The Impact of Body Size on Utilizing Mental Health Services

Katie Mittelstaedt

College of Social and Behavioral Sciences

Northwest University

Author Note

I have no conflicts of interest to disclose.

K. Kim Lampson, Ph.D., Dissertation Chair. Nikki R. L. Johnson, Psy.D., Committee Member. Cherri Seese, Ph.D., Committee Member. February 10, 2020.

Correspondence concerning this article should be addressed to Katie Mittelstaedt at Northwest University, College of Social and Behavioral Sciences, 5520 108th AVE NE, Kirkland, WA, 98033. Email: Katie.Brennecke10@northwestu.edu

Acknowledgements

I am so grateful for the support and guidance of my professors, dissertation committee members, family, and friends, whose care and encouragement helped to make this dissertation possible. I would like to specifically name and thank a few of these individuals who were instrumental in helping me to achieve this lifelong milestone in my academic and clinical career.

First, I would like to thank specific members of Northwest University. I am thankful for Dr. Matt Nelson, Dean of the College of Social and Behavioral Sciences—I quite literally would not be in this doctoral program had you and I not sat next to each other on an airplane flying home from Paris, France, where you encouraged me to seriously consider pursuing doctoral work. I am deeply appreciative of Dr. Kim Lampson, my dissertation chair and the first professor who I knew, without a doubt, really believed in me, and who encouraged me to pursue my passion for food and body issues. Thank you to my dissertation committee member Dr. Cherri Seese, who introduced me to works such as *Whistling Vivaldi* which sparked my interest into matters of bias and discrimination. And finally, I am indebted to Dr. Nikki Johnson, committee member, whose enthusiasm, cheerleading, and statistics genius helped me to get through the results portion of this document.

I would also like to thank other members of my support system, namely my family and friends. Thank you to my parents, Alvin and Diane Mittelstaedt, whose unconditional love and support has been unwavering throughout my doctoral work- and my life. I am so grateful that you both have always believed in me and dreamed of great things for me and my future. My dear friend Ilona Trofimovich—I am appreciative of

your willingness to process life with me, including the stress of writing a dissertation. Thank you to my PsyD Cohort 7. I am still blown away by how well we have loved and supported one another over these five years. And finally, I want to specifically thank Jeff Raemer, whose care, friendship, and countless coffee study sessions were invaluable to me. I honestly and deeply believe I would not have gotten through this program without you.

Table of Contents

Acknowledgements 2
List of Tables 6
Abstract 7
Chapter 1 8
Literature Review 8
Body Size in the United States 9
"Overweight" and "Obesity" Prevalence Rates 11
Stigmatization and Discrimination 13
Weight Stigma and Healthcare 18
Rationale and Research Question 26
Hypotheses 26
Chapter 2 27
Participants 27
Materials 28
Demographic Questionnaire 28
Mental Healthcare Service Utilization Questionnaire 28
Modified Weight Bias Internalization Scale (WBIS-M) 29
The Beliefs About Obese Persons Scale (BAOP) 29
Study Procedures 30
Summary 31
Chapter 3 32
Analytic Strategy 32
Results 33
Hypotheses 1 Test 35
Hypotheses 2 Test 37
Summary 42
Chapter Four 43
Interpretation 43
Integration 44
BMI and Mental Healthcare Utilization 44
Internalized Weight Stigma and Mental Healthcare Utilization 46
Responsibility for Weight Ideology and Mental Healthcare Utilization 47
BMI, Internalized Weight Bias, and Responsibility for Weight Ideology 48
Limitations 49
Representative Sample 50
Recruitment Method 50
Study Design 51
Diversity 51
Body Satisfaction 52

Explanatory Models....52
Future Directions....53
Representative Sample....53
Mental Healthcare Need....53
Experiences of Bias....53
Explanatory Models....54
Body Satisfaction....55
Higher BMI Sample....55
Expanding Mental Healthcare Visit Definitions....55
Conclusions....56
References....60
Appendices....78

List of Tables

Table 1. Descriptive Statisics for Study Variables 34
Table 2. Correlations between BMI and Mental Healthcare Utilization 35
Table 3. Correlations between Internalized Weight Stigma and Mental Healthcare Utilization 36
Table 4. Correlations between Responsibility for Weight Ideology and Mental Healthcare Utilization 36
Table 5. Multiple Hierarchical Regression Model Summary 38
Table 6. ANOVA 40
Table 7. Coefficients 41

Abstract

According to Flegal et al. (2016), approximately 32.5% of American adults are classified as "overweight" and 37.7% are considered "obese" in the BMI system (Flegal et al., 2016). At the same time, bias and discrimination toward obese individuals are widely reported and documented (Agell & Rothblum, 1991; O'Brien et al., 2013; Puhl & King, 2013). Given that bias and discrimination impact mental health outcomes (i.e., Simone & Lockhart, 2016), it is important to understand how body size, internalized weight bias, and responsibility for weight ideology may impact a person's likelihood of seeking out necessary mental healthcare services. The present study looked at predictive factors of mental healthcare utilization based on BMI, internalized weight bias, and responsibility for weight ideology. Results indicated that as BMI increased, mental healthcare utilization decreased; as internalized stigma increased, mental healthcare utilization decreased; and as genetic/environmental responsibility for weight ideology increased, mental healthcare utilization increased. The combination of BMI, internalized weight stigma, and responsibility for weight ideology provided the best-fit model for predicting past-year mental healthcare utilization rates. The results suggest that a lower BMI, lower internalized weight stigma, and believing that weight is largely attributable to genetics/environment best predicts past-year mental healthcare utilization rates.

Keywords: BMI, weight stigma, weight discrimination, mental healthcare utilization

Chapter 1

Literature Review

Psychologists and other mental health practitioners provide psychological and behavioral health services to help people who have a variety of mental, emotional, and behavioral health issues. Within the field of psychology, there are well-established methods of providing this treatment. These methods are rooted in *evidence-based practice in psychology*, which is defined as "the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences" (The APA Task Force on Evidence-Based Practice [APA Task Force], 2006, p. 273).

This APA Task Force (2006) asserts that the purpose of evidence-based practice in psychology is to further the effective practice of psychology and to enhance public health through the application of empirically supported assessment, case formulation, therapeutic relations, and intervention strategies. Additionally, the goal of psychotherapy may be to provide symptom relief, decrease future occurrences of unwanted psychopathology or mental health symptomatology, foster adaptive functioning, enhance quality of life, and increase the likelihood of positive health choices (Burlingame et al., 2003; Carr, 2009; Kosters et al., 2006; Wampold, 2010).

The efficacy of psychotherapy is widely established for treating a wide range of concerns. The average effect of psychotherapy is significant and large, with approximately 75% of treated individuals demonstrating improvements compared to counterparts who receive no treatment (Smith & Glass, 1977; Smith et al.,1980). These treatment outcomes are consistent across most diagnostic conditions and a large variety

of settings (Beutler, 2009; Lambert & Ogles, 2004; McMain & Pos, 2007; Verheul & Herbrink, 2007; Wampold, 2001).

Furthermore, patients and clients frequently experience continued improvement in symptomatology even after their treatment has concluded as evidenced by larger effect sizes at follow up (Abbass et al., 2006; de Maat et al., 2009; Grant et al., 2012; Leichsenring & Rabung, 2008; Shedler, 2010). One reason that patients and clients continue to improve may be that they apply skills gained throughout the psychotherapy process beyond the treatment window (Shedler, 2010). Thus, psychotherapy results tend to last longer and require less additional treatment compared to psychopharmacological interventions alone (APA Task Force, 2006).

Despite these efficacy statistics, many individuals who could benefit from psychotherapy and other evidence-based practices in psychology do not utilize the services available to them (Corrigan, 2004). Based on a four-year long study (2008-2012) of about 228,600 US adults, approximately 13.6% of individuals utilized mental health services in any form (including treatment or counseling for concerns with emotions, nerves, or mental health in a medical office, outpatient, or inpatient setting, as well as use of prescription medication; U.S. Department of Health and Human Services, 2015). Researchers have studied mental health care utilization rates among individuals with a wide range of cultural and social identities, including ethnic/racial background, gender, sexual orientation, religion, and age (Fortuna et al., 2008; Marques et al., 2011; Salomon et al., 2009; Jimenez Bartels et al., 2012). However, researchers have not yet examined mental health care utilization rates based on one important social identity: body size.

Body Size in the United States

According to the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP; 2017), the Body Mass Index (BMI) is a widely utilized measure of individuals' body sizes or weight categories in the American medical system. The NCCDPHP (2017) divides BMI scores into four categories: A BMI score that is less than 18.5 is considered "underweight," 18.5 to <25.0 is the "normal" range, 25.0 to <30.0 is deemed overweight, and 30.0 or higher is judged to be "obese." The "obesity" range is further subdivided into three categories: class I (BMI of 30.0 to < 35.0), class II (BMI of 35.0 to < 40.0), and class III (BMI of 40.0 or more). Class III obesity is often referred to as "morbid" or "extreme" obesity.

The BMI score is calculated by dividing a person's weight in kilograms by the square of their height in meters (NCCDPHP, 2017). Thus, BMI does not measure body fat directly, but rather is an estimate of a person's body fat based on their height-to-weight ratio. BMI is modestly correlated with more exact methods of calculating body fat, including skinfold thickness measurements, bioelectrical impedance, densitometry (weighing underwater), and dual energy x-ray absorptiometry (measuring bone mineral density with x-ray beams) (Freedman et al., 2013; Garrow & Webster, 1985; Wohlfahrt-Veje et al., 2014). Therefore, the NCCDPHP (2017) noted that while BMI is a useful screening tool, it is not meant to be diagnostic and cannot replace one of the aforementioned measures of body fat, nor can it replace a comprehensive medical evaluation of a person's health. However, because BMI is a low-cost and easy-to-implement method of screening for individuals' weight categories, it is utilized nearly universally in the United States medical system.

Because of the widespread use of BMI to categorize body size and weight within the American medical system, it is helpful to examine United States demographics with this measuring tool. The National Institute of Diabetes and Digestive and Kidney Diseases (2016) stated that approximately 28.4% of US adults age 18 or older had normal body weights in 2013-2014. About 32.5% of American adults were classified as "overweight" and another 37.7% were considered obese (Flegal et al., 2016). Of these obese individuals, the prevalence of class III obesity was 7.7%.

"Overweight" and "Obesity" Prevalence Rates

There are demographic variances in the rates of overweight and obesity in the United States using the BMI system. There are differences in rates across a variety of demographic variables, including age, sex, race/ethnicity, and socioeconomic status.

Age

Hales et al. (2017) described that there are more middle-aged individuals in the obese category (age 40-59) compared to young adults (over age 18) and that there is no significant disparity between older adults age 60 and over and younger age groups.

Sex

Flegal et al. (2016) further noted disparities based on sex. They found that more men than women (38.7% vs. 26.5%) fell in the overweight category. Additionally, both obesity and class III obesity rates were higher in women (40% vs. 35% and 9.9% vs. 5.5%, respectively). Thus approximately 3/4 of men and 2/3 of women fell in either the overweight or obese BMI category.

Race

The prevalence of obesity varied among races in the United States as well. Flegal et al. (2016) reported that non-Hispanic black (46.8%) and Hispanic (47.0%) adults had obesity at higher rates compared to their non-Hispanic white (37.9%) and non-Hispanic Asian (12.7%) counterparts. The prevalence rates among females in the various racial groups mirrored those of the general population. Among men, however, non-Hispanic black males had lower rates of obesity compared to Hispanic men, and there was no significant difference between non-Hispanic black males and non-Hispanic white males. As in the overall population, Non-Hispanic Asian males had the lowest prevalence of obesity.

Socioeconomic Status

Body size tends to vary based on socioeconomic status as well. In the United States, overweight and obesity rates are substantially higher for women who have low socioeconomic status (Cutler & Lleras-Muney, 2006; Devaux & Sassi, 2013; Shaikh et al., 2015). Men with low socioeconomic status also tend to be overweight; however, men's propensity to have obesity is less for low socioeconomic individuals (compared to men with higher SES), suggesting that socioeconomic status impacts men and women quite differently (Devaux & Sassi, 2013). These results remained true when controlling for marital status, race/ethnicity, smoking tobacco consumption, occupational status, and education level (Deveux & Sassi, 2013). Furthermore, these inequalities have been consistent for the past 15 years (Devaux & Sassi, 2013).

Future Projections

According to the Organisation for Economic Co-operation and Development (2017), rates of individuals who are considered obese by the BMI system are expected to

continue to increase until at least 2030. Thus far, rates in the United States have increased 3.7 times compared to what they were forty years ago, from approximately 14.0% of adults in 1970s. These rates are projected to increase as a function of time over the next 10-15 years, and to reach approximately 46.0% by year 2030.

Stigmatization and Discrimination

Despite these high percentages of people across many demographics in larger bodies and the trend toward increasing rates of people who are overweight or who have obesity according to the BMI categorizations, Western society displays a marked preference for thinness (Swami, 2015).

