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Differences in Internalized Weight Stigma and the Treatment of Clients in Larger Bodies Among Mental Health and Medical Professionals

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CERTIFICATE OF APPROVAL

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Abstract

Weight is a complex interaction of several factors, including genetics, environment, adverse childhood experiences, culture, physiology, and emotional circumstances (Hale, 2019). By solely considering the categories of food consumption and individual activity, the belief of personal responsibility and controllability is perpetuated, which may lead to intentional or unintentional harm within interpersonal interactions and throughout medical services (Nutter et al., 2020). Weight bias refers to "stereotypes, negative attitudes, and discriminatory behavior toward individuals with larger bodies" (Nutter et al., 2020). Weight bias can be displayed as discomfort around those in larger bodies, holding beliefs that fat people are lazy or unattractive, teasing or physically assaulting those in larger bodies, or not having an accommodating physical environment, such as narrow hallways or small furniture (Carels & Latner, 2016). Unfortunately, weight stigma is also present within the medical and mental health professions, impacting how fat patients experience health care. This study compared the implicit and explicit weight bias present in mental health and medical professionals and observed whether this bias (a) impacted their treatment decision-making and (b) whether the amount of training in weight-related care impacted one's bias. The findings of this study did not show any differences in implicit or explicit weight bias between medical and mental health professionals, decision-making for treatment was different for thin patients compared to fat patients, and training amount did not impact weight bias. However, it should also be noted that the amount of training participants received was not a significant part of their training program, and it is possible that more intensive training would show additional benefits in addressing weight bias. Future research should investigate ways to include weight bias in social-justice-based coursework throughout training programs.

DIFFERENCES IN INTERNALIZED WEIGHT STIGMA AND THE TREATMENT OF CLIENTS IN LARGER BODIES AMONG MENTAL HEALTH AND MEDICAL PROFESSIONALS

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Chapter I. Introduction

Mental health and medical professionals are subjected to rigorous training programs that prepare them to manage various people, conditions, and environments. Many programs have several courses dedicated to cultural diversity and how to treat those who are different from the provider. However, a missing sector of diversity appears to be rarely touched upon—treating those who live in larger bodies. Based upon personal accounts from individuals who live in larger bodies, they have vocalized the experiences of weight shaming, misdiagnoses, and ignored complaints throughout their medical encounters. While society leans toward a preference for thin bodies, one would expect mental health and medical professionals to be well-trained to work beyond their biases and treat all patients equally, no matter the number on the scale. This study aims to show the need for more training to ensure that patient care is all-encompassing of differences.

Complexities of Weight and Obesity Research

Weight is a complex interaction of several factors, including genetics, environment, adverse childhood experiences, culture, physiology, and emotional circumstances (Hale, 2019). The "obesity discourse" that has dominated the societal and medical approach to addressing weight gain suggests that weight is a controllable factor for all individuals (Bombak, 2014). However, research has shown that weight gain is considerably more complex than the "calories in and calories out" belief that society and the diet industry promote. Foresight (2007) proposed that over 100 different variables impact one's energy balance and are interconnected in 300 unique pathways, collectively impacting one's weight. Each of these 100 variables can be categorized into 7 systems that encompass the complexity of weight: physiology, individual activity, physical activity environment, food consumption, food production, individual

psychology, and social psychology (Foresight, 2007). By solely considering the categories of food consumption and individual activity, the belief of personal responsibility and controllability is perpetuated, which may lead to intentional or unintentional harm within interpersonal interactions and throughout medical services (Nutter et al., 2020).

Efforts to classify obesity as a disease began at the 1985 National Institute of Health Consensus Conference on Obesity, where obesity researchers, medical professionals who oversee weight-loss clinics, pharmaceutical companies, and public health leaders were aiming to make it easier for patients to obtain insurance coverage for weight-loss treatment (Lyons, 2009). By 2013, obesity was classified as a chronic disease by the American Medical Association (Frellick, 2013). Although the initial goal for classifying obesity as a disease was to obtain insurance coverage, a new push has been made to improve research and improve the healthcare received by patients living in larger bodies (Kahan & Zvenyach, 2016).

There has been clear evidence that Americans have, on average, seen an increase in weight since the mid-1900s (Flegal et al., 1998, 2002; Ogden et al., 2020). However, there is no definitive data to support the causal link between higher weight and increased mortality. Obesity research has shown a correlation between higher mortality rates and living in a larger body, especially in relation to those with co-morbid conditions such as type 2 diabetes, high cholesterol, high blood pressure, obstructive sleep apnea, cancer, arthritis, and polycystic ovarian syndrome (Abdelaal et al., 2017). However, other mortality research has shown a more complex picture of mortality among higher-weight individuals. Flegal and colleagues (2013) conducted a systematic review of obesity mortality research and found a decreased risk of mortality in those classified as overweight (BMI $\geqq$ 25 to < 30), no increased mortality for grade I obesity (BMI 30 to < 35), and slightly increased mortality risks for grade II and III obesity. Findings similar to

Flegal and colleagues (2013) were found in a study of Canadian adult mortality, where they concluded being overweight was associated with lower mortality risk and grade I obesity was not associated with higher mortality risks (Orpana et al., 2010). Another study found that older adults whose Body Mass Index (BMI) fell in the overweight category showed the lowest death rates over six-and-a-half years and that mortality was higher for those with a lower BMI (Wang & Yi, 2022). These findings are important to consider as 2020 data from the National Health and Nutrition Examination Survey, which gathers population-based nutrition and health data, show that 41.9% of US adults are considered obese (Stierman et al., 2021), and 53.7% of individuals classified as obese fell in the grade I obesity category (Wang et al., 2023). Furthermore, individuals classified as overweight (BMI $\geqq$ 25 to < 30) are estimated to make up 30% of women and 40% of men in America (Flegal et al., 2013).

The Body Mass Index (BMI), which relies on the height to weight ratio as a measure of one's body mass, is used as the preferred method of measuring one's body fat and by which doctors determine health and its relation to weight (Alammar et al., 2020). The concept of BMI can be traced back to 1835 when Flemish statistician Lambert Adolphe Jacque Quetelet set out to define "social averages" (Nuttall, 2015). These "social averages" were based upon the "average" white male and encompassed several characteristics, including height and weight. These "social averages" were plotted onto a bell curve to find the average characteristics found in society at large. Through these efforts, Dr. Quetelet found that one's body mass in conjunction with height was more accurately represented when height was squared and placed into the ratio of weight to height squared (Nuttall, 2015). However, BMI was not used as a determinant of health until 1972 when Ancel Keys suggested that Metropolitan Life Insurance should use the Quetelet Index to document weight for height data rather than their existing method (Keys et al., 1972). This

recommendation led Metropolitan Life Insurance to create tables that laid out criteria for obesity, and the United States adopted this criterion to predict one's health outcomes (Nuttall, 2015). Ancel Keys cautioned that BMI and weight percentages could not be considered an all-encompassing reason for the development of certain health conditions or death, due to the impact that aging and predisposition to certain health conditions has on the development of chronic or acute conditions (Keys et al., 1972). However, BMI is currently the most cost-effective and simple screening measure of one's body mass (Mohajan & Mohajan, 2023). Therefore, providers who utilize BMI as a method of determining health outcomes should also consider other diagnostic tools that help determine the individual's risk for developing certain health conditions and to make a determination about an individual's overall health status (Cardel et al., 2022).

In 2013, the American Heart Association, the American College of Cardiology, and the Obesity Society stood in line with research that suggests being overweight (BMI ≧ 25 to < 30) does not place one at elevated mortality risk (Jensen et al., 2014). Additionally, the European Society of Cardiology reported in their guidelines that (a) overweight and grade I obese individuals with heart failure have a lower mortality risk than other weight categories, (b) that BMI does not consider one's muscle mass or fat distribution, which impacts one's risk of heart disease and heart failure, and (c) weight loss as an intervention to address heart failure cannot be confidently recommended for those with a BMI < 35 (McDonagh et al., 2021). Another option that may increase the validity of BMI measurements is the inclusion of waist circumference to determine the amount of body fat that falls along the waistline (Buss, 2014). When combining fat distribution measurements from waist circumference with triglyceride levels, one gets a measure of lipid accumulation product (LAP) and this has been associated with type-2 diabetes, hypertension, and increased visceral adipose tissue (Koyama, 2023). Some research has

suggested a different approach rather than measuring adipose tissue and instead looking at cardiometabolic health (i.e., blood pressure, triglycerides, cholesterol, glucose, insulin resistance, and C-reactive protein), which may be more effective at identifying those at highest risk for disease and death (Friedemann Smith et al., 2015; Tomiyama et al., 2010; Wildman et al., 2008). Additionally, Gaesser and colleagues (2015) determined through critical analysis that fitness levels, both cardiorespiratory fitness and muscular fitness, is a better indicator of health across individuals even when BMI did not significantly change. In line with the concept of physical fitness being an effective health indicator, adopting and maintaining overall healthy habits such as not smoking, increasing fruit and vegetable intake, engaging in regular movement of the body, and moderate alcohol consumption may be more helpful at decreasing mortality risk compared to focusing solely on weight loss (Matheson et al., 2012). Matheson and colleagues found that across average BMI, overweight BMI, and obese BMI categories the adoption of two or more healthy habits was indicative of lower overall mortality risk despite the individual's weight not decreasing.

Diets and Weight Loss

Products that promote weight loss have been prevalent in society including treatments such as amphetamines, diuretics, Metrecal (a weight-loss beverage), Weight Watchers, Atkins, phen-fen, Redux, and more recently anti-obesity medications that include Wegovy and Ozempic. While most diets do show weight loss in the short-term, most weight loss peaks at the six-month mark and long-term weight-loss maintenance has not shown to be effective for most individuals (Dombrowski et al., 2010). Depending on one's definition of success for long-term weight loss, success rates can range from 3%, for those maintaining their weight loss at 100%, to 28%, for those who have maintained a loss of at least 10% from their starting weight (Sumithran &

Proietto, 2013). A meta-analysis by Anderson and colleagues (2001) found that across studies that either followed individuals on a structured very low energy diet, eating less than 800 calories per day, or individuals on a structured hypoenergetic balanced diet, eating 1200-1500 calories per day, five years after completion, participants maintained a 7-pound weight loss, approximately 3.2% of their initial weight (Anderson, Konz et al., 2001). In contrast, a study of the National Weight Control Registry suggested that approximately 20% of dieters, those who engage in caloric restriction and physical activity, were successful in maintaining weight loss for 5 or more years (Wing & Phelan, 2005). However, this weight loss is maintained through continued caloric restriction and high levels of physical activity, equivalent to one hour per day of moderate intensity exercise, thus suggesting that weight loss would not be maintained should an individual cease caloric restriction and high levels of physical activity. In contrast, the CDC currently recommends two and one-half hours per week of moderate intensity exercise and two days of weight training to achieve health benefits (U.S. Department of Health and Human Services, 2018), a stark difference in comparison to the seven hours per week that was estimated to maintain the level of weight loss that 20% of participants in the National Weight Control Registry achieved. Furthermore, participants in the National Weight Control Registry who had maintained weight loss reported eating on average 1,381 kcals per day (Wing & Phelan, 2005), which is 619 kcals less than the CDC recommended average caloric intake of 2,000 kcals per day for women (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020).

Many nutrition-focused weight-loss methods favor a low-carbohydrate approach to their diet structure (i.e., Atkins, Weight Watchers, Keto). Manaf and colleagues (2018) conducted a systematic review of randomized controlled trials that consisted of over 1000 participants on

either a low-carbohydrate diet, defined as <45% of daily nutritional intake consisting of carbohydrates, or a low-fat diet, defined as <30% of daily nutritional intake consisting of fat. They analyzed whether there was significant weight loss directly following the diet, sustained weight loss after one year, improvement in triglycerides, and improvement in both LDL and HDL cholesterol. Analyses showed that while a low-carbohydrate diet showed significantly more weight loss at the six-month mark compared to a low-fat diet, there was no long-term maintenance of the weight loss nor was there appreciable improvements in HDL or LDL cholesterol levels, and both weight and triglycerides were shown to incrementally increase with a low-carbohydrate diet at long-term follow-up (Manaf et al., 2018). A promising alternative to the low-carbohydrate and low-fat diet is the Mediterranean diet, which consists of consumption of fruits and vegetables, whole grains, legumes, nuts, fish, white meat, a moderate amount of fermented dairy, and limited consumption of red meat (Ventriglio et al., 2020). For those who follow a Mediterranean diet, they show a decrease in cardiovascular events, improved metabolic balance, decreased risk of cancer, and improved mental health (Ventriglio et al., 2020). Additionally, older adults following a Mediterranean diet show lower levels of neurocognitive decline and Alzheimer's Disease (Guasch-Ferré & Willett, 2021).

However, weight loss alone is not necessarily correlated with better health outcomes above and beyond other improvements to health practices, such as intuitive body movement, intuitive eating practices, and regular health care maintenance (McHugh & Kasardo, 2012). Several studies have suggested that weight cycling, or repetitive dieting, has been correlated with a slowing of one's metabolism due to repetitive restriction and bingeing cycles, thus potentially contributing to weight regain (Blair et al., 1993; Field et al., 2004; Fothergill et al., 2016; Gaesser et al., 2015; Garner & Wooley, 1991; Stice et al., 1999). Additionally, dieting has been

associated with higher cortisol production, which increases risk of chronic inflammation (Tomiyama et al., 2010). Furthermore, weight fluctuations have been linked to increased risk of cardiovascular disease (Zou et al., 2019), diabetes (Delahanty et al., 2014), hypertension (Guagnano et al., 2000), and chronic inflammation (Strohacker & McFarlin, 2010). Even after one instance of weight loss, negative health effects may be seen upon weight regain. A study of postmenopausal women who were either classified as overweight or obese who engaged in weight loss showed initial improvements in their cardiometabolic measures (Beavers et al., 2013). However, after 12 months, those who showed even partial regain of weight also showed a reversal of cardiometabolic improvements. Furthermore, these women showed increased values for their total cholesterol, LDL cholesterol, insulin, and insulin resistance compared to their baseline levels (Beavers et al., 2013).

A different direction that medical professionals are taking to address weight loss is through medications such as Wegovy or Ozempic, both forms of semaglutide, a glucagon-like peptide-1 (GLP-1) analog, which is administered weekly via injection (Bergmann et al., 2023). Clinical trials have shown that those taking semaglutide, along with a caloric deficit of at least 500 calories less than what is metabolically required for their starting weight and 150 minutes of physical activity per week, experienced an average weight loss of 15% of their initial body weight over 68 weeks (Wilding et al., 2021). Sustained weight loss of at least 15% of initial body weight while maintaining recommended use of semaglutide has been shown up to 104 weeks (Garvey et al., 2022). The most common side effect of semaglutide is gastrointestinal disturbance, which is more common at higher doses (Singh et al., 2022). Long-term efficacy and safety data have been scarce due to the novelty of semaglutide medications. Preliminary research has shown that those who cease the use of semaglutide are significantly more likely to regain

two-thirds of the weight lost within a year of discontinuing (Wilding et al., 2022). However, the initial safety profile of semaglutide is favorable according to studies that have observed reported symptoms for up to one year and have not shown significant life-threatening adverse events (Smits & Van Raalte, 2021). Although preliminary data is promising, due to the novelty of this medication, long-term efficacy and safety trials are needed to determine the long-term benefits and costs of semaglutide use for weight loss.

