

WEIGHT BIAS AND SOCIAL WORK PRACTICE:

AN EMPIRICAL EXPLORATION

by

MELISSA McCARDLE

A dissertation submitted to the Graduate Faculty in Social Welfare in partial fulfillment  
of the requirements for the degree of Doctor of Philosophy,  
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## Abstract

## WEIGHT BIAS AND SOCIAL WORK PRACTICE: AN EMPIRICAL EXPLORATION

by

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There is ample evidence in the non- social work literature to suggest that weight bias by health and mental healthcare professionals is a serious social problem with very negative potential psychological, social, and medical consequences for obese clients. Despite the important role of social work practitioners in challenging various types of bias and discrimination, the topic of possible weight bias by social work professionals has been wholly neglected in the weight bias research literature to date. The purpose of the current study is to assess weight bias among social work clinicians and to determine its potential impact on social work practice. The study is based on a survey sample of 564 social workers who are members of the National Association of Social Workers. Respondents were mailed a self-administered questionnaire which included pre-existing measures of attitudes toward obese people, beliefs about controllability, and original measures of social work practice behaviors with obese clients, their own experience with obesity, and questions regarding the perceived importance of weight bias to social work practice. Significant relationships were found between beliefs about controllability of obesity and

negative attitudes toward obese people, as well as among beliefs about controllability, attitudes toward obese people and social work practice behaviors. Specifically, respondents who believed more strongly that obesity is under an individual's control tended to have more negative attitudes toward obese people overall. Further, those respondents with more negative attitudes toward obese people, demonstrated more negative practice behaviors in work with obese or significantly overweight clients. Respondents with higher Body Mass Indexes, with a family history of obesity, with more friends who are obese, and with higher percentages of obese clients in practice, demonstrated more positive attitudes toward obese people. Likewise, younger social workers demonstrated significantly more tolerance toward obese persons. Weight bias among female respondents was influenced by different variables than that of male respondents. Perception of the importance of weight bias to individual practice of respondents significantly differed from the perceived importance of weight bias to their clients, suggesting that level of value placed on weight bias may be an important factor in understanding social work's neglect of this issue to date. Overall, these findings suggest that weight bias does exist among social workers and it can negatively impact practice with obese clients. Implications for policy and future research are considered.

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## Chapter One

### Problem Statement

#### *Introduction*

While healthcare professionals are generally believed to be caring and committed to enhancing the lives of their patients, there is a growing body of literature that suggests many of these professionals maintain negative attitudes and beliefs about the overweight and obese clients they treat. (Kristeller & Hoerr, 1997; Kaminsky & Gadaleta, 2002; Foster et al., 2003; Block et al., 2003; Hankey et al., 2004; Loomis et al., 2001; Cowan et al., 1991; Teachman & Brownell, 2001; Young & Powell, 1985; Harvey & Hill, 2001; Reto, 2003; Hebl & Xu, 2001; Peternelji-Taylor, 1989; Anderson et al., 2001; Bagley et al., 1989; Campbell & Crawford, 2000; Fogelman et al., 2002; Harvey & Summerbell, 2002; Hoppe & Ogden, 1997; Maiman et al., 1979; Oberrieder et al., 1995; Price et al., 1987; Barr et al., 2004; Schwartz et al., 2003; Hare et al., 2000; Chambliss et al., 2004). Increasingly, these beliefs have been shown to result in an array of negative consequences for obese people in our society (Fabricatore et al., 2005). While the consequences of weight bias, or the inclination to develop unreasonable and negative judgments towards overweight or obese individuals (Brownell, 2005), have been widely demonstrated, there is considerable evidence that weight bias by clinical practitioners, may have consequences that are particularly damaging to the health and well-being of obese people.

Yet, despite the increasing evidence for weight bias among health, mental health, and other clinical professionals, few studies have examined the actual relationship

between negative beliefs and attitudes toward obese people and provider interaction with obese clients, among social workers. In essence, the relationship of weight-biased beliefs to practice, has been inconsistent in the literature to date. Speculation exists that weight bias may lead to differential treatment of obese clients, but as of yet, the empirical evidence to support this belief is limited.

The failure to include social workers in existing studies of weight bias among health and mental health care professionals is another critical issue. The few studies that have included social workers were either lacking in regard to measurement validity and reliability due to methodological concerns (Kaminsky & Gadaleta, 2002; Abramson, 1983) or lumped social workers in with other types of mental health care providers when sampling (Schwartz, et al., 2003; Kaminsky & Gadaleta, 2002; Teachman & Brownell, 2001). Consequently, there have been no attempts to date to understand the specific experiences of social workers in regard to obese clients and how these may influence beliefs and attitudes toward obesity and toward practice. This is of particular concern since many other disciplines have been studied independently such as psychologists, nurses, dieticians, etc. and differences among them have been found (Hankey et al., 2004; Schwartz et al., 2003; Kaminsky & Gadaleta, 2002; Harvey & Hill, 2001; Teachman & Brownell, 2001). It would be of great interest to know whether social workers, who practice in a field grounded in values of equality and social justice, would demonstrate similar biases and practice behaviors than that of other types of practitioners working with obese clients.

Further, there is little evidence that social workers, often considered the advocates for the underserved, have made significant attempts to address this problem or to

challenge the potential for social injustice that is inherent in weight bias as with any form of negative bias. The fact that social work as a field has been neglectful of the issue of bias toward obese people, is of concern as social workers are often a significant part of the forefront of movements to address various forms of disenfranchisement and injustice. Clearly, the failure of weight-bias researchers to include social workers in their studies of weight bias and the neglect by social work of this problem, suggests that there is much still unknown about the problem itself as well as potential avenues for addressing it.

Nonetheless, some studies have examined the relationship between healthcare professionals' beliefs about what causes obesity and negative attitudes toward obese people (Quinn & Crocker, 2003; Crandall, 1995; Wadden & Stunkard, 1985; DeJong, 1980; Allon, 1975). One current hypothesis holds that certain ideological perspectives, such as that of political conservatism, correlate with increased weight bias (Quinn & Crocker, 2003). In general conservative beliefs tend to focus on individual and behavioral causes for problems, rather than environmental or social ones. Several studies have examined the relationship between behavioral explanations for obesity and negative attitudes toward obese clients. In fact, a set of companion scales have been created to examine the relationship between beliefs about the causes of obesity and attitudes toward obese persons. Yet, the authors of these scales suggest that further validation is still necessary (Yuker et al., 1991).

More specifically, recent social work studies have begun to explore the relationship between other forms of bias and practice behaviors, in regard to other disenfranchised groups such as gays and lesbians. One such study focused on the creation of a scale to measure homophobic ideas and the impact of these on practice with gay and lesbian

clients (Crisp, 2002). Although to date, no comparable scale has been created to understand the relationship between weight bias and practitioner behavior, this is clearly an issue that deserves further exploration. An application of the Gay Affirmative Practice Scale (GAP) (Crisp, 2002) to weight bias, would be one such approach in using validated instruments to enhance understanding about weight bias among social workers.

Although weight bias has been extensively addressed in the literature on obesity, clearly there are several gaps that must be addressed before a complete understanding is possible. Until the relationship between beliefs and practice, the experience and role for social workers in challenging the problem, and further validation of existing scales, are accomplished, it is impossible to develop effective social work interventions and policies to prevent discrimination and injustice for an ever increasing segment of society.

This current study highlights the extent of the problem, reviews the literature that exists, and therefore contributes to closing the gaps in knowledge that remain about weight bias by health and mental healthcare professionals.

In order to grasp the significance of the problem of weight bias, it is necessary to understand the societal context in which it occurs, as well as the scale and scope of the problem. Therefore, the following section will begin with an overview of the prevalence and definition of obesity itself. The medical and economic consequences of obesity will then be reviewed in order to demonstrate both the significance of the obesity epidemic in the United States as well as the potential personal and social consequences of failing to provide adequate and comprehensive obesity treatment. The history and prevalence of weight bias will then be reviewed, followed by a discussion of its consequences. A theoretical perspective of the relationship between controllability beliefs and weight bias

will be presented to provide an understanding of one potential cause of weight bias that has received recent attention and to provide a framework for the current study. A brief discussion of the portrayal of weight in the media will be provided to further exemplify the extensiveness of this phenomenon throughout our society. This will also serve as an example of how culturally defined norms and values can contribute to social problems of this type. The relationship of social work practice and policy to weight bias will then be considered through a review of the legal and policy issues that have developed in relation to this social problem. The specific impact of weight bias by healthcare professionals will be examined in order to demonstrate why this particular problem can create serious and even life-threatening consequences for obese people in our society. Finally, a discussion of the importance of this social problem to the field of social work will be presented to provide a clear rationale for the current and future studies of weight bias among social workers. This comprehensive review will demonstrate that weight bias by clinical practitioners can result in a lack of adequate healthcare for the people who often need it most, further exacerbating this social problem.

### *Central Concepts*

#### *Obesity*

Obesity is generally defined as an abnormally high proportion of body fat; it is a medical condition affecting a significant portion of this society. Operationally, it is most commonly measured through the Body Mass Index (BMI), a specific formula combining height and weight. This formula has been widely accepted throughout the medical field during the past several years. The classifications for understanding BMI as identified by the National Heart, Lung and Blood Institute (NHBLI, 1998), are as follows: < 18.5 is

underweight, 18.5- 24.9 is a healthy weight range, 25-29.9 is an overweight range, and  $\geq$  30 is an obese weight range. The key to employing this formula for identification of obesity is that it uses height as well as weight to identify those at health risk due to excessive stores of fat in their bodies (Field et al., 2002). It is these excess stores of fat that are believed to place people at risk for various comorbid conditions .

During the past forty years, obesity rates have risen to epidemic levels throughout the world. Today, obesity ranks among the most significant medical conditions in the United States and many other developed countries. In the United States, approximately one-third of adults are obese. The consequences of obesity are evident in three hundred thousand adult deaths linked to obesity each year in this country. Obesity has been identified as a risk factor for diabetes, heart disease, stroke, hypertension, gallbladder disease, osteoarthritis, sleep apnea, other respiratory problems, and some forms of cancer including uterine, breast, colorectal, kidney, and gallbladder. (National Institute of Diabetes & Digestive & Kidney Diseases, 2003). Obesity also has economic consequences. Approximately one hundred and twenty- two billion dollars are spent every year in the United States on health care related to the treatment of obesity and obesity-related illnesses. (National Institute of Diabetes & Digestive & Kidney Diseases, 2003). Clearly, the economic and medical costs of obesity are significant.

### *Weight Bias*

As rates of obesity continue to rise, the issue of bias against the obese has emerged as a serious social problem. Bias towards obese individuals has existed for centuries, although its effects are only now being examined. (Stunkard et al., 1998). According to Stunkard et al. (1998), historical evidence from medieval times documents stigma

towards obese people in Japan where obesity was viewed as a consequence of moral failing. The authors contend that this type of stigma was also prevalent in Europe during medieval times when obesity was believed to be the result of gluttony, one of the seven deadly sins of Christianity. Bias towards obese people continues today and may in fact be increasing. As recently as 2003, Latner and Stunkard reported that bias toward obese individuals has increased during the past forty years (Latner & Stunkard, 2003). While the prevalence rates of weight bias continue to rise, it is the consequences of this bias which lead to the conclusion that it is a true social problem.