Weight Bias

People in Western society generally uphold the thin ideal, wherein thinness is equated to physical attractiveness (Swami, 2015). Societal messages frequently assert that for one to have value as a human being, one must be aesthetically pleasing (Thompson et al., 1999). Thus, there is a widespread message throughout the United States that a person cannot feel good about oneself if he or she is in a larger body

Weight bias research thoroughly demonstrates that people associate being "overweight" or obese with several other negative character attributes, including being lazy, unsuccessful, unintelligent, lacking willpower, and being noncompliant with medical recommendations and treatment (Brownell et al., 2005; Puhl et al., 2015; Puhl & Brownell, 2001; Puhl & Heuer, 2009). Negative judgments also include the idea that fat people are more personally responsible for their body size compared to people in smaller bodies (Puhl & Heuer, 2009).

Holding strong negative evaluations is not limited to people in thin or normal weight bodies, either; fat people tend to express weight bias as well (Carels et al., 2013; Durso & Latner, 2008; Wang et al., 2004). People in larger bodies often display strong weight bias against other obese people (Carels et al., 2013; Schwartz et al., 2006; Wang et al., 2004). These preferences are expressed explicitly (via self-report) and implicitly (Crandall & Reser, 2005; Wang et al., 2004). In tests of implicit bias, people in larger bodies demonstrate strong, consistent negative character associations with being "overweight" or obese, including strong relations with laziness, stupidity, and having low general worth (Wang et al., 2004). These biases should be juxtaposed against social identity theory, which asserts that individuals within a distinct group are apt to assess group members in a positive light and members of their out-group in a negative light (Tajfel & Turner, 1986). Research supports this theory, as most social groups do indeed display marked preferences for their own in-group (Rudman et al., 2002). However, obese people clearly do not demonstrate this common in-group preference, and, instead, tend to devalue their group members (Crandall & Reser, 2005; Wang et al., 2004).

One explanation for this lack of in-group preference is internalized weight bias. Durso and Latner (2008) defined internalized weight bias as one's "belief in social stereotypes relating to obesity and negative self-evaluations due to one's weight" (p. S81). They distinguish internalized weight bias from body image. Whereas body image is concerned with one's internal feelings about one's body weight or shape compared to others', internalized weight bias involves one's personal belief in stereotypes and negative self-evaluations regarding one's weight, shape, and other socially related constructs (e.g., intelligence, willpower, general value as a human being). Furthermore,

individuals in larger bodies often blame themselves for feeling stigmatized (Lewis et al., 2011). Thus internalized weight bias extends far beyond self-esteem and has been associated with other types of functional impairment, including non-engagement with other health behaviors (i.e., exercise, choosing nutritious foods), body image concern, eating disorder pathology (i.e., drive for thinness, restricting, binge-eating), reduced physical activity, depression, anxiety, and stress (Durso & Latner, 2008; Vartanian et al., 2018). Based on these findings, it seems that internalized weight bias may result in many negative psychological, emotional, and physical health consequences for obese individuals' psychological and emotional health (Durso & Latner, 2008; Vartanian et al., 2018).

Responsibility for Weight Ideology

It is clear there are significant biases toward people in larger bodies- held by both those in normal weight bodies and those who are obese. While the stereotypes, biases, and discrimination related to having a larger body are comparable to the biases and stigmatizations experienced by those of other outwardly observable stigmatized social identities (such as in race and physical disabilities), there is evidence that the stigma of being in a larger body is experienced quite differently (Pearl & Lebowitz, 2014). For instance, unlike race, body size is often conceptualized as a factor that is under one's personal control despite its multifaceted etiology.

Negative evaluations and bias toward obese people appear most strongly in people who believe that weight is largely within one's control (Hilbert et al., 2008). People who interpret being overweight or having obesity as being due to internal, controllable factors (such as a lack of willpower) display the most biased attitudes toward

people in larger bodies (Crandall, 1994; Crandall et al., 2001; Crandal & Martinez, 1996; Crandall & Moriarty, 1995; Hilbert et al., 2008; O'Brien et al., 2010; Weiner et al., 1988). For example, O'Brien et al. (2010) conducted a randomized trial to manipulate implicit and explicit anti-fat biases in health service students. Students who were trained within a traditional health curriculum that emphasized controllable causes of gaining weight (i.e., overeating and lack of exercise) demonstrated a 27% increase in implicit anti-fat prejudice regarding how motivated or lazy they believed obese people are. However, students who were trained within a curriculum that emphasized weight factors that are outside of one's control (i.e., genetics, environmental determinants of health) exhibited a 27% decrease in implicit anti-fat prejudice of larger-bodied people being good or bad) and a 12% decrease in implicit anti-fat prejudice of obese people being motivated or lazy. The fact that people who display the most biased attitudes toward people in larger bodies believe fatness is largely controllable is consistent with attribution theory (Weiner, 1986; Weiner et al., 1988), which posits that causal attributions significantly impact reactions to people in stigmatized groups (Martin et al., 2000; Menec & Perry, 1998).

Beliefs about the origin of weight and obesity have long-reaching impacts that extend beyond holding biased opinions as well (McFerran & Mukhopadhyay, 2013; Pearl & Lebowitz, 2014). Responsibility for weight ideology seems to impact engagement in health behaviors and actual BMI.

First, Pearl and Lebowitz (2014) found that personal responsibility attributions did not motivate engagement in health behaviors. In other words, believing that one is

obese due to his or her own poor health behaviors does not actually encourage a person to engage in more positive health behaviors.

Second, in a large study with a sample across five countries and three continents, McFerran and Mukhopadhyay (2013) reported that individuals' beliefs about the origins of weight predicted their actual BMI. Holding the belief that obesity is caused by personal choices in diet and exercise predicted a higher actual BMI compared to the belief that obesity is brought about by uncontrollable factors. These results remained true when controlling for 18 potentially confounding variables, including age, gender, reported stress, socioeconomic status, employment, self-esteem, and overall health. In line with previous research discussed, they hypothesized that responsibility for weight ideology influenced actual health behaviors, which then impacted weight; the individuals who believed that weight is largely caused by external factors (i.e., genetics, the environment) likely engaged in more positive health behaviors than those who thought they were causing their own high weight. Thus, these researchers posited that belief about the origins of weight might explain a considerable portion in the variance in BMI.

Weight Bias and Discrimination

Widespread weight bias results in people in larger bodies experiencing significant psychosocial consequences, including public derogation, devaluation, and outright discrimination wherein people are treated unfairly due to their body size (Durso & Latner, 2008; Puhl & Brownell, 2001). Puhl and Brownell (2001) described clear and consistent discrimination within the realms of employment and education. For instance, in a landmark study by Pingitoire et al. (1994), the researchers found consistent and strong employment bias against professional actors interviewing for a job when they

wore theoretical prostheses that made them look obese. More recently, O'Brien et al. (2013) conducted a similar study by showing pictures of potential employees to participants and asked them to select personnel for a managerial position. The pictures showed women either pre or post weight-loss surgery. The participants demonstrated markedly discriminatory selections against the pre-surgery "candidates." Similarly, Canning and Myer (1966) found that obese high school students are significantly less likely to be accepted to colleges compared to their normal weight peers with equivalent academic accolades.

Weight Stigma and Healthcare

Exposure to weight stigma and unfair treatment based on size is extremely stressful, resulting in increased cortisol levels (Schvey et al., 2014). Tomiyama et al. (2014) found that weight stigma is significantly associated with an increased cortisol wakening response (wherein cortisol levels increase by about 50% within 20-30 minutes of morning waking) and oxidative stress, independent of levels of obesity. Unsurprisingly, then, perceived weight stigma is associated with a variety of physical and psychological health consequences.

Weight discrimination increases risk for chronic inflammation (Sutin et al., 2014), increased blood pressure (Major et al., 2012), and higher disease burden (the summation of hypertension, diabetes, cancer, cardiovascular conditions, stroke, and arthritis; Sutin, Stephan, Carretta et al., 2015). In fact, Muennig (2008) asserts that many of the diseases that are often associated with (or even attributed to) obesity, including hypertension and type II diabetes, may develop (at least in part) due to the stress of weight-based discrimination as opposed to merely behavioral habits like diet and exercise choices.

Additionally, Tomiyama (2014) proposed the existence of a "cyclic obesity/weight-based stigma cycle" (p. 8) wherein weight stigma results in health consequences, which result in weight stigma, thus creating a perpetuating feedback loop. This theory is supported by the findings that perceived weight stigma was associated with a 57% increased mortality rate- a rate that could not be accounted for by the effects of other psychological and physical health risk factors (Sutin, Stephen, & Terracciano, 2015).

Medical Provider Bias

Because weight stigma increases many health risks, it is essential to understand how body size and stigma may be impacting healthcare. The fact that medical providers report preferences for patients in smaller bodies, and emphasize reducing patient body sizes, is well established in the research literature (Hebl et al., 2003; Jay et al., 2009; Puhl & King, 2013; Sabin et al., 2012; Ward-Smith & Peterson, 2016). In fact, there is an expanding body of literature suggesting that medical providers often hold strong negative opinions and biases about people in larger bodies (Puhl & King, 2013).

For example, in a large study of medical doctors, Sabin et al. (2012) administered the Weight Implicit Association Test (Greenwald et al., 1998) via Harvard's *Project Implicit* and collected self-reported preferences for body weight categories. They found that, on average, the physicians showed strong implicit and explicit anti-fat biases.

Another study similarly found that primary care physicians were more likely to endorse negative attitudes toward patients the heavier they were. These negative attitudes included the belief that the patient was less healthy, less likely to take care of him/herself, and be less disciplined. Furthermore, the larger body weight a person had, the more likely the primary care physicians were to report annoyance toward the patient, describe less

overall positivity toward the patient, and express a lessened personal desire to help the patient. Lastly, the trend demonstrated that these physicians believed obese were unlikely to follow medical advice and expressed the belief that seeing the patient was a "waste of time" (Heb & Xu, 2001, p. 1250).

Likewise, in an alternative study, 63% of the physicians they surveyed described negative evaluations of obese people (Jay et al., 2009). More than 50% reported that they felt unsuccessful when treating obese patients and that they found treating these patients to be frustrating (Jay et al., 2009). Nurse practitioners reported beliefs that individuals who were overweight or obese were not as good, successful, or healthy as normal weight people, were not fit for marriage, and were messy (Ward-Smith & Peterson, 2016).

Medical Provider Discrimination

Medical practitioners' negative evaluations of overweight and obese patients may impact the care they provide. In one study, physicians displayed more distancing behaviors with obese patients and spent 28% less time with these patients compared to normal weight counterparts (Hebl & Xu, 2001). Throughout these potentially shortened visits, the care may be less excellent as well. Primary care providers seem to spend less time educating obese patients on their health (Bertakis & Azari, 2005). There is evidence that providers engage in significantly less emotional rapport building with overweight and obese patients (Gudzune et al., 2013). Physicians also tend to provide less patient-centered care wherein they provide information, communicate support, and attempt to partner with people they perceive to be less likely to adhere to medical advice, such as obese individuals (Street et al., 2007)

Providers may also be more likely to overly attribute obese patients' complaints and symptomatology to obesity rather than referring the patients for medically appropriate diagnostic testing or considering other diagnostic origins and treatment possibilities (Phelan et al., 2015). For instance, Persky and Eccleston (2003) found that medical students were more likely to prescribe lifestyle changes to patients with shortness of breath if they were obese versus other weight categories (54% vs. 13%). They were also less likely to recommend medications to manage the shortness of breath symptoms (23% vs. 5%).

Healthcare Avoidance

It is not surprising, then, that individuals in larger bodies tend to delay and avoid necessary healthcare services, at least in part due to the experience of discrimination or bias by healthcare providers (Amy et al., 2006; Drury & Louis, 2002; Phelan et al., 2015; Wee et al., 2015). People who experience or perceive weight stigma within medical or healthcare settings delay or avoid a variety of medical care, including preventative care, cancer-screening tests, pelvic examinations, Pap smears, and mammograms (Aldrich & Hackley, 2005; Amy et al., 2006; Cohen et al., 2008; Phelan et al., 2015; Rosen & Schneider, 2004; Wee et al., 2015).

Patients report that they delay and avoid healthcare because they perceive their weight as being a barrier to attaining appropriate health care (Amy et al., 2006). This avoidance cannot be attributed to lack of access to healthcare (Amy et al., 2006).

The proportion of patients who report weight as being a barrier to care increases as their BMI's increase (Amy et al., 2006; Drury & Louis, 2002). Amy et al. (2006)

observed significant healthcare avoidance compared to lower weight populations even when higher weight patients reported moderate to extreme concern about their symptoms.

These women reported that the primary barriers to accessing the medical system were prior disrespectful treatment, negative attitudes of their medical providers, feeling embarrassed when weighed, receiving unwelcome weight loss advice, and medical equipment being too small. Many women report the fear that they will be judged (Amy et al., 2006; Drury & Louis, 2002). Drury and Louis (2002) added that individuals have an increased likelihood of delaying or avoiding health care if they had gained weight since their last visit.

Perceived weight stigma and internalized weight bias are also linked with a heightened risk for a variety of mental health concerns. A multinational study of obesity and mental illness across 13 countries found a significant relationship between obesity and both depressive and anxiety disorders in women controlling for age and education level (Scott et al., 2008). Subgroup analysis revealed that these associations were strongest for both younger and older adult females (not middle-aged), as well as women with class II or class III obesity (BMI >35). Thus, there may be a connection between obesity and depression and anxiety in women in the general population.