Health At Every Size and Intuitive Eating

As more research questions the efficacy of dieting for weight loss and health management, a weight-neutral approach to health and lifestyle has been proposed, Health at Every Size (HAES; Bacon & Aphramor, 2011; Robison, 2005). The HAES initiative focuses on the following principles: (a) weight inclusivity where all bodies are accepted and respected regardless of size, (b) health enhancement that focuses on equality of care and individualized needs, (c) encompasses eating for well-being, hunger, satiation, nutrition, and pleasure, (d) respectful care intended to address biases, and (e) life-enhancing movement to support an individual's engagement in enjoyable forms of movement (Association for Size Diversity and Health, n.d.; O'Hara & Taylor, 2014; Penney & Kirk, 2015).

Research has found that using a weight-neutral approach such as HAES is associated with improved health markers and healthier lifestyle habits. Ulian and colleagues (2022) observed cardiometabolic improvements after the incorporation of a HAES-based intervention including improvements in cholesterol, fasting glucose, and in one's quality of life. Bégin and colleagues (2018) found that women who engaged in a 14-week HAES intervention showed significant improvements in eating behaviors such as flexible restraint, disinhibition,

susceptibility to hunger, intuitive eating, and obsessive-compulsive eating; improvements in self-esteem and body-esteem; and improvements in depressive symptoms.

Furthermore, Bacon and colleagues (2005) found that while participants who followed a diet of moderate caloric restriction and physical exercise and those who engaged with a HAES treatment program that taught the HAES principles showed improvement in blood pressure, cholesterol, eating behaviors, self-esteem, body image, and depression, the longevity of the health improvements differed between the two groups. For those who followed the HAES approach these improvements were still maintained at a two-year follow-up, whereas the traditional diet group showed little sustained improvement and weight regain (Bacon et al., 2005). A move toward a HAES approach appears to have benefits not only to one's psychological well-being but also to their physiological well-being (Dugmore et al., 2020). However, while a HAES approach to addressing obesity appears promising, it is not without it's limitations. Current HAES research has small sample sizes, which makes generalizability more difficult to determine (Penney & Kirk, 2015). Furthermore, there are few HAES studies that include class II and III obesity levels, thus the efficacy in these individuals has not been supported (Penney & Kirk, 2015).

Attribution Theory

The focus and importance that society has placed on reaching the "perfect" body has led to the subconscious or blatant discrimination of higher-weight individuals (Klaczynski et al., 2009). A theory of mental processing that may explain why discrimination occurs can be helpful to determine an appropriate course of action to combat weight stigma in society. Attributions are how one explains the cause of events that occur in their daily lives (Bell-Dolan & Anderson, 1999). These attributions can be either implicit or explicit and automatic or deliberate in nature

(Bell-Dolan & Anderson, 1999). Attributes can fall on several causal dimensions; however, weight bias often falls under the controllability dimension that views weight as an attribute entirely or mostly within the individual's control (Weiner, 1985). The dimension of controllability is often aligned with emotions such as guilt and shame (Weiner, 1985), and attributing controllability to one's weight has been associated with rejection of the individual (Weiner et al., 1988). Crandall and colleagues (2001) found that those who score high on a measure that predicts their likelihood of making attributions of controllability were also more likely to hold stronger anti-fat prejudice.

The attribution process begins with recognition of an event and the way one perceives and interprets the event that has occurred, which is partially influenced by one's expectations and preconceived beliefs (Bell-Dolan & Anderson, 1999). Immediate attributions are seemingly automatic and happen without conscious awareness (Bell-Dolan & Anderson, 1999). These attributions can occur due to prior beliefs or earlier experiences with similar events (Bell-Dolan & Anderson, 1999). The belief that weight is fully in the person's control leads to emotional reactions (i.e., anger and less pity) and influences the way that one interacts toward people in larger bodies, which is known as the attribution-emotion-behavior link (Schwarzer & Weiner, 1991). When people perceive that a group has negative attributes that they are responsible for, they are more likely to hold anti-fat prejudices (Crandall et al., 2001). Black and colleagues (2014) expanded attribution theory to include offset controllability, a fat person's ability to lose weight, and offset effort, a fat persons effort to lose weight. They found that society is less likely to judge or place negative attributions on fat persons who they perceive to put in more effort to live a healthy lifestyle, no matter societies belief about controllability of weight (Black et al., 2014).

Stigma of Obesity and Anti-Fat Bias in Society

Weight bias refers to "stereotypes, negative attitudes, and discriminatory behavior toward individuals with larger bodies" (Nutter et al., 2020, p. 106). Weight bias can be displayed as discomfort around those in larger bodies, holding beliefs that fat people are lazy or unattractive, teasing or physically assaulting those in larger bodies, or not having an accommodating physical environment, such as narrow hallways or small furniture (Carels & Latner, 2016). Since the early 2000s, weight bias has seen an exponential increase within society, bringing its prevalence closer to that of racial discrimination, especially among women (Puhl & Heuer, 2009). Andreyeva and colleagues (2008) found that weight discrimination increased significantly by 5% between 1996 and 2006 among all races, genders, and ages, except those older than 65. Weight discrimination increased sixfold for those categorized as obese by society (Puhl et al., 2008). Not only does anti-fat bias affect an individual socially, but it has been found that fat individuals are less likely to be provided a job interview even when the applications are the same, as shown by Agerström and Rooth (2011), who sent job applications to equally qualified employers, but one featured a thin applicant while the other featured a fat applicant. Discrimination of fat bodies among numerous facets of our society may be linked to the portrayal of fat bodies in television and movies where these characters are normally depicted by negative attributes, have fewer positive interactions with friends or potential romantic partners, are more often shown engaging in binge eating or being bullied, and are shown less often in scenes displaying sexual interactions, romance, or physical affection (Greenberg et al., 2003).

Increased cortisol levels, higher inflammatory markers, such as C-reactive protein, and oxidative stress have all been linked to the experience of internalized weight stigma (Wu & Berry, 2018). Although the link between weight stigma and health outcomes is less researched,

the link between racial stigma and health outcomes has been well documented in the literature. Lepore and colleagues (2006) found that African American women showed higher blood pressure in the presence of racial stressors than white women. Furthermore, Butler and colleagues (2002) found a link between higher fasting glucose levels and the experience of internalized racism in African-Caribbean women. African-American women under 50 years old who experienced daily racial discrimination were at higher risk for developing breast cancer than those who experienced less racial discrimination (Taylor et al., 2007). Puhl and Latner (2007) posited whether the same concept that applies to the increase in health complications because of the internalization of racism and racial discrimination might also apply to the experiences of fat people and be the cause of increased health complications rather than their weight. Children who are obese are at a higher risk of encountering stigmatization from their peers, as research has shown that children as young as four years old have a propensity for thinner bodies and have negative perceptions toward what they deem "chubby bodies" (Brylinsky & Moore, 1994; Carvalho et al., 2021). Not only is this stigmatization occurring during a key time for social development, but it also can lead to difficulty developing socially, emotionally, and academically, which can increase the likelihood of poor health outcomes, including disrupted glucose tolerance, insulin resistance, high blood pressure, lipid imbalance, increased cardiovascular risk, and increased risk of liver problems (Puhl & Latner, 2007). Furthermore, the internalization of weight bias has been shown to increase the likelihood of developing an anxiety or depressive disorder (Almutairi et al., 2021; Fettich & Chen, 2012; Pearl & Puhl, 2018)

Stigma of Obesity and Anti-Fat Bias in Medicine

Weight stigma is not only a concept that greater society ascribes to but one that also impacts medical professionals. Foster and colleagues (2003) found that in a sample of more than

600 primary care physicians, over half perceived fat patients to be more unattractive, ugly, and noncompliant compared to thin patients, and a third of the sample perceived fat patients as weak-willed, sloppy, and lazy. Physician beliefs about the causes of obesity were directly attributed to behavioral contributions and these negative attributes (i.e., laziness, noncompliance; Foster et al., 2003). Furthermore, many physicians claim that a lack of patient motivation is the greatest barrier to working with fat patients (Alberga et al., 2019; Bocquier et al., 2005; Campbell et al., 2000; Fogelman et al., 2002; Thuan & Avignon, 2005). Weight bias may also affect women greater than men, as evidenced by a study where doctors were given scenarios of men and women who were classified as overweight or obese (Anderson, Peterson et al., 2001). Results found that physicians were more likely to prescribe weight loss, Weight Watchers, or caloric restriction to overweight women, whereas overweight men were encouraged to accept their appearance and dieting was discouraged or not mentioned (Anderson, Peterson et al., 2001). However, weight bias is not exclusive to doctors alone. Brown, Stride, and colleagues (2007) surveyed almost 700 nurses and discovered over 60% held similar biases that physicians do about fat patients, including that they are unmotivated to change, are lazy, unattractive, and noncompliant with treatment. Biases around weight may be due to a lack of education in treating diverse bodies. A sample of 600 French physicians suggested that overindulgence of food contributes more to obesity than genetics or other environmental factors (Bocquier et al., 2005). Although over half of these French general practitioners felt unqualified to treat weight concerns, 60% set a weight-loss goal that was too difficult to obtain and was more rigorous than recommended guidelines suggested. Extreme caloric restriction was prescribed by 22% of physicians, and 35% often or always recommended avoidance of specific foods (Bocquier et al., 2005). There is further concern that physicians may spend less time with patients with larger

bodies. Hebl and Xu (2001) showed physicians the profiles of patients with a BMI of 23 ("normal" weight), a BMI of 30 ("overweight"), and a BMI of 36 ("obese") and assessed the amount of time they spent with the patient during their visit. They found that the physicians would spend less time overall with overweight and obese patients, and 42% of physicians would discuss interventions related to nutrition-based weight loss with obese patients. Bertakis and Azari (2005) viewed 506 first-time patient visits with 105 different primary care physicians and found that they spent less time overall with patients who have a BMI > 30 and provided less health education compared to patients whom they perceived to be in better physical health or who were of higher socioeconomic status. A study of 122 physicians was conducted to view how treatment planning differed for patients based on weight (Hebl & Xu, 2001). Physicians were given a chart for a male or female patient of average weight, overweight, or obese according to BMI classification and complaining of migraines. Analysis showed that although physicians recommended more tests for fat patients, they also spent significantly less time and viewed them in a more negative light than thin patients (Hebl & Xu, 2001).

In regard to implicit weight bias, Miller and colleagues (2013) had 310 fourth year medical students complete the Implicit Attitudes Test (IAT) for weight to view implicit weight bias and discovered that 39% of the sample showed an anti-fat bias. Implicit anti-fat bias as measured by the IAT for weight in a large sample of medical doctors (N = 329,261) resulted in large effect size (Cohen's d = 1.00) suggesting strong implicit negative attitudes toward fat bodies (Sabin et al., 2012). The IAT has been used to view anti-fat bias in physicians and has found that fat people are most often implicitly associated with negative attributes such as laziness and being bad compared to thin people (Schwartz et al., 2003; Teachman & Brownell, 2001). Furthermore, students in medical school have said that fat patients are often the topic of jokes

made by other students, attendings, and residents, especially among surgical and obstetric-gynecological specialties, due to the belief that the patient is at fault for their weight status and that their weight creates more work for the student (Wear et al., 2006).

The weight bias portrayed by medical doctors significantly impacts the patient, which may produce negative health outcomes. A survey of over 2,400 overweight women found that more than 50% had experienced comments about their weight that they thought were inappropriate by their doctors (Puhl & Brownell, 2006). This sample of women named doctors as the second source from which they experienced the most stigma concerning their weight, with other sources including nurses, dietitians, and mental health professionals (Puhl & Brownell, 2006). Due to the increased experiences of weight bias from medical professionals, fat patients are more likely to delay breast and cervical cancer screens (Amy et al., 2006; Meisinger et al., 2004; Mitchell et al., 2008; Ostbye et al., 2005; Wee et al., 2000, 2004, 2005), colorectal cancer screens (Ferrante et al., 2006; Heo et al., 2004; Rosen & Schneider, 2004), yearly wellness check-ups, and are overall less likely to utilize health services for chronic and acute symptoms that are not urgently life-threatening (Drury & Louis, 2002).

Stigma of Obesity and Anti-Fat Bias in Mental Health Professionals

Although mental health professionals are trained to work with diverse populations and are thought to be better trained to address and not act upon their biases, there are several studies that suggest mental health professionals and their practice may also be affected by weight bias. A study of 163 mental health professionals found that clinicians were more likely to pathologize fat clients, ascribe negative attributes to fat clients, and score overall levels of functioning as lower in fat clients (Hassel et al., 2001). Marriage and family therapists were found to have explicit weight bias, which was more pronounced for therapists with higher BMIs, were master's

level therapists, and identified as white (Pratt et al., 2014). A study by Davis-Coelho and colleagues (2000) found that when therapists viewed profiles of an "average weight" (defined as 130-139 pounds) and "overweight" (defined as 170-179 pounds) client and were asked to supply details about their treatment plan and initial beliefs about the patient, psychologists younger than 40 years old were more likely to believe that fat clients would put less effort into their therapy treatment and were given a worse prognosis. Furthermore, female psychologists predicted a worse prognosis for fat clients (Davis-Coelho et al., 2000). Eating disorders were more often suggested as a diagnosis for fat clients, while adjustment disorders were more often provided to non-fat clients, even though the symptom profiles did not differ for either vignette. Treatment goals also differed based on weight, with fat clients more often being prescribed goals to improve their body image and increase their sexual satisfaction despite these goals not being mentioned as ones for the client. Furthermore, despite knowledge from a medical professional that a fat client's physical health was within normal limits, mental health professionals are more likely to pathologize the fat client more than a thin client (Davis-Coelho et al., 2000). A study of eating disorder professionals found that over 50% have witnessed colleagues in their field react negatively toward those in larger bodies, 42% thought that other eating disorder professionals believe negative stereotypes about those in larger bodies, 35% believed that eating disorder professionals are not comfortable treating clients in larger bodies, and 29% believed eating disorder professionals hold negative attitudes toward those in larger bodies (Puhl, Latner et al., 2014). Lawrence and colleagues (2012) proposed that since graduate-level social work programs tend to attract younger students, weight stigma should be included in discussions related to oppression and work with diverse populations due to research suggesting that weight bias is

more likely to occur in younger professionals compared to older professionals (Davis-Coelho et al., 2000).

Impact of Training Programs on Anti-Fat Bias

Due to the effects that stigmatization can have on patient well-being, it is imperative that professionals in training and those established in their careers receive the proper tools and skills to work with all individuals. It is suggested that professionals need to (a) assess their implicit and explicit weight biases, (b) educate themselves on the negative impacts of weight bias and the systemic impacts weight bias has on their fat patients, (c) find alternative therapies for fat patients that do not focus on weight loss, and (d) assess their clinical space for weight-inclusive furniture and other accessibilities (Davis-Coelho et al., 2000). Additionally, practitioners are discouraged from using BMI and weight as markers of overall health or providing "moral" labels such as "good" or "bad" to foods when working with patients both of which can spark food and weight preoccupation (McVey et al., 2013).