Many studies document weight bias among lay people and its consequences on the lives of obese people. (Maddox and Liederman 1969; Keys, 1955; Allon, 1975; Crandall, 1994; DeJong, 1980; Drury & Louis, 2002; Schwartz et al, 2003). Obesity leads to lower acceptance rates to high ranking colleges, lower salaries, reduced job opportunities and even lower marriage rates (Wadden & Stunkard, 1985; Puhl & Brownell, 2001). One particular study even demonstrated a negative correlation between political conservatism among parents and a willingness to provide financial college support for their overweight daughters (Crandall, 1994).

By contrast, when morbidly obese people do lose prodigious amounts of weight, for example through bariatric surgery, bias and discrimination are reduced; they experience improvements in the social, economic, and marital aspects of their lives (Bochieri, et al., 2002; Rand & Macgregor, 1990). Many studies document the improvements in quality of life, vocational opportunities and functioning, as well as relationships, following significant weight loss (Dymek et al., 2001; Rae, et al., 1993;

Arcila Psyhyc, 2002). Improvements in quality of life for formerly obese people may result from a reduction in experienced weight bias.

### *Portrayal of Weight in the Media*

Weight bias is evident, not only in the individual reports and experiences of obese people, but through the ways we learn our cultural ideals and societal values. Nowhere is this more apparent than through the portrayal of weight in the media. According to Greenberg et al. (2003), in the 1999-2000 television season, a review of two hundred and seventy five episodes from fifty-six television series, revealed that one out of every three women portrayed were underweight, while only three out of every one hundred were shown as obese. In the general population, according to the National Institutes of Health, only five percent of women are underweight; while one quarter are actually overweight (Greenberg et al., 2003). The implications of this type of idealizing an underweight body type for women, is that obesity is further seen as a negative and stigmatizable trait. Thinner characters are often perceived as more attractive and further, thinner characters are disproportionately represented in major television roles (Greenberg et al., 2003). Larger female characters are more often the objects of jokes and negative comments than thinner characters (Greenberg et al., 2003; Fouts & Burggraf, 2000). Finally, one study even demonstrated that audience laughter levels were stronger when negative comments on a television episode were directed at larger female actors (Fouts & Burggraf, 2000). Television has a strong influence on societal norms and values (Greenberg & Worrell, 2005), and the studies described above emphasize the negative attitudes toward obesity that are endemic in this society. These examples are not only reflective of the weight bias that presently exists; some studies suggest they also contribute to greater instances of

unrealistic body ideals and negative attitudes toward obesity (Tantleff-Dunn, 2004; Meyers & Bioca, 1992).

It is important to note that the evidence suggesting a direct media influence on weight bias is limited in that there are few experimental studies examining this relationship and those that do exist tend to measure the impact of weight portrayal in the media on individual body satisfaction, body-size distortion, and levels of depression (Tantleff-Dunn, 2004; Groesz et al., 2002; Meyers & Bioca, 1992; Waller et al., 1992; Pinhas et al., 1999). Therefore there is no direct correlation to weight bias per se; however, these findings do suggest that there is a consistent pattern of avoidance and disdain for obesity influenced by the media.

#### *Weight Bias Policy and Law*

While weight bias has been identified as a rather socially accepted phenomenon with clear social, occupational, and financial consequences, recently there has been an increased focus on legal issues and public policies that either contribute to or address this problem. Considering the scope of the obesity epidemic, some believe that the dearth of public policies designed to address obesity exemplifies the widespread belief that obesity is a personal problem and a consequence of poor willpower and deviance (Downey, 2005; USNews.com, 2004; DeJong, 1980; Maddox & Liederman, 1969). Some authors suggest that the disproportionately low funding for both obesity research and obesity campaigns are examples of the impact of weight bias on public policy. For example, in 2004, National Institutes on Health (NIH) obesity funding was approximately \$422 million (1.5 %) of the total budget, whereas NIH Alzheimer's funding was about 150% of the obesity budget. All of this occurred at a time when obesity affected about 15 times as

many people as Alzheimer's disease (Downey, 2005). Further, currently about \$1 billion dollars per year are spent on junk food advertising in the United States, while only \$4 million are spent on healthy nutrition campaigns (Center for Science in the Public Interest, 2004). It is possible that weight bias itself negatively impacts the development of policies and the types of funding allotted to address this very serious health epidemic of obesity.

According to Downey (2005) the lack of governmental support for education about the genetic and environmental causes of obesity, the failure of insurance companies to cover obesity treatment, and the dearth of efforts aimed at reducing weight-based discrimination, are further examples of the way weight bias influences public policy in this country. While there have been some policies designed to address the obesity epidemic, most focus completely on changing individual behavior, rather than societal changes. Many people perceive obesity to be a matter of personal choice (Connolly, 2003). This is reflected in the fact that between 1952 and 1999, there were thirty-six policy guidelines for obesity prevention developed by United States government agencies. All but three of them emphasized that the key to prevention was diet, exercise, or both. The remaining three mentioned that government interventions and responsibility must play a role in addressing the issue (Nestle & Jacobson, 2000). Clearly, the vast majority of policy-makers view obesity as an individual problem and therefore seek only individual solutions. This is another way that inaccurate beliefs about obesity are reflected in public policy.

An example of an attempt to address obesity in a non-biased and comprehensive way is also provided through policy ideas. "The Global Strategy on Diet, Physical

Activity and Health” by the World Health Organization (WHO) was proposed in 2004, making numerous recommendations aimed at halting the growing obesity epidemic, including changes in food advertising, packaging, labeling, pricing, preparation methods, as well as altering collective consumer behavior, dietary patterns, and physical activity levels. In essence, the policy was designed to address obesity on multiple levels, including response from government and the larger society (Center for Science in the Public Interest, 2004). The response from the current conservative presidential administration has been to call for reform of the policy to further stress personal responsibility to the virtual exclusion of strong governmental action. Further, they have responded by drafting a clause to the policy called “the personal responsibility clause” (Obesity Policy Report, 2004). Again, the perception of obesity as a result of personal failing and lack of willpower are subtly supported through these types of policy recommendations.

The reflection of weight bias is clear through many of the public policies designed to address obesity in this country. In conjunction with policy-makers, the court system has also demonstrated a failure to adequately address weight bias. According to Theran (2005), with few exceptions, there is a severe deficiency in the number of laws specifically designed to prohibit weight-based discrimination in this country. Beliefs about controllability of obesity, inaccurate knowledge about the environmental and genetic causes of obesity, and overall weight stigma interfere greatly with needed weight bias legislation (Theran, 2005).

While there is a scarcity of weight- based discrimination laws in the United States, existing anti-discrimination laws often fail to protect the obese. The American

Disabilities Act of 1990 (ADA) was designed to protect individuals from discrimination on the basis of physical or mental disability within the private sector or in state or local governments. Despite the fact that individuals are frequently discriminated against because of their weight in employment settings (Puhl & Brownell, 2001), almost no local or state court has been willing to accept overweight or obesity as a disability in and of itself (Theran, 2005). Further, throughout the United States, only two states (Michigan and Washington DC) and two cities (San Francisco and Santa Cruz) have existing laws banning discrimination based on weight (Theran, 2005). Clearly, both the lack of protection from existing laws, and the dearth of weight-based anti-discrimination laws demonstrate the scope of the impact that weight bias can have even on political and legislative levels. As social workers, often considered policy advocates for the undeserved, this clearly highlights an area that is need of our attention.

### *Healthcare Professionals*

Downey (2005) suggests that when examining the impact of weight bias, the first place to start is with healthcare institutions and healthcare professionals. The effect of weight bias is most apparent in this setting, as obesity is a physiologic disease with severe life-threatening comorbidities. Therefore, the presence of weight bias by healthcare professionals can have a particularly transparent and grave impact on obese people (Downey, 2005). While there are many consequences of weight bias throughout multiple levels of society, weight bias by healthcare professionals may be perceived as the most significant and also the most evident.

Health professionals in general have negative attitudes towards obese people. Doctors describe their significantly overweight and obese patients as ugly, weak-willed

and awkward. (Maddox & Liederman, 1969) and their negative attitudes towards obese patients may be related to the belief that these individuals are self indulgent and therefore immoral (Keys, 1995). Mental health providers, such as social workers and psychologists may be even less supportive of their obese clients (Kaminsky & Gadaleta, 2002), although further empirical support for such a finding is critically necessary. In one study of mental health professionals, obese clients were more likely to be rated negatively in various areas of psychological functioning than their “normal” weight counterparts (Young & Powell, 1985). Doctors, more than family, strangers, employers, were identified as the primary source of bias toward obese women and the second most frequent source among obese men in another large study examining weight stigma (Puhl & Brownell, 2006). Even some health professionals who specialize in obesity treatment are biased against their clients (Schwartz et al., 2003). What seems clear is that a “pervasive and powerful stigma” towards obese individuals continues among health providers and those attitudes may have negative effects on their treatment. (Stunkard & Sorenson, 2002; Sobal & Stunkard, 1989; Wadden & Stunkard, 1985).

As the negative impact of bias toward the obese has been demonstrated, there is also evidence that negative bias from healthcare professionals may have a particularly significant impact on obese people. Perceived bias may lead obese people to avoid medical care resulting in failure to obtain treatment for serious medical conditions. (Drury & Louis, 2002). Experiences of weight bias by healthcare professionals can lead to fear of medical appointments and medical professionals and as a result needed care can be delayed or avoided.

### *Relevance to Social Work*

Clearly obese people experience significant consequences as a result of weight bias by health and mental healthcare providers. Despite the inclusion of many different disciplines for study in the research literature on this topic, social workers have been largely ignored. This is of particular concern when attempting to understand the impact of an issue such as bias or discrimination as a tradition of the field of social work has long been to target and challenge various types of social injustice. According to the National Association of Social Workers' (NASW) Code of Ethics (1996), three of the core values of the profession of social work include social justice, dignity and worth of the person, and integrity. Further, the NASW Code of Ethics specifically states that a key ethical principle of the profession is to challenge social injustice and to fight discrimination. Considering the commitment of the social work profession in particular, to address inequity, to help underserved and disenfranchised groups, and to advocate for policy change to protect such groups (Popple & Leighninger, 2002; Mullaly, 1993), there is clearly an important role for social workers in advocating for legal and policy change to ban weight bias. Yet, here again, social workers are relatively absent in the literature on weight bias by practitioners in the health, mental health, and other clinical fields.

Although the profession of social work places value on equality and social justice, Crisp (2002) found that the field has been remarkably neglectful of certain other undeserved groups. One such population is that of gays and lesbians. According to Crisp, social works' neglect of the problem of homophobia, is an example of placing greater

value on heterosexuals and therefore perpetuating social injustice and bias. Further, there is evidence that this type of differential valuing by social workers may affect their practice in negative ways, possibly perpetuating further discrimination toward these and other undeserved groups (Crisp, 2002). Although weight bias and homophobia are different, the negative consequences that have resulted from both are clearly examples of social injustice and discrimination. Considering the lack of policy and legal protection for obese people, and the lack of social work inclusion in studies of weight bias, it is essential to obtain better understanding of the beliefs and attitudes of social workers toward obese patients, as such studies have been significantly helpful in understanding social work practice with other groups of disenfranchised persons (Crisp, 2002). It is a responsibility of the profession of those charged with promoting social justice, to ascertain both whether or not social workers are biased against obese clients and if so, the impact of that bias on their practice. It is only through such research can we assure ourselves that those charged with addressing bias and injustice, are not causing greater harm for the obese people they treat.