Weight stigma increases cumulative risk for binge eating, dietary restraint, and other disordered eating behaviors (Almeida et al., 2011; Durso & Latner, 2008; Major et al., 2012; Simone & Lockhart, 2016). For instance, stigmatizing experiences seem to predict binge-eating behavior in obese adults (Ashmore et al., 2008). Weight stigmatization seems to uniquely contribute to the development of binge eating behaviors in college students over and above other risk factors, including living in an urban

community, having depressive, anxious, and/or antisocial symptomatology, possessing body dissatisfaction, and having a lack of social support (Almeida et al., 2011).

Weight bias internalization has a positive relationship with frequency of binge eating, eating concern, shape and weight concern, as well as suicidal thoughts and behaviors (Roberto et al., 2012). These internalized attitudes are also correlated with a drive for thinness, body dissatisfaction, bulimic symptomatology, and poor self-esteem (Vartanian & Novak, 2011). People who experience weight-based discrimination also report a lower sense of overall subjective wellness, emotional distress, social isolation, social withdrawal, lower life satisfaction, and increased loneliness (Lewis et al., 2011; Sutin, Stephan, Carretta et al., 2015). Thus, individuals in larger bodies may have unique risks of developing depressive, anxiety, and/or eating disorders and require mental health treatment due to bias and stigmatization. It is important, therefore, to understand if obese individuals experience stigmatization, bias, and discrimination within the settings they are provided mental health care in the same way that they experience the results of stigmatization within traditional medical settings.

Mental Health Provider Bias

Davis-Coelho et al. (2000) asserted that psychotherapists who live and practice within Western cultures are not immune to the cultural biases against obese people. For example, when therapists were presented with case studies of clients described as either obese or non-obese, the therapists rated the obese clients as more unattractive and embarrassed then their non-obese counterparts (Agell & Rothblum, 1991). Young clinicians (age 40 and younger) displayed more anti-fat bias compared to older clinicians, as indicated by them expressing lower expectations for therapy (Agell & Rothblum,

1991). Furthermore, psychologists often ascribe to the cultural beliefs that larger-bodied people overeat, that dieting is an effective weight loss strategy, and that obese individuals have more mental health issues compared to their thin counterparts (Robinson & Bacon, 1996).

More recently, Aza (2009) found through her qualitative analysis that mental health clinicians might experience intense negative countertransference with female obese clients. She found that many practitioners were aware of their prejudices but had not considered how countertransference might have been impacting their work with these clients. These clinicians' responses toward women in larger bodies were characterized by ambivalence, and they described affective experiences including devaluation, shame, fear, and confusion around the topic of working with obese women.

Mental Health Provider Discrimination

Mental health practitioners' clinical judgments may therefore be impacted by their biases against people in larger bodies (Davis-Coelho et al., 2000; Hassell et al., 2001; Young & Powell, 1985). Specifically, mental health practitioners are more likely to ascribe negative psychological pathology and attributes to case history patients when presented with a photo of a patient who is obese compared to an altered photo of the same patient of lesser weight (Young & Powell, 1985; Hassell et al., 2001). Davis-Coelho et al. (2000) discovered that therapists tended to assign more pathology to obese clients, even when they received information from medical providers that these obese clients even when they received medical information from physicians that these clients were physically healthy. These researchers found that psychologists' clinical judgments were also impacted in that they assessed obese client's prognoses as being less promising

and estimated that they would put in less effort in the therapy process. The psychologist in the study assigned less therapy homework to the obese clients and had more conservative treatment goals for them. Aza (2009) also witnessed clinician microaggressions toward clients wherein they invalidated obese women's experiences of weight discrimination. Thus, it is possible that larger-bodied clients could receive the same biases and prejudiced behavior from mental health clinicians that they receive within medical settings and everyday life.

In addition to these generally partial judgments against obese clients, weight bias frequently emerges in therapy when clients in larger bodies elect to discuss weight issues with their mental health providers (McHugh & Kasardo, 2012). When clients request to discuss weight with their psychotherapists, the common response is to discuss weight loss strategies, as opposed to questioning the cultural oppression against people in larger bodies and internalized weight bias (McHugh & Kasardo, 2012).

Unfortunately, this response maintains the cycle of oppression against obese individuals and is fundamentally ineffective. As many before me have pointed out, therapists and medical physicians would not conduct any other intervention that has less than a 95% effectiveness rate for clients long term and that, in fact, has substantial contraindications including being highly predictive of long term weight-gain and disordered eating behaviors (see, e.g., Field et al., 2003; Golden et al., 2016; Neumark-Sztainer et al., 2011; O'Hara & Taylor, 2018; Patton et al., 1999; Pietilaineet et al., 2012; Rothblum, 2018). Doing so not only violates the American Psychological Association's (2017) ethics code Principle A: Beneficence and Nonmaleficence to "benefit those with

whom they work and take care to do no harm," but also reduces the likelihood for obese individuals to seek out needed mental health services.

Rationale and Research Question

Due to these biases and potential prejudiced behaviors by mental health practitioners, it is logical to hypothesize that obese people may experience discrimination in mental healthcare settings in the same ways in which they tend to experience discrimination in healthcare settings. It has been well established that people in larger bodies avoid healthcare settings for these reasons. These conclusions beg the question do obese people tend to delay or avoid necessary mental healthcare services as well?

Hypotheses

In order to pursue the answer to this question, the purpose of this investigation is to understand the relationships between mental healthcare utilization, BMI, internalized weight bias, and responsibility for weight ideology. The following hypotheses are offered:

H1: Each of the independent variables (BMI, internalized weight stigma, and responsibility for weight ideology) will individually predict past-year mental healthcare utilization rates.

H2: The combination of BMI, internalized weight bias, and responsibility for weight ideology will provide the best-fit model for predicting past-year mental healthcare utilization rates.

Chapter 2

Researchers have suggested that obese people experience widespread discrimination, which likely occurs in mental health care settings (Aza, 2009; Davis-Coelho et al., 2000; Hassell et al., 2001; McHugh & Kasardo, 2012; Powell, 1985). Therefore, the purpose of this study was to answer the question, does BMI, internalized weight bias, and/or responsibility for weight ideology predict past-year mental healthcare utilization rates? Specifically, the following research question were proposed:

1. Did each of the independent variables (BMI, internalized weight bias, and responsibility for weight ideology) individually predict past-year mental healthcare utilization rates?

2. Did the combination of BMI, internalized weight bias, and responsibility for weight ideology provide the best model for predicting past-year mental healthcare utilization rates?

This study utilized a cross-sectional survey design and online data collection via Qualtrics. The study was advertised through word of mouth and social media. Interested parties accessed a description of the study, informed consent, and the survey itself on the survey-hosting site Qualtrics.

Participants

The minimum number of 152 participants was determined by a priori power analysis. Participants included a convenience sample of adults aged 18 years or older. Participants had the option to provide their email address to be placed in a drawing for one of two $20 Amazon gift cards. Participant email addresses were in no way tied to their survey responses. Participants received an informed consent form in English (see

Appendix A), which included parameters of confidentiality and potential risks of involvement in the study. Names were not collected.

Materials

A demographic questionnaire, a self-report measure of mental healthcare utilization, the Modified Weight Bias Internalization Scale (WBIS-M), and the The Beliefs About Obese Persons Scale (BAOP) were utilized in this study.

Demographic Questionnaire

The demographic questionnaire requested that participants self-report their age, height, weight, ethnicity, and gender (see Appendix B).

Mental Healthcare Service Utilization Questionnaire

Participants were asked to report mental healthcare service utilization by providing responses to three questions about their service use over the past year (see Appendix C). These questions were used with permission from Bartos (2015). Bartos (2015) modeled them after the World Health Organization's World Mental Health Composite International Diagnostic Interview (WMH-CIDI; Kessler & Ustun, 2004). The three questions asked about the number of distinct visits that the participant had with a medical provider (e.g., family doctor, general practitioner, nurse), mental health provider (e.g., psychiatrist, psychologist, social worker), and non-clinical provider (e.g., religious or spiritual pastor, herbalist, etc.) over the last year. The number of total visits was utilized for the mental healthcare utilization variable.

This measure served as the dependent variable in this study. The researcher addressed research question one by calculating regression models for BMI, internalized weight bias, and responsibility for weight ideology to see if each predicts this dependent

variable (mental healthcare utilization) individually. The hypothesis was that each of the independent variables would individually predict mental healthcare utilization rates. The second research question was explored by calculating the regression model to determine if BMI, internalized weight bias, and responsibility for weight ideology collectively best predicted past-year mental healthcare utilization rates. The hypothesis was that this regression model would best predict past-year mental healthcare utilization rates.

Modified Weight Bias Internalization Scale

The Modified Weight Bias Internalization Scale (WBIS-M; Pearl & Puhl, 2014) was a self-report measure of internalized weight stigmatization for people of diverse body weights and sizes. It measured participants' endorsement of negative stereotypes and negative self-statements regarding one's weight. Participants ranked their agreement with eleven different items on a 7-point Likert scale (*strongly disagree* to *strongly agree*). Sample items included "Because of my weight, I feel that I am just as competent as anyone" and "My weight is a major way that I judge my value as a person." The WBIS-M had high internal consistency and strong construct validity, with a Cronbach's alpha of 0.94 and all factor loadings at or above 0.50. The impact of this variable on mental healthcare utilization rates in conjunction with the other variables was be studied. The examiner hypothesized that this measure would predict mental healthcare utilization rates.

The Beliefs About Obese Persons Scale

The Beliefs About Obese Persons Scale (BAOP; Allison et al., 1991) was a measure of responsibility for weight ideology. It included eight questions on a 7-point Likert scale (-3 = *I strongly disagree* to +3 = *I strongly agree*) to measure respondent's

beliefs that obesity is caused by genetic or environmental factors or is within one's personal control. For example, a sample item is, "Obesity often occurs when eating is used as a form of compensation for lack of love or attention." The BAOP has a Cronbach's alpha of 0.82 - 0.84. Higher scores indicated a more salient belief that obesity is the result of genetic or environmental causes, and therein not a matter of willpower or personal control. The impact of this variable on mental healthcare utilization rates in conjunction with the other variables was studied. The examiner hypothesized that this measure would predict mental healthcare utilization rates.

Study Procedures

Data collection occurred in fall 2019 after the researcher received approval from the Northwest University Institutional Review Board.

After accessing the Qualtrics link and study description, participants reviewed the informed consent, which explained that by participating in the study the participants were providing the researcher with permission to use their responses in the research study. Participants were required to acknowledge that they were 18 years of age or older to participate. After viewing the informed consent, participants completed the demographic questionnaire, a self-report measure of past-year mental healthcare utilization, the WBIS-M (Pearl & Puhl, 2014), and the BAOP (Allison et al., 1991). The survey took approximately 10 minutes to complete. All responses were completely anonymous.

As an incentive, participants had the option of providing an email address in order to be placed in a drawing for one of two $20 Amazon.com gift cards. To maintain participant anonymity, a second "incentive" survey followed the actual survey. This way, the survey responses and the email addresses were not linked to one another. The second

"incentive" survey collected participant email addresses, and the winners were emailed an Amazon.com eGift card following data collection.

Information gathered for this research study was completely confidential and was gathered and stored within the HIPPA compliant software system Qualtrics.

Following data collection, simple correlations were run between the dependent variable (mental health care utilization) and the three main independent variables (BMI, internalized weight stigma, and responsibility for weight ideology. Additionally, a three-stage hierarchical multiple regression was conducted with past-year mental healthcare utilization as the dependent variable. The independent variable of BMI was added at stage one. The independent variable of internalized weight bias (the WBIS-M, Pearl & Puhl, 2014) was added at stage two. The independent variable of responsibility for weight ideology (the BAOP, Allison et al., 1991) was added at stage three.

Summary

To summarize, the purpose of this study was to answer the question, do obese people tend to avoid mental healthcare services? In order to pursue the answer to this question, the purpose of this investigation was to understand the relationships between mental healthcare utilization, BMI, internalized weight bias, and responsibility for weight ideology. The study was advertised via word of mouth and online data collection occurred through Qualtrics. A demographic questionnaire, a self-report measure of mental healthcare utilization, and two measures of bias and beliefs were given: the WBIS-M (Pearl & Puhl, 2014) and the BAOP (Allison et al., 1991).

Chapter 3

The hypotheses of this study were:

H1: Each of the independent variables (BMI, internalized weight stigma, and responsibility for weight ideology) would individually predict past-year mental healthcare utilization rates.

H2: The combination of BMI, internalized weight bias, and responsibility for weight ideology would provide the best-fit model for predicting past-year mental healthcare utilization rates.

Analytic Strategy

After collection, the data was prepared for analysis by being imported from Qualtrics into Excel. Each participant was assigned a unique number. Each participant's BMI was calculated by multiplying each participant's reported weight (in pounds) by 703 and dividing that number by their height (in inches) squared. The WBIS-M (Pearl & Puhl, 2014) was prepared for analysis by averaging each participant's score. The BAOP (Allison et al., 1991) was prepared for analysis by reverse scoring Item1, Items 3 through Item 6, and Item 8, summing each participant's responses, and adding 24.