In regard to training, many programs do not offer comprehensive training about the effects of weight stigma or bias. Russell-Mayhew and colleagues (2016) analyzed several Canadian-based training programs ranging in disciplines from medicine to social work and psychology to determine the level of training students received on weight-related issues. Results showed that 30% of the programs had general course content focused on public health concerns but these courses were not built to teach students about weight bias in a systematic way or to address fat oppression with clients. A limited number of medical school programs offer course content on the prevention or treatment of obesity, and even more limited course content for reducing weight bias (Russell-Mayhew et al., 2016). Most learning is conducted through modeling of faculty, supervisors, and attendings where prejudice and poor treatment of fat

patients is often the accepted norm (Phelan, Puhl et al., 2015). Seventy-two percent of family doctors in one study showed that they felt poorly effective in treating their fat patients and believed that their training did not effectively guide them in treating those who are overweight (Fogelman et al., 2002). Furthermore, 60% of the doctors in this study revealed poor knowledge of nutritional guidelines (Fogelman et al., 2002). This lack of training is not exclusive to medical programs and is also seen among mental health training programs. Three of five focus groups consisting of licensed marriage and family therapist (LMFT) students showed that they received no training on weight bias within their training program and the remaining two focus groups indicated minimal exposure to the concept of weight bias (Cravens et al., 2016). Licensed marriage and family therapist (LMFT) students showed that training activities focused on the language used with clients when discussing their weight was the most useful during a training with some students saying that they were unaware of the negative connotation words such as "overweight," "obesity," and "morbidly obese" hold for clients in larger bodies (Cravens et al., 2016). Although a majority of LMFTs reported working with fat clients in clinical practice, they endorsed receiving no training on working with the fat population or fat oppression (Pratt et al., 2014). McHugh and Kasardo (2012) analyzed the top 10 bestselling introductory psychology textbooks for their conceptualization of obesity and fat oppression, and they found that not only did most of these texts ascribe to the medical model of obesity but also tout dieting as the primary solution for health improvements. Furthermore, the textbooks lacked any mention of the oppression fat people experience.

Interventions that focus on changing the belief that weight is under the control of the patient have shown effectiveness in some studies to combat weight bias in medical professionals (Davis-Coelho et al., 2000). A brief lecture intervention to address weight bias in preservice

psychology students showed to be effective at decreasing one's belief about weight controllability and improving one's attitudes toward fat persons immediately after the intervention and three weeks later (Diedrichs & Barlow, 2011). However, other studies have shown that video interventions that target the audience's belief about a person's ability to control obesity only serve to improve explicit anti-fat bias but do not attend to implicit fatphobia (Swift et al., 2013). A systematic review of 17 interventions targeting anti-fat bias in health professional students resulted in no interventions that were methodologically sound or generalizable outside of a laboratory setting (Alberga et al., 2016). The 17 interventions that were assessed included being placed on a low-calorie diet for one week, receiving one or multiple lectures regarding obesity and the various causes, self-learning modules, provision of articles on weight stigma, sensitivity training, and videos that addressed weight bias (Alberga et al., 2016). While some of these interventions were successful at addressing students' beliefs about weight controllability, interventions were less successful at changing attitudes or beliefs about fat patients (Alberga et al., 2016). Alberga and colleagues (2016) suggested that randomized controlled trials and long-term follow-ups are needed to develop a better understanding of the impact that anti-fat bias interventions have on implicit and explicit weight bias attitudes of health professionals. With the mixed research regarding the efficacy of interventions to target weight bias, further research should be conducted to determine the most effective and efficient way to address this sector of diverse patient experiences.

Statement of the Problem

While previous research has addressed the weight bias in mental health and medical professionals separately, none to date has effectively compared the rates or expression of implicit and explicit weight bias between the two professions. Additionally, little research has addressed

the impact that training on weight bias may have on one's implicit or explicit biases. This study filled the gaps by providing a preliminary comparison of implicit and explicit bias among mental health and medical professionals. A secondary gap that this study addressed was the amount, quality, and impact of weight-inclusive training on one's implicit and explicit biases of weight.

Purpose of the Study

The purpose of this study was to determine if there is a difference in internalized weight stigma between health care workers (including MDs, PAs, ARNPs, APRNs, RNs, and DOs) and mental health care providers (i.e., PsyDs, LMHCs, LCSWs, LMFTs, LPCs, and PHDs). It is also important to determine if there is a difference in the care provided to clients in larger bodies based on their BMI and physical appearance. Based upon published research, this study answered the following questions: (1) Is there a significant difference between implicit weight bias among medical professionals and mental health professionals?, (2) How do clinicians approach diagnostic and treatment planning among non-fat and fat clients?, and (3) Does the amount of training in weight-inclusive care influence internalized weight stigma?

Significance of the Study

Despite current research depicting the prevalence of weight bias within both mental health and medical professionals, research has yet to view the differences in biases between the two professions. Patients who live in larger bodies that are unable to garner support from their mental health and medical professionals are at a greater risk of allowing their mental health and medical concerns go without treatment, thus increasing the risk for increased mortality and suffering (Drury & Louis, 2002; Puhl & Latner, 2007).

Hypotheses

Based on the review of literature, two quantitative null hypotheses and one qualitative research question were tested for this study.

1. Research question 1: Is there a significant difference between implicit weight bias among medical professionals and mental health professionals?
    a. Null hypothesis: There is no significant difference between implicit weight bias among medical professionals and mental health professionals.
    b. Alternative hypothesis: There is a significant difference between implicit weight bias among medical professionals and mental health professionals.
2. Research question 2: How do clinicians approach diagnostic and treatment planning among non-fat and fat clients?
    a. Due to the qualitative nature of this research question, there are no null or alternative hypotheses.
3. Research question 3: Does the amount of training about weight-inclusive approaches and the effect of weight bias influence internalized weight stigma?
    a. Null hypothesis: There is no relationship between the amount of training in weight-inclusive approaches and internalized weight stigma.
    b. Alternative hypothesis: There is a relationship between the amount of training in weight-inclusive approaches and internalized weight stigma.

It was first hypothesized that there is a difference in internalized weight stigma between mental health and medical professionals. Second, it was suspected that there would be a difference in the way medical and mental health professionals approach treatment plans for those in thinner and larger bodies. Finally, it was hypothesized that there is a relationship between the amount of

training one received in weight-inclusive approaches or the effects of weight bias on patients and the amount of internalized weight stigma one holds.

Chapter II. Methods

The purpose of this study was threefold: first, to determine if there is a difference in internalized weight stigma between medical professionals and mental health care providers; second, to determine if there are qualitative differences in how these professionals treat patients living in thinner bodies compared to those living in larger bodies; and third, to determine whether the amount of training in weight-inclusive approaches has an impact on how these professionals deal with their internalized weight bias.

Research Design

This study was nonexperimental and explored the differences in implicit weight bias, via the Implicit Association Test (IAT), among mental health and medical professionals. The relationship between time spent in trainings about weight-inclusive approaches and both implicit bias, via the IAT, and explicit weight bias, via the Beliefs About Obese Persons (BAOP) and the Anti-Fat Attitudes (AFA) Questionnaire, was also explored.

1. Research question 1: Is there a significant difference between implicit weight bias among medical professionals and mental health professionals?
    a. Null hypothesis: There is no significant difference between implicit weight bias among medical professionals and mental health professionals.
    b. Alternative hypothesis: There is a significant difference between implicit weight bias among medical professionals and mental health professionals.
        i. IV: Profession (two levels)
            1. Medical Professional
            2. Mental Health Professional
        ii. DV: Implicit Bias

1. Continuous scale: Negative scores = greater preference for thinner bodies; Positive scores = greater preference for larger bodies; Score of zero = no preference for larger or thinner bodies.

2. Research question 2: How do clinicians approach diagnostic and treatment planning among non-fat and fat clients?
    a. There are no null or alternative hypotheses due to the qualitative nature.
    b. Analysis: qualitative analysis of responses to vignettes.
3. Research question 3: Does the amount of training in weight-inclusive approaches relate to internalized weight stigma?
    a. Null hypothesis: There is no relationship between the amount of training in weight-inclusive approaches and internalized weight stigma.
    b. Alternative hypothesis: There is a relationship between the amount of training in weight-inclusive approaches and internalized weight stigma.
        i. IV: Amount of Training (nominal variable)
            1. No Training
            2. Some Training
        ii. DV: Weight Bias (three predictors)
            1. IAT
                a. Continuous scale: Negative scores = greater preference for thinner bodies; Positive scores = greater preference for larger bodies; Score of zero = no preference for larger or thinner bodies.
            2. Beliefs About Obese Persons Scale (BAOP)

   a. Continuous scale: Higher scores = stronger belief that control of weight is not in direct control of individual; Lower scores = stronger belief that control of weight is in the direct control of the individual.

3. Anti-Fat Attitudes Questionnaire (AFA)
   a. Continuous scale: Higher scores = stronger aversion to larger bodies; Lower scores = less aversion to larger bodies

Secondary Analysis

A secondary analysis was conducted to first determine if implicit and explicit biases of the whole sample significantly differed from a level indicative of no bias. This was measured via one-sample t-tests for each of the three bias measures: the IAT, BAOP, and AFA. The second goal of the secondary analysis was to determine whether implicit bias levels significantly predicted explicit bias levels. These comparisons were performed via simple linear regression. The third goal was to determine whether ones scores on the Belief About Obese Persons scale significantly predicted scores on the Anti-Fat Attitudes questionnaire as previous research has suggested that one's belief about obesity will predict how they feel about larger body individuals (Rathbone et al., 2021).

Data Collection

Data was collected via an online survey hosted on Google Forms. The survey was distributed via email and social media outlets, such as Facebook, Instagram, Twitter, LinkedIn, and Reddit. Along with postings on the researcher's personal account, the survey was posted in professional groups on the platforms. The first round of recruitment also included the survey being sent to listservs with the American Psychological Association, Academy of Eating

Disorders, and the International Association of Eating Disorder Professionals. The researcher also looked for medical listservs to send study recruitment to. However, there were no listservs that were accessible to the public without a medical degree or a medical school endorsement. Recruitment materials were continually pushed on these platforms every few weeks between July 2022 and March 2023. It was also distributed via email to a hospital listserv and among professional contacts of the researcher. Finally, emails were sent to the researcher's academic institution, throughout the researcher's internship program, and the researcher's post-doctoral fellowship program.

Informed consent was provided at the beginning of the survey and had to be agreed upon before participants could move forward to the first question (Appendix A). The survey consisted of the Implicit Association Test, demographic questions including gender, race, ethnicity, degree obtained or in progress, and amount of training in weight-inclusive approaches (Appendix B), two individual measures of explicit weight bias, the BAOP scale (Appendix C) and the Anti-Fat Attitudes Questionnaire (Appendix D), and five vignettes created by the researcher that provided basic patient characteristics including age, race, sex, and BMI as well as a presenting complaint and pertinent background history (Appendix E). The survey contained 35 questions and the Implicit Association Task and took an average of 15 minutes to complete. A generic purpose for the study was provided to the participants. However, the intention to observe internalized weight bias was kept from participants until the study was completed. A debrief of the entire purpose of the study was provided to participants upon completion (Appendix F). Participants were apprised of the voluntary nature of the survey and were provided the opportunity to leave the survey at any time or withdraw their participation after completion. No identifying information was collected to ensure the confidentiality of participant data. The authors of the BAOP and AFA

scales provided consent to use each assessment prior to dissemination of the survey (Appendix G).

Materials

Vignettes

The researcher created the five vignettes to capture diagnostic and treatment planning decisions that may be made by providers. Vignettes one and four were matched on gender, age, race, and the presenting concern of chronic migraines. These vignettes only differed on BMI ranking with vignette one was a patient of normal BMI and vignette four was a patient with an overweight BMI. Vignettes three and five were matched on gender, age, and presenting concerns that were indicative of malnourishment and possible anorexia nervosa. These vignettes differed in race (Asian vs Black) and BMI (underweight BMI vs obese BMI). Vignette two was created as a third opportunity to observe diagnostic decision-making of a patient with a normal BMI who presents with dizziness, depressed mood, fatigue, and trouble sleeping.

Implicit Association Test

The Implicit Association Test (Greenwald et al., 1998) is a measure that assesses the automatic associations a participant makes between a word and stimuli of interest. In the current study, three IAT constructs were used to capture implicit associations of weight bias. The first IAT measure assessed the attributes good versus bad and how participants automatically associated these attributes with silhouettes of thin and fat bodies. The second IAT measure assessed the attributes motivated versus lazy while the third measure assessed the attributes strong-willed versus weak-willed. These attributes have been reported most often by medical and mental health professionals as anti-fat prejudices they often hold (Foster et al., 2003). Each IAT measure took approximately 20 seconds to complete and was conducted a second time with

associated pairings reversed. Scoring of the IAT was completed by subtracting the number of times a participant created a negative attribute-fat body pairing and the number of positive attribute-fat body pairings. Higher negative scores on the IAT suggest greater automatic preference for thinner bodies and in turn stronger implicit anti-fat bias whereas higher positive scores on the IAT suggest greater automatic preference for larger bodies. A score near or at zero suggests no automatic preference for larger or thinner bodies. A D score ± 0.15 indicates no preference, ± 0.16 to ± 0.35 indicates slight preference, ± 0.36 to ± 0.65 indicates moderate preference, and ± 0.66 or higher indicates a strong preference (Sriram & Greenwald, 2009). There are no reliability statistics in the literature for the IAT.

Beliefs About Obese Persons Scale

The Belief About Obese Persons (BAOP) scale (Allison et al., 1991) consists of eight Likert scale items that measure what one believes about the causes of weight gain and obesity. Responses were measured on a scale of −3 to +3 and reflected a respondent's level of agreement or disagreement with statements such as "The majority of obese people have poor eating habits that lead to their obesity." Questions 1, 3, 4, 5, 6, and 8 were multiplied by −1 to reverse the score and then all 8 items were added together to create a raw score. Next, 24 points were added to the raw score to create the total score on the BAOP. Respondents who had higher total scores on the BAOP hold stronger beliefs that weight, and more specifically obesity, are not controllable by the individual. Reliability among various studies have ranged from $\alpha = 0.63$ to $\alpha = 0.82$ (Allison et al., 1991; Puhl & Brownell, 2006).

Anti-Fat Attitudes Questionnaire

The Anti-fat Attitudes Questionnaire (AFA; Crandall, 1994) is a 13-item Likert scale that measures anti-fat attitudes across three domains: dislike of fat people (e.g., "Fat people make me

somewhat uncomfortable"; α = .84), willpower or controllability of weight (e.g., "Fat people tend to be fat pretty much through their own fault"; α = .66), and fear of fat (e.g., "One of the worst things that could happen to me would be if I gained 25 pounds"; α = .79). Responses were measured on a scale of 0 to 9 and reflected a respondent's level of agreement or disagreement with statements. All items were added together to create a total score. Higher scores on this measure indicate higher levels of anti-fat bias (Crandall, 1994).

Participants

A sample of 31 health care providers was collected and included both licensed professionals and students who identified as medical doctors (MD), advanced registered nurse practitioners (ARNP), physician assistants (PA), licensed clinical social workers (LCSW), licensed professional counselors (LPC), clinical psychologists (PhD and PsyD), and licensed mental health counselors (LMHC). All participants acknowledged that they provided care to patients within the last year and were aware of the voluntary nature of the study. Convenience and snowball sampling were used to obtain participants. Exclusion criteria included (a) anyone who had not seen patients within the last year and (b) anyone who was not a health care or mental health provider.

Descriptive Statistics

Participants of the current study included 19 cis-gender females (13.3%), 11 cis-gender males (35.5%), and 1 non-binary participant (3.2%). Twenty-seven participants (87.1%) identified as white, 2 identified as Latinx (6.5%), 1 identified as Jewish American (3.2%), and 1 chose not to disclose their racial identity (3.2%). Participants included 5 individuals who identified as having a Hispanic ethnicity (16.1%). Eighty-seven percent of the respondents work in the mental health field and 13% work as medical providers (see Table 1 for degrees obtained).

Five participants (16.1%) indicated that they had received some form of formal training in weight-inclusive approaches and 6 participants (19.4%) reported having accessible resources on HAES or intuitive eating practices during their academic training. Finally, 77.4% of respondents (*N* = 24) had been considered overweight at some point in their life. For all demographics of the sample see Table 1. Thirty-one participants responded to the BAOP and AFA measures. The mean score for the BAOP was 26.23 (*SD* = 10.35) and the mean score for the AFA was 29.42 (*SD* = 19.23). Twenty-five participants completed the IAT, and the mean D score was −0.24 (*SD* = 0.39).