Bias towards obese individuals is a significant problem that can have detrimental effects on this growing segment of society. The fact that this bias is as pervasive as to impact on attitudes in children as young as 10 years old (Latner & Stunkard, 2003), increases concern over how this problem can be reversed. Of particular concern is the documented bias and stigmatization of obese individuals by their own medical and mental health providers, as well as the lack of inclusion of social workers in the literature on this topic. While there is need for greater examination of this particular problem, current evidence suggests that individuals trained to help and heal obese people may in

fact be harming their patients (Drury & Louis, 2002; Kaminsky & Gadaleta, 2002; Falkner et al., 1999; Fontaine et al., 1998). Further, the avoidance of medical care as a result of this bias, suggests that the consequences are substantial. The increase in obesity throughout the world supports the urgency to describe the beliefs and attitudes of social workers and to help them to examine their own biases toward obese people so that they are not perpetuating or contributing to an already serious problem. This is an essential process in order for social workers recognize the incompatibility of their values with the current practices that have been documented in other health and mental health fields. Further, this is a critical step in developing treatment approaches that are bias free. Until this happens, a growing segment of society is unlikely to receive the services they need and deserve.

## Chapter Two

### Review of Literature

#### *Introduction*

Outside of social work, the growth of research examining the issue of weight bias by healthcare professionals is significant. In order to grasp the significance of the problem of weight bias as well as the lack of recognition surrounding it, it is necessary to understand the societal context in which it occurs, as well as the scale and the scope of the problem. Recent publications clearly document the implications of weight bias by healthcare professionals for the obese as well as the society as a whole (Brownell et al., 2005), yet the literature has multiple gaps and contradictions that limit empirical understanding and social action. Therefore, the following section will begin with a review of the definitions most commonly used and the current state of knowledge of the etiology of obesity in order to differentiate between accurate and inaccurate beliefs about obesity and therefore to highlight the inaccuracies that are believed to lead to weight bias. Following this, there will be a review of diverse terms and definitions that are often used interchangeably to describe weight bias. An overview of empirical evidence will be presented followed by a more in-depth review of studies documenting both the prevalence of weight bias and its consequences. Specific studies of weight bias by healthcare professionals will then be reviewed, focusing on studies that examine the prevalence of the problem among this particular population, those that compare health and mental healthcare disciplines, those that assess patient experiences, those that assess practitioner experiences, those that explore potential relationships between biased beliefs and their impact on treatment of obese patients, those that examine the relationship between weight bias and other

potential mediating variables, and those that examine the relationship of other forms of bias to social practice. This is a critical step in establishing the breadth of empirical knowledge that has been accumulated to date, as well as to present existing gaps and inconsistencies in the literature. In essence, the problem of weight bias by healthcare professionals will be documented through a review of the literature examining the conceptual underpinnings as well as the potential consequences. Despite the existing evidence, what emerges from this review, is the need for additional knowledge about weight bias and its correlates, as there still remains significant gaps in the literature. It is necessary to obtain enhanced clarification in order to support a true understanding of this complex phenomenon. Ultimately, what will result from this research is a clear picture of what is known, some of the issues that are the subject of controversy and those correlates that will remain unclear. The importance of this current study in addressing some of these unanswered questions will then be presented.

#### *Explanations of the Etiology of Obesity*

Although obesity is most commonly identified through use of a BMI scale, its causes are understood in many ways. According to Tataranni & Ravussin (2002), obesity, an excess amount of fat stored in the body, results from “a chronic imbalance between energy intake and energy expenditure” (pg. 42). In other words, obesity is a chronic condition that is caused by a disproportionate amount of calories consumed when compared with the amount of calories burned. While this appears to be a basic formula leading to very clear individually-based interventions such as reducing caloric intake or increasing activity, these interventions consistently ignore the many biological, genetic, and environmental causes of obesity which are now known to be responsible for a

significant portion of the disease. Various studies consider alternative biological explanations for the etiology of obesity.

For example, genetic predisposition is believed to account for up to 70% of the variability in BMI in adults. Stunkard et al. (1990) conducted a study examining four groups of twins; 93 pairs of identical twins reared apart, 154 pairs of identical twins reared together, 218 pairs of fraternal twins reared apart, and 208 pairs of fraternal twins reared together. The purpose of this study was to determine the degree of genetic versus environmental influence on BMI. The authors determined that genetic influences were substantial in that identical twins reared separately, demonstrated much more similar BMIs (.70 for men, .66 for women), than even those fraternal twins who were reared together.

Allison et al. (1996) conducted a similar study of 53 pairs of identical twins, all of whom were reared apart. They also determined that genetic predisposition played a substantial role in influencing BMI; between 50- 70%. From the standpoint of external validity, it is important to note that this sample consisted of twins from a Japanese database, a series of American case studies and the Finnish Cohort Study. Therefore, the findings are thought to be somewhat generalizable to people of varying cultures and hold that genetics account for a significant amount of the correlation in BMI among identical twins. Yet, sample size was rather small here, and therefore, despite inclusion of various cultures, external validity is limited. Nonetheless, a critical point remains that the causes of obesity are not wholly behavioral as often assumed; rather they include a significant genetic component.

Understanding the role of genes in influencing BMI is important, it is essential as well to understand the various ways that genes can influence energy intake and expenditure. One important concept related to this influence is resting metabolic rate (RMR). RMR is the amount of energy that the body expends while an individual is at rest and in a comfortable state (Tataranni & Ravussin, 2002). Low RMR has been found through longitudinal study, to be a risk factor for increased weight gain (Ravussin et al., 1988) and has been shown through meta-analysis to contribute to high rates of weight regain among formerly obese persons (Astrup et al., 1999). As RMR is negatively correlated to obesity, it is important to note that studies suggest that it is at least in part, genetically determined (Bogardus et al., 1986; Bouchard et al., 1989). In summary, RMR is a biological correlate of obesity which has been identified as in part, a genetic predisposition. It is one of several of the genetic and biological determinants that put people at risk for obesity. Again, it is significant in demonstrating the multiple etiological factors contributing to obesity that are outside of one's personal or behavioral control.

Insulin sensitivity is another biological factor that has been correlated to obesity and may influence the way the body expends energy, particularly the way it oxidizes glucose. Insulin sensitivity is the total amount of glucose the body disposes of in response to the presence of insulin. In essence, insulin stimulates the metabolism of glucose and therefore insulin sensitivity is the amount of glucose that is disposed of in this process, within a given period of time. Higher rates of insulin sensitivity have been correlated with weight gain and obesity (Tataranni & Ravussin, 2002). Several longitudinal studies were conducted and actually found that insulin sensitivity is a predictor of weight gain and obesity (Swinburn et al., 1991; Valdez et al., 1994). Hence, an additional biological

factor has been identified that can influence the way energy is metabolized and expended in obese versus healthy weight people. Further, insulin sensitivity, as an etiological predictor, may contribute to the development of obesity in some people.

Another important biological correlate to energy expenditure is Sympathetic Nervous System (SNS) activity. According to Ravussin & Tataranni (2002), there is evidence that low SNS activity can be related to a number of key biological factors related to obesity and overall energy expenditure. Examples of some of the processes found through empirical study to influence SNS activity include RMR, spontaneous physical activity, and in the regulation of energy balance within the body. These authors report that norepinephrine, a hormone secreted through SNS activity, has also been found to be negatively correlated with body weight gain in one study of male Pima Indians; a group known to have a much higher rate of obesity than the general population (Tataranni et al., 1997). While the influence of SNS activity on weight appears to be a complex and multifaceted process, it is reasonable to conclude that there is an inverse correlation between SNS activity and the development of obesity (Tataranni & Ravussin, 2002). The complexity of the biological processes contributing to obesity is well demonstrated through these types of studies, leading to the conclusion that there are strong components of BMI that are not easily addressed through behavioral intervention alone.

Yet another important genetic factor related to the development of obesity is that of leptin. Leptin is a hormone produced by the *ob* gene that has been found to stimulate energy expenditure and decrease food intake. (Tataranni & Ravussin, 2002). In one study of Pima Indians, people who gained weight had significantly lower levels of leptin in

their systems than those who maintained their weight (Ravussin et al., 1997). Hence, some have used the term leptin resistant to identify those obese individuals who have lower levels of leptin in their bodies (Caro et al., 1997, Ravussin et al., 1997). These findings have led to a number of pharmaceutical interventions that have been specifically targeted to leptin resistant individuals. The purpose of this new class of medications is to stimulate the production and reuptake of leptin in order to stimulate energy expenditure and halt food intake; weight loss as the ultimate goal (Tataranni & Ravussin, 2002).

Also significant is a recently discovered neuropeptide hormone called ghrelin that has received a great deal of attention during the past few years. (Cummings et al., 2001, Cummings et al, 2002, Cummings & Shannon, 2003, Williams et al, 2003). As opposed to leptin, an increase in ghrelin seems to lead to increased hunger, which is a trigger for greater consumption. One current hypothesis is that some obese people who have difficulty controlling their food intake, may have difficulty regulating the amount of ghrelin in their systems (Cummings et al., 2001). Although much is still unknown, ghrelin, in particular, is now considered critical to research on the physiologic underpinnings of obesity. In fact, there is a significant amount of hope that this hormone may lead to further development of effective interventions to treat obesity. In examining all of these biological etiologies, one important issue here, is the manner in which enhanced understanding of the etiology of obesity influences the types of interventions that are developed to address this chronic disease. Of further importance, is understanding the way healthcare professionals use or do not use this knowledge and the available interventions that accompany it to help their obese patients.

While the genetic and biological factors contributing to obesity are very important to understanding its etiology, many researchers have emphasized that the current state of knowledge about its true cause lies in greater understanding of the interaction between genes and the environment (Price, 2002; Horgen & Brownell, 2002; Ravussin & Bogardus, 2000; Yanovski & Yanovski, 1999). According to Yanovski & Yanovski (1999), despite current knowledge that up to 70% of the variability in BMI may be related to genetic and biological factors, genetics cannot explain the marked increase in obesity rates during the past few decades. Some believe that it is the gene-environment interaction that explains the significant rise in rates of obesity in that as sedentary lifestyles and highly caloric diets become the cultural norm, genetic differences among individuals with regard to predispositions to obesity become highly magnified (Price, 2002). In essence, people who are genetically predisposed to obesity are the most vulnerable to what has been called the “toxic environment” (Horgen & Brownell, 2002).

Although most of the empirical evidence for this gene-environment interaction explanation comes from animal studies, there have been clear findings that genetic predisposition can influence one’s response to an environmental influence, such as diet or exercise norms (Price, 2002). Further, there have been few studies of direct environmental influence on obesity and therefore this is an area in great need of further research.