To address the first hypothesis, simple correlations were run between the dependent variable (mental health care utilization) and the three main independent variables (BMI, internalized weight stigma, and responsibility for weight ideology). To address the second hypothesis, a hierarchal regression was run to determine if the best fitting model utilizes all three independent variables.

Results

Data was collected from 184 participants. Basic demographic information was collected.

Of the participants, 83.7% (N=154) were female and 16.3% (N=30) were male. No participants declined to respond to this question.

Regarding race, 82% identified as Non-Hispanic White (N=151), 7% (N=13) identified as Hispanic White, 3.3% (N=6) identified as Non-Hispanic Asian, 3.3% (N=6) as another race, 3.3% (N=6) as two or more races, and 1% (N=2) as Non-Hispanic Black or African American. No participants self-identified as Asian Hispanic, Latino Americans, Black Hispanic or Latino Americans.

In terms of age, 10.9% (N=20) were 18-25 years old, 45.7% (N=84) were 26-35, 16.8% (N=31) were 36-45, 9.2% (N=17) were 46-55, 9.8% (N=18) were 56-65, and 7.6% (N=14) were 66+.

Regarding BMI, 0.16% (N=3) were in the underweight category, 31% were in the normal weight range (N=57), 24% were overweight (N=44), 15.8% (N=29) were in the obese I category, 8.2% (N=15) were in the obese II category, and 19.6% fell in the obese III group (N=36).

Descriptive statistics for the independent variables (BMI, internalized weight stigma, and responsibility for weigh ideology) and the dependent variable (mental healthcare utilization) are contained in Table 1. Within the sample of 184 participants, the minimum BMI was 17.16 (underweight) and the maximum was 76.81 (class III obesity). The mean BMI was 31.99 (obese) and the median BMI was 28.94 (overweight). The minimum number of past-year healthcare visits was 0 and the maximum reported was 60.

The mean number of visits was 7 and the median was 2. In total, 55.9% (N=104) of the participant sample reported having at least one past-year mental healthcare visit.

Table 1

Descriptive Statistics for Study Variables

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
BMI	184	17.16	76.81	31.99	11.16	124.55
Internalized weight stigma	184	1.64	4.73	3.5227	.79277	.628
Genetic/environmental responsibility for weight ideology	184	2.00	46.00	21.5000	10.26267	105.322
Health care utilization	184	.00	60.00	7.0761	11.56567	133.765

Hypotheses 1 Test

The first hypothesis in this study was that each of the independent variables (BMI, internalized weight stigma, and responsibility for weight ideology) would individually predict past-year mental healthcare utilization rates. To test this hypothesis, simple correlations between the dependent variable (health care utilization) and the three main independent variables were run. Each analysis was performed on the full sample size of 184.

Each independent variable correlated significantly with the main dependent variable (see Tables 2-4). Specifically, health care utilization was negatively correlated with BMI (as BMI increased, health care utilization decreased). Mental healthcare utilization was negatively correlated with internalized weight stigma (as internalized stigma increased, mental healthcare utilization decreased). Health care utilization was positively correlated with genetic/environmental responsibility for weight ideology (as external responsibility for weight ideology increased, mental healthcare utilization increased). All correlations were weak but significant at the 0.01 level (2-tailed).

Table 2

Correlations Between BMI and the Mental Healthcare Utilization

		Mental healthcare utilization	BMI
BMI	Pearson Correlation	.246**	1
	Sig. (2-tailed)	.001	
	N	184	184

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3

Correlations between Internalized Weight Stigma and Mental Healthcare Utilization

		Mental Healthcare Utilization	Internalized Weight Stigma
Internalized Weight Stigma	Pearson Correlation	-.178*	1
	Sig. (2-tailed)	.016	
	N	184	184

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4

Correlations between Responsibility for Weight Ideology and Mental Healthcare Utilization

		Mental Healthcare Utilization	Responsibility for Weight Ideology
Genetic/Environmental Responsibility for Weight Ideology	184	.310**	1
	Sig. (2-tailed)	.000	
	N	184	184

**. Correlation is significant at the 0.01 level (2-tailed).

Hypotheses 2 Test

The second hypothesis explored whether the combination of BMI, internalized weight bias, and responsibility for weight ideology would provide the best-fit model for predicting past-year mental healthcare utilization rates. To test this hypothesis, a hierarchal regression was calculated to determine if the best fitting model utilized all three IVs.

As measured by raw amount of Sum of Squares, Model 3 is best because it had the greatest number of sum of squares. Since the goal is to best account for the outcome measure (mental healthcare utilization rates), the adjusted R^2 was also utilized, which is the proportion of variance in Y that was accounted for by variance in X. This measure also suggests that Model 3 was best.

Tables 5 summarizes the results of the three-stage hierarchical regression. The independent variable of BMI was added in Model 1. The independent variable of internalized weight bias (the WBIS-M; Pearl & Puhl, 2014) was added in Model 2. The independent variable of genetic/environmental responsibility for weight ideology (the BAOP; Allison et al., 1991) was added in Model 3.

Table 5

Multiple Hierarchical Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.246[a]	.060	.055	11.24230	.060	11.679	1	182	.001
2	.256[b]	.066	.055	11.24082	.005	1.048	1	181	.307
3	.385[c]	.148	.134	10.76495	.082	17.356	1	180	.000

a. Predictors: (Constant), BMI

b. Predictors: (Constant), BMI, internalized weight stigma

c. Predictors: (Constant), BMI, internalized weight stigma, genetic/environmental responsibility for weight ideology

The hierarchical multiple regression revealed that in Model 1, BMI contributed significantly to the regression model, adjusted R^2=.055, F(1,182)=11.679, p=.001) and accounted for 5.5% of the variation in past-year mental healthcare utilization.

The addition of internalized weight stigma in Model 2 also contributed significantly to the regression model, although the adjusted R^2 remained .055, F(1,181), p=.002. Thus Model 2 was not significantly better than Model 1 at explaining past-year mental healthcare utilization.

In Model 3, the addition of genetic/environmental responsibility for weight ideology along with BMI and internalized weight stigma accounted for 13.4% of variation in past-year mental healthcare utilization with adjusted R^2=.134, F(1,180), p=.000. Thus, in Model 3 the addition of responsibility for weight ideology accounted for 7.9% more of the variance in mental healthcare utilization compared to BMI with internalized weight stigma and BMI alone.

The analysis of variance (see Table 6) demonstrated that each model produced statistically significant regressions. Thus, BMI, BMI plus internalized weight stigma, as well as BMI plus internalized weight stigma plus genetic/environmental responsibility for weight ideology all were predictive of past-year mental healthcare utilization rates.

Table 6

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1476.072	1	1476.072	11.679	.001[b]
	Residual	23002.863	182	126.389		
	Total	24478.935	183			
2	Regression	1608.511	2	804.256	6.365	.002[c]
	Residual	22870.424	181	126.356		
	Total	24478.935	183			
3	Regression	3619.781	3	1206.594	10.412	.000[d]
	Residual	20859.154	180	115.884		
	Total	24478.935	183			

a. Dependent Variable: health care utilization

b. Predictors: (Constant), bmi

c. Predictors: (Constant), bmi, internalized weight stigma

d. Predictors: (Constant), bmi, internalized weight stigma, genetic/environmental responsibility for weight ideology

Within the best-fitting model (Model 3), the Beta values presented in Table 7 usefully demonstrate comparisons between the strength of the effects of various independent variables, which were all on different scales. The Beta values show that there were statistically significant correlations between internalized weight stigma and mental healthcare utilization as well as genetic/environmental responsibility for weight ideology and mental healthcare utilization within Model 3.

Table 7

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1.065	2.522		-.422	.673	-6.042	3.912					
	BMI	.254	.074	.246	3.417	.001	.108	.401	.246	.246	.246	1.000	1.000
2	(Constant)	4.439	5.938		.747	.456	-7.279	16.156					
	BMI	.215	.084	.208	2.572	.011	.050	.380	.246	.188	.185	.791	1.264
	internalized weight stigma	-1.207	1.179	-.083	-1.024	.307	-3.532	1.119	-.178	-.076	-.074	.791	1.264
3	(Constant)	7.792	5.744		1.357	.177	-3.541	19.126					
	BMI	.054	.089	.053	.612	.541	-.121	.230	.246	.046	.042	.642	1.557
	internalized weight stigma	-2.909	1.200	-.199	-2.423	.016	-5.277	-.540	-.178	-.178	-.167	.699	1.430
	responsibility for weight ideology	.362	.087	.321	4.166	.000	.191	.534	.310	.297	.287	.795	1.257

a. Dependent Variable: health care utilization

Summary

Each of the independent variables (BMI, internalized weight stigma, and genetic/environmental responsibility for weight ideology) individually predicted past-year mental healthcare utilization rates. Specifically, a higher BMI predicted higher mental healthcare utilization rates; increased internalized weight stigma predicted lower mental healthcare utilization rates; and a higher external sense of responsibility for weight ideology (a more salient belief that obesity is the result of genetic or environmental causes, rather than a matter of willpower or personal control) predicted more mental healthcare utilization over the past-year.

Furthermore, the combination of BMI, internalized weight bias, and responsibility for weight ideology provided the best-fit model for predicting past-year mental healthcare utilization rates, accounting for 13.4% of the variation in mental healthcare utilization.

Chapter Four

The purpose of this study was to answer the question, do obese people tend to avoid mental healthcare services? In order to pursue the answer to this question, research was conducted to understand the relationships between mental healthcare utilization, BMI, internalized weight bias, and responsibility for weight ideology. The first hypothesis was that each of the independent variables (BMI, internalized weight stigma, and responsibility for weight ideology) would individually predict past-year mental healthcare utilization rates. A second hypothesis was that the combination of BMI, internalized weight bias, and responsibility for weight ideology would provide the best-fit model for predicting past-year mental healthcare utilization rates.

Interpretation

The first hypothesis was supported because BMI, internalized weight stigmatization, and responsibility for weight ideology were all predictive of past-year mental healthcare utilization. Correlational analysis revealed that a higher BMI predicted more mental healthcare utilization. This means that the higher a person's BMI, the more likely they were to utilize mental healthcare services.

Higher levels of internalized weight stigma predicted less mental healthcare utilization rates. Thus, the more a person endorsed negative stereotypes and negative self-statements regarding one's weight, the less likely they were to seek out mental healthcare.

Furthermore, higher amounts of external responsibility for weight ideology paralleled more mental healthcare utilization. In other words, the more a person believed that obesity is the result of genetic or environmental causes, and not a matter of

willpower or personal control, the more likely he/she was to utilize mental healthcare services.

The second hypothesis was supported as well, with the combination of BMI, internalized weight bias, and genetic/environmental responsibility for weight ideology providing the best-fit model for predicting past-year mental healthcare utilization. Significantly, these three variables, when combined, accounted for 13.4% of variation in past-year mental healthcare utilization rates. In other words, these three independent variables explained 13.4% of the variation around the mean of service use. Of all the possible reasons a person might seek out or avoid psychotherapeutic services, participants' BMI, internalized bias, and beliefs about the etiology of obesity accounted for 13.4% of the variation of use (for this study sample).

Integration

Although explanatory models are beyond the scope of this study, several hypotheses may be presented as to why these patterns existed in this sample based upon the literature previously presented in this document.

BMI and Mental Healthcare Utilization

In this study sample, the higher a person's BMI, the more they utilized mental healthcare services. This result may be loosely interpreted within the context of the literature that suggests many people's experiences of living in a larger body are likely to impact their mental health.

As discussed, people in Western society generally uphold the thin ideal, which likens thinness with physical attractiveness (Swami, 2015). Furthermore, societal messages overtly indicate that the more physically attractive a person is, the more value

they possess as a human being (Thompson et al., 1999). Thus, there is a widespread belief within the culture that a larger-bodied person does not have equivalent inherent value to a thinner-bodied person. It is unsurprising, then, that higher BMIs are linked with higher mental healthcare utilization, considering issues of self-confidence and self-worth can be inherently linked with experiences of depression, anxiety, and other mental-health issues.

The weight bias research also shows clear, consistent patterns of negative evaluations made toward people in larger bodies by both obese and non-obese people (Brownell et al., 2005; Carels et al., 2013; Durso & Latner, 2008; Puhl & Brownell, 2001; Puhl et al., 2015; Puhl & Heuer, 2009; Wang et al., 2004). People in larger bodies may also experience substantial psychosocial consequences because of their weight, including explicit discrimination (Durso & Latner, 2008; Puhl & Brownell, 2001). These experiences are highly stressful, resulting in increased cortisol levels (Schvey et al., 2014) and a heightened risk for depressive and anxiety disorders (Scott et al., 2008), binge eating, dietary restraint, and other disordered eating behaviors (Almeida et al., 2011; Durso & Latner, 2008; Major et al., 2012; Simone & Lockhart, 2016). Thus, it is consistent with this literature that the higher a person's BMI, the more likely they are to experience consequences of discrimination, and thus potentially increase the need for mental healthcare services.