Table 1

Demographics of Study Sample

	n (%)
Gender	
Cis female	19 (61.3%)
Cis male	11 (35.5%)
Non-binary	1 (3.2%)
Race	
Caucasian	27 (87.1%)
Latinx	2 (6.5%)
Jewish American	1 (3.2%)
Ethnicity	
Hispanic	5 (16.1%)
Non-Hispanic	25 (80.6%)
Did not answer	1 (3.2%)
Degree obtained	
MD	2 (6.5%)
LCSW	4 (12.9%)
LPC	2 (6.5%)
PhD	7 (22.6%)
PsyD	4 (12.9%)
PA	1 (3.2%)
ARNP	1 (3.2%)
LMHC	1 (3.2%)
Still in school	9 (29%)
Degree in progress	
LCSW	2 (6.5%)
PhD	4 (12.9%)
PsyD	6 (19.4%)
Degree already obtained	19 (61.3%)
Official training in weight-inclusive approaches	
Yes	5 (16.1%)
No	26 (83.9%)
Academic training resources in HAES	
Yes	6 (19.4%)
No	24 (77.4%)
Did not answer	1 (3.2%)
Considered overweight in lifetime	
Yes	24 (77.4%)
No	7 (22.6%)

Statistical Analyses

The design used to address the following research questions and hypotheses is both a quantitative and qualitative, nonexperimental research design. All analyses were performed with IBM Statistical Package for Social Science version 24. A power analysis was conducted via G*Power 3.1 to estimate the minimum number of participants required for parametric tests. It was determined that 128 participants were needed to be adequately powered. Due to the small sample size, nonparametric tests were utilized to compare explicit weight bias among mental health and medical professionals. A multivariate analysis of variance was used to determine the relationship between weight-related training and implicit/explicit bias. An alpha level of 0.05 was used as a cutoff for significance. Therefore, a *p*-value less than 0.05 led to rejecting the null hypothesis and suggested a significant difference between groups.

Chapter III. Results

Reliability Analysis

The internal consistency of the dependent measures was analyzed using Cronbach's alpha. The reliability analysis for the Anti-Fat Attitudes Questionnaire was 0.82, suggesting adequate internal consistency. The Belief About Obese Persons Scale yielded a Cronbach's alpha of 0.81, suggesting adequate internal consistency. Internal consistency for the Implicit Association Task was not calculated as this is not a self-report measure.

Assumption Testing

Normality, linearity, outliers, homogeneity of variance and multicollinearity assumptions were assessed for all the dependent variables in this study. The Anti-Fat Attitudes Questionnaire, the Belief About Obese Persons Scale, and the Implicit Association Task are all continuous variables, thus meeting the assumption for level of measurement. The Case Processing Summary shows that 100% of the 31 participants responded to the BAOP scale and the Anti-Fat Attitudes Questionnaire. The Implicit Associations Task was responded to by 25 participants (80.6%) of the sample completing this measure. Therefore, the assumption of related pairs was met (see Table 2). It can be assumed that all participants completed the measures independently, and no one's responses influenced another's due to the nature of the survey. Therefore, the assumption of independent observations was met.

Linearity and homoscedasticity were observed via scatterplots of the dependent variables. There is some variability in scatter among the IAT D scores. Therefore, linearity and homoscedasticity are not met for this variable. Analyses were still completed using the IAT D score despite this assumption not being met. However, the results were interpreted cautiously. The AFA and BAOP total scores display linearity and similar variance among scores within the

plot, thus meeting the assumption for linearity and homoscedasticity (see Figure 1). Mahalanobis distance was used to investigate multivariate outliers across the dependent variables. The maximum distance of 6.20 was less than the critical value of 16.27, indicating no significant multivariate outliers. There was no correlation between the AFA total scores and IAT D scores ($r = -0.083$, $n = 25$, $p = 0.69$). There was also no correlation between the BAOP total scores and IAT D scores ($r = 0.141$, $n = 25$; $p = 0.50$). Finally, a significant medium, negative correlation existed between AFA and BAOP total scores ($r = -0.74$, $n = 31$; $p < 0.001$). Therefore, multicollinearity and singularity are absent, and this assumption has been met (see Table 3). Box's M test of equality of covariance matrices could not be calculated due to fewer than two nonsingular cell covariance matrices; therefore, the assumption of homogeneity of variance-covariance matrices was not met. Levene's test of equality of error variances did not show any values less than .05, indicating no violation of this assumption (see Table 4).

Table 2

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	*N*	Percent	*N*	Percent
BAOP total score	31	100.0%	0	0.0%	31	100.0%
AFA total score	31	100.0%	0	0.0%	31	100.0%
IAT D score	25	80.6%	6	19.4%	31	100.0%

Figure 1

Scatterplot Indicating Linearity and Homoscedasticity of Dependent Variables

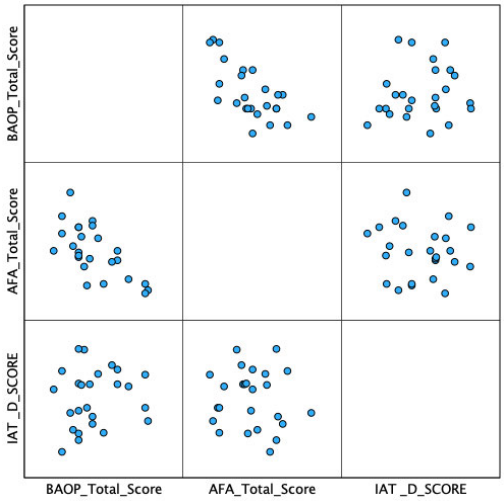


Table 3

Correlations

		IAT D Score	AFA Total Score	BAOP Total Score
IAT D score	Pearson correlation	--		
	N	25		
AFA total score	Pearson correlation	−.083	--	
	Sig. (2-tailed)	.692		
	N	25	31	
BAOP total score	Pearson correlation	.141	−.742**	--
	Sig. (2-tailed)	.503	< .001	
	N	25	31	31

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

Table 4

Levene's Test of Equality of Error Variances[a]

		Levene Statistic	df1	df2	Sig.
BAOP total score	Based on mean	1.329	1	23	.261
	Based on median	.530	1	23	.474
	Based on median and with adjusted df	.530	1	20.376	.475
	Based on trimmed mean	1.282	1	23	.269
AFA total score	Based on mean	.006	1	23	.938
	Based on median	.001	1	23	.980
	Based on median and with adjusted df	.001	1	22.779	.980
	Based on trimmed mean	.006	1	23	.937
IAT D score	Based on mean	1.061	1	23	.314
	Based on median	.027	1	23	.871
	Based on median and with adjusted df	.027	1	8.795	.873
	Based on trimmed mean	.950	1	23	.340

Note. Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
a. Design: Intercept + Training Amount.

Assumptions for Implicit Association Test Variable

The total number of participants who responded to the Implicit Association Test was 25, with 6 responses missing from the data set. The mean for the IAT was −0.24, with a standard deviation of 0.39 and a median of −0.12. As these scores fell within one standard deviation of each other, the assumption of normality based on central tendency was met. The data did not show significant skew as determined by a transformed *z*-score (−0.066 / 0.464 = −0.142 < 1.96). Additionally, the data did not show significant kurtosis as determined by a transformed *z*-score (−0.963 / 0.902 = −1.07 < 1.96). The Shapiro-Wilk test of normality was not significant (W = 0.96, p = 0.46), therefore indicating that the data were normally distributed. When observing the histogram of IAT D scores, it displays an even distribution across scores without too much skew, flatness, or peak of the data (see Figure 2). The box plot did not display any outliers (see Figure

3). The normal Q-Q plot shows that the data did not stray too far from the line of normality; thus, the assumption of linearity was met (see Figure 4). The detrended normal Q-Q plot does not show a significant grouping of data points; all points are relatively near the zero line (see Figure 5). Overall, the IAT D scores appear normally distributed without significant skew.

Figure 2

Histogram for Implicit Association Test D Scores

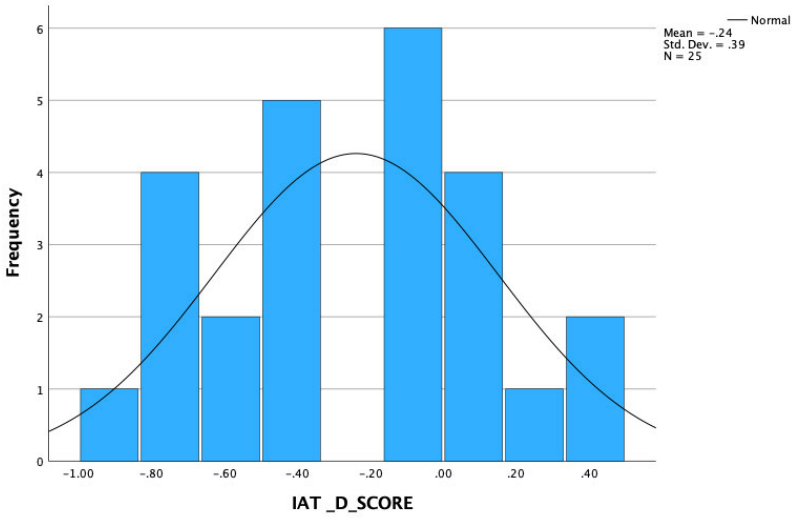


Figure 3

Box Plot for Implicit Association Test D Scores

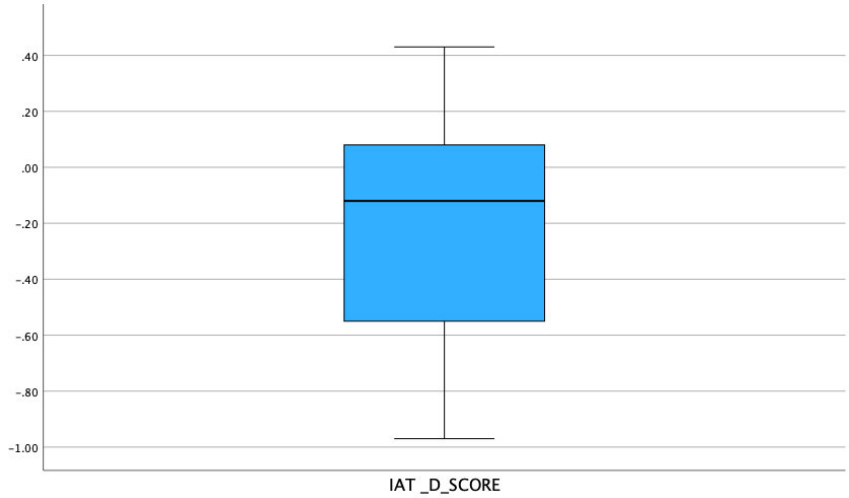


Figure 4

Normal Q-Q Plot of Implicit Association Test D Scores

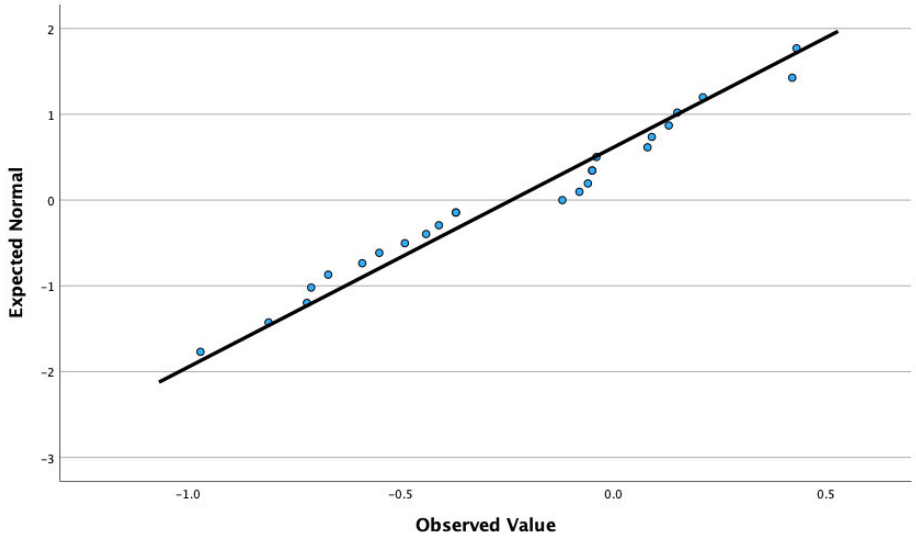
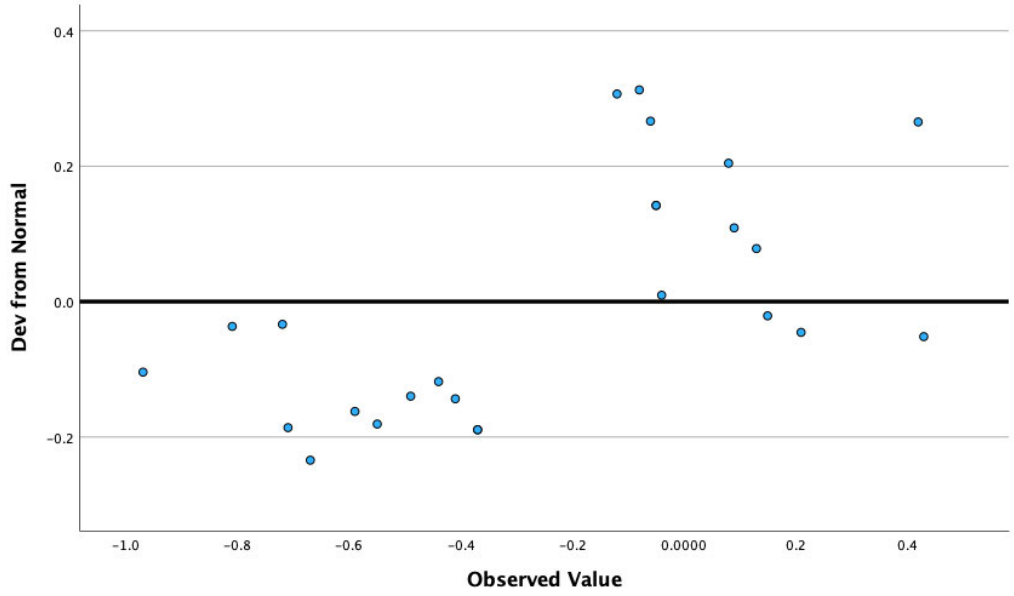


Figure 5

Detrended Normal Q-Q Plot of Implicit Association Test D Scores



Assumptions for Belief About Obese Persons Variable

The total number of participants who provided responses for the Belief About Obese Persons scale was 31, with zero responses missing from the data set. The mean for the BAOP was 26.23 with a standard deviation of 10.35 and a median of 24.00. As each of these scores fall within one standard deviation of each other, the assumption of normality based on central tendency has been met. The data does not show significant skew as determined by a transformed z-score (0.232/0.421 = 0.551 < 1.96). Additionally, the data does not show significant kurtosis as determined by a transformed z-score (-0.188/0.821 = -0.229 < 1.96). The Shapiro-Wilk test of normality was not significant ($W = 0.96$, $p = 0.38$), therefore indicating that the data is normally distributed. When observing the histogram of BAOP scores, it displays an even distribution across scores without too much skew, flatness, or peak of the data (see Figure 6). The Box plot does not display any outliers (see Figure 7). The normal Q-Q plot shows that the data does not stray too far from the line of normality and thus the assumption of linearity is met (see Figure 8). The detrended normal Q-Q plot does not show significant grouping of data points and all points are relatively around the zero line (see Figure 9). Overall, the BAOP total score appears to be normally distributed without significant skew or variability.