Despite these serious limitations in the current state of knowledge of environmental factors, there are several points to be made regarding the etiology of obesity in relation to the social environment. According to Horgen & Brownell (2002), despite the fact that there is so much pressure on people to be thin in this society and such a tremendous

industry geared toward individual health and individual weight loss (health clubs, diet centers, low-fat/ low-carbohydrate foods, media attention, etc.), there remains an increasingly serious obesity epidemic. Therefore, there is reason to believe that efforts that have been aimed at solely individual behavior, have been wholly unsuccessful. Some argue that the key to this lack of success lies in the failure to recognize the role of the environment in the development of obesity. The environment “promotes behaviors that cause obesity” (Hill & Peters, 1998, pg. 1371). In essence, while behaviors such as poor eating habits and lack of exercise cause the energy imbalance that leads to individual obesity, current efforts to intervene remain unsuccessful because they fail to acknowledge the social underlying influences of these behaviors. Critical environmental factors that have been identified as potential etiological causes include food availability and the portion size increases, typical diets of inexpensive and high-fat foods through fast food and other restaurants, reinforcement of low levels of physical activity in work and leisure, all of which have become quite prevalent in this and other developed countries around the world. It is these same countries which have experienced the sharpest increases in obesity rates (Horgen & Brownell, 2002; Hill & Peters, 1998). The structures of these societies are such that the environment contributes to increased energy intake and decreased energy expenditure (Horgen & Brownell, 2002). This is what is encouraged and supported. Horgen & Brownell (2002) summarize this understanding of obesity when they state “biology permits obesity to occur in individuals, but the environment causes obesity in the culture” (pg. 98). The key to enacting an effective intervention will be to include policies and programs that address the societal contributors as well.

### *Weight Bias*

An understanding of the empirical evidence for environmental and biological etiologies of obesity are particularly important when discussing the problem of weight bias. Some suggest that a failure to recognize the various environmental and biological causes, leads to an excessive focus on individual, behavioral causes and therefore individual blame of obese persons. Given the serious economic, social and health consequences of obesity to members of our society and the current gaps in the state of knowledge discussed above, many researchers have examined the failure to develop a comprehensive approach to combat it. Some believe that it is health professionals, policy-makers and general public who refuse to recognize the seriousness of the threat and refuse to prioritize it as a major public health problem (Hill & Peters, 1998). Others contend that the failure to develop comprehensive treatments that extend beyond the individual/behavioral level, is really an example of the implicit nature of weight bias in this society (Horgen & Brownell, 2002). The cultural attribution of faulting individuals for their problems with weight regulation has lead to very specific, individually-based approaches to addressing obesity; those that fail to acknowledge the role of the environment and one's biology. In some cases, these attributions have lead to direct expressions of bias and discrimination. In other cases, they have simply lead to a failure to recognize the other factors, environmental and genetic, that have lead to the problem (Horgen & Brownell, 2002). Regardless, weight bias emerges from this understanding as a set of beliefs about the etiology of obesity that is distinctly different from the current state of empirical knowledge. Therefore, for the purpose of this discussion, weight bias is a negative inclination toward people, based on the fact that they are visibly overweight or

obese, involving inaccurate beliefs about the etiology of weight gain at least with regard to recognition of the multiple factors that contribute to obesity.

### *Bias, Stigma and Discrimination*

Literature that examines the effects of bias towards the obese by medical professionals uses a number of concepts interchangeably. (Schwartz et al., 2003; Puhl & Brownell, 2001; Kaminsky & Gadaleta, 2002; Wadden & Stunkard, 1985; Maddox et al., 1968; DeJong, 1980). In his classic work, Goffman (1963) defined stigma as an attribute that is highly discrediting to an individual or group of individuals. Stigma is a characteristic that identifies an individual as different from the “norm”. The individual possessing the stigmatizing attribute has the potential to being seen as “less than a whole or usual person” (Goffman, 1963, p.3). Bias is defined as a bent, inclination, proclivity and one-sidedness (Merriam-Webster, 2003). Therefore, bias may be understood as the one-sided, often inaccurate, focus on individual, behavioral, and psychological characteristics that contribute to obesity. According to Teachman & Mallet (2005), bias can be understood as the way in which the thoughts, feelings, and behaviors of others are altered because of a stigmatizing attribute. Discrimination is behavioral expression of bias, stereotypes are the cognitive expressions of bias and prejudices are the affective expression of bias (Teachman & Mallet, 2005). While these definitions all refer to the process whereby negative attitudes impact a particular group, for the purposes of this paper, weight bias is nominally defined as a negative inclination toward people, based on the fact that they are visibly overweight or obese, involving inaccurate beliefs about the etiology of weight gain at least with regard to recognition of the multiple factors that contribute to obesity. Bias is to be used to describe the negative attitudes toward the

obese and discrimination is the actual behaviors that impact the obese, by those who are biased against them. Stigma will be used only to identify the specific characteristics that obese people maintain that may trigger bias from others. Goffman (1963) contends that the “visibility” of a stigmatized attribute can have a significant effect on the amount of bias and discrimination experienced. Some suggest that the ability of others to view the attribute readily, which occurs with physical disabilities and of particular interest here obesity, leads to greater initial bias and discrimination (Latner & Stunkard, 1998).

Obesity is clearly a condition that evokes negative feelings and responses within this country (Maddox et al., 1968) and the existing biases can have significant effects.

#### *Overview of the Empirical Evidence*

Studies aimed at understanding the phenomenon of weight bias have taken many different foci and employed different empirical approaches. Numerous studies have documented the negative attitudes toward obese people from children through adults (Latner & Stunkard, 2003; Stunkard et al., 1998; Maddox and Liederman 1969; Keys, 1955). Several of these studies particularly focus on the role of controllability beliefs in relation to weight bias (Quinn & Crocker, 2003; Wadden & Stunkard, 1985; DeJong, 1980; Allon, 1975). A different set of studies then examine the consequences of this type of bias on the lives of obese people. Some of these studies examine the specific negative effects of weight bias (Crandall et al., 2007; Cawley et al., 2006; Sobal et al., 1995; Crandall, 1995; Loh, 1993; Crandall, 1991; DeJong, 1980; Larkin & Pines, 1979), while a few look at improvements in economic and social functioning as formerly obese individuals lose weight (Arcila Psyhyc, 2002; Bochieri, et al., 2002; Dymek et al., 2001; Rae, et al., 1993; Rand & Macgregor, 1990). Finally, there are a number of researchers

who focus particularly on weight bias evident among healthcare professionals as a unique group (Schwartz et al., 2003; Kaminsky & Gadaleta, 2002; Keys, 1995; Young & Powell, 1985; Maddox & Liederman, 1969). Attempts to understand the presence of weight bias among healthcare professionals is particularly important as first, this is a group who are assumed to have specific knowledge of the true etiologic factors contributing to obesity, and second, the impact of weight bias by healthcare professionals may have very specific and detrimental effects on the lives of obese people (Puhl & Brownell, 2006; Drury & Louis, 2002; Packer, 1990). What emerges from this body of research is a picture that despite, increased understanding of the physiological and environmental causes of obesity, weight bias exists at multiple levels of society and seems to be marked by inaccurate beliefs about controllability and individual blame of obese persons. The valence of weight bias among healthcare professionals is particularly troubling, given their level of education and access to empirical data, as well as their particular role in directly treating obesity and/or obese patients with other diseases.

### *Prevalence of Weight Bias*

As rates of obesity continue to rise, the issue of bias against the obese has emerged as a serious social problem. Researchers have documented the rising prevalence rates in several ways. Latner & Stunkard (2003) replicated a study from 1961, demonstrating that bias toward obese individuals, among children, has increased during the past forty years. They studied a sample of 458 5<sup>th</sup> and 6<sup>th</sup> grade public school children and presented them with six drawings of other children who had various disabilities, obesity, or with no disability and appearing healthy weight. Children were asked to rank order the drawings in the order of how much they “liked” each child. Consistently, the authors report that

obese children were “liked” least of all. These were similar findings to the 1961 study (Richardson et al., 1961), but what was striking here was that the obese child was liked significantly less in 2001 than in the earlier study. The authors cite a 40% decrease in “liking” of the obese child in 2001. These findings were reported as reflective of the rise in weight bias over the past forty years. (Latner & Stunkard, 2003). While these findings are quite significant, it is necessary to note that there are limits to the external validity of the study in that this study was conducted on public school children only and therefore cannot be generalized to other groups. Further, reliability of the conceptual definition of “liking” as reflective of bias may be questionable. Despite these concerns, there seems to be some evidence that the prevalence rates of weight bias are on the rise. Of significance, there seems to be something specific about obesity, in contrast to other physical disabilities, that leads to higher levels of disliking. Weight bias as discussed above is one such possible explanation. Accepting this assumption, it is the consequences of this bias which lead to the conclusion that it is a learned response that starts at an early age.

### *Consequences of Weight Bias*

Many studies document weight bias among lay people and its consequences on the lives of obese people. (Maddox and Liederman 1969; Keys, 1955; Allon, 1975; Crandall, 1995; DeJong, 1980; Drury & Louis, 2002; Schwartz et al, 2003). One example of these consequences is that obesity may lead to lower acceptance rates to high ranking colleges. In a three part study by Crandall (1991), female undergraduate students (N= 833) were surveyed to determine the source of finances for their tuition payment. In each arm of the study, the author added questions not previously included that may have contributed to sample bias distortions or to mediating factors not previously considered,

such as socioeconomic status, parent's income, race and family size. The findings of the study, although acknowledged as modest, were that student's weight was negatively correlated with levels of familial financial support for college. By the third arm, each of these potentially mediating variables was controlled for. For these female students, a higher weight correlated with lower likelihood that their parents would financially support their attendance to college. In a similar study by Crandall (1995) a few years later, the issue of controllability was considered as the author examined a coed sample of undergraduate students (n=1,029) and explored the relationship between student's weight, financial support for college, parent's political orientation, as well as several other variables. Findings suggested overweight female undergraduates were less likely to receive financial support for college, particularly if their parent's maintained a politically conservative perspective. Interestingly, this relationship did not exist for male students in the study suggesting that gender may mediate the relationship between political conservatism, parental support and weight bias. The authors concluded that parental conservatism, related to beliefs about an individual's personal responsibility for problems, was related to their lack of willingness to pay for overweight daughter's education. They identify this as an implicit form of bias and discrimination. There were a number of limitations to the study, including the fact that generalizability was limited as the samples were taken from specific undergraduate institutions that maintained very low number of students of color or of various cultures. Further both studies were survey designs thereby limiting generalizability and the ability to carefully control for many possible mediators that were unrecognized. Despite study limitations, there does seem to be a negative relationship between daughter's weight and conservative parent's

willingness to pay for college, suggesting that female students may experience differential treatment and support from parents, based on their weight. This is illustrative of the way that weight bias may lead to discrimination. Further, these findings suggest that more must be known about the relationship between ideological beliefs and bias toward obese persons.