Medical providers and mental health care providers, like the rest of the population, also demonstrate these anti-fat biases. Medical providers express preferences for working with normal weight patients (Hebl et al., 2003; Jay et al., 2009; Puhl & King, 2013; Sabin et al., 2012; Ward-Smith & Peterson, 2016). Medical providers also often

express strong negative opinions and biases about people in larger bodies (Puhl & King, 2013). Thus, medical clinics, which provide care for mental health needs, are a potential source of stigma and discrimination for people in larger bodies. Therefore, people in larger bodies avoid physical healthcare services and service providers due to experiences of discrimination and bias within medical systems (Amy et al., 2006; Drury & Louis, 2002; Phelan et al., 2015; Wee et al., 2015). This healthcare avoidance occurs despite the increased health risks that are associated with a higher BMI. Based on this research, it was expected that a higher BMI would be associated with mental healthcare avoidance. However, this was not the case.

Similarly, mental health practitioners are more likely to ascribe negative psychological pathology and attributes to obese patients (Hassell et al., 2001; Young & Powell, 1985). Psychologists assessed obese client's prognoses as being less promising and estimated that they would put in less effort in the therapy process (Davis-Coelho et al., 2000). Therefore, the researcher expected that patients with higher BMIs would engage in mental healthcare avoidance despite the increased risk for mental health concerns due to therapist discrimination, in parallel to people avoiding physical healthcare despite increased physical health risks. However, this was not the case in this study. BMI alone did not predict mental healthcare avoidance, but instead predicted more engagement with mental health professionals.

Internalized Weight Stigma and Mental Healthcare Utilization

In this study sample, the higher a person's score on the internalized weight stigma measure, the less they utilized mental healthcare services. This result can also be examined within the framework of the existing research. As noted earlier in this

document, internalized weight bias involves one's personal belief in stereotypes and negative self-evaluations regarding one's weight, shape, and other socially related constructs (e.g., intelligence, willpower, general value as a human being; Durso & Latner, 2008). Internalized weight bias has been associated with various types of functional impairment, including non-engagement with other health behaviors (i.e., exercise, choosing nutritious foods), body image concern, eating disorder pathology (i.e., drive for thinness, restricting, binge-eating), reduced physical activity, depression, anxiety, and stress (Durso & Latner, 2008; Vartanian et al., 2018).

Based on this research, it was expected that internalized weight stigma would result in non-engagement in mental health treatment as an extension of Durso and Latner's (2008) findings that internalized weight stigma is linked to non-engagement in health behaviors. This result was seen in the study. Placed into this context, it is possible that internalized weight stigma may produce health behavior non-engagement (avoidance), which may result in negative mental health consequences, further weight gain, and further stigma. This reflects the cyclic obesity/weight-based stigma cycle wherein weight stigma results in health consequences, which result in weight stigma, thus creating a perpetuating feedback loop (Tomiyama, 2014, p. 8).

Responsibility for Weight Ideology and Mental Healthcare Utilization

In this study, the higher a participant's score on the genetic/environmental responsibility for weight ideology measure, the more they utilized mental healthcare services. This is consistent with the current literature and thus was the expected outcome.

As discussed, personal responsibility for weight ideology, or the belief that people are in almost total control of their body weight based upon their personal character

qualities (i.e., possessing or lacking willpower), is tied to holding biased attitudes toward people in larger bodies (Crandall, 1994; Crandall et al., 2001; Crandal & Martinez, 1996; Crandall & Moriarty, 1995; Hilbert et al., 2008; O'Brien et al., 2010; Weiner et al., 1988). Personal responsibility for weight ideology also lessens engagement in health behaviors (Pearl & Lebowitz, 2014) and is predictive of higher BMI (McFerran & Mukhopadhyay, 2013). In fact, McFerran and Mukhopadhyay (2013) suggested that belief about the origins of weight might explain a considerable portion in the variance in individuals' BMIs.

Based upon this research, it was anticipated that genetic/environmental responsibility for weight ideology would lessen mental healthcare avoidance. This was seen within this study's participant group's reported past-year mental healthcare utilization rates. Participants with a more salient belief that obesity is caused by genetic or environmental factors reported higher past-year mental healthcare utilization rates. This outcome supports the notion that believing one's weight is one's fault does not actually encourage or result in engagement in health behaviors or, in this case, mental healthcare services. Instead, those who reported feeling largely responsible for their weight did not utilize mental healthcare services as extensively. Conversely, those participants who believed that genetics and environment were large contributors to their weights used mental healthcare services more frequently.

BMI, Internalized Weight Bias, and Responsibility for Weight Ideology

The combination of BMI, internalized weight bias, and responsibility for weight ideology provided the best-fit model for predicting past-year mental healthcare utilization rates, accounting for 13.4% of the variation in mental healthcare utilization. These

findings were consistent with the hypothesis that these three variables would together be the best predictor. The hypothesis was based on the previously discussed literature that BMI, internalized weight bias, and responsibility for weight ideology would each individually predict mental healthcare utilization rates. Thus, when combined, they provided the best model for predicting the utilization. Specifically, a higher BMI, combined with low internalized weight bias, and low personal responsibility for weight ideology predicted higher mental healthcare utilization for the past year. In other words, people in larger bodies, but who did not hold strong negative beliefs about people in large bodies, and who did not take personal responsibility for their weight, were most likely to highly utilize mental healthcare services.

Importantly, these three factors accounted for 13.4% of the variation in participant's past-year use of psychotherapeutic and other mental health services. The results indicated that of the multitude of factors that may influence one's choice to engage with the mental healthcare system, BMI, internalized weight bias, and beliefs about the etiology of obesity accounted for 13.4% of the differences in past-year service visits within this participant group. The findings are noteworthy. These three variables alone played a significant role in participant's likelihood of utilizing mental health care treatment.

Limitations

Now that the results of the study have been interpreted within the context of the wider literature, it is important to also discuss the limitations of these conclusions. The weaknesses of this study lie largely within the representative nature of the participants, sampling method, study design, lack of diversity within the sample as well as the lack of explanatory nature of the statistical methods utilized.

Representative Sample

First, this was not a representative sample of the general US population, particularly in regard to ethnic, gender, and age diversity. As mentioned, 82% of participants reported their race as non-Hispanic white, 83.7% self-identified as female, and 45.7% (N=84) were age 26-35.

The lack of representation was echoed in the percentage of participants who reported utilizing mental health services overall. Of individuals sampled, 55.9% (N=104) reported having at least one past-year mental healthcare visit. This can be compared the more typical estimated 13.6% of who individuals who utilize mental health services in a one-year period, based on more nationally representative estimates of adults by the U.S. Department of Health and Human Services (2015). Thus, it is possible that individuals who interact with the mental healthcare system self-selected to participate in this study, which could impact the results observed.

Recruitment Method

Second, there are some limitations that come with the recruitment method. Participants were recruited via a convenience sampling through my social media, as well as the networks of my friends, family, peers, and colleagues. Participants' affiliation with me, a doctoral student in psychology, or my colleagues and friends (many of whom are also working within the psychology field) may have increased the likelihood of their exposure or openness to psychological principles or mental health care. Therefore, it is possible there was inadvertent sampling bias. If this was the case, participants who are educated on stigma and bias, or who are more open to mental healthcare, may have

skewed the results compared to a different sample without connections to the mental health or psychology field.

Study Design

The study design in and of itself may have skewed the participant sample pool. The survey was distributed electronically. Therefore, participants had to have access to and competency with using technology, which increases the likelihood that they were educated and potentially of higher socioeconomic status. Thus, results may have been impacted and could have been different if given on paper and pencil to an intentionally diversely educated and diverse socioeconomic population.

Diversity

Next, the deficiency of ethnic and gender diversity in this sample is a clear limitation. Of the 184 participants surveyed, 83.7% (N=154) were female and 89.1% (N=164) identified as White. This lack of diversity is problematic because it indicates that the results may not be reflective of the wider population demographics. Approximately ¾ of men fall into obese or overweight categories, so it is important that men be included in this field of research (Flegal et al., 2016).

Furthermore, the highest obesity prevalence rates occur in non-Hispanic black (46.8%) and Hispanic (47%) adults (Flegal et al., 2016). However, only 3% (N= 6) of the participants in the present study identified as non-Hispanic Black or African American, and only 7% (N=13) of participants in the present study identified as Hispanic. This is particularly problematic because ethnic minorities have been regularly and historically missed in psychological research. Brown (2003) discussed that the lack of ethnic diversity sampling in psychological research results in the development of both theories

and intervention practices that may not adequately meet the needs of minority individuals. Therefore, this study cannot claim to be generalizable to ethnic minority populations.

Body Satisfaction

Another weakness of this study was that it did not specifically examine how body satisfaction may impact the various dependent variables. Although this was surveyed as a part of the WBIS-M (Pearl & Puhl, 2014) (specifically question 9), this was not specifically examined as a potential contributing factor in this study.

Explanatory Models

A final limitation of this study is the lack of explanatory nature of the statistical methods utilized. Based on the predictive statistics used, in combination with the wider research literature, it appears that internalized weight bias and responsibility for weight ideology may be resulting in mental health treatment avoidance. However, this conclusion assumes that this group of individuals have the same mental health needs as those with lesser internalized weight bias and responsibility for weight ideology. This is not much of a leap based upon the body of research that exists that suggests this would not be true; however, there was no measure of mental health diagnosis or need for treatment in this study. There could be a variety of moderating variables that were not measured in this study that impact mental healthcare utilization.

Additionally, because a number of mental health treatments may result in weight gain (e.g., several classes of antidepressant medications can cause weight gain as a side effect; Deshmukh & Franco, 2003), it is possible that the experiences of having a larger body may not be a cause of mental healthcare utilization at all; rather, it could be that

individuals gain weight (and have a higher BMI) as a result of their treatment. Therefore, the results should be interpreted with these cautions in mind, and no explanatory conclusions should be drawn from this research.

Future Directions

There are several future directions for research based on the results of this study.

Representative Sample

First and foremost, researchers could focus on replicating this study but with a more representative sample with ethnic minorities and men. Attention should be paid to sampling methods that do not increase the likelihood of targeting a participant group that is more likely to interact with the mental healthcare system than the rest of the wider population.

Mental Healthcare Need

To address the explanatory model limitation, it would be interesting to explore past-year mental healthcare utilization rates among a population of individuals who self-identify as having a mental healthcare need, as well as a sample of participants who have been diagnosed with a psychiatric condition. Doing so would help to reduce the ambiguity that comes with the past-year mental healthcare utilization rates in regard to actual past-year mental healthcare need.

Experiences of Bias

As previously discussed, there is clear medical provider (Amy et al., 2006; Drury & Louis, 2002; Phelan et al., 2015; Wee et al., 2015; Young & Powell, 1985) and mental health provider (Davis-Coelho et al., 2000; Hassell et al., 2001) bias established in the literature. In this study, discrimination and bias as a reason for mental healthcare

avoidance is assumed; it is inferred that larger-bodied individuals would avoid healthcare and mental healthcare systems, and thus talk with their medical and mental health providers about mental health issues less. Therefore, future researchers should explicitly evaluate for participants' individual experiences of discrimination by medical and mental health providers and mental healthcare utilization rates.

Explanatory Models

In this study, a higher BMI was linked to higher rates of past-year mental healthcare utilization. This was contrary to the expected result that a higher BMI would be linked to mental healthcare avoidance. Further research could focus on explanatory models for why people in larger bodies utilize mental healthcare services more than their smaller-bodied counterparts.

One facet of explanatory models that may be of particular interest includes the potentially cyclical nature of receiving mental health treatment and obesity. Although the current study does not provide explanatory models for mental healthcare use, there is a body of research that supports the idea that being in a larger body is contributing to mental healthcare use. However, because (as previously discussed) a number of mental health treatments may result in weight gain (Deshmukh & Franco, 2003), it is possible that mental health treatment could result in higher BMIs for patients and clients. Therefore, engagement with the mental healthcare system could, for some patients, shift body weight. Thus, the results of having a larger body may not be a cause of mental healthcare utilization; rather, it could be the other way around. So, taken together, future researchers might distinguish between the experiences of individuals who seek out mental healthcare services as a potential byproduct of discrimination and stigma versus

those who are already utilizing the mental healthcare system and gain weight as a result of that.

Body Satisfaction

Another factor that might impact the dependent variable is body satisfaction. It would be interesting to explore how satisfaction with one's body size impacts the dependent variable, and how this variable could contribute to an explanatory model for past-year mental healthcare utilization.

Higher BMI Sample

The associations between internalized weight bias and mental healthcare utilization, as well as the link between responsibility for weight ideology and mental healthcare utilization, were small but significant. However, approximately 31% of this sample were in the normal weight range. It is possible that including normal weight individuals impacted the results, as this study was truly aimed to look at higher BMIs and mental healthcare utilization. Therefore, other future research should examine these variables but solely within an overweight or obese sample.

Expanding Mental Healthcare Visit Definitions

Within the Service Utilization measure, the researcher inquired about past-year utilization of a mental healthcare provider in an office or clinic. However, the use of videoconferencing technology, which allows for audio and video psychological consultations and therapy to occur outside of an office or clinic, is rising in popularity (Backhaus et al., 2012). Backhaus et al. (2012) found that the use of telemedicine for psychotherapy has been effectively used with a variety of psychotherapeutic modalities and diverse populations. It has been generally associated with positive user satisfaction

and demonstrates comparable clinical outcomes to traditional, in-office psychotherapy. Therefore, future research should expand the definition of what a mental health appointment is to include the utilization of telemedicine.