Figure 6

Histogram of Belief About Obese Persons Scores

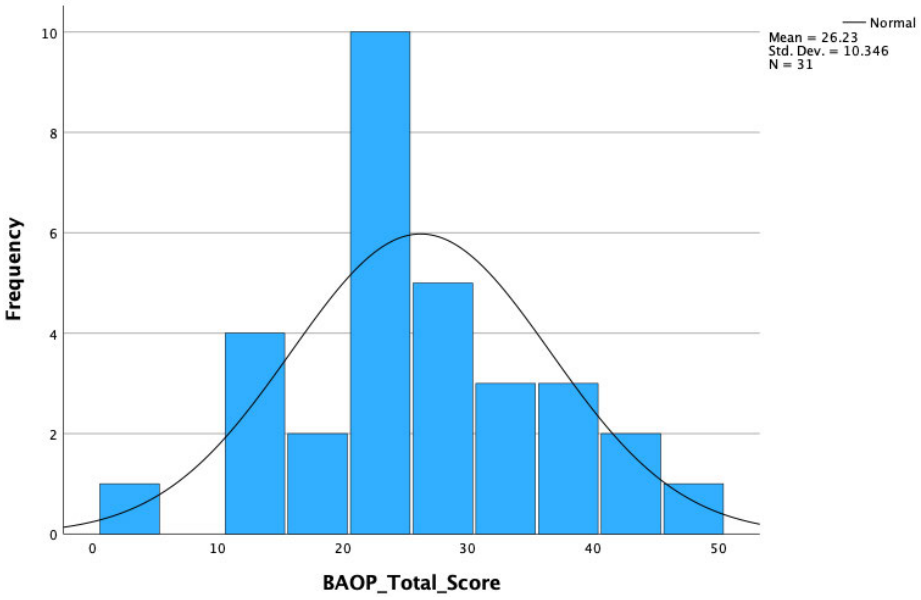


Figure 7

Box Plot of Belief About Obese Persons Scores

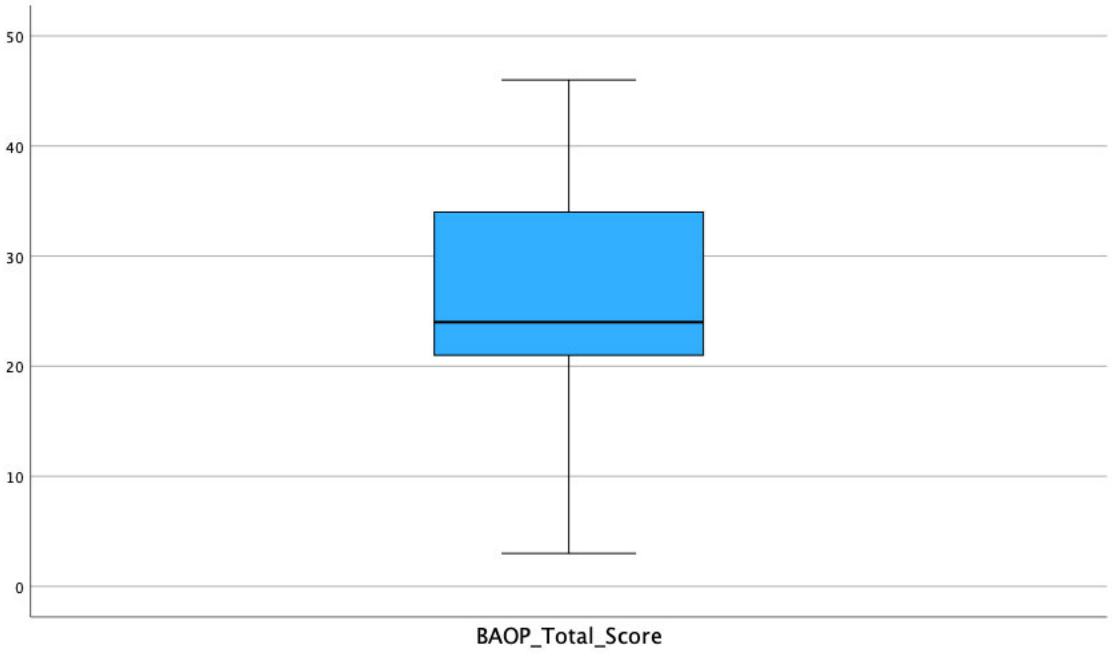


Figure 8

Normal Q-Q Plot of Belief About Obese Persons Scores

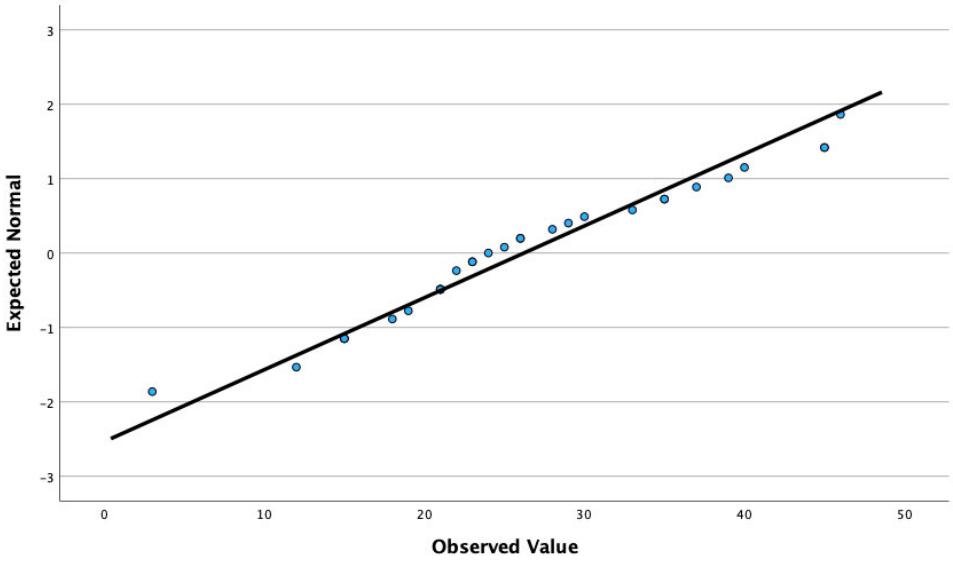
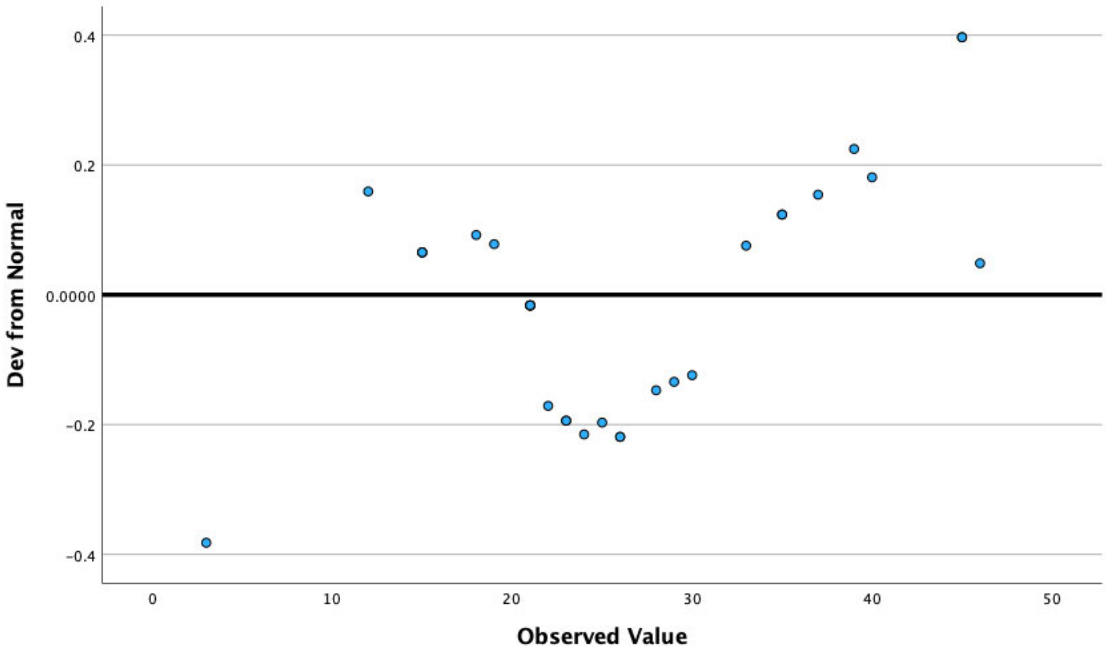


Figure 9

Detrended Normal Q-Q Plot of Belief About Obese Persons Scores



Assumptions for Anti-Fat Attitudes Variable

Thirty-one participants responded to the Anti-Fat Attitudes Questionnaire, with zero responses missing from the data set. The box plot shows one outlier, participant 25, whose score was significantly higher than all other respondents. Therefore, this case was removed from further analyses (see Figure 10). After removing this outlier, the mean for the AFA was 27.40, with a standard deviation of 15.87 and a median of 27.00. As these scores fell within one standard deviation of each other, the assumption of normality based on central tendency was met. The data did not show significant skew as determined by a transformed *z*-score (0.238 / 0.427 = 0.56 < 1.96). Additionally, the data did not show significant kurtosis as determined by a transformed *z*-score (−0.246 / 0.833 = −0.295 < 1.96). The Shapiro-Wilks test of normality was not significant ($W = 0.97$, $p = 0.61$), therefore indicating a normal distribution. When observing the histogram of AFA scores, it displays an even distribution across scores without too much skew, flatness, or peakedness of the data (see Figure 11). The normal Q-Q plot shows that the data did not stray too far from the line of normality; thus, the assumption of linearity was met (see Figure 12). The detrended normal Q-Q plot did not show a significant grouping of data points; all points were relatively around the zero line (see Figure 13). Overall, the AFA total score appears normally distributed without significant skew.