The impact of weight on employment opportunities has also been explored as another indicator that weight bias has significant consequences on the lives of obese people. One large study of male and female workers (n= 1,022 women, 1,274 men) examined the relationship between weight and salary (Loh, 1993). The data collection method was a large survey conducted as part of the National Longitudinal Survey Youth Cohort. The findings of this study suggest that obesity was not necessarily correlated with lower wages, though it was significantly correlated with lower wage growth, particularly for men. Although obesity correlated with lower wage growth for both genders, male obese workers were less likely to be given raises and promotions once they attained a position. Although survey designs are limited in numerous ways, this study is heavily cited by later studies as important to the field of weight bias. Further, the large sample size lent much to its credibility. Key to these findings was the recognition that weight bias can lead to discriminatory practices in the work setting. Further, gender may play a mediating role in this relationship.

Another study examined the relationship between work experience and weight. A sample of 120 participants (60 males, 60 females) was randomly assigned to watch a video of individual job applicants in simulated hiring settings. There were four categories of “interviewees”; healthy weight male, overweight male, healthy weight female, and

overweight female. The participants were asked to rate the “interviewees” in the video in terms of the degree they would be considered an “ideal employee”, “effective manager” and “motivated worker”. Next, participants were asked to rate whether or not the person appeared competent on various tasks they did in the video, that were “part of the hiring process”. Finally, participants were asked to rate whether they would recommend hiring this “interviewee” or not. Consistently, overweight interviewees were less likely to be recommended for hiring and were seen as less effective, less motivated and less ideal, than the healthy weight interviewees. Further, even when rated equally competent on certain tasks, the overweight interviewee were often “not recommended” for hiring. (Larkin & Pines, 1979). Again, there are limits to this study with regard to external validity as the participants were college students rather than actual employers. Yet, these individuals were preparing to enter the job market and to potentially be in the position of hiring others in the future. These findings certainly suggest that one’s weight may influence whether or not an employer chooses to hire them. These studies further substantiate the existence of weight bias, as obese people are perceived as less “competent” and are at greater risk to be discriminated against based on their weight.

It is important to note that weight bias exists in the social and relational arenas as well. A longitudinal survey of 5,789 participants found that obese women are more likely to marry later and to marry partners they perceive as less desirable (Fu & Goldman, 1996). Therefore obese women may be more likely to be prevented from satisfying marital relationships. This is a critical finding in demonstrating that weight may be a predictor, rather than just a correlate, in how future relationships develop, considering the longitudinal design of the study. A telephone survey of 1,980 married male and female

adults of varying BMIs, found that obese men had more marital problems overall. On the other hand the same study found that obese women reported less marital unhappiness (Sobal et al., 1995). Both of these studies suggest that gender may be a mediating variable to consider when exploring the relationship between weight and marital satisfaction, however this relationship requires greater clarification.

A large and recent survey study of 8,783 female adolescents and 8,236 male adolescents was conducted to determine how weight and height relate to ones dating and sexual activity during adolescence. Despite mixed results with some of the author's hypotheses involving height, weight was consistently found to be negatively related to dating for adolescent boys and girls (Cawley et al., 2006). According to Sobal (2005), weight bias does lead to difficulty entering into intimate relationships for obese women, and to some extent men. Clearly, another consequence of weight bias may be the negative impact it has on social functioning.

Another approach to understanding the impact of weight bias is to consider the potential for changes in social, economic and vocational functioning when obese people lose weight. When morbidly obese people do lose prodigious amounts of weight, for example through bariatric surgery, bias and discrimination are reduced; they experience improvements in the social, economic, and marital aspects of their lives (Bochieri, et al., 2002; Rand & Macgregor, 1990). Bochierri et al. (2002) conducted a literature review of 45 empirical studies, including 30 pre/ post experiments and found that overall following bariatric surgery, there is a positive relationship between weight, psychological distress and discrimination and a negative relationship to marital quality. The authors report that there were some inconsistencies in these findings, particularly with regard to marital

quality as discussed above (Sobal et al., 1995). Also, there was acknowledgement that a significant limitation of these studies is the inability to conduct randomized controlled experiments with a bariatric surgery population, as it is unethical to assign individuals to surgery on a random basis. Overall however, the authors reported that the quality of the studies included, was high enough to consider this review significantly credible. The findings were persuasive in demonstrating the numerous studies that have found reductions in weight bias and discrimination following weight loss. Many studies document the improvements in quality of life, vocational opportunities and functioning, as well as relationships, following significant weight loss (Crerand et al., 2007; Dymek et al., 2001; Rae, et al., 1993; Arcila Psyhyc, 2002). Improvements in quality of life for formerly obese people may result from a reduction in experienced weight bias.

In citing Sobal & Stunkard (1989), one group of researchers reported that one of the most significant developments in empirical understanding over the past several decades, has been that obesity is not the result of gluttony and lack of control, but rather is the result of a “genetically determined handicap” (Bochierri et al., 2002). These authors found multiple links between weight bias and beliefs about controllability, as they cited examples of the link between discrimination, bias and beliefs that individuals were to blame for this medical condition. They highlight empirical understanding as a significant development, because they believe that causes of weight bias are often related to lack of understanding of its physiological rather than psychological etiology. In summary, these studies have demonstrated that weight bias does exist, as they have documented a persistent pattern of differential treatment of obese people, at times, based solely on their weight. The fact that this treatment is almost always in the form of lowered opportunities

in the social, educational, and vocational arenas, suggests that a major consequence of weight bias is discrimination. Given the evidence and the growing population of obese people in this society, it is necessary to recognize weight bias as a serious social problem at this time.

*Controllability Beliefs/ Protestant Ethic*

While there is considerable documentation of weight bias as a social problem with serious consequences, much attention has also been paid to understanding some of the theories of what causes bias in some people. Although lack of empirical understanding about the genetic and environmental causes may be important, beliefs about the relationship between personal responsibility and weight maintenance have been also been examined as contributors to weight bias. Some believe that this relationship may contribute significantly to the problem. Some studies link weight bias to earlier beliefs about gluttony, weakness and self-indulgence (DeJong, 1980; Allon, 1975; Wadden & Stunkard, 1985). In a literature review, Wadden & Stunkard (1985) cite multiple studies demonstrating the negative connotations and biased beliefs that are common among the general population, with regard to obesity. Further, they indicate that several studies of healthcare professionals have found a strong connection between beliefs about obesity, immorality, and self-indulgence; often characteristics perceived of as at odds with the Protestant Ethic that is so highly regarded in our society (Crandall, 1994; Allon, 1975, Keys, 1955). More recently, the link between obesity bias and a Protestant Ethic ideology has been specifically identified in a study of college women (Quinn & Crocker, 2003). Quinn & Crocker (2003), asked 257 college women to rate their perceived weight status, their psychological well-being, their endorsement of hard work, personal responsibility,

and self-discipline (The Protestant Ethic Scale, Katz & Hass, 1988), their beliefs about the controllability of weight and finally, their attitudes toward overweight/obese others. The findings revealed that there is a positive relationship between endorsement of the Protestant Ethic and beliefs about controllability of weight status. There is also a positive relationship between endorsement of the Protestant Ethic and negative attitudes/dislike for overweight others. This is an important study as it explicitly links an ideological perspective focused on individualism and personal responsibility to negative attitudes toward obese people. Recognized as the dominant ideology in this country (Kluegel & Smith, 1986), the Protestant Ethic has been shown in studies to correlate with strong values of self control and obedience (Feather, 1984; MacDonald, 1972). As weight is an attribute often believed to be personally controllable (Allon, 1982, Goffman, 1963) obesity is often perceived as a moral failing. In fact, people are often held responsible for the bias and discrimination they experience (Crocker & Quinn, 2003). In essence, the dominant ideology, expressed through various means, impacts perceptions of obesity and the negative attributions that become part of its meaning in those who demonstrate weight bias. Beliefs that obesity is a reflection of failure in personal responsibility and immorality may develop through a process of a shared endorsement of Protestant Ethic ideology.

Much of the empirical evidence to date has focused on the role of controllability attributions in weight bias; however, many of these studies have suggested that other mediators are influential as well. Further, some studies have resulted in inconsistent findings. Anesbury & Tiggeman (2000) conducted an experimental design including 74 4th-6<sup>th</sup> grade children in the experimental group and 32 controls. In this study, children

were presented with a baseline set of questionnaires to measure both beliefs about controllability as well as degree of negative stereotyping of obesity. The intervention included a brief 10 minute discussion about the uncontrollability of obesity. The follow-up set of questionnaires indicated that while the intervention did decrease beliefs about controllability of obesity, it did not decrease negative stereotyping among these children. The authors emphasize that controllability beliefs were high for all participants at the baseline assessment, indicating that there is a significant amount of inaccuracy in understanding obesity, however, they conclude that interventions aimed only at controllability attributions may fall short of effectively decreasing weight bias. Future research may need to examine the complexity of mediating factors, as well as controllability, all of which may contribute to this serious social problem.

#### *Healthcare Professionals*

Downey (2005) suggests that when examining the impact of weight bias, the first place to start is with healthcare institutions and healthcare professionals. The effect of weight bias is most apparent in this setting, as obesity is a physiologic disease with severe life-threatening co morbidities. Therefore, the presence of weight bias by healthcare professionals can have a particularly transparent and grave impact on obese people (Downey, 2005). While there are many consequences of weight bias throughout multiple levels of society, weight bias by healthcare professionals is thought to be the most significant and also the most evident. Further, given their potential for increased access to empirical studies of obesity, it might be assumed that healthcare professionals would be immune to controllability attributions of obesity. The fact they are apparently not, is of particular interest and concern.

Health professionals in general have negative attitudes towards obese people. Doctors describe their obese patients as ugly, weak-willed and awkward (Maddox & Liederman, 1969) and their negative attitudes towards these patients may be related to the belief that they are self indulgent and therefore immoral (Keys, 1995). While there is need for greater examination of this particular problem, the current evidence suggests that individuals trained to help and heal obese people may in fact be harming their patients. The following section will explore the various aspects of the phenomenon of weight bias by healthcare professionals by examining the prevalence of weight bias by healthcare professionals, including both the impact of controllability beliefs as well as perceptions of competence on weight bias, comparisons between various groups of clinical practitioners on levels of weight bias, the impact that weight-biased beliefs can have on healthcare treatment, specific practice experiences that may impact the development of biased beliefs by clinical providers, patient experiences of weight bias by healthcare professionals, possible provider characteristics that mediate weight bias, and finally possible patient characteristics that mediate weight bias by the professionals trained to heal and help.

#### *Healthcare Professional Experiences*

It is important to recognize the multiple competing realities which are shaped by various experiences of different people (Guba & Lincoln, 1994). In developing greater understanding the issue of weight bias, it is helpful to examine subgroups within society to determine if there are certain meanings and experiences that shape their particular views. From a policy and practice perspective, healthcare professionals have been identified as a subgroup which, when exhibiting weight bias, can have a particularly

obvious and significant impact on obese people (Downey, 2005). This particular group can impact individuals and social problems on multiple levels considering their influence and position in the lives of others. Further, empirical evidence, and although somewhat inconsistent, does reflect the significance of weight bias, particularly by healthcare and other clinical professionals (Kristeller & Hoerr, 1997; Kaminsky & Gadaleta, 2002; Foster et al., 2003; Block et al., 2003; Hankey et al., 2004; Loomis et al., 2001; Cowan et al., 1991; Teachman & Brownell, 2001; Young & Powell, 1985; Harvey & Hill, 2001; Reto, 2003; Hebl & Xu, 2001; Peternelji-Taylor, 1989; Anderson et al., 2001; Bagley et al., 1989; Campbell & Crawford, 2000; Fogelman et al., 2002; Harvey & Summerbell, 2002; Hoppe & Ogden, 1997; Maiman et al., 1979; Oberrieder et al., 1995; Price et al., 1987; Barr et al., 2004; Schwartz et al., 2003; Hare et al., 2000; Chambliss et al., 2004).