Conclusions

Within the United States population approximately 32.5% of adults were classified as overweight and another 37.7% were considered obese (Flegal et al., 2016). These prevalence rates are expected to continue to grow until at least 2030 (Flegal et al., 2016). At the same time, cultural expectation and evaluations of having a larger body size remain largely the same, with widespread weight bias and discrimination toward obese individuals occurring day to day, as well as within the healthcare and mental healthcare systems. Given that bias and discrimination impact mental health outcomes (e.g., Almeida et al., 2011; Durso & Latner, 2008; Major et al., 2012; Simone & Lockhart, 2016), it is important to understand and address how body size, internalized weight bias, and responsibility for weight ideology may impact a person's likelihood of seeking out necessary mental healthcare services.

The present study looked at predictive factors of mental healthcare utilization based on BMI, internalized weight bias, and responsibility for weight ideology. Results indicated that each independent variable predicted past-year mental healthcare use. Mental healthcare utilization was positively correlated with BMI (as BMI increased, mental healthcare utilization decreased). Mental healthcare utilization was negatively correlated with internalized weight stigma (as stigma increased, mental healthcare utilization decreased). Mental healthcare utilization was positively correlated with genetic/environmental responsibility for weight ideology (as genetic/environmental responsibility for weight ideology increased, mental healthcare utilization increased). The combination of BMI,

internalized weight stigma, and responsibility for weight ideology provided the best-fit model for predicting past-year mental healthcare utilization rates.

The results of the present study are important to highlight because the findings indicate that, within this participant pool, 13.4% of the differences in past-year service visits could be explained by BMI, internalized weight bias, and beliefs about the causes of obesity. These findings are significant because, prior to this study, no researchers had examined how BMI and weight stigma might impact mental health usage. Reasons that may contribute to mental healthcare use versus mental healthcare avoidance were completely unknown. Now, based on the results of this study, clinicians may infer that a fairly large proportion of the reasons someone in a larger body might not use mental health services may be due to weight stigmatization or related factors. This is because BMI, responsibility for weight ideology, and internalized weight stigma alone played a significant role in participant's likelihood of utilizing mental health care treatment (13.4%, to be exact). Additionally, the results highlighted that a higher BMI is predictive of more mental health need and higher stigmatized beliefs about obesity and the causes of obesity predict more mental health need. Therefore, if clinicians are able to address some of the ways in which BMI, stigma, or responsibility for weight ideology may be impacting their clients or patients, they may be able to offer better care and increase the likelihood of clients/patients receiving needed services. Clinicians could address these factors in several ways.

The results demonstrate that internalized weight bias decreases mental healthcare utilization. This is completely new information to the research community. Based upon this study, clinicians may deduce that it may be helpful if mental healthcare providers address the false beliefs about how weight impacts personal competence, attractiveness, and worth, and

destigmatize having a larger body. Addressing bias could involve focusing on patient strengths and normalizing the beauty and depth that body diversity brings to one's community. Helping clients to challenge negative beliefs and offer themselves self-compassion could have a domino effect in a very positive way. Effective intervention on this measure could aim at increasing self-compassion, embracing body positivity, and engaging in positive health behaviors for the sake of wellness. Based on this research, doing so would predict more willingness to utilize needed mental healthcare services in the future.

Second, these results demonstrate for the first time that holding personal responsibility for weight ideology decreases mental healthcare utilization. These findings could dramatically impact patient care, because they tell us that clients may benefit from receiving psychoeducation about the complex and multiple causes of weight gain and obesity. Helping clients to understand the multifaceted causal components of weight, including genetics and environmental causes, may help clients to offer themselves more compassion when it comes to having a higher weight. Previous research indicates that this could result in more positive mental health outcomes, and this study suggests it could cause higher utilization of needed mental healthcare services as well. Higher utilization of needed mental healthcare services could significantly increase the functioning of this appreciable portion of the United States population.

Taken together, this study demonstrates the impact that living in a larger body can have on one's willingness to engage with the mental health treatment system. This study contributes to psychology's body of knowledge about mental healthcare utilization in this completely new way. The results indicate that holding negative beliefs about people with higher BMIs and believing that one is largely responsible for one's weight, is predictive

of avoiding mental healthcare services. The results also explain 13.4% of the variance in reasons why people utilize mental health services. Therefore, addressing weight stigma concerns in treatment, as well as on a public health level, could have long reaching benefits for patients struggling with issues of food, body, and weight.

References

Abbass, A., Kisely, S., & Kroenke, K. (2006). Short-term psychodynamic psychotherapy for somatic disorders: Systematic review and meta-analysis of clinical trials. *Psychotherapy and Psychosomatics*, *78*, 265-274. https://doi.org/10.1159/000228247

Agell, G., & Rothblum, E. D. (1991). Effects of clients' obesity and gender on the therapy judgments of psychologists. *Professional Psychology: Research and Practice*, *22*(3), 223–229. https://doi.org/10.1037/0735-7028.22.3.223

Aldrich, T., Hackley, B. (2005). The impact of obesity on gynecologic cancer screening: an integrative literature review. *Journal of Midwifery and Women's Health*, *55*, 344–356. https://doi.org/10.1016/j.jmwh.2009.10.001

Allison, D. B., Basile, V. C., & Yuker, H. E. (1991). The measurement of attitudes toward and beliefs about obese persons. *International Journal of Eating Disorders*, *10*(5), 599–607. https://doi.org/10.1002/1098-108X(199109)10:5<599::AID-EAT2260100512>3.0.CO;2-%23

Almeida, L., Savoy, S., & Boxer, P. (2011). The role of weight stigmatization in cumulative risk for binge eating. *Journal of Clinical Psychology*, *67*, 278–292. http://dx.doi.org/10.1002/jclp.20749

American Psychological Association. (2017). *Ethical principles of psychologists and code of conduct* (2002, amended effective June 1, 2010, and January 1, 2017). http://www.apa.org/ethics/code/index.aspx

Amy, N. K., Aalborg, A., Lyons, P., & Keranen, L. (2006). Barriers to routine gynecological cancer screening for White and African-American obese women.

International Journal of Obesity, *30*(1), 147–155. https://doi-org.nu.idm.oclc.org/10.1038/sj.ijo.0803105

APA Task Force on Evidence-Based Practice. (2006). Evidence-based practice in psychology. *American Psychologist*, *61*, 271–285. https://doi.org/10.1037/0003-066X.61.4.271

Ashmore, J. A., Friedman, K. E., Reichmann, S. K., & Musante, G. J. (2008). Weight-based stigmatization, psychological distress, & binge eating behavior among obese treatment-seeking adults. *Eating Behaviors*, *9*, 203–209. https://doi.org/10.1016/j.eatbeh.2007.09.006

Aza, M. N. (2009). *What's the skinny on fat women in psychotherapy: Mental health clinicians' countertransference with women of size* [Master's thesis, Smith College]. Smith ScholarWorks. https://scholarworks.smith.edu/theses/469

Backhaus, A., Agha, Z., Maglione, M. L., Repp, A., Ross, B., Zuest, D., Rice-Thorp, N.M., Lohr, J., & Thorp, S. R. (2012). Videoconferencing psychotherapy: A systematic review. *Psychological Services*, *9*(2), 111–131. https://doi.org/10.1037/a0027924

Bertakis, K. D., & Azari, R. (2005). The impact of obesity on primary care visits. *Obesity Research*, *13*, 1615–1623. https://doi.org/10.1038/oby.2005.198

Beutler, L.E. (2009). Making science matter in clinical practice: Redefining psychotherapy. *Clinical Psychology: Science and Practice*, *16*, 301-317. https://doi.org/10.1111/j.1468-2850.2009.01168.x

Brown, T. L. (2003). Internet-based research: Is it a viable strategy for increasing the representation of ethnic minorities in psychological research? *Individual Differences Research*, *1*(3), 218–229.

Brownell, K. D., Puhl, R. M., Schwartz, M. B., & Rudd, L. (Eds.). (2005). *Weight bias: Nature, consequences, and remedies.* The Guilford Press.

Burlingame, G. M., Fuhriman, A., & Mosier, J. (2003). The differential effectiveness of group psychotherapy: A meta-analytic perspective. *Group Dynamics: Theory, Research & Practice*, *2*, 101-117. https://doi.org/0.1037/1089-2699.7.1.3

Carels, R. A., Burmeister, J., Oehlhof, M. W., Hinman, N., LeRoy, M., Bannon, E., Koball, A., & Ashrafloun, L. (2013). Internalized weight bias: Ratings of the self, normal weight, and obese individuals and psychological maladjustment. *Journal of Behavioral Medicine*, *36*(1), 86–94. https://doi.org/10.1007/s10865-012-9402-8

Carr, A. (2009). The effectiveness of family therapy and systemic interventions for adult-focused problems. *Journal of Family Therapy*, *31*, 46-74. https://doi.org/10.1111/j.1467-6427.2008.00452.x

Cohen, S. S., Palmieri, R. T., Nyante, S. J., Koralek, D. O., Kim, S., Bradshaw, P., & Olshan, A. F. (2008). A review: Obesity and screening for breast, cervical, and colorectal cancer in women: A review. *Cancer*, *112*(9), 1892–1904. https://doi.org/10.1002/cncr.23408

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, *59*(7), 614–625. https://doi-org.nu.idm.oclc.org/10.1037/0003-066X.59.7.614

Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology*, *66*, 882–894. http://dx.doi.org/10.1037/0022-3514.66.5.882

Crandall, C. S., D'Anello, S., Sakalli, N., Lazarus, E., Nejtardt, G. W., & Feather, N. T. (2001). An attribution-value model of prejudice: Anti-fat attitudes in six nations. *Personality and Social Psychology Bulletin*, *27*(1), 30-37. http://dx.doi.org/10.1177/0146167201271003

Crandall, C. S., & Martinez, R. (1996). Culture, ideology, and antifat attitudes. *Personality and Social Psychology Bulletin*, *22*, 1165–1176. http://dx.doi.org/10.1177/01461672962211007

Crandall, C. S., & Moriarty, D. (1995). Physical illness stigma and social rejection. *British Journal of Social Psychology*, *34*, 67–83. http://dx.doi.org/10.1111/j.2044-8309.1995.tb01049.x

Crandall, C. S., & Reser, A. H. (2005). *Attributions and weight-based prejudice*. Guilford Publications.

Cutler, D., & Lleras-Muney, A. (2006). *Education and health: Evaluating theories and evidence* (NBER Working Paper No.12352). The National Bureau of Economic Research. www.nber.org/papers/w12352

Davis-Coelho, K., Waltz, J., & Davis-Coelho, B. (2000). Awareness and prevention of bias against fat clients in psychotherapy. *Professional Psychology: Research and Practice*, *31*(6), 682–684. https://doi.org/10.1037/0735-7028.31.6.682

de Maat, S., de Jonghe, F., Schoevers, R., & Dekker, J. (2009). The effectiveness of long-term psychoanalytic therapy: A systematic review of empirical studies. *Harvard Review of Psychiatry*, *17*, 1-23. https://doi.org/10.10880/16073220902742476

Deshmukh, R., & Franco, K. (2003). Managing weight gain as a side effect of antidepressant therapy. *Cleveland Clinic Journal of Medicine*, *70*(7), 614-623. https://doi.org/10.3949/ccjm.70.7.614.

Devaux, M., & Sassi, F. (2013). Social inequalities in obesity and overweight in 11 OECD countries. *European Journal of Public Health*, *23*(3), 464–469. https://doi.org/10.1093/eurpub/ckr058

Drury, C. A. A., & Louis, M. (2002). Exploring the association between body weight, stigma of obesity, and health care avoidance. *Journal of the American Academy of Nurse Practitioners*, *14*(12), 554-561. https://doi.org/10.1111/j.1745-7599.2002.tb00089.x

Durso, L. E., & Latner, J. D. (2008). Understanding self-directed stigma: Development of the Weight Bias Internalization Scale. *Obesity*, *16*, s80–s86. https://doi.org/10.1038/oby.2008.448

Field, A. E., Austin, S. B., Taylor, C. B., Malspeis, S., Rosner, B., Rockett, H. R., Gillman, M.W., & Colditz, G. A. (2003). Relation between dieting and weight change among preadolescents and adolescents. *Pediatrics*, *112*(4), 900-906. https://doi.org/10.1542/peds.112.4.900

Flegal, K. M., Kruszon-Moran, D., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2016). Trends in obesity among adults in the United States, 2005 to 2014. *The Journal of*

the American Medical Association, *315*(21), 2284–2291. https://doi.org/10.1001/jama.2016.6458

Fortuna, L. R., Porche, M. V., & Alegria, M. (2008). Political violence, psychosocial trauma, and the context of mental health services use among immigrant Latinos in the United States. *Ethnicity & Health*, *13*, 435–463. https://doi.org/10.1080/13557850701837286

Freedman, D. S., Horlick, M., & Berenson, G. S. (2013). A comparison of the Slaughter skinfold-thickness equations and BMI in predicting body fatness and cardiovascular disease risk factor levels in children. *American Journal of Clinical Nutrition*, *98*(6), 1417–24. https://doi.org/10.3945/ajcn.113.065961

Garrow, J. S. & Webster, J. (1985). Quetelet's index (W/H2) as a measure of fatness. *International Journal of Obesity*, *9*(2), 147–153.