Figure 10

Box Plot of Anti-Fat Attitude Scores

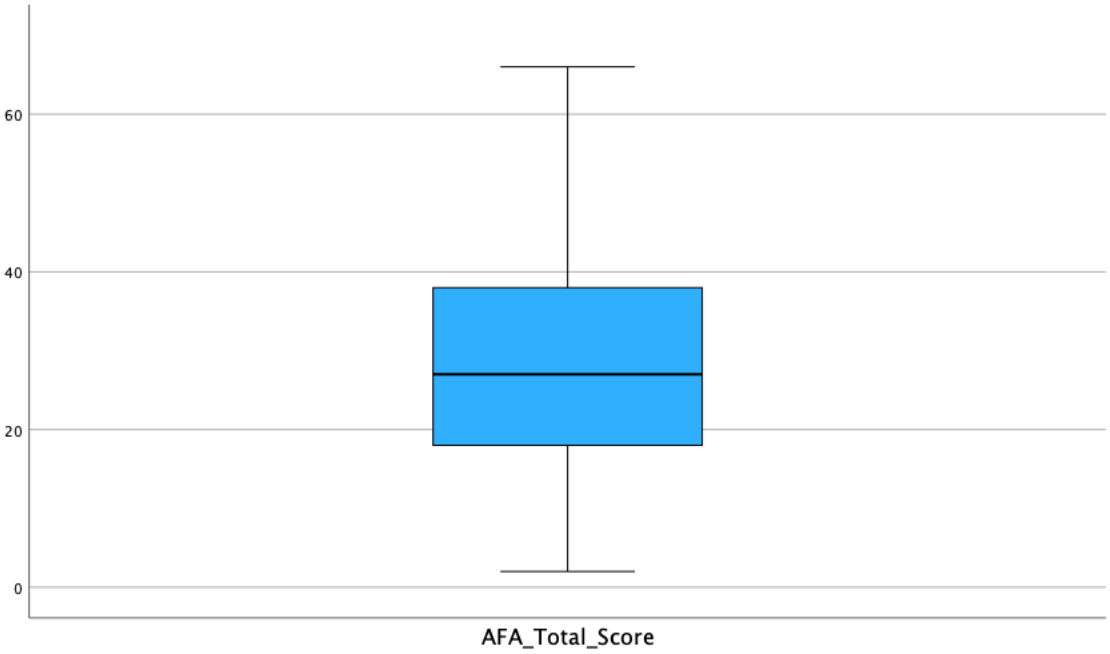


Figure 11

Histogram of Anti-Fat Attitude Scores

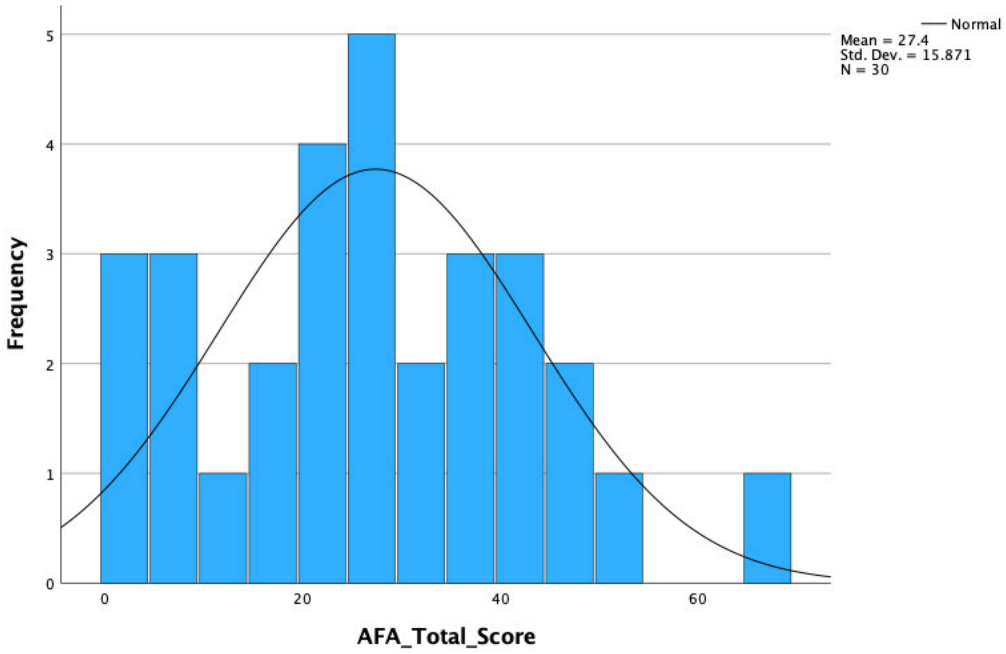


Figure 12

Normal Q-Q Plot of Anti-Fat Attitude Scores

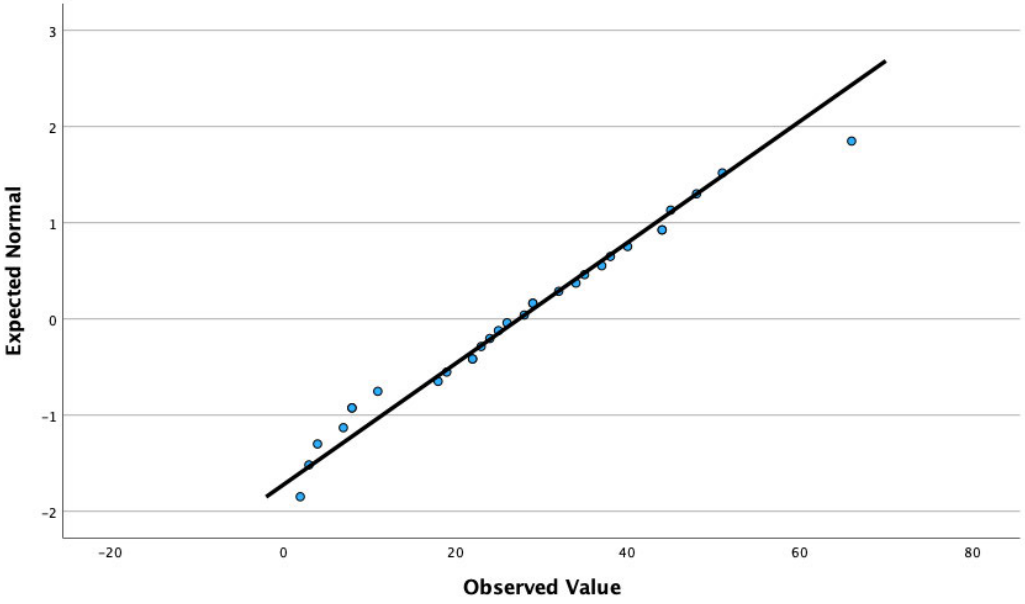
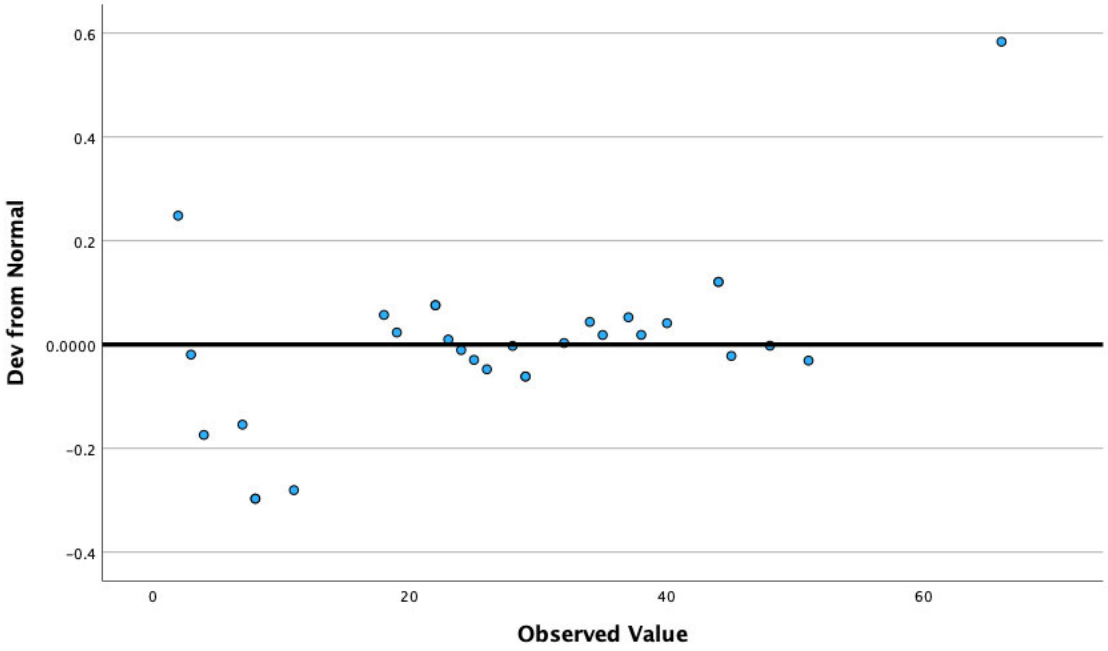


Figure 13

Detrended Normal Q-Q Plot of Belief About Obese Persons Scores



Primary Analysis Results

Research Question One

The first research question determined if there was a significant difference between implicit weight bias among medical professionals and mental health professionals. The null hypothesis indicated that there would not be a difference in weight bias among medical and mental health professionals. The mean IAT D score across all professionals was −0.24, suggesting a slight implicit preference toward thin bodies, indicating some weight bias. The mean IAT D score for mental health professionals was −0.24, and for medical professionals was −0.26. A Mann-Whitney U Test was used to determine if there were any significant differences in implicit association D scores among mental health and medical professionals. This test revealed that there were no significant differences in the implicit association D scores of mental health professionals (Md = −0.10, n = 25) and medical professionals (Md = −0.55, n = 3), U = 31.00, z = −0.167, p = 0.91, r = −0.03. Therefore, the null hypothesis for hypothesis one was retained.

Research Question Two

A qualitative analysis of participant responses to the vignettes was conducted to determine common themes in diagnostic decision-making and to determine how often disordered eating behaviors were accurately assessed for. Of the 31 participants who completed the survey, 30 participants provided responses for the vignettes. Across the 5 vignettes, 45.2% (n = 14) of the sample always appropriately assessed for disordered eating patterns, whether the vignette portrayed a thin patient or a patient living in a larger body. Among those who did not always appropriately assess for disordered eating, 22.6% (n = 7) only assessed for these patterns in the thin patient, 19.4% (n = 6) never assessed for disordered eating patterns, and 9.7% (n = 3)

assessed the larger-bodied patient for weight concerns even if weight should not have been considered an important contributing factor to the presenting concerns.

Further inspection was given to the two vignettes that specifically pulled for a potential diagnosis or rule out of anorexia nervosa or atypical anorexia nervosa. These vignettes were assessed for thematic content, and differences were observed in the recommendations for the thin versus the fat patient. Both vignettes showed a high number of responses ruling out or addressing social anxiety disorder or generalized anxiety disorder. However, the vignette that portrayed the patient with a BMI of 16 also displayed more responses that addressed anorexia nervosa or disordered eating than the matched vignette that portrayed the patient with a BMI of 34. Clinicians were more likely to suggest medical stabilization for the thin client and were more open to suggesting treatment in an eating disorder treatment facility. Whereas, for the larger client, clinicians were more likely to conduct a physical examination or refer the patient to their primary care physician for medical rule-outs that could cause physical symptoms such as fatigue, lightheadedness, irregular menstruation, and heart palpitations.

Response pairs were assessed for differences among individual participants in how they would treat a patient with the same symptom profile but with varying BMI. Some response pairs can be seen in Table 5. Within the first response pair, the response for treatment of the patient with “normal” BMI specifically indicates that an eating disorder may be an explanation for the symptom profile of the thin patient, whereas the second response did not provide an eating disorder as a possible explanation for the higher-weight patient. Although in the second response pair, both responses indicated that the participant did not believe there was enough information to fully diagnose the patient, for the thin patient, they were specifically concerned about

disordered eating as a potential cause for the weight loss and other physical symptoms. Finally, the last response shows a visceral, elevated response to the larger patient.

Table 5

Select Participant Vignette Responses

Patient with "Normal" BMI	Patient with "Overweight" or "Obese" BMI
"First: medical referral for diagnosis/treatment for fatigue, lightheadedness, menstruation, heart palpitations, weight loss, possible eating disorder; Diagnosis as required by insurance company: adjustment disorder; Treatment: education and training in decreasing somatic focus, relaxation and distraction techniques, CBT."	"First: medical referral for diagnosis/treatment for fatigue, lightheadedness, menstruation, heart palpitations, weight loss; Diagnosis as required by insurance company: adjustment disorder; Treatment: education and training in decreasing somatic focus, relaxation and distraction techniques, CBT."
"I would assess her eating/exercise/sleep behaviors. Based on the current info, I don't feel there's enough info to diagnose, though I am concerned about possible disordered eating. I would refer for an immediate medical evaluation/physical exam to understand some of her physical symptoms better and request a release of information to consult with her physician."	"I would further assess for possible anxiety and panic symptoms, assess her eating/exercise/sleep behaviors; based on information gathered, coping skills training to manage symptoms could be discussed in therapy. Based on the current info, I don't feel there's enough info to diagnose anything yet. I would refer for a medical evaluation/physical exam to understand some of her physical symptoms better and request a release of information to communicate with her physician."
"I would advise her to get to a healthy 18 BMI depending on her structure, possibly 19 if she's in the right conditions."	"34 is out of my realm of objectivity. I would lose my temper and forcefully hospitalize her to help her get down, again as above, to a healthy 19 BMI."

Research Question Three

The third research question determined if the amount of training in weight-inclusive approaches was related to internalized weight stigma. The null hypothesis indicated that no relationship existed between training amount and internalized weight stigma. A multivariate analysis of variance was utilized to observe the relationship between the amount of training in weight-inclusive approaches and one's implicit and explicit weight bias scores. The three

dependent variables were the total scores on the AFA Questionnaire, the total scores on the BAOP scale, and the IAT D score. The independent variable was the amount of training in weight-inclusive approaches, categorized as "no training" or "some training." Preliminary assumption testing was completed to assess normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity. No gross violations in linearity, homoscedasticity, normality, outliers, or multicollinearity were observed. However, the study's sample size was small, and only six participants indicated some training in weight-inclusive approaches; therefore, the results were significantly underpowered and should be considered during interpretation. There was no statistically significant difference between no training and some training on the combined dependent variables, F (3, 21) = 0.22, p = 0.885, partial eta squared = 0.03 (see Table 6). Furthermore, There was no significant difference between training amount and BAOP total scores, F(1, 23) = 0.102, p = 0.753, partial eta squared = 0.004; training amount and AFA total scores, F(1, 23) = 0.508, p = 0.483, partial eta squared = 0.022; or training amount and IAT D scores, F(1, 23) = 0.117, p = 0.735, partial eta squared = 0.005 (see Table 7). Therefore, the null hypothesis was retained.

Table 6

Multivariate Tests[a]

Effect		Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial Eta Squared
Intercept	Pillai's trace	.933	98.247[b]	3.000	21.000	< .001	.933
	Wilks' lambda	.067	98.247[b]	3.000	21.000	< .001	.933
	Hotelling's trace	14.035	98.247[b]	3.000	21.000	< .001	.933
	Roy's largest root	14.035	98.247[b]	3.000	21.000	< .001	.933
Training amount	Pillai's trace	.030	.215[b]	3.000	21.000	.885	.030
	Wilks' lambda	.970	.215[b]	3.000	21.000	.885	.030
	Hotelling's trace	.031	.215[b]	3.000	21.000	.885	.030
	Roy's largest root	.031	.215[b]	3.000	21.000	.885	.030

a. Design: Intercept + Training_Amount.
b. Exact statistic.

Table 7

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Squared
Corrected model	BAOP total score	9.775[a]	1	9.775	.102	.753	.004
	AFA total score	139.636[b]	1	139.636	.508	.483	.022
	IAT D score	.019[c]	1	.019	.117	.735	.005
Intercept	BAOP total score	7911.375	1	7911.375	82.411	< .001	.782
	AFA total score	6940.276	1	6940.276	25.232	< .001	.523
	IAT D score	.778	1	.778	4.928	.037	.176
Training amount	BAOP total score	9.775	1	9.775	.102	.753	.004
	AFA total score	139.636	1	139.636	.508	.483	.022
	IAT D score	.019	1	.019	.117	.735	.005
Error	BAOP total score	2207.985	23	95.999			
	AFA total score	6326.364	23	275.059			
	IAT D score	3.631	23	.158			
Total	BAOP total score	19960.000	25				
	AFA total score	26630.000	25				
	IAT D score	5.085	25				
Corrected total	BAOP total score	2217.760	24				
	AFA total score	6466.000	24				
	IAT D score	3.650	24				

a. R^2 = .004 (adjusted R^2 = −.039).
b. R^2 = .022 (adjusted R^2 = −.021).
c. R^2 = .005 (adjusted R^2 = −.038).

Secondary Analysis

Due to the small number of medical professionals in the sample, secondary analyses were conducted to observe the differences in bias compared to levels indicative of no bias. A one-sample t-test was conducted to compare the IAT and AFA to a score of 0, which is indicative of no implicit or explicit bias. Furthermore, the BAOP was compared to a score of 12, which is the lowest score on this measure and would be indicative of a strong belief that obesity is a controllable factor. When compared to 0, the whole sample IAT mean score was significantly different, t(24) = -3.07, p = .005. This indicates that the whole sample showed a significant

implicit bias towards those in larger bodies. The mean AFA score for the whole sample was significantly different from 0, $t(30) = 8.52$, $p < 0.001$. This indicates the whole sample showed a significant explicit bias towards those in larger bodies. The mean BAOP score for the whole sample was significantly different from a score of 12, $t(30) = 7.66$, $p < 0.001$. This indicates the whole sample showed a significant belief that obesity is not entirely a controllable factor for individuals.

To determine if implicit bias significantly predicted explicit bias in the sample, a linear regression was performed. Total scores on the AFA did not significantly predict scores on the IAT, $F(1,23) = 0.16$, $p = 0.69$. Furthermore, total scores on the BAOP did not significantly predict scores on the IAT, $F(1,23) = 0.46$, $p = 0.50$. These findings suggest that implicit bias is not significantly predicted by explicit bias in this sample.

A final analysis was conducted to determine if scores on the BAOP, which measures one's beliefs about the controllability of obesity, would significantly predict one's score on the AFA, which measures one's overall attitude towards individuals in larger bodies. The linear model was significant, $F(1,29) = 35.50$, $p < 0.001$, $R^2 = 0.55$, indicating that beliefs about the controllability of obesity significantly predict one's overall attitude towards individuals in larger bodies. Approximately 55% of the variance in one's overall attitude could be explained by controllability beliefs. BAOP total scores significantly predicted AFA scores, $B = -1.38$, $t(29) = -5.96$, $p < 0.001$. This indicates that a one-unit increase of the BAOP total score will decrease the AFA total score by 1.38 units. Table 8 summarizes the results of the linear regression.

Table 8

Linear Regression with BAOP total scores predicting AFA total scores

Variable	*B*	*SE*	95% CI	β	*t*	*p*
(Intercept)	65.59	6.51	[52.27, 78.91]		10.07	<0.001
BAOP	-1.38	0.23	[-1.85. -0.91]	-0.74	-5.96	<0.001

Note. Results: $F(1,29) = 35.50$, $p < 0.001$, $R^2 = 0.55$

Chapter IV. Discussion and Conclusion

This study answered three questions pertaining to medical and mental health professionals' attitudes toward working with patients living in larger bodies. The first hypothesis was that mental health and medical professionals would have significantly different levels of internalized weight bias, with mental health professionals showing less weight bias due to the differences in their diversity training. The findings showed no significant differences in the internalized bias scores for mental health and medical professionals. However, it is important to note that only three medical professionals completed the necessary items for this analysis, and the results were interpreted cautiously. The second research question was to examine whether clinicians approach diagnostic and treatment planning among non-fat and fat clients differently. The qualitative findings suggested that less than half of the participants always appropriately assessed for disordered eating patterns, regardless of the patient's weight. Among those who did not always appropriately assess for disordered eating, approximately one-fifth of the participants only assessed for disordered eating patterns in thin patients, one-fifth never assessed for disordered eating patterns, and 9% assessed the larger-bodied patient for weight concerns even if weight should not have been considered an important contributing factor to the presenting concerns. This suggested that weight may have been an influential factor in decision-making

processes. The last research question determined whether the amount of training in weight-inclusive approaches was related to internalized weight stigma scores. Findings did not show a significant difference in internalized weight stigma scores between those who had no training versus some training in weight-inclusive approaches.

Furthermore, for exploratory purposes, three secondary analyses were conducted to observe trends of the whole sample. Due to the discrepancy in group size between mental health and medical professionals, as well as the small sample size, these secondary analyses allowed for further insight to whether implicit and explicit bias existed within the current sample and whether there were any significant predictive relationships among the measures. Analysis showed that implicit bias towards larger bodies, negative explicit attitudes towards larger bodies, and lower controllability beliefs about obesity were present in the sample. Additionally, negative attitudes and controllability beliefs were not significant predictors of implicit bias. Finally, the stronger one's belief is that obesity is not entirely a controllable factor predicts lower negative explicit attitudes towards larger bodies.

The first research question determined whether there was a difference in implicit weight bias between mental health and medical professionals. Findings showed that there were no significant differences in implicit weight bias scores between medical and mental health professionals. However, it was found that the average D score was −0.24, which suggested a slight preference for thinner bodies and is suggestive of some level of implicit anti-fat bias. Furthermore, it should be taken into consideration that there were significantly fewer medical professionals who completed the study measures (n = 3), which makes the possibility of finding significant differences more difficult.