While some believe the medical profession developed the “disease model” to help explain the genetic, hormonal, and biological causes of obesity, as a way to reduce bias and negative attitudes toward the obese, the literature suggests that the gains in reducing bias have been limited. Many healthcare professionals continue to identify the disease model as the “disease defense” (Reto, 2003), implying that they refuse to accept the physiological underpinnings of obesity, choosing instead to focus on blaming individuals for psychological and behavioral weaknesses.

Numerous studies document the existence of bias among various health professional populations including physicians, nurses, dieticians, fitness professionals, mental health professionals, and among medical, dietary, and exercise science students (Kristeller & Hoerr, 1997; Kaminsky & Gadaleta, 2002; Foster et al., 2003; Block et al., 2003; Hankey et al., 2004; Loomis et al., 2001; Cowan et al., 1991; Teachman &

Brownell, 2001; Young & Powell, 1985; Harvey & Hill, 2001; Reto, 2003; Hebl & Xu, 2001; Peternelji-Taylor, 1989; Anderson et al., 2001; Bagley et al., 1989; Campbell & Crawford, 2000; Fogelman et al., 2002; Harvey & Summerbell, 2002; Hoppe & Ogden, 1997; Maiman et al., 1979; Oberrieder et al., 1995; Price et al., 1987; Barr et al., 2004; Schwartz et al., 2003; Hare et al., 2000; Chambliss et al., 2004). Several studies have focused on physicians in the examination of weight bias by healthcare professionals. Fogelman et al. (2002) surveyed 510 Israeli Family Practice physicians and found that negative attitudes were prevalent among this group. They perceived their patients as less motivated and lazier than healthy weight patients, overall. Of interest, physicians did recognize the role of socialization and of media influence on patient's development of obesity, thereby indicating a greater recognition for other accurate etiological influences. Finally, they found that physicians in this sample perceive their competence in treating obesity to be quite limited. Hence, perceptions of competence may be important influences on attitudes toward obese patients by healthcare providers. Again, there is evidence that a relationship exists between negative attitudes toward obese patients and a treatment response from healthcare professionals. Additional studies are necessary to more fully understand how this relationship develops.

Physicians who perceive obesity to be the result of a behavioral or psychological problem, may not feel fully equipped to treat it (Foster et al, 2003). These beliefs may lead to physician's feelings of incompetence to address obesity as a medical problem. Foster et al. (2003) surveyed 5000 primary care physicians about a number of factors including their beliefs about the primary causes of obesity, their attitudes toward obese people, their beliefs about the efficacy of obesity treatment and several others. Findings

revealed that overall behavioral factors such as inactivity and overeating were perceived as the most important causes of obesity. One third of the sample rated poor willpower as a very or extremely important cause. Half of the sample (50%) perceived their patients as awkward, unattractive, ugly, and noncompliant. Further, of 10 chronic conditions provided, treatment of obesity was rated second lowest on perceived efficacy, only higher than drug addiction. Therefore, physicians have negative attitudes toward their patients, perceive the cause of their condition to be primarily within their behavioral control, and do not believe that medical interventions can be effective with obese patients. These findings suggest that negative attitudes and beliefs about controllability may also be correlated with feelings of helplessness to treat the condition.

Loomis et al. (2001) also conducted a study of physician attitudes toward obesity and the relationship of these attitudes to practice. 214 military Family Practice physicians were randomly selected and surveyed about their attitudes toward obese patients, the satisfaction they experience in treating obesity, their beliefs about the definitions of obesity as well as several other variables. One quarter (25%) of the sample identified lack of self control as a primary obesity cause, another 18% ascribed “sadness” as a descriptor of obese patients. Further, the majority of these physicians (56%) did not find weight loss counseling of obese patients satisfying. Of interest here, less than half of the physicians ascribed negative and individual characteristics (lacking control, sadness) to obese patients, suggesting that a contradiction in empirical understanding of weight bias exists. Perhaps there is something unique about military physician experience which decreases controllability beliefs or limits negative attitudes. These findings support the need for greater empirical understanding of weight bias by healthcare professionals, and perhaps

in particular, the practice and personal differences among providers, in their responses toward obese patients.

In exploring a different group of healthcare professionals, Hoppe & Ogden (1997) examined nurses' beliefs about obesity and their practice expectations. 586 practice nurses were surveyed and of particular importance here, were found to rate lifestyle as the main cause of obesity. Further, expectations of patient compliance and ability to be successful were found to be quite low. These findings suggest that perception of competence may play a role in how healthcare professionals perceive their obese patients as well as their perceptions of the barriers to success in treatment. Beliefs that individual lifestyle is the most significant factor in influencing obesity, can certainly contribute to bias as discussed above. Further, lowered expectations of success and perceived insurmountable barriers can lead to differential treatment and potential discrimination of obese patients. Further study is needed to substantiate the empirical support for such a relationship.

In another study exploring attitudes of nurses toward obese patients, a sample of 100 nursing students was randomly assigned to one of four groups; normal weight female, obese female, normal weight male, obese male (Peternelj- Taylor, 1989). In each category, the participant was shown a picture of one of the four hypothetical patients and asked to rate them on several scales (Nurse Evaluation of Patient Scale from Kaplan, 1982; Attribution of Responsibility Scale from Bochieri et al., 1985; and Care Delivery Decision Scale from Peternelj-Taylor, 1989). The findings revealed that nursing students do perceive obese patients more negatively than normal weight patients. Yet of interest, these nursing students did not attribute obesity to be the fault or responsibility of the

obese person, in this study. Also, nurse withdrawal from obese patients was not correlated with negative attitudes toward them. These findings indicate that while negative attitudes may exist for this particular group of healthcare professionals, the causes and correlates may vary as well as the level of impact on treatment. Hence, these findings raise questions about the universality of the relationship between negative attitudes and practice behavior. It is important to recognize here that a significant limitation of this study was the small sample of nursing students and therefore the external validity of these findings is low. It cannot be assumed that professional nurses will have similar responses toward obese patients and therefore further study is indicated.

Another study focused on comparison of healthcare students to professionals. Here the group which received particular attention with regard to weight bias, were dietitians. Accordingly, Oberrieder et al. (1995) conducted a survey study of dietetics students ( $n = 64$ ) and registered dietitians ( $n = 234$ ) in order to determine whether or not negative attitudes exist toward obese persons among these groups of healthcare professionals. Using a 47 item Likert-type survey of attitudes toward obesity (Bray Attitudes Toward Obesity Scale), the authors found that both students of dietetics and registered dietitians maintain negative attitudes toward obese persons. No difference between the two groups was found, although the sample sizes were clearly disproportionate. The authors emphasize that the significance of these findings lies in the suggestion that perhaps neither research-based evidence gained through training and education, nor practice experience, is sufficient to mediate negative attitudes among dietitians toward obese persons. They hypothesize that other important factors may be

more influential in understanding weight bias, but are quite clear in recognizing the limits of these findings in determining what those other influences could be.

Another study of dieticians (n = 187) was conducted to examine the relationship between beliefs about the causes of obesity (9 item original scale), attitudes toward obese people (Attitudes Toward Obese Person's Scale; Allison et al., 1991), and particular management practices (Harvey et al., 2002). The findings revealed that dieticians have more negative attitudes toward obese people than toward overweight people. Further, physical inactivity, mood, interpersonal factors, poor eating habits, and repeated dieting were seen as the most important etiological factors to obesity and overweight among this sample. Although, attitudes toward obese people tended toward neutral to positive, these findings do suggest that education about obesity has not been sufficient to diminish inaccurate beliefs about causes and personal responsibility. Obviously, even healthcare professionals can be influenced by controllability beliefs.

Another group of 400 Australian dieticians expressed negative beliefs about their ability to be effective with obese patients despite the fact that they believed weight management to be their specialty domain of practice (Campbell & Crawford, 2000). In this study, participants were mailed a self-report survey questionnaire about their views of obesity, their education and training in weight management, definitions and perceptions of efficacy, professional readiness to manage obesity, and several other variables related to specific practice strategies. The findings revealed that although these participants reported feeling that among healthcare professionals, dieticians as opposed to other professionals were the most appropriate and equipped to address obesity, a significant number believed that their training was inadequate and they did not perceive a

high level of efficacy in treating obesity. This suggests that perceptions of competence to treat and expectations of success are important variables to consider when examining the impact of attitudes toward obese patient by all healthcare professionals.

Similarly, Barr et al. (2004) conducted a survey study with 514 Canadian dieticians to assess their beliefs about obesity and overweight, their perception of their roles in treating obesity, their counseling techniques and their definitions of success. However, these researchers found that the dieticians they studied perceive an important role for themselves in treating obesity and that preventive techniques were perceived as more effective than treatment strategies. This suggests that at least some dieticians recognize the more broad environmental influences on obesity and have more accurate beliefs about its etiology. On the other hand, they believe that behavioral intervention strategies were most effective. While these complex findings are of interest, there are important limitations in their contribution to understanding of weight bias by healthcare professionals. First, unlike many other studies examining attitudes and beliefs, the measures used here focused much less on attitudes and more on empirical knowledge of physiology and co morbidity. Therefore, it is difficult to compare findings of beliefs about obesity in this study to that of other studies. Negative attitudes were not assessed here. Also, it is unknown whether preventive strategies here are operationalized as environmental strategies and therefore reliability of these findings is at issue. Further investigation is clearly needed as there are inconsistencies in what is known about the perceptions of dieticians toward obese people.

A study of fitness professionals (n= 330) explored their perceptions of obesity (Hare et al., 2000). The sample was a randomly chosen group of certified Health Fitness

Instructors, exercise specialists, and exercise test technologists. Each participant was asked to complete a 25 item self-report survey which examined beliefs about primary causes of obesity, access to empirical evidence of obesity, perceptions of the importance of weight on lifestyle, portion of practice involving obese patients, perceived role in treating obesity, and several other variables. The findings revealed that the majority of the participants worked with obese individuals (74%), overall felt that their role in counseling about obesity was important, and felt competent to do so. Most striking of these findings was that a statistically significant number of participants believed that psychological problems, poor eating habits, lack of activity, and excessive calorie consumption played the major role in development of obesity. A significant number of participants reported high access to research evidence such as journals, classes, seminars, and textbooks. Therefore, despite access to research evidence to the contrary, these exercise professionals continue to focus on individual, psychological and behavioral causes as most significant in influencing obesity. Clearly, empirical evidence is not sufficient to influence accurate understanding of the complex causes of obesity among exercise professionals.

