be understood as a psychological asset available to SMW facing size discrimination. Using the same sample of

SMW from M-SASS as examined in *Chapter III*, I tested three resilience models of body size, experiences of body-size discrimination, body image, and mental health (i.e., depressive symptoms, self-esteem): (1) a compensatory model, (2) a protective model, and (3) a protective-stabilizing model (see *Chapter IV* for detailed description of the distinctions between these three models). These analyses revealed that women who reported more experiences of body-size discrimination also reported more depressive symptoms, but the relationship between body-size discrimination and self-esteem was not significant. Conversely, positive body image was significantly associated with fewer symptoms of depression and more self-esteem. There were no interaction effects between body image and experiences of body-size discrimination on either of the mental health outcomes. The results of this study point to body image as being an important compensatory asset within a psychological process of resilience among SMW.

Major Themes across Dissertation Studies

Theme 1: Dominant analytic approaches limit our understanding of SMW's experiences. One overarching theme in this dissertation is the fact that the decisions a researcher makes around their analytic approach inform the scope of the conclusions drawn about populations of interest, such as SMW. The samples used, questions asked, and analytic plans constructed all place constraints on the range of results possible to derive from that particular analytic endeavor. Current health science understandings of SMW mark them as obese, but frequently come out of national datasets which ask questions almost exclusively about physical illness and recruit few sexual and gender minorities into the sample (Jun et al., 2012; Katz-Wise et al., 2014; Struble, Lindley, Montgomery, Hardin, & Burcin, 2010). In this dissertation, I formulated research questions which moved beyond the obesity/ illness paradigm and used data

specifically collected with SMW in order to adequately acknowledge the heterogeneity within this group.

In *Chapter II*, a review of influential research studies focusing on body size and SMW demonstrated that the dominant framework guiding research questions about SMW and their bodies is one of sickness. This review revealed that research questions on SMW and body size generally situated large bodies as being in need of explanation (i.e., positioning body mass index or BMI as an outcome) and studies largely excluded body image as a construct of interest thus ignoring women's perceptions of their bodies. In *Chapter III*, I used a multidimensional measure of body esteem to assess body image along multiple axes within a sample of exclusively SMW. This measure, the *Body Esteem Scale for Adolescents and Adults*, provided a snapshot of women's perceptions of their bodies in three domains: their overall assessment (i.e., body shame), their feelings about weight (i.e., body weight), and the beliefs they have about how others see them (i.e., body attribution) (Mendelson, Mendelson, & White, 2001). This multidimensional approach in a sample of only SMW allowed for identification of places where aspects of the identities of SMW boosted their body image (i.e., shame and weight) and domains through which women's identities did not appear to influence their body image (i.e., attribution). As such, this analytic approach revealed a nuanced picture of the relationship between identity and body image in SMW. In *Chapter IV*, I reframed the question of body size and SMW in terms of mental, rather than physical, health. Through this reframing, this study portrayed a strong relationship between body size, as measured by BMI, and negative mental health outcomes; however, this relationship was explained entirely by experiences of body-size discrimination. As such, social forces were implicated in the SMW's health, rather than a focus

on individual health behaviors like diet or physical activity which position SMW as at fault for negative health outcomes associated with body size.

Taken together, these studies indicate that in order to create a complete portrait of the health of SMW, it is critical to use innovative research approaches that do not evaluate SMW only in relationship to illness or lump all SMW together as a monolithic group. These objectives may be met by pulling in academic scholarship from other fields (i.e., psychological literature on SMW and positive body image; Leavy & Hastings, 2010; Owens et al., 2003; Peplau et al., 2009; Wagenbach, 2004) to broaden the understanding of SMW beyond sickness as well as recruiting samples of exclusively SMW in order to examine the diversity within these populations.

Theme 2: Resilience and SMW. This dissertation project provides evidence that SMW cannot be understood only in terms of risk, but that identification as a sexual minority opens women up to potential processes of resilience which have the potential to improve self-concept and health. In this dissertation, I took up the concept of *positive marginality*, that is, that socially marginalized groups may thrive not in spite of their marginalized status, but *because* of their marginalized status (Meyer, Ouellette, Haile, & McFarlane, 2011; Unger, 2000). Being a sexual minority may allow lesbian, bisexual, and other queer-spectrum identified women to escape from some of the social expectations placed on heterosexual women. This concept is particularly relevant to issues of body image and body size, given the social policing of women to adhere to feminine norms of beauty and thinness (Bartky, 2003; Bordo, 2003).