The second research question was qualitative in nature and was used to determine if there were appreciable differences in the treatment recommendations and diagnostic possibilities for thin-bodied and larger-bodied patients. The findings suggested that less than half of the participants effectively assessed for disordered eating patterns in the appropriate cases. Of those who did not successfully assess for disordered eating, 22% only assessed for disordered eating in the thin patient, 19% never assessed for disordered eating, and almost 10% assessed for disordered eating patterns or weight-related concerns when the patient's weight should not have been a factor considered in the treatment plan. Of greatest concern are missed assessments for disordered eating when the patient has a normal or high BMI. Current research has shown that serious complications from malnutrition can occur even when an individual does not present with a low body weight (Garber, 2018; Garber et al., 2019). Due to their higher starting weight, these patients may go years before concerns are raised about their eating patterns and instead are congratulated for their weight loss and dedication to their health (Sawyer et al., 2016). It is important that all medical and mental health professionals are assessing every patient who presents with physiological and psychological signs of disordered eating, including the loss of significant weight in a short time. Furthermore, several clinicians opted to assess for weight-related concerns when the presenting problem did not indicate a relationship to weight. This overvaluation on weight and body shape plays a significant role in the reason clients in larger bodies postpone or avoid medical professionals until their symptoms are too severe to ignore (Mensinger et al., 2018). The qualitative nature allowed for the opportunity to compare how frequently keywords, such as "eating disorder," "medical condition," and "social anxiety" were mentioned in matched vignettes that only differed in the BMI presentation of the client. Findings showed that clinicians were more likely to under-diagnose disordered eating in higher BMI

patients and were more likely to suggest social anxiety or lifestyle changes. Furthermore, one response from a medical provider stated, “34 is out of my realm of objectivity, I would lose my temper and forcefully hospitalize her, to help her get down, again as above, to a healthy 19 BMI.” This statement was indicative of the frustration that some research has shown to be prevalent in medical professionals (Wear et al., 2006). It is also in line with lived experience that some patients in larger bodies have reported, which include experiences of teasing, unfair treatment, and discrimination (Verhaak et al., 2022). Previous research has found medical providers are less likely to provide patient care that is respectful and attentive and are more likely to suggest changes to lifestyle (e.g., eating, exercise habits) or medical interventions (e.g., bariatric surgery, weight loss medication) for larger-bodied patients rather than appropriate medical interventions that address their presenting concerns (Phelan, Burgess et al., 2015).

The final research hypothesis determined if there was a relationship between a professional’s amount of training in weight-inclusive approaches and their implicit and explicit weight bias. The study did not find support for this hypothesis. The reason for the lack of findings may be twofold: (a) the sample size was very low; thus, the statistic was underpowered, making it more difficult to find a significant effect; and (b) the way in which the training amount was quantified. Participants were initially asked to quantify their amount of weight-centered training in percentage categories that were predetermined. These predetermined categories were not mutually exclusive as evidenced by the category options of “less than 25%” and “less than 50%,” which may have led to confusion for the respondent when they were choosing the most appropriate category. Furthermore, requesting that the respondent quantify the amount of training in a percentage is subject to their memory of what content was covered and how much emphasis was placed on a small portion of their training. Due to the limited amount of training

that participants had received, this resulted in a small number of responses in each category and a need to dichotomize the information. While this allowed for a preliminary assessment of the data, it is possible that differences of impact due to training amounts could have been lost to the dichotomy. It is also possible that not providing a definition for what encompassed training in weight-inclusive approaches created confusion on how to best respond to the question and may have led to inconsistent acknowledgment of what counted as training in weight-inclusive approaches.

A secondary analysis observed whether there was significant implicit and explicit bias present in the study participants. The IAT showed implicit bias that was significantly different from a neutral score of 0, thus indicating that implicit bias was present within the study participants. This is in line with previous research that indicates professionals hold implicit attitudes towards those in larger bodies (Sabin et al., 2012). Furthermore, explicit bias was observed to determine whether it was also present in the sample. The AFA total score showed explicit negative attitudes that was significantly different from a score of 0, thus indicating that explicit negative attitudes were present within the study participants. This is in line with previous research that indicates professionals are likely to hold explicit biases toward those in larger bodies (Foster et al., 2003). Finally, the BAOP total score showed that the participant's beliefs about the controllability of obesity were significantly different from a level indicative of obesity being controllable. Study participants show at minimum some understanding that obesity is a complex interaction of factors and not simply under the individual's control. These findings indicate not only that implicit bias is still present in the medical and mental health professions, but that explicit bias is still present even when controllability of obesity is recognized as something not fully in the individual's control.

The secondary analysis also looked to determine if one's negative attitudes and controllability beliefs predicted their implicit bias. This relationship is important to understand as we shape training programs that address weight bias. It was found that neither negative attitudes nor beliefs about obesity controllability were predictive of scores on the implicit bias task. This suggests that even if we were to see changes in negative attitudes towards larger bodies or were to target controllability beliefs, we may not see a change in implicit bias. This has been supported by previous literature that suggests even when explicit bias improves, implicit bias is unaffected (Davis-Coelho et al., 2000; Swift et al., 2013). Therefore, if we are aiming to change implicit bias in our professionals, the interventions used should be developed to target implicit bias specifically. By addressing implicit bias effectively, it is possible that we will be able to target microaggressions experienced by those in larger bodies, as microaggressions are one way that implicit bias appears in social interactions (Brown, Daniel, et al., 2021).

Finally, the secondary analysis observed whether one's belief about the controllability of obesity significantly predicted their negative attitudes about those in larger bodies. The findings suggested that as one holds stronger believes that obesity is not entirely a controllable factor their negative attitudes about those in larger bodies decrease. This is supported by previous literature that suggests a similar inverse relationship between negative attitudes and controllability beliefs (Fang et al., 2019) as well as studies which show interventions that address the controllability of obesity are effective in decreasing the negative attitudes towards those in larger bodies (Diedrichs & Barlow, 2011). However, other research has suggested that addressing controllability beliefs is not enough to fully change negative attitudes (Alberga et al., 2016).

As there has been a recent push for social justice training in the mental health profession through the American Psychological Association (2019), and as weight discrimination has been

framed as a social justice issue (Nutter et al., 2016), it is important to consider that by addressing weight bias the field would be promoting the ethical guideline of nonmaleficence and beneficence (Hand et al., 2013). The domain of weight equality should be included within this social justice model to ensure the prevention of harm done to clients, whether intentional or not (Nutter et al., 2020). As this study showed a significant level of implicit and explicit bias, these findings bring into question whether diversity training is specifically and effectively targeting weight bias. A thematic analysis conducted by Kasardo (2019) found that of 29 commonly used diversity textbooks written for use by graduate training programs, weight diversity was infrequently addressed, with only four texts discussing fat prejudice and only three texts discussing fat prejudice among medical professionals. Even when fat prejudice was mentioned in texts, the information was limited and did not share the scope of research and lived experiences that help frame weight diversity in a social justice lens (Kasardo, 2019). Several studies have shown that students are amenable to including weight bias prevention into their curriculum and many believe it will be beneficial for them moving forward into practice (Cravens et al., 2016). Additionally, preliminary research on weight bias interventions has shown promising short-term, but not necessarily long-term, effects on one's explicit biases (Diedrichs & Barlow, 2011). Diedrichs and Barlow (2011) found that even a brief lecture that included a segment on the impacts of weight bias for undergraduate health service students produced a decrease in explicit biases three weeks after the lecture was provided. Swift and colleagues (2013) found that explicit weight bias was improved via viewing of a brief anti-stigma film with effects lasting at six-week follow-up. However, there was no appreciable impact on implicit bias (Swift et al., 2013), which can lead to unconscious bias in treatment decision-making (Chapman et al., 2013). Being able to improve our understanding of how long the impacts of these brief interventions last and a greater

understanding of how these interventions impact one's internalized and implicit weight bias is necessary for the creation of successful training tools. Research is still in its infancy regarding successful long-term interventions for combating weight bias and future research should be conducted to develop such programming. This study is one of the first to attempt a direct comparison of internalized weight bias between mental health and medical professionals. Although findings did not show appreciable differences among professionals, there was significant weight bias present in the whole sample. To effectively serve the community, all providers of an individual's care should be a cohesive unit with an intention to protect patient dignity and to reduce the amount of harm experienced.

Strengths

The current study supported literature that suggests both mental health and medical professionals experience weight bias likely set by society. This was one of the first studies to attempt a comparison of medical and mental health professionals, which is a current gap in the literature. Furthermore, the qualitative nature of the second research question allowed for the analysis of treatment plans and diagnoses in a way that self-report, forced-choice questionnaires may not be able to capture, adding depth to the previously published research and opening avenues for future research to expand upon. Finally, this study supported current literature suggesting a lack of training in weight-inclusive approaches. Results suggest that medical and mental health professionals lack training in weight-inclusive approaches and that explicit and implicit bias are still present in the current sample. This may support the need for more weight-inclusive and weight-bias initiatives within training programs that more effectively target implicit and explicit bias beyond discussing the lack of evidence that personal controllability contributes to obesity.

Limitations

This study's largest limitation was the small sample size. The intention of this study was to obtain 120 participants to ensure that each of the statistics was appropriately powered for finding significant effects. The study was approved for dissemination on social media platforms, through personal and professional contacts, and throughout a local hospital. The decision to stop recruitment was made after eight months of continual efforts to garner more participants, as the rate of responses was not increasing, and no other recruitment avenues could be identified. As the number of participants was significantly lower than the necessary number to meet power for the statistics initially planned, nonparametric tests were used to address the research questions when appropriate. There are several potential explanations for the difficulty in recruiting participants. It has been shown that recruitment of general practitioners for research surveys is a difficult feat marked by several barriers, including uncertainty about the value that the research has toward the field, being inundated with multiple research participation requests, a lack of time to engage in the survey, and a lack of compensation for their participation (Parkinson et al., 2015). This study saw significantly more mental health students and professionals participate than medical students and providers, which the aforementioned research may explain. Furthermore, another possibility is that the research was not of interest to those who received the request for participation and, thus, chose not to participate. This factor cannot be controlled, nor can the recruitment materials be adjusted to entice participants, as participation was voluntary, and compensation was not guaranteed.

A second limitation of this study was that several survey respondents did not complete the IAT. It is possible that the requirement on the Google form that participants had to navigate to a second web page to complete the IAT portion of the survey caused them not to complete that

portion. Although the IAT prompt was placed in the middle of the survey to encourage participants to complete this portion and return to complete the survey, several respondents completed the survey but did not complete the IAT. Future studies may embed the IAT into the rest of the survey to make it easier to access without requiring a second browser window to be opened. Relatedly, the IAT required that participants complete the survey on a desktop computer or laptop. Although the consent form stated that all surveys must be completed on something other than a mobile device, there may have been a possibility that people completed the survey on their phones and therefore were unable to complete the IAT.

A third limitation of this study was the lack of diversity in professionals, as the vast majority consisted of mental health professionals. Receiving a low number of responses from medical professionals made it difficult to compare levels of bias between the two disciplines. However, extensive research has been conducted regarding weight bias in medical professionals, whereas research examining mental health professionals is less developed. Therefore, this study examined the level of bias among various mental health professionals. This study gathered data from various mental health professionals, which has not been done as most studies view mental health professionals separately (e.g., doctoral-level psychologists, LMFTs, LMHCs). Furthermore, participants in this study were similar in demographic characteristics (i.e., predominately white and female), limiting the findings' generalizability.

Directions For Future Research

This study provides a preliminary comparison of bias and the amount of training present in the mental health and medical fields. While the quantitative findings of this study were not significant for the hypotheses stated, there is, at minimum, a slight preference for thinner bodies across mental and medical health care providers. This finding aligns with previous literature

suggesting mental health and medical professionals hold weight bias beliefs. Furthermore, respondents reported a lack of training in weight-related care as it was not a focus of their training programs. Secondary analyses supported the literature that suggests mental health and medical professionals hold both implicit and explicit biases and that there is no predictive link between one's explicit and implicit bias. Finally, it was found that the level of belief that obesity is not a controllable factor is related to one's level of negative attitudes towards those in larger bodies. Future research should work to expand this study through a larger sample, improved assessment of weight-inclusive training, and a focus on recruiting diverse professionals to observe differences in internalized weight bias among medical and mental health professionals. It could also be informative to make further comparisons within the fields to determine if different levels of training (i.e., a doctorate compared to a master's degree) impact biases. These comparisons would allow for a more focused intervention within specific levels of training.

In alignment with the social justice initiative throughout society, it is imperative that those responsible for patient care advocate for all patients equally and fairly. Not only does this align with the oath that healthcare professionals take, but previous studies have indicated that the physiological stress from perceived and experienced stigmatization can have a significant negative impact on physical and mental health (Major et al., 2018; Phelan, Burgess et al., 2015). Future steps toward ending the stigmatization may include further research into effects of provider-initiated weight stigma, development and implementation of training initiatives, social advocacy through media sources, and policy changes within the mental health and medical fields. Although this study did not find a difference in internalized weight bias even among participants who had "some training" in weight-inclusive approaches, this finding did not come

unexpected. There is a gap in research on the long-term outcome of intervention programs for addressing weight bias (Alberga et al., 2016; Swift et al., 2013).

Additionally, the low levels of training in weight-inclusive approaches seen in study participants were in line with previous research that has found a lack of training on weight bias within the curriculum (Cravens et al., 2016; Phelan, Puhl et al., 2015; Russell-Mayhew et al., 2016). For social change to be enacted within the medical and mental health field, incoming students need to be trained on all forms of discrimination that may impact patient experience and care. Preliminary research on reduction of implicit and explicit weight bias in students has suggested that a focus on the uncontrollable factors that contribute to weight and body shape are effective in at least a short-term decrease in anti-fat biases (O'Brien et al., 2010). Training programs may include a more detailed focus on the multitude of factors that play a role in weight to decrease students' beliefs of controllability. However, addressing controllability alone is not the only effective way to address weight bias. A systematic review of training outcomes suggested that sharing positive experiences within the treatment of individuals living in larger bodies was a beneficial and effective tactic for modeling appropriate care to trainees (Alberga et al., 2016).

Additionally, lived experiences of fat patients should also be considered when creating interventions for training programs as learning from those with lived experience has shown to be effective in changing one's beliefs or biases and increases one's ability to understand the impact of bias in a novel way (Kang & Joung, 2020). Finally, future research focused on assessing the outcomes of training initiatives should include pre- and post-training surveys to assess weight bias and patient-related care to help determine the efficacy of training. To protect the dignity and well-being of all patients who come into the care of medical and mental health professionals, all

aspects of one's diverse human experience should be accounted for (Hand et al., 2013). This should include one's body shape and size, as current literature shows the complexities of weight (Foresight, 2007) and the negative impact that weight bias has on a person's well-being (Fettich & Chen, 2012; Puhl & Latner, 2007).

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Appendix A

Informed Consent Online Survey

***** Please complete this on a laptop or desktop computer *****

Informed Consent Online Survey

Researcher Affiliation: You are being asked to participate in an online survey for a research project being carried out by Alexis Dosal, MA, doctoral intern, at National Louis University.

Purpose: The study is occurring from 07-2022 to 06-2023. The purpose of this study is to understand how medical and mental health professionals make diagnostic decisions and choose interventions for a variety of patients. This study will help researchers develop a deeper understanding of how clinicians consider factors of a patient's presentation when making diagnostic and intervention decisions. This information outlines the purpose of the study and provides a description of your involvement and rights as a participant.