Golden, N. H., Schneider, M., & Wood, C. (2016). Preventing obesity and eating disorders in adolescents. *Pediatrics*, *138*(3), Article e20161649. https://doi.org/10.1542/peds.2016-1649

Grant, P. M., Huh, G. A., Perivoliotis, D., Solar, N., & Beck, A. T. (2012). Randomized trial to evaluate the efficacy of cognitive therapy for low-functioning patients with schizophrenia. *Archives of General Psychiatry*, *69*, 121-127. https://doi.org/10.1001/archgenpsychiatry.2011.129

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, *74*, 1464–1480. http://dx.doi.org/10.1037/0022-3514.74.6.1464

Gudzune ,K. A., Beach, M. C., Roter, D. L., & Cooper, L. A. (2013). Physicians build less rapport with obese patients. *Obesity*, *21*(10), 2146–2152. http://dx.doi.org/10.1002/oby.20384

Hales, C. M., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2017). *Prevalence of obesity among adults and youth: United States, 2015–2016* (Data Brief No. 288). Centers for Disease Control and Prevention, National Center for Health Statistics. https://www.cdc.gov/nchs/data/databriefs/db288.pdf

Hassel, T. D., Amici, C. J., Thurston, N. S., & Gorsuch, R. L. (2001). *Client weight as a barrier to non-biased clinical judgment* (Publication No. 121) [Faculty Publication, George Fox University]. Digital Commons at George Fox University. http://digitalcommons.georgefox.edu/gscp_fac/121 (Reprinted from "Client Weight as a Barrier to Non-Biased Clinical Judgment," 2001, *The Journal of Psychology & Christianity*, *20*[2], 145-161.)

Hebl, M. R., & Xu, J. (2001). Weighing the care: Physicians' reactions to the size of a patient. *International Journal of Obesity & Related Metabolic Disorders*, *25*(8), 1246. https://doi-org.nu.idm.oclc.org/10.1038/sj.ijo.0801681

Hebl, M. R., Xu, J., & Mason, M. F. (2003). Weighing the care: Patients' perceptions of physician care as a function of gender and weight. *International Journal of Obesity and Related Metabolic Disorders*, *27*, 269–275. http://dx.doi.org/10.1038/sj.ijo.802231

Hilbert, A., Rief, W., & Braehler, E. (2008). Stigmatizing attitudes toward obesity in a representative population-based sample. *Obesity*, *16*, 1529– 1534. http://dx.doi.org/10.1038/oby.2008.263

Jay, M., Kalet, A., Ark, T., McMacken, M., Messito, M. J., Richter, R., Schlair, S., Sherman, S., Zabar, S., & Gillespie, C. (2009). Physicians' attitudes about obesity and their associations with competency and specialty: a cross-sectional study. *BMC Health Services Research*, *9*(1), 106. https://doi.org/10.1186/1472-6963-9-106

Jimenez, D. E., Bartels, S. J., Cardenas, V., Dhaliwal, S. S., & Alegría, M. (2012). Cultural beliefs and mental health treatment preferences of ethnically diverse older adult consumers in primary care. *American Journal of Geriatric Psychiatry*, *20*(6), 533-542. https://doi.org/10.1097/JGP.0b013e318227f876.

Kessler, R. C., & Ustun, T. B. (2004). The world mental health (WMH) survey initiative version of the world health organization (WHO) composite international diagnostic interview (CIDI). *International Journal of Methods in Psychiatric Research*, *13*(2), 93-121. https://doi.org/10.1002/mpr.168

Kosters, M., Burlingame, G. M., Nachtigall, C., & Strauss, B. (2006). A meta-analytic review of the effectiveness of inpatient group psychotherapy. *Group Dynamics: Theory, Research, and Practice*, *10*, 146-163. https://doi.org/10.1037/1089-2699.10.2.146

Lambert, J. J., & Ogles, B. M. (2004). The efficacy and effectiveness of psychotherapy. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., pp. 139-193). Wiley.

Leichsenring, F., & Rabung, S. (2008). Effectiveness of short-term psychodynamic psychotherapy: A meta-analysis. *Journal of the American Medical Association*, *200*, 1551-1565. https://doi.org/10.1001/jama.300.13.1551

Lewis, S., Thomas, S. L., Blood, R. W., Castle, D. J., Hyde, J., & Komesaroff, P. A. (2011). How do obese individuals perceive and respond to the different types of obesity stigma that they encounter in their daily lives? A qualitative study. *Social Science Medicine*, *73*(9), 1349-56. https://doi.org/10.1016/j.socscimed.2011.08.021

Major, B., Eliezer, D., & Rieck, H. (2012). The psychological weight of weight stigma. *Social Psychological and Personality Science*, *3*, 651–658. https://doi.org/10.1177/1948550611434400.

Marques, L., Alegria, M., Becker, A. E., Chen, C., Fang, A., Chosak, A., & Diniz, J. B. (2011). Comparative prevalence, correlates of impairment, and service utilization for eating disorders across US ethnic groups: Implications for reducing ethnic disparities in health care access for eating disorders. *International Journal of Eating Disorders*, *44*(5), 412–420. https://doi-org.nu.idm.oclc.org/10.1002/eat.20787

Martin, J. K., Pescosolido, B. A., & Tuch, S. A. (2000). Of fear and loathing: The role of "disturbing behavior," labels, and causal attributions in shaping public attitudes toward people with mental illness. *Journal of Health and Social Behavior*, *41*, 208–223. https://doi.org/ 10.2307/2676306

McHugh, M. C., & Kasardo, A. E. (2012). Anti-fat prejudice: The role of psychology in explication, education and eradication. *Sex Roles*, *66*(9-10), 617-627. http://dx.doi.org/10.1007/s11199-011-0099-x

McMain, S., & Pos, A. E. (2007). Advances in psychotherapy of personality disorders: A research update. *Current Psychiatry Reports*, *9*, 46-52. http://dx.doi.org/10.1007/s11920-007-0009-7

McFerran, B., & Mukhopadhyay, A. (2013). Lay theories of obesity predict actual body mass. *Psychological Science*, *24*, 1428–1436. https://doi.org/10.1177/0956797612473121

Menec, V. H. & Perry, R. P. (1998). Reactions to stigmas among Canadian students: testing an Attribution-Affect-Help Judgment Model. *Journal of Social Psychology*, *138*, 443–453. https://doi.org/10.1080/00224549809600399

Muennig, P. (2008). The body politic: the relationship between stigma and obesity-associated disease. *BMC Public Health*, *8*, 128. https://doi.org/10.1186/1471-2458-8-128

National Center for Chronic Disease Prevention and Health Promotion. (2017, August 29). *Assessing your weight: About adult BMI*.

National Institute of Diabetes and Digestive and Kidney Diseases. (2016, June 16). *Obesity and overweight statistics*.

Neumark-Sztainer, D., Wall, M., Larson, N. I., Eisenberg, M. E., & Loth, K. (2011). Dieting and disordered eating behaviors from adolescence to young adulthood: Findings from a 10-year longitudinal study. *Journal of the American Dietetic Association*, *111*(7), 1004-1011. https://doi.org/10.1016/j.jada.2011.04.012

O'Brien, K. S., Latner, J. D., Ebneter, D., & Hunter, J. A. (2013). Obesity discrimination: The role of physical appearance, personal ideology, and anti-fat prejudice.

International Journal of Obesity, *37*(3), 455–460. https://doi.org/10.1038/ijo.2012.52

O'Brien, K. S., Puhl, R. M., Latner, J. D., Mir, A. S., & Hunter, J. A. (2010). Reducing anti-fat prejudice in pre-service health students: A randomized trial. *Obesity*, *18*, 2138–2144. https://doi.org/10.1038/oby.2010.79

O'Hara, L., & Taylor, J. (2018). What's wrong with the war on obesity? *SAGE Open, 8*(2), 1-28. https://doi.org/10.1177/2158244018772888

Organisation for Economic Co-operation and Development. (2017). *Obesity updated 2017*. http://www.oecd.org/health/obesity-update.htm

Patton, G. C., Selzer, R., Coffey, C. C. J. B., Carlin, J. B., & Wolfe, R. (1999). Onset of adolescent eating disorders: Population based cohort study over 3 years. *BMJ*, *318*(7186), 765-768. https://doi.org/10.1136/bmj.318.7186.765

Pearl, R. L, & Lebowitz, M. S. (2014). Beyond personal responsibility: Effects of causal attributions for overweight and obesity on weight-related beliefs, stigma, and policy support. *Psychology & Health*, *29*(10), 1176-1191. https://doi.org/10.1080/08870446.2014.916807.

Pearl, R. L., & Puhl, R. M. (2014). Measuring internalized weight attitudes across body weight categories: Validation of the Modified Weight Bias Internalization Scale. *Body Image*, *11*(1), 89-92. https://doi.org/10.1016/j.bodyim.2013.09.005

Persky, S. & Eccleston, C. P. (2003). Medical student bias and care recommendations for an obese versus non-obese virtual patient. *International Journal of Obesity*, *35*, 728–735. https://doi.org/10.1038/ijo.2010.173

Phelan, S. M., Burgess, D. I., Yeazel, M. W., Hellerstedt, W. L., Griffin, J. M., & Ryn, M. (2015). Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. *Obesity Review*, *16*, 319-326. https://doi.org/10.1111/obr.12266

Pingitoire, R., Dugoni, R., Tindale, S., & Spring, B. (1994). Bias against overweight job applicants in a simulated employment interview. *Journal of Applied Psychology*, *79*, 909–17. https://doi.org/10.1037/0021-9010.79.6.909

Puhl, R. M, & Brownell, K. D. (2001). Bias, discrimination, and obesity. *Obesity Research*, *9*(12), 788–805. https://doi.org/10.1038/oby.2001.108

Puhl, R. M., & Heuer, C. A. (2009). The stigma of obesity: A review and update. *Obesity*, *17*(5), 941–964. https://doi.org/10.1038/oby.2008.636

Puhl, R. M., & King, K. M. (2013). Weight discrimination and bullying. *Best Practice and Research: Clinical Endocrinology & Metabolism*, *27*(2), 117-127. https://10.1016/j.beem.2012.12.002

Puhl, R. M., Latner, J. D., O'Brien, K., Juedicke, J., Danielsdottir, S., & Forhan, M. (2015). A multinational examination of weight bias: Predictors of anti-fat attitudes across four countries. *International Journal of Obesity*, *30,* 1166-1173. https://doi.org/10.1038/ijo.2015.32

Puhl, R. M., Schwartz, M. B., & Brownell, K. D. (2005). Impact of perceived consensus on stereotypes about obese people: a new approach for reducing bias. *Health Psychology*, *24*(5), 517. https://doi.org/10.1037/0278-6133.24.5.517

Roberto, C. A., Sysko, R., Bush, J., Pearl, R., Puhl, R. M., Schvey, N. A., & Dovidio, J. F. (2012). Clinical correlates of the weight bias internalization scale in a sample

of obese adolescents seeking bariatric surgery. *Obesity*, *20*(3), 533-539. https://doi.org/10.1038/oby.2011.123

Robinson, B. E., & Bacon, J. G. (1996). The "If only I were thin…" Treatment Program: Decreasing the stigmatizing effects of fatness. *Professional Psychology: Research and Practice*, *27*(2), 175–183. https://doi.org/10.1037/0735-7028.27.2.175

Rosen, A. B. & Schneider, E. C. (2004). Colorectal cancer screening disparities related to obesity and gender. *Journal of Gen Internal Medicine*, *19,* 332–338. https://doi.org/10.1111/j.1525-1497.2004.30339.x

Rothblum, E. (2018). Slim chance for permanent weight loss. *Archives of Scientific Psychology*, *6*, 63-69. https://dx.doi.org/10.1037/arc0000043

Rudman, L. A, Feinberg, J., Fairchild, K. (2002). Minority members' implicit attitudes: automatic ingroup bias as a function of group status. *Social Cognition*, *20*, 294–320. https://doi.org/10.1521/soco.20.4.294.19908

Sabin, J. A., Marini, M., & Nosek, B. A. (2012). Implicit and explicit anti-fat bias among a large sample of medical doctors by BMI, race/ethnicity and gender. *PLoS ONE*, *7*(11), Article e48448. https://doi.org/10.1371/journal.pone.0048448

Salomon, E. A., Mimiaga, M. J., Husnik, M. J., Welles, S. L., Manseau, M. W., Montenegro, A. B., Safren, S. A., Koblin, B. A., Chesney, M. A., & Mayer, K. H. (2009). Depressive symptoms, utilization of mental health care, substance use and sexual risk among young men who have sex with men in EXPLORE: Implications for age-specific interventions. *AIDS and Behavior*, *13*(4), 811-21. http://dx.doi.org/10.1007/s10461-008-9439-4

Schvey, N. A., Puhl, R. M., & Brownell, K.D. (2014). The stress of stigma: Exploring the

effect of weight stigma on cortisol reactivity. *Psychosomatic Medicine*, *76*(2), 156-62. https://doi.org/10.1097/PSY.0000000000000031

Schwartz, M. B., Vartanian, L., Nosek, B., Brownell, K.D. (2006). The influence of one's own body weight on implicit and explicit anti-fat bias. *Obesity Research*, *14*, 440–447. https://doi.org/10.1038/oby.2006.58