In *Chapter II* I introduced the reader to the broad literature within psychology and women's studies which points to SMW possessing more positive body image than heterosexual women, and the theoretical conversations about this body positivity being born out of the identities and communities of SMW (Bergeron & Senn, 1998; Krakauer & Rose, 2002; Myers,

Taub, Morris, & Rothblum, 1999; Yost & Chmielewski, 2011). Through a review of obesity literature focused on SMW, I built an argument that to disregard discussion of body image in research on body size undercuts health scientists' ability to speak to SMW's health holistically. In *Chapter III*, I empirically tested whether deviations from heteronormativity (i.e., identification with masculinity, connection to an LGBT community) explained SMW's positive body image, as these would be pathways that are unique to sexual minority identities. Indeed, places where SMW reported deviating from heteronormativity did relate to better body esteem in the MSASS sample. This finding suggests that there are avenues to improved self-concept that SMW access through their marginalized social identities and points to potential an experience of resilience among SMW. In *Chapter IV*, I explicitly tested whether body image could be understood as a health promotive asset in a psychological process of resilience. Body image was found to compensate for the deleterious effects of size discrimination—it was associated with a reduction in depressive symptoms and a boost in self-esteem, thus suggesting that positive body image in SMW has tangible, measurable benefits to health status.

In sum, this construct of body image provides insight into a unique, identity specific process of resilience experienced by SMW. This process appears to exist because SMW hold identities that deviate from dominant cultural groups. As such, body image and its relationship to mental health may be an important example of positive marginality of SMW (Meyer, Ouellette, Haile, & McFarlane, 2011; Unger, 2000).

Limitations and Strengths

This dissertation is not without its limitations. The data from the Michigan Smoking and Sexuality Survey (M-SASS) come from a convenience sample of SMW between the ages of 18 and 24 who live in Michigan, and thus cannot be generalized to SMW broadly. Particularly

relevant to topics of body image and body size is the fact that M-SASS data is mostly comprised of women who identified their race or ethnicity as White/ European American. A broad literature exists which speaks to the unique ways that women of color engage with body image and body size (Krauss, Powell, & Wada, 2012; Kronenfeld, Reba-Harrelson, Von Holle, Reyes, & Bulik, 2010; Pepper & Ruiz, 2007; Watson, Ancis, White, & Nazari, 2013; Wilson, 2009), and I was unable to address important questions around the intersection of race and sexual identity in my papers. Additionally, the cross-sectional design of the M-SASS data limited my ability to examine the directionality of the pathways I tested around indicators of body esteem or resilience processes around body size and mental health. Moving forward with this line of research, purposeful data collection with an eye toward racial diversity and the development of longitudinal study designs are important next steps to adequately examining these question around body size, body image, and SMW.

Those limitations notwithstanding, this dissertation also possesses some notable strengths. Firstly, the data for this dissertation was collected exclusively with young SMW for the purposes of understanding health issues key to this populations, and is not a sub-sample from a larger national data set conducted to meet objectives outside of the needs of this group. As such, the research team was able to tailor the content of the survey directly to issues relevant to SMW. Responses to M-SASS questions provided information about SMW's perceptions of their identities, gender, connections to the LGBTQ community, and bodies, all which allowed for an exploration of the heterogeneity and nuance of these issues within SMW. Secondly, the overarching objective of this dissertation project was to view SMW through a lens of resilience. While more and more researchers and scholars who study LGBT populations are calling for the uptake of such an approach (Harper, Brodsky, & Bruce, 2012; Herrick et al., 2011; Meyer,

2010), this remains an underexplored avenue to understanding sexual and gender minorities. The positive frame of this dissertation contributes to an understanding of assets and resources available to SMW which may improve their health status.

Implications for Health Promotion

The results of this dissertation provide critical implications for health promotion for SMW, particularly with regard to obesity-related interventions. There is an emergent discussion within the health sciences around how best to tackle obesity among SMW (Roberts, Stuart-Shor, & Oppenheimer, 2010; Fogel, Young, Dietrich, & Blakemore, 2012). The salience and importance of body image in this dissertation's analyses point to a critical need to construct such interventions in a way that does not damage or undercut the body image of SMW, especially as it relates to size. Interventionists seeking to improve health and wellbeing among SMW might opt to utilize a *Health at Every Size (HAES)* approach. The *HAES* approach was developed as an alternative to weight loss interventions, and provides a rubric for a cardiovascular health intervention that combines body acceptance with healthful eating and physical movement (Bacon, 2010; Burgard, 2009). *HAES* operates on the premise that if one needs to resort to extreme calorie restriction or intensive physical activity in order to maintain a particular weight, then that is by definition not a healthy weight for that individual (Burgard, 2009). Instead, an individual should concentrate on building a respectful relationship with their body, tuning into internal signals for nutrition and movement in order to achieve optimal health (Burgard, 2009). Such an approach to interventions with SMW might help to avoid the issue of damaging the body image of SMW in the context of health promotion.