Data Collection: Please understand that the purpose of the study is to explore the decision-making process of medical and mental health professionals. Some aspects pertaining to the purpose of the study are being withheld until after participation is complete as to not affect the validity of your responses. Participation in this study will include Completion of the following online survey, expected to take approximately 20-30 minutes to complete. During this survey you will be asked to fill out basic demographic information including the degree you have obtained or are in the process of obtaining, gender identity, and race and ethnicity; complete 5 short vignettes where you will be asked to provide rule out mental health or medical diagnoses and/or a preliminary treatment plan; several questions to assess opinions surrounding patient care; and an implicit association task.

Inclusion criteria for this study include:

> All participants will be at least 18 years old, and

> Will be seeking or will have obtained one of the following degrees: Registered Nurse (RN), Advanced Registered Nurse Practitioner (ARNP), Advanced Practice Registered Nurse (APRN), Doctor of Nursing Practice (DNP), Physician's Assistant (PA), Doctor of Medicine (MD), Doctor of Osteopathic Medicine (DO), Licensed Marriage and Family Therapist (LMFT), Licensed Mental Health Counselor (LMHC), Licensed Clinical Social Worker (LCSW), Licensed Professional Counselor (LPC), Doctor of Psychology (PsyD), Doctor of Philosophy in Clinical Psychology (PhD), or PhD in Counseling.

> Currently seeing or have seen patients within the last year.

Voluntary Nature: Your participation is **voluntary** and can be discontinued at any time without penalty or bias. Compensation for participation in this study will be offered via a randomized drawing for 4 individual $25 gift cards to Amazon. Entry into the drawing will be **voluntary** and email for entry confirmation will be gathered separately from research data. Emails will be kept in a separate password protected folder and will be deleted immediately upon drawing of recipients. If you would like to be entered into the drawing, please use the following link to submit your email: [redacted].

Confidentiality: The results of this study will be published as part of the principal investigator's doctoral dissertation or otherwise reported at conferences, but participants' identities will in no way be revealed (data will be reported anonymously and bear no identifiers that could connect data to individual participants). To ensure confidentiality the data file of compiled results will be kept in a password protected folder. Only Alexis Dosal, MA and her dissertation chair, Dr. Elizabeth Lane, will have access to these data.

Risks/Benefits: There are no anticipated risks or benefits greater than that encountered in daily life. Further, the information gained from this study could be useful to medical and psychological programs as they consider training protocols and ways to improve their training programs for broader picture diagnostic and intervention treatment plans.

Sharing Results: Upon request you may receive summary results from this study and copies of any publications that may occur. Please email the researcher, Alexis Dosal at adosal@my.nl.edu to request results from this study.

Contact Information: In the event that you have questions or require additional information, please contact the researcher, Alexis Dosal, [redacted]

If you have any concerns or questions before or during participation that cannot be addressed by the researcher, you may contact the principal investigator's supervisor, Elizabeth Lane, PhD; email: elane3@nl.edu; or the co-chairs of NLU's Institutional Research Board:

Dr. Shaunti Knauth; email: Shaunti.Knauth@nl.edu; phone: (312) 261-3526 or Carla Sparks; email: csparks3@nl.edu; phone: (813) 928-6889.Thank you for your consideration.

Consent: I understand that by checking "Agree" below, I am agreeing to participate in the study. My participation will consist of the activities below:· Completion of an online survey taking approximately 20-30 minutes to complete.

I also understand that by checking "Agree" below, I am attesting that I meet the following inclusion criteria:

· I am 18 years of age or older

· I will be seeking or will have obtained one of the following degrees: Registered Nurse (RN), Advanced Registered Nurse Practitioner (ARNP), Advanced Practice Registered Nurse (APRN), Doctor of Nursing Practice (DNP), Physician's Assistant (PA), Doctor of Medicine (MD),

Doctor of Osteopathic Medicine (DO), Licensed Marriage and Family Therapist (LMFT), Licensed Mental Health Counselor (LMHC), Licensed Clinical Social Worker (LCSW), Licensed Professional Counselor (LPC), Doctor of Psychology (PsyD), PhD in Counseling, or Doctor of Philosophy in Clinical Psychology.

· I am currently seeing or have seen patients within the last year

ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that you have read the above information, you voluntarily agree to participate, and you are 18 years of age or older.

Appendix B

Demographics

If you have previously graduated, which degree do you hold?

- Doctor of Medicine (MD)
- Doctor of Osteopathic Medicine (DO)
- Doctor of Philosophy in Psychology (PhD)
- Doctor of Psychology (PsyD)
- Physician's Assistant (PA)
- Registered Nurse (RN)
- Advanced Registered Nurse Practitioner (ARNP)
- Licensed Mental Health Counselor (LMHC)
- Licensed Marriage and Family Therapist (LMFT)
- Licensed Clinical Social Worker (LCSW)
- Licensed Professional Counselor (LPC)
- PhD in Counseling
- N/A - Have not graduated yet.

If you are in the process of obtaining a degree, which degree will you graduate with?

- Doctor of Medicine (MD)
- Doctor of Osteopathic Medicine (DO)
- Doctor of Philosophy in Psychology (PhD)
- Doctor of Psychology (PsyD)
- Physician's Assistant (PA)
- Registered Nurse (RN)

- Advanced Registered Nurse Practitioner (ARNP)
- Licensed Mental Health Counselor (LMHC)
- Licensed Marriage and Family Therapist (LMFT)
- Licensed Clinical Social Worker (LCSW)
- Licensed Professional Counselor (LPC)
- PhD in Counseling
- N/A - Already graduated.

What is Your Gender Identity?

- Cis Male
- Cis Female
- Trans Male
- Trans Female
- Non-Binary
- Gender Fluid

What is your Racial Identity?

- Caucasian
- Black or African American
- American Indian or Native Alaskan
- Asian
- Native Hawaiian or Other Pacific Islander
- Other

Do you identify as Hispanic/Latinx?

- Yes

- No

Have you received official training or attended workshops/conferences that discuss a Health at Every Size or utilizing an Intuitive Eating approach to health?

- Yes
- No

During your academic training, were you provided resources or information about the Health at Every Size initiative or the use of Intuitive Eating Practices?

- Yes
- No

During your academic training, what amount of time was spent discussing or preparing your for addressing eating behaviors, disordered eating, and weight-related bias in your patients?

- 0%
- Less than 25%
- Less than 50%
- 50 - 75%
- More than 75%

Have you ever been considered overweight or fat?

- Yes
- No

Appendix C

Beliefs About Obese Persons Scale

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.

Appendix D

Anti-Fat Attitudes Questionnaire

The AFA is scored using a Likert-type response format (0 = very strongly disagree; 9 = very strongly agree). Higher scores indicate stronger anti-fat attitudes.

Dislike

1. I really don't like fat people much.

2. I don't have many friends that are fat.

3. I tend to think that people who are overweight are a little untrustworthy.

4. Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people.

5. I have a hard time taking fat people too seriously.

6. Fat people make me somewhat uncomfortable.

7. If I were an employer looking to hire, I might avoid hiring a fat person.

Fear of Fat

8. I feel disgusted with myself when I gain weight.

9. One of the worst things that could happen to me would be if I gained 25 pounds.

10. I worry about becoming fat.

Willpower

11. People who weigh too much could lose at least some part of their weight through a little exercise.

12. Some people are fat because they have no willpower.

13. Fat people tend to be fat pretty much through their own fault.

Appendix E

Vignettes

Vignette 1: Mary is a 28-year-old, average weight (BMI = 19), Caucasian female with no prior health diagnoses. She presents with complaints of migraines that occur two times per week and impair her ability to perform daily tasks including work, household chores, or hygienic routines. There is no family history of migraines and no history of traumatic brain injury. Mary's experience with these chronic migraines have led to feelings of frustration regarding her lack of ability to complete her daily tasks and anxiety surrounding when another migraine will begin.

Vignette 2: James is a 30-year-old Black male without any significant personal medical or psychiatric history. He presents with complaints of dizziness, depressed mood, fatigue, and trouble sleeping. His BMI is 24. He has a family history of high blood pressure and high cholesterol.

Vignette 3: Amy is a 29-year-old Asian female who presents with fatigue, lightheadedness, irregular menstruation, social anxiety, and heart palpitations. Her current BMI is 16. She reported losing 15 pounds in the last month.

Vignette 4: Elizabeth is a 22-year-old, overweight (BMI = 27), Caucasian female with no prior health diagnoses. She presents with complaints of migraines that occur two times per week and impair her ability to perform daily tasks including work, household chores, or hygienic procedures. There is no family history of migraines and no history of traumatic brain injury. Elizabeth's experience with these chronic migraines have led to feelings of frustration regarding

the lack of ability to complete her daily tasks and anxiety surrounding when another migraine will begin.

Vignette 5: Janelle is a 20-year-old Black female who presents with fatigue, lightheadedness, irregular menstruation, social anxiety, and heart palpitations. Her current BMI is 34. She reported losing 15 pounds in the last month.

Appendix F

Debriefing

Debriefing Form for Participation in a Research Study

Florida School of Professional Psychology

Thank you for your participation in our study! Your participation is greatly appreciated.

Purpose of the Study:

Earlier in our consent form we informed you that the purpose of the study was to gain information about how you diagnose patients with generic symptoms and the most common recommendations made for these ailments. In actuality, our study is about how implicit and explicit weight bias may affect one's decision-making process in regard to diagnosis and treatment recommendations. The full purpose was withheld at the beginning of the study to allow for a true depiction of your diagnostic plan and recommendations without concern that you were being assessed for weight bias in these actions. We expect to find that clinicians with higher implicit or explicit weight bias will provide diagnoses and treatment recommendations to patients in larger bodies that strongly focus on weight reduction rather than true symptom reduction which is likely seen more often for patients in thinner bodies.

Unfortunately, in order to properly test our hypothesis, we could not provide you with all of these details prior to your participation. This ensures that your reactions in this study were spontaneous and not influenced by prior knowledge about the purpose of the study. The vignettes provided for which you were asked to provide a diagnosis and treatment recommendations were not looking at your general diagnostic and treatment planning methodology, but rather to determine whether treatment recommendations would differ depending on weight-based descriptors. If we had told deception, actual purposes of our study, your ability to honestly provide diagnostic and treatment recommendations could have been affected. We regret the deception, but we hope you understand the reason for it.

Confidentiality:

Please note that although the purpose of this study has changed from the originally stated purpose, everything else on the consent form is correct. This includes the ways in which we will keep your data confidential. Your data remains anonymous, and no IP addresses were obtained during this study. There are no pieces of identifying information to connect you to your responses.

Now that you know the true purpose of our study and are fully informed, you may decide that you do not want your data used in this research. If you would like your data removed from the study and permanently deleted, please contact the primary investigator, Alexis Dosal, at her email[redacted]

Please do not disclose research procedures and/or hypotheses to anyone who might participate in this study in the future as this could affect the results of the study.

Final Report:

If you would like to receive a copy of the final report of this study (or a summary of the findings) when it is completed, please feel free to contact us.

Useful Contact Information:

If you have any questions or concerns regarding this study, its purpose or procedures, or if you have a research-related problem, please feel free to contact the researcher, Alexis Dosal at [redacted]. If you have other concerns about this study or would like to speak with someone not directly involved in the research study, you may contact the Chair of the Department of Psychology: Dr. Crystal Collier at ccollier4@nl.edu.

If you have any concerns about your rights as a participant in this study, please contact NLU Institutional Review Board co-chairs: Dr. Shaunti Knauth (Shaunti.Knauth@nl.edu; 312-261-3526) and Dr. Kathleen Cornett (kcornett@nl.edu; 844-380-5001).

If you feel upset after having completed the study or find that some questions or aspects of the study triggered distress, talking with a qualified clinician may help. If you feel you would like assistance, please contact:

Crisis Center Services

- National Suicide Prevention Lifeline - (800) 273-TALK/8255; En Español - (888) 628-9454
- SAMHSA's National Helpline - (800) 662-HELP/4357
- Crisis Text Line - Text HELLO or BADGE to 741741
- Disaster Distress Helpline - (800) 985-5990 or text "TalkWithUs" to 66746

Other Resources

- Colleges and Universities | COVID-19 | CDC: https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/index.htmlMental Health and Coping During COVID-19 | CDC: https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html
- Care for Yourself | CDC: https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/care-for-yourself.html
- Grief and Loss | CDC: https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/stress-coping/grief-loss.html

- Mental Health Resources in the Tampa Bay Area2-1-1 Tampa Bay Cares: Information and referral and crisis counseling - 2-1-1; Hillsborough - (813) 234-1234; Pinellas - (727) 562-1542
- Center of Revitalizing Psychiatry in Florida: (941) 621-3662
- BayCare Life Management-Tampa - (813) 936-0474
- BayCare Life Management-St. Petersburg - (727) 327-7656 Ext. 247 for Information
- St. Pete Behavioral Health Center Outpatient Services and Partial Hospitalization - (727) 895-8499
- Brandon Psychiatric Group, Medication Therapy and Counseling - (813) 373-9531

Centerstone in Bradenton - (877) HOPE123 or (877) 467-3123; https://centerstone.org/

In a serious emergency, remember that you can also call 911 for immediate assistance.

Further Reading(s):

If you would like to learn more about weight bias and the impact it has on the medical and mental health communities, please see the following references:

1. Garner, D., & Wooley, S. (1991). Confronting the failure of behavioral and dietary treatments for obesity. *Clinical Psychology Review, 11*, 729-780.

2. Hale, I. (2019). Improving care for patients with obesity by recognizing weight bias. *BC Medical Journal, 61*(5), 216-218.

3. Lyons, P. (2009). Prescription for harm: Diet industry influence, public health policy, and the "obesity epidemic." In E. Rothblum & S. Solovay (Eds.), *The fat studies reader* (pp. 75-87). New York University Press.

4. Nutter, S., Russell-Mayhew, S., Ellard, J. H., & Arthur, N. (2020). Reducing unintended harm: Addressing weight bias as a social justice issue in counseling through justice motive theory. *Professional Psychology: Research and Practice*, *51*(2), 106-114. https://doi.org/10.1037/pro0000279

5. Fikkan, J.L., & Rothblum, E.D. (2012). Is fat a feminist issue? Exploring the gendered nature of weight bias. *Sex Roles* (*66*), 575-592.

*****Please keep a copy of this form for your future reference. Once again, thank you for your participation in this study!*****

Appendix G

Belief About Obese Persons Scale

Belief About Obese Persons Scale:

Dear Alexis Dosal,
Dean Allison is delighted to hear of your interest in his research and delighted to grant your request. Unfortunately, he has not worked with these scales for some years and does not have additional details to provide at this time, other than the actual paper and scales (which are attached). He would be interested in hearing the results of your further work.

Should you need anything else, please let me know how I may be of assistance.
Best of luck with your dissertation!

Patricia
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http://www.publichealth.indiana.edu/

Anti-Fat Attitudes Questionnaire:

Yes, of course, you may use it for any non-commercial purpose.
--Chris Crandall
Professor of Psychology, University of Kansas
Past President, Society for the Psychological Study of Social Issues
Former Editor, *Personality and Social Psychology Bulletin*

Implicit Association Task:

Thank you for your message and your interest in Project Implicit's Programming Services. If you'd like to work with a Project Implicit programmer, the service fee largely depends on the complexity of the study design, with a single IAT starting at $4K. If you would like to learn more about this service, we invite you to schedule a call with our Research Team. If you do not have a budget or would prefer to build the study on your own, we provide access to **minnoJS**, the same open-source platform that we use for programming studies. If you have access to Qualtrics, there is also an extension for minnoJS available. You can find more information about both resources on our website. While there is no cost to use minnoJS or the Qualtrics extension, we are not able to provide technical support for building a study.

Thank you again for your interest in our work.
The Project Implicit Services Team