Chambliss et al. (2004) conducted a study of 246 undergraduate (n= 136) and graduate (n= 110) students of exercise science to assess their attitudes toward obese people. This was identified as an important population to assess as their professional focus on exercise, will often place them in positions of great influence with regard to helping people lose weight. The researchers used both implicit (Implicit Associations Test) and explicit measures of attitudes (Antifat Attitudes Test; Lewis et al., 1997).As will be discussed in greater detail in Chapter 3, this is a useful means to understand both

automatic associations that individuals may make toward obesity, as well as the self-reported attitudes and negative beliefs that are held toward obese people. The findings of this study revealed that exercise science students do maintain implicit associations between obesity and “bad” and “lazy”. Further, there were relationships found between negative attitudes toward obesity and a belief that obesity is the result of poor personal control. Perceptions of laziness were correlated with negative attitudes toward obese people. These findings further substantiate the connection between negative attitudes toward obesity and beliefs that obese people are lazy and lacking self control, among exercise professionals.

Another study, focusing specifically on mental health workers, found that obese patients are more likely to be rated negatively in various areas of psychological functioning than their “normal” weight counterparts (Young & Powell, 1985). For example, Young & Powell (1985) showed 120 mental health workers case histories, including a picture of each of the “clients”. For each case, the history and current presenting issues were controlled and held constant; only the weight was altered. There were three pictures produced, of the same individual through technological adjustments; “best weight”, “overweight” and “obese”. Participants were asked to assess the client and assign “level of dysfunction” based on a number of items describing psychological symptoms and were asked to rate their own willingness to work with the clients, belief that a favorable outcome was possible and belief that their intervention would be useful. The results indicated that while willingness to work with a client, perceived prognosis, and perceived usefulness of the intervention, did not significantly vary between obese, overweight, and “best weight” clients, the obese clients were evaluated significantly more

negatively than the other two groups when considering psychological symptoms and functioning. This suggests that perhaps, for mental health workers feelings of professional helplessness and inadequacy are not related to negative perceptions of obese clients; rather something else was contributing to these negative evaluations. One speculation requiring further study would be whether or not controllability beliefs or possibly specific practice experiences have a negative influence on perceptions of obese patients. What is clear is that mental healthcare providers may perceive their obese clients negatively, on the basis of their weight alone. The impact of the bias does require further exploration.

#### *Professional Group Comparisons*

Few studies actually compare healthcare professional across disciplines; instead most focus on one professional group independent of the others. There are exceptions to this however, as demonstrated in a few key comparative studies on attitudes toward obese patients by various types of clinical providers.

Lack of understanding and inaccurate beliefs of the disease etiology of obesity were found in self-completed survey of physician general practitioners, nurses and dieticians (n= 1488). Lack of knowledge about how to deliver effective interventions was correlated with these beliefs (Hankey et al., 2004). This study was significant in that it explored the connections between controllability beliefs and practice interventions among various healthcare professional groups. This suggests few variations among healthcare professionals, based on different experiences in practice. As this was a survey design, the results are limited with regard to internal and external validity.

Harvey & Hill (2001) conducted a survey study of 255 clinical psychologists (n = 51) and general medical physicians (n=204). Each participant was mailed a self-report questionnaire and was asked to rate their beliefs and attitudes about one of four types of hypothetical patient; moderately overweight person, extremely overweight person, moderate smoker, or heavy smoker. The key constructs included in the survey were demographics of the participant, beliefs about the cause of overweight or smoking, attitudes toward the obese people or smokers, and perception of responsibility for their health risk of the obese person or the smoker. For the purposes of this study, the central measurement instruments used were those that used the Attitudes Toward Obese Persons scale (ATOP; Allison, 1991), Beliefs About Obese Persons scale (BAOP; Allison, 1991), as well as an original perception of responsibility scale. The findings of this study revealed that physicians were more likely to rate lack of willpower and personality as important contributors to obesity. Ironically, they were also more likely to acknowledge genetics as important etiological factors as well. General practitioners, rather than psychologists were more likely to have negative attitudes toward overweight and obese patients, however, both groups rated obese persons more positively than smokers. Obese patients were seen as personally responsible for their weight by both groups, however, less responsible than smokers. In summary, it seems that there were some differences between these two groups of healthcare professionals, however, the disproportionate sample sizes make valid group comparisons difficult. Further, it is possible, as these authors hypothesized that recognition of the genetic causes of obesity may relate to lowered perceived personal responsibility of patients, although further study is needed to substantiate this hypothesis. Further, these findings do support the relationship between

personal responsibility perceptions and negative attitudes. Future studies with similar designs, comparing groups of healthcare professionals will be necessary to enhance understanding of this complex relationship.

There are no studies assessing levels of weight bias among social workers as a unique healthcare professional group. Yet, a survey study by Kaminsky & Gadaleta (2002) of patient experiences, did attempt to examine differences between multiple disciplines, including social workers, with regard to treatment of obese patients. The authors surveyed 40 morbidly obese patients, who had recently undergone bariatric surgery to assess their perceptions of treatment by healthcare professionals of various disciplines, during their recent hospitalization. Even here, social workers and psychologists were lumped into one group in the survey, therefore, it is difficult to understand perceptions of social worker attitudes as separate from other groups in the behavioral health field. Participants were asked to rank their experiences of the attitudes of healthcare professionals as well as the appropriateness of equipment available at the facility where their surgeries were performed. Social workers and psychologists were compared to other groups such as radiologists, nephrologists, surgeons, primary care physicians, cardiologists, dietary staff, nursing staff, laboratory staff and several other groups. In perceived supportiveness, social workers and psychologists were ranked lowest of all groups, followed next by dietary staff. The authors speculate that education around the etiology and prognosis for obesity plays a significant role in moderating weight bias and negative attitudes toward obesity. In essence, they hold that physicians who are trained in the physiological underpinnings of obesity will be better able to support and understand their patient's needs. These findings contradict those of other

studies cited throughout this paper that document significant weight bias among physicians and other healthcare professionals who have knowledge of the genetic underpinnings of obesity. Therefore, more needs to be understood about comparisons of specific healthcare groups and the potential causes for variations in weight bias between them. Further, it must be recognized that the sample size of this survey study is particularly low, and this places substantial limits to the validity of the findings. Finally, as this study is designed to understand patient perception of various healthcare groups, it is also limited in contributing to further understanding of the professional's actual experience of weight bias, including its causes, correlates, and impact on practice behavior. Despite these limitations, this was an important first step in identifying social workers as influential to obese patients and in evaluating the influence of their attitudes on obese patients. Consequently, future studies should highlight social workers as a unique healthcare group with the potential to impact obese patients based on the attitudes and beliefs they hold about obesity.

A study by Teachman & Brownell (2001) sought to understand the relationship between implicit associations, or automatic descriptions and stereotypes, to explicit beliefs and attitudes toward obese people, among several different healthcare groups who all specialize in obesity work. The participants were 84 healthcare professionals, most of whom were physicians (72%). Other participants were nutritionists, pharmacists, and "other healthcare specialists". To assess explicit attitudes and beliefs about obesity, participants were asked to rate their perceptions of "fat people" and "thin people" on a number of adjectives such as good/bad, motivated/lazy, etc. This measure was developed by the authors. The scores from this explicit assessment were then compared to the scores

on the Implicit Association Test (IAT) (Greenwald et al., 1998) which requires participants to pair words or pictures in super ordinate categories and based on timing, matches the correctly paired to incorrectly paired items to determine the level of negative implicit attitudes toward obesity. The findings revealed that this group of healthcare professionals did demonstrate negative implicit associations of obese people, in both perceptions of them as lazy and as bad. On the other hand, they revealed negative explicit attitudes in that obese people were seen as lazy, but did not explicitly associate “badness” with obesity. Therefore, healthcare professionals were willing to explicitly acknowledge their beliefs that obese people were lazy, but were unwilling to acknowledge perceptions of them as bad, even though they implicitly hold these beliefs. Of interest, these authors compared the data from this study, to data from a similar study of the non-healthcare professionals; the general public. Overall, they found that healthcare professionals specializing in obesity, although weight biased, demonstrate lower levels of bias than the general population. Several important points can be made from these findings. First, healthcare professionals specializing in obesity, and therefore potentially able to access the most up to date empirical evidence, demonstrate high levels of weight bias. Further, there may be different processes contributing to the relationship between beliefs about obesity and negative attitudes toward obese people, as indicated in the variance between explicit and implicit results. Finally, further study is needed to understand the differences between healthcare professionals and the general public. For instance, are there practice-related experiences that actually decrease negative attitudes toward obesity, or does empirical evidence have a modest effect on bias?

A similar study, considered a landmark in the field of weight bias research, was conducted by Schwartz et al. (2003) on a larger sample of healthcare professionals specializing in obesity (N=389). In this study, the sample varied with regard to discipline in a somewhat more proportionate way in that there were physicians (n=122), researchers (n=134), dieticians (n=31), business people (n=28), pharmacologists (n=15), epidemiologists (n=14), psychologists (n=12), nurses (n=5), other obesity clinicians (n=18), and others (n=10). It is unclear what proportion, if any, were social workers. Also, it is important to note that while more than one-half of the sample did obesity-related research (64%), less than one-tenth worked directly with obese patients (9%), or both (24%). Therefore, although all participants worked in the field of obesity, level of access to empirical evidence about obesity and direct professional contact with obese patients, varied significantly. As in the previous study (Teachman & Brownell, 2001), participants were given both a brief explicit attitudes measurement scale as well as were administered the paper and pencil IAT. Unlike the previous study however, there was a significant explicit “anti-fat” attitude demonstrated in all areas including beliefs that obese people are bad, lazy, stupid and worthless. Further, implicit weight bias was also demonstrated to a significant degree. Also, there were significant relationships found between age, gender, having an obese family member or friend, direct work with obese people and weight bias. Females demonstrated more weight bias than males. Younger participants demonstrated more weight bias than older participants. Having an obese family member did not relate to level of weight bias, however, having obese friends was associated with lower levels of weight bias. Direct work with obese patients related to lower levels of weight bias.

These findings are noteworthy in a number of ways. Explicit and implicit weight bias among various healthcare professional groups was demonstrated and seems to exist even among those who specialize in obesity. In this study, greater levels of bias were found than in the previous study (Teachman & Brownell, 2001) and considering the increased sample size, this contributes to the validity of the findings. Further, several potential important mediating variables were found to be influential including age, gender and personal and professional experience with obesity. As the study did not specifically highlight the profession of social work and did maintain a disproportionate number of physicians, future studies should further seek to understand the role of these types of mediators among social workers. This will be critical in developing greater understanding of the shared meaning of obesity among various groups with different experiences. While the current research literature demonstrates that weight bias is evident among various clinical practitioners, what is less understood is whether the bias is manifested differently among different groups of professionals.