Additionally, this dissertation underscores the very real impact that discrimination related to body size takes on the mental health of SMW. Rather than exclusively focusing on physical

health concerns, health interventionists might seek to tackle the relationship between stigma and mental health for this group. This effort could be done across multiple ecological levels. At the individual level, interventions with SMW could target assets like body image with proven benefits to mental health in the face of stigma, and work to bolster them in order to improve individual resilience to size discrimination. At the interpersonal level, health interventionists could develop programs focused dynamics within key relationships in SMW's lives which may influence body image and mental health. For example, it could be fruitful to work with SMW and their romantic partners on issues of body image and body size, as the perceptions of romantic partners have been demonstrated to affect the way SMW appraise their bodies (Huxley, Clarke, & Halliwell, 2011). For SMW with poor body image, incorporating romantic partners into intervention work focused on mental health may offer tangible benefits. Alternatively, interpersonal interventions might target groups whose negative beliefs about larger bodies could directly impact the wellbeing of SMW. For example, anti-fat bias in medical providers has been shown to be both pervasive and dissuade individuals with fat bodies from pursuing health care (Carr & Friedman, 2005; Puhl & Brownell, 2001). An educational program targeting beliefs and attitudes of medical providers and the ways in which they communicate health messaging around body size to SMW clients might combat anti-fat bias in an arena with a tangible connection to health. Further upstream at the community and structural levels, social marketing campaigns could be designed to shift social norms and alter negative attitudes about larger bodies. Such efforts could reduce stigma directed toward fat bodies.

Directions for Future Research

Each chapter individually highlights avenues that would be ripe for further investigation. In *Chapter II*, a call is made to broaden research which examines body size, and in particular, fat

bodies, as a stigmatized characteristic rather than a health state among SMW. Research might examine how the minority stress model could be expanded to include body size as a pathway to poorer health through discrimination and victimization. Additionally, it would be fruitful to evaluate how these processes of size discrimination are similar or different for women across different sexual identities. Are SMW's experiences with size discrimination worse than heterosexual women due to a double whammy of discrimination across the axes of sexual identity and body size (Meyer & Frost, 2013; Fikkan & Rothblum, 2011; Saguy, 2011), or do SMW find themselves protected from such discrimination due to access to cultural spaces with different normative beliefs about what the ideal body type is (Bergeron & Senn, 1998; Krakauer & Rose, 2002; Maor, 2012; Myers et al., 1999; Yost & Chmielewski, 2011)? Comparisons such as these would deepen the current understanding of how processes of stigma shape health in SMW specifically and women generally regardless of sexual identity.

Chapter III points to the mechanisms of masculine gender identification and LGBT community connection as being directly related to more positive body esteem in SMW, and yet, the *why* of these relationships is theorized but not empirically assessed. Qualitative in-depth interviews with SMW focused on how their experiences with and beliefs about heteronormativity influence the ways in which they perceive and assess their physical bodies would fill this gap. This line of research would provide an enriched understanding of how these mechanisms operate for SMW, and whether there are aspects of these mechanisms that might be bolstered or made available to women who are *not* sexual minorities.

Chapter IV identifies body image as a psychological asset with important benefits to the mental health of SMW, especially those who experience size related discrimination; however, the data for this analysis are from a cross-sectional study, and it is unclear how these

relationships might fluctuate over time. In particular, it would be useful to know how the relationships between these constructs shifted from adolescence into young adulthood as women define their sexual identities and move in and out of different communities. Do young women find their body image strengthened through the coming out process? Do rates of size discrimination shift as women become integrated into LGBTQ communities? How do fluctuations in body image and size discrimination connect to mental health over time? These questions could be analyzed through longitudinal work with SMW.

Broadly, this dissertation highlights that young SMW may experience positive marginality in relationship to their body size, body image, and mental health. This finding points to a need for additional asset-framed and resilience approaches to the study of SMW's health. While frameworks such as minority stress and sexual stigma note that marginalization of sexual minority can compromise health, this dissertation project clarifies an important route out of these processes of stigmatization. Notably, the data for these analyses came from SMW between the ages of 18-24. More inquiry into how these processes of resilience evolve or change over the life course may enrich the understanding of SMW as a group who experience positive marginality. Further investigation of how SMW thrive as young women, as adults, and as elders in the face of social discrimination may open up the dominant paradigm of risk that current pervades research on this group.

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