Scott, K. M., Bruffaerts, R., Simon, G. E., Alonso, J., Angermeyer, M., de Girolamo, G., Demyttenaere, K., Gasquet, I., Haro, J. M., Karam, E., Kessler, R. C., Levinson, D., Medina Mora, M. E., Oakley Browne, M. A., Ormel, J., Villa, J. P., Uda, H., & Von Korff, M. (2008). Obesity and mental disorders in the general population: Results from the world mental health surveys. *International Journal of Obesity*, *32*, 192–200. https://doi.org/10.1038/sj.ijo.0803701

Shaikh, R. A., Siahpush, M., Singh, G. K., & Tibbits, M. (2015). Socioeconomic status, smoking, alcohol use, physical activity, and dietary behavior as determinants of obesity and body mass index in the United States: Findings from the National Health Interview Survey. *International Journal of MCH and AIDS*, *4*(1), 22–34. https://doi.org/10.21106/ijma.53

Shedler, J. (2010). The efficacy of psychodynamic psychotherapy. *American Psychologist*, *65*, 98-109. https://doi.org/10.1037/a0018378

Simone, M., & Lockhart, G. (2016). Two distinct mediated pathways to disordered eating in response to weight stigmatization and their application to prevention programs. *Journal of American College Health*, *64*(7), 520–526. https://doi.org/10.1080/07448481.2016.1188106

Street, R. L., Jr., Gordon, H., & Haidet, P. (2007). Physicians' communication and perceptions of patients: Is it how they look, how they talk, or is it just the doctor? *Social Science Medicine*, *65*, 586–598. https://doi.org/10.1016/j.socscimed.2007.03.036

Sutin, A. R., Stephan, Y., Carretta, H., & Terracciano, A. (2015). Perceived discrimination and physical, cognitive, and emotional health in older adulthood. *American Journal of Geriatric Psychiatry*, *23*(2), 171-179. https://doi.org/10.1016/j.jagp.2014.03.007

Sutin A. R., Stephan, Y., Luchetti, M., & Terracciano, A. (2014). Perceived weight discrimination and C-reactive protein. *Obesity*, *22*(9), 1959-61. https://doi.org/10.1002/oby.20789

Sutin, A. R., Stephan, Y., & Terracciano, A. (2015). Weight discrimination and risk of mortality. *Psychological Science*, *26*, 1803-1811. https://doi.org/10.1177/0956797615601103

Swami, V. (2015). Cultural influences on body size ideals: Unpacking the impact of Westernization and modernization. *European Psychologist*, *20*(1), 44–51. https://doi-org.nu.idm.oclc.org/10.1027/1016-9040/a000150

Tajfel, H., & Turner, J. C. (1986). Social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds), *Psychology of intergroup relations* (pp. 7-24). Nelson-Hall.

Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance.* American Psychological Association. http://dx.doi.org/10.1037/10312-000

Tomiyama, A. J. (2014). Weight stigma is stressful. A review of evidence for the Cyclic Obesity/Weight-Based Stigma model. *Appetite*, *82*, 8-15. https://doi.org/10.1016/j.appet.2014.06.108

Tomiyama, A. J., Epel, E. S., McClatchey, T. M., Poelke, G., Kemeny, M. E., McCoy, S. K., & Daubenmier, J. (2014). Associations of weight stigma with cortisol and oxidative stress independent of adiposity [Supplemental]. *Health Psychology*, *33*(8), 862–867. https://doi.org/10.1037/hea0000107.supp

Substance Abuse and Mental Health Services Administration. (2015). *Racial/ethnic differences in mental health services use among adults*. U.S. Department of Health and Human Services. https://www.integration.samhsa.gov/MHServicesUseAmongAdults.pdf

Vartanian, L. R., & Novak, S. A. (2011). Internalized societal attitudes moderate the impact of weight stigma on avoidance of exercise. *Obesity*, *19*, 757-762. https://doi.org/10.1038/oby.2010.234

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

Verheul, R., & Herbrink, M. (2007). The efficacy of various modalities of psychotherapy for personality disorders: A systematic review of the evidence and clinical recommendations. *International Review of Psychiatry*, *19*, 25-38 https://doi.org/10.1080/09540260601095399

Wampold, B. E. (2001). *The great psychotherapy debate: Model, methods, and findings.* Lawrence Erlbaum Associates.

Wampold, B. E. (2010). *The basics of psychotherapy: An introduction to theory and practice.* American Psychological Association.

Wang, S. S., Brownell, K. D., & Wadden, T. A. (2004). The influence of the stigma of obesity on overweight individuals. *International Journal of Obesity*, *28*, 1333–1337. https://doi.org/10.1038/sj.ijo.0802730

Ward-Smith, P., & Peterson, J. A. (2016). Development of an instrument to assess nurse practitioner attitudes and beliefs about obesity. *Journal of the American Association of Nurse Practitioners*, *28*(3), 125-129. https://doi.org/10.1002/2327-6924.12281

Wee, C. C., McCarthy, E. P., Davis, R. B., & Phillips, R. S. (2000). Screening for cervical and breast cancer: Is obesity an unrecognized barrier to care? *Annals of Internal Medicine*, *132*, 697-704. https://doi.org/10.7326/0003-4819-132-9-200005020-00003

Weiner, B. (1986). *An attributional theory of motivation and emotion.* Springer

Weiner, B., Perry, R. P., Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology*, *55*, 738–748. https://doi.org/10.1037/0022-3514.55.5.738

Wohlfahrt-Veje, C., Tinggaard, J., Winther, K., Mouritsen, A., Hagen, C. P., Mieritz, M. G., de Renzy-Martin, T., Boas, M., Petersen, J.H., & Main, K. M. (2014). Body fat throughout childhood in 2647 healthy Danish children: Agreement of BMI, waist circumference, skinfolds with dual X-ray absorptiometry. *European Journal of Clinical Nutrition*, *68*(6), 664. https://doi.org/10.1038/ejcn.2013.282

Young, L. M., & Powell, B. (1985). The effects of obesity on the clinical judgments of mental health professionals. *Journal of Health and Social Behavior*, *26*(3), 233-246. https://doi.org/10.2307/2136755

Appendix A

Consent Form

The Impact of Body Size on Utilizing Mental Health Services

Welcome to "The Impact of Body Size on Utilizing Mental Health Services," a research study that looks at the relationships among Body Mass Index, mental healthcare utilization, and stigma. This study is being conducted by Katie Mittelstaedt, a student in the Psy.D. program at Northwest University in fulfillment of her dissertation. Before beginning the survey, please read this consent form in full. If you understand all information contained in this form and agree to freely participate in this study, please click the "I Agree" button. You may exit the survey at any time.

Completion of this study typically takes approximately 10 minutes and is strictly anonymous. If you agree to participate in this study you will complete questionnaires regarding your demographic information (your age, ethnicity, height and weight (to calculate Body Mass Index), and gender) your mental healthcare utilization, and two measures that look at your beliefs about weight and people who are "obese."

Following the completion of this study, you will have the option of entering a second survey that will ask for your email address. If you wish to submit your email address, you will be entered into a random drawing for one of two $20 Amazon.com eGift cards. Your responses to the survey items will not be linked to your email address in any way.

The Northwest University Institutional Review Board has approved the study. No deception is involved, and participation in this study poses minimal risk to participants, although some participants may experience emotional distress when answering questions

that utilize potentially stigmatizing language related to body size and weight. If content of this questionnaire causes you significant distress, please contact the National eating Disorder Association helpline at (800) 931-2237, the crisis hotline at (800) 273-8255, or find your local WarmLine (peer-run listening line) at http://warmline.org. Participation in this study is voluntary, and you may elect to discontinue the questionnaire at any time and for any reason. You may print this consent form for your records. By submitting the survey, you are giving permission to use your responses in this research study.

The results from this study will be incorporated into the researcher's dissertation. Results may be presented within a variety of psychological forums (formal and informal) and/or presented for publication. All data forms will be destroyed by June 2022.

If you have any questions about this study, please contact the principal researcher, Katie Brennecke at katie.brennecke10@northwestu.edu. If you have further questions, please contact my faculty advisor Dr. Kim Lampson at kim.lampson@northwestu.edu. You may also contact the Chair of the Northwest University IRB, Dr. Cherri Seese, at cherri.seese@northwestu.edu or 425-285-2413.

Thank you for considering participation in this study.

Katie Mittelstaedt
Doctoral Student
College of Social and Behavioral Sciences
katie.brennecke@northwestu.edu

Dr. Kim Lampson, Ph.D.
Professor of Psychology
College of Social and Behavioral Sciences
kim.lampson@northwestu.edu

Appendix B

Demographics Questionnaire

Please answer these questions to the best of your ability. The information you provide will not be used to identify you in any way.

1) What is your age?

_____ 1) 18-25

_____ 2) 26-35

_____ 3) 36-45

_____ 4) 46-55

_____ 5) 56-65

_____ 6) 65+

2) What ethnicity do you consider yourself?

_____ 1) Non-Hispanic White

_____ 2) Hispanic White

_____ 3) Non-Hispanic Black or African-American

_____ 4) Hispanic Black or African American

_____ 5) American Indian / Alaska Native Multi-ethnic

_____ 6) Non-Hispanic Asian American

_____ 7) Hispanic Asian American

_____ 8) Hawaiian or Pacific Islander

_____ 9) Other: Please specify _____

_____ 10) Two or more races

3) What is your gender?

_____1) Male

_____2) Female

_____3) Prefer Not to Answer

4) What is your height?

_____inches

5) What is your weight?

_____ lbs

Appendix C

Service Visit Questionnaire

During the past 12 months, how many times did you see a MEDICAL PROVIDER such as a family doctor, general practitioner, chiropractor, massage therapist, or nurse in an office or clinic for problems with your emotions, nerves, or mental health (such as feeling sad, blue, anxious or nervous), or your use of alcohol or drugs?

Specify *number of distinct visits:*_____

During the past 12 months, how many times did you see a MENTAL HEALTH PROVIDER such as a psychiatrist, psychologist, social worker, counselor, psychotherapist, mental health nurse, or other mental health professional in an office or clinic for problems with your emotions, nerves, or mental health (such as feeling sad, blue, anxious or nervous), or your use of alcohol or drugs?

Specify *number of distinct visits:*_____

During the past 12 months, how many times did you seek support from a NON CLINICAL SOURCE such as a religious or spiritual minister, pastor, or priest, or any other healer like an herbalist, curandero, sobador, or self-help or support group for problems with your emotions, nerves, or mental health (such as feeling sad, blue, anxious or nervous), or your use of alcohol or drugs?

Specify *number of distinct visits:*_____

Appendix D

Modified Weight Bias Internalization Scale (WBIS-M).

(Pearl & Puhl, 2014)

1. Because of my weight, I feel that I am just as competent as anyone.

Strongly 1 2 3 4 5 6 7 Strongly

Agree Disagree

2. I am less attractive than most other people because of my weight.

Strongly 1 2 3 4 5 6 7 Strongly

Agree Disagree

3. I feel anxious about my weight because of what people might think of me.

Strongly 1 2 3 4 5 6 7 Strongly

Agree Disagree

4. I wish I could drastically change my weight.

Strongly 1 2 3 4 5 6 7 Strongly

Agree Disagree

5. Whenever I think a lot about my weight, I feel depressed.

Strongly 1 2 3 4 5 6 7 Strongly
Agree Disagree

6. I hate myself for my weight.

Strongly 1 2 3 4 5 6 7 Strongly
Agree Disagree

7. My weight is a major way that I judge my value as a person.

Strongly 1 2 3 4 5 6 7 Strongly
Agree Disagree

8. I don't feel that I deserve to have a really fulfilling social life, because of my weight.

Strongly 1 2 3 4 5 6 7 Strongly
Agree Disagree

9. I am OK being the weight that I am.

Strongly 1 2 3 4 5 6 7 Strongly
Agree Disagree

10. Because of my weight, I don't feel like my true self.

Strongly 1 2 3 4 5 6 7 Strongly
Agree Disagree

11. Because of my weight, I don't understand how anyone attractive would want to date me.

Strongly 1 2 3 4 5 6 7 Strongly
Agree Disagree

Appendix E

Beliefs About Obese People scale (BAOP)

(Allison, Basile, & Yuker, 1991)

Please mark each statement below in the left margin, according to how much you agree or disagree with it. Please do not leave any blank. Use the numbers on the following scale to indicate your response. Be sure to place a minus or plus sign (- or +) beside the number that you choose to show whether you agree or disagree.

-3	-2 -	1	+1	+2	+3
I strongly disagree	I moderately disagree	I slightly disagree	I slightly agree	I moderately agree	I strongly agree

1. _____ Obesity often occurs when eating is used as a form of compensation for lack of love or attention.
2. _____ In many cases, obesity is the result of a biological disorder.
3. _____ Obesity is usually caused by overeating.
4. _____ Most obese people cause their problem by not getting enough exercise.
5. _____ Most obese people eat more than nonobese people.
6. _____ The majority of obese people have poor eating habits that lead to their obesity.
7. _____ Obesity is rarely caused by a lack of willpower.
8. _____ People can be addicted to food, just as others are addicted to drugs, and these people usually become obese.