#### *Practice Experiences*

There is evidence that the specific practice experiences of some professionals, may impact the accuracy of the beliefs held about obese patients. In fact, through specific practice-related experiences, a perception of barriers to success may develop and this may be an important contributor to weight bias (Reto, 2003). There are some very specific physical and psychological demands that are placed on the staff caring for obese patients and these demands can impact beliefs about their patients. Morbid obesity makes it harder to start an IV, to get an accurate blood pressure reading, to maintain an open airway, to position, and to do CPR (Reto, 2003). Reto (2003) explains that this can lead

to feelings of powerlessness, fear, loss of control, and inadequacy on the part of nursing staff who care for these patients. She explains that the obese patient can represent the potential for failure and perceptions of impossible work for the medical nurse. These types of reactions can often lead to an aversion to the patients that elicit them. Caring for an obese patient can elicit feelings of fear and self-doubt on the part of the medical staff caring for them and this may result in greater negative bias toward them as a patient group.

Further, there is evidence that medical equipment, considered essential for treatment of obese patients, may not be sought by providers and this can lead to an inability to properly care for these patients (Kaminsky & Gadaleta, 2002). This equipment may be seen as expensive and cumbersome. Over time, consistent mistreatment may lead patients to avoid or refuse to comply with medical recommendations.

The morbidly obese patient may require specialized care, regardless of the medical issues they are being treated for. Many physicians report that pelvic examinations of obese women require increased technical skill (Fontaine et al., 1998). It is important to note, however, that many of these reports are provided as opinion pieces rather than empirical studies. A study by Fontaine et al. (1998) found that gynecological care is often delayed by physicians, however, the focus of this study was not on the actual technical difficulty of performing examinations on obese versus non-obese patients. Instead, the study was a survey of 6,981 female patients and sought to examine the correlation between BMI and use of health services. Further, a case study was conducted on physician reports of gynecological care provided to obese versus non-obese patients

and did not find obesity to be associated with less Pap-smear performance (Lubitz et al., 1995). Nonetheless, Reto (2003) emphasizes that specialized training of staff as well as specialized equipment and the potential need for additional staff to adequately meet the patient's needs, place greater demands on the medical staff caring for them. There is a strong perception that these specific requirements may also contribute to greater risk of injury to both the patient and the staff. Therefore, it is possible that fear about the safety of staff as well as the required specialization in training and equipment needed to treat the obese patient, can result in negative bias toward the obese patient. These patients can be perceived as burdensome and dangerous by healthcare professionals and attempts to avoid them or to encourage them to avoid treatment become common. What is clear is that there is a strong perception of increased risk and difficulty in caring for an obese patient, but future studies must determine if this perception is accurate with regard to technical skill and risk to staff and patients. It is further essential to begin to understand the role of this perception in leading to weight biased beliefs by healthcare professionals as the empirical evidence is wholly lacking in this area.

### *Patient Experiences*

Biased beliefs of healthcare professionals may impact the way they treat their obese patients. As one recent study of 222 obese men and women demonstrated that obese women identify doctors as their primary source of weight-based bias and men identify doctors as their second most common weight bias source, second only to classmates. For both men and women, the problem is significant (Puhl & Brownell, 2006). But, what is the impact of this inadequate or lesser treatment? Obese patients do not feel that their physicians provide effective obesity interventions (Murphree, 1994;

Wadden et al., 2000). Numerous studies document the fact that obese women often delay needed medical care. (Olson et al., 1994; Fontaine et al., 1998; Yanovski, 1998) It is important to examine the personal experiences of obese people to understand how biased medical care impacts their decisions to avoid or not comply with what has been prescribed. Additionally, there is evidence that negative bias from medical professionals may have a particularly significant impact on obese people. Perceived bias may lead obese people to avoid medical care resulting in failure to obtain treatment for serious medical conditions. (Drury & Louis, 2002). In one study, 216 women were surveyed and it was determined that there was a direct relationship between BMI and health care avoidance. Women reported that concerns about the response of their physician to their weight, were related to this avoidance (Drury & Louis, 2002). Another study found that 12.7 % of the 310 women surveyed delay or cancel medical appointments because of weight concerns (Olson et al., 1994). In a qualitative study, 20 female participants reported that they often feel disrespected and berated by their physicians because of their obesity. The findings of this study revealed that women frequently avoid or delay medical care, particularly for gynecological assessment and treatment (Packer, 1990). Experiences of weight bias by medical professionals can lead to fear of medical appointments and medical professionals and as a result needed care can be delayed or avoided. Of particular concern here, is that this is a population that more often need additional medical care because of the co-morbid conditions that are likely to accompany obesity.

Drury & Louis (2002) conducted a survey study of 216 women to determine if obese women delay medical care, if there is a relationship between self esteem and

delayed medical care, if there is a relationship between delayed medical care and personal responsibility attributions, and finally if there is a relationship between delayed medical care and satisfaction with medical care. The most significant finding of this study was that there is a positive relationship between BMI and delay of medical care. The authors report that societal and medical obesity stigma is the most influential factor in a woman's choice to delay or avoid medical care. Limitations of this study include the fact that obesity stigma was not clearly operationalized and therefore although a positive relationship was found between BMI and avoidance, it is difficult to know with empirical certainty that weight stigma is the key contributing factor. Future studies should explore more definitively the relationship between experienced weight-based discrimination and delay of medical care.

Fontaine et al. (1998) conducted a large-scale survey of six thousand nine hundred and eighty one women and found that obesity is correlated with lower rates of preventive health care for women. These authors contend that for many obese women, shame about disrobing and exposing their bodies to physicians can lead to avoidance of a number of health care tests. Clearly, mistreatment and discrimination can only increase these feelings of shame and embarrassment. As a group, obese people are more at risk for a number of life-threatening diseases and therefore it may be more important for them to seek preventive health care than for the average person. (National Institute of Diabetes and Digestive and Kidney Diseases, 2003). These findings suggest that perceived bias against the obese client may in fact contribute to avoidance of essential medical care and increased medical risk.

The personal impact of negative bias toward the obese can be found in numerous anecdotal reports. McAfee (2003) cites examples of verbal discrimination as patients share their experiences with bias from medical professionals. Following a bungled gynecological examination, one physician stated, “Well, probably no man would touch you anyway”. Another stated, “I don’t want to see you back here unless you’ve lost fifty pounds”. I have heard accounts of one gynecologist saying during an examination, “I hope I don’t get lost in here” and “When you go to a restaurant, do you just say ‘I’ll have the right side of the menu’”. Multiple accounts of verbal abuse by physicians can demonstrate the high levels of bias experienced by obese patients (Puhl & Brownell, 2001). Through these reports, it becomes evident that avoidance of medical care may be one way patients attempt to avoid weight bias, discrimination, and abuse.

Perceptions of bias by healthcare professionals are a common experience among the obese. (Falkner et al., 1999). One particular group of obese patients, those having bariatric surgery, have reported feeling misunderstood and mistreated by the medical professionals involved in treatment of their obesity. (Kaminsky & Gadaleta, 2002). Research suggests that these painful experiences with medical professionals may be related to prejudice against the obese and misunderstandings by doctors about the actual causes of obesity. Patient reports are one important means to understanding the relationship of bias to practice behavior, but as these studies and reports do not specifically measure the beliefs and attitudes held by practitioners, they are limited in substantiating this relationship.

### *Treatment Impact*

It is important to develop greater understanding of weight bias by healthcare professionals as there is empirical evidence that these attitudes may influence treatment of obese patients, and possibly lead to discrimination based on these biased beliefs. Unfortunately, the relationship between bias and practice behavior has been given only limited attention in the literature. Price et al., (1989) surveyed 318 family practice physicians about their attitudes toward obesity and the potential relationship to practice. Findings revealed that a significant number of physicians held negative attitudes toward obese patients including the beliefs that they are lazy, sad and lack self- control. Further, they found that most physicians recommend wholly behavioral approaches to address the obesity epidemic, including decreased calorie consumption (92%), participation in Weight Watchers (84%) and various behavioral and psychological approaches. While these approaches are clearly not inappropriate components to improvement of individual health and possibly reduction in obesity, what the authors emphasize is the fact that physicians may be failing to recognize important physiological and empirically supported interventions to help their patients, due to the fact that they focus wholly on negative attitudes and behavioral etiologies. Clearly, this indicates that negative attitudes may influence practice, thereby suggesting a level of discrimination by healthcare professionals toward their obese patients.

Kristeller & Hoerr (1997) surveyed 1,222 physicians from various specialties including family practice, internal medicine, gynecology, endocrinology, cardiology, and orthopedics, about their beliefs, attitudes and practice interests with regard to obesity. The findings of this study revealed a positive correlation between a physician's level of

interest in treating and learning about obesity, with their overall attitudes toward obese people. In other words, physicians with more positive attitudes tended to use more active treatment interventions with their obese patients, while those with more negative attitudes tended to use referrals to other providers as a primary obesity intervention strategy. Further, physicians who had more positive attitudes toward obesity were more likely to seek specialty training to enhance their empirical understanding of the disorder. Again, there is evidence that attitudes toward obesity among healthcare providers can significantly influence their professional response and treatment of their patients. Also, those with more positive attitudes may be more likely to seek the most current level of empirical knowledge and therefore may become best equipped to comprehensively treat obesity. Unfortunately, obese patients may not always be aware of these correlations and therefore risk treatment by providers who have negative attitudes toward them and therefore may be less educated and less prepared to effectively treat their condition.

#### *Practice Behaviors*

The problem of bias against stigmatized groups by healthcare professionals extends to many groups beyond the obese. In a qualitative study using both participant observation and in-depth interviews, Mizrahi (1986) examined an informal system established by a group of physicians in a large university medical center. The system was called GROPE (Getting Rid of Patients). GROPE was a mechanism to actively shun certain types of patients and “pass them off” to less experienced residents and other staff. One particular category of patients that were often GROPEd was those labeled “self abusers”. These were people who were seen as causing their own illnesses. The author contends that overeaters were considered one such group and were frequently GROPEd

by house staff physicians. Therefore, obese patients were given care from less experienced providers.

Another study of 122 physicians found that while more tests are prescribed for obese versus non-obese patients, physicians view obese patients more negatively and actually spend less time with them during appointments (Hebl & Xu, 2001). In this study, participants were randomly assigned to one of six groups receiving a “medical file” on a patient who was either, average weight female, average weight male, overweight female, overweight male, obese female, or obese male. The participants were asked to rate the patient on a number of attitudinal variables and also rate the amount of time they would spend and the types of tests they would prescribe. Obese patients were consistently viewed more negatively than other patients on 12 of 13 variables including several measures of perceived personal responsibility, perceived self-care, level of annoyance, etc. Further, physicians indicated they would spend significantly less time with obese patients than other patients. The findings suggest that quality of care is lowered for obese patients, and this differential treatment is influenced by beliefs about personal responsibility and lack of self control. Future research is needed to determine if care by less experienced staff and informal systems such as GROPing (Mizrahi, 1986), impact an obese patient’s avoidance of needed medical treatment.

Healthcare professionals may perceive their primary roles as treatment of physical disease and therefore feel unable to adequately address problems they perceive as falling outside of the “medical” domain. In essence, providers who maintain the belief that obesity is an individual and behavioral problem, may demonstrate negative expectations of their role and ability to effectively treat it. An important connection to understand is

how beliefs about controllability influence perceptions of one's role and ability to be effective. Medical residents have demonstrated a misperception regarding their roles in treating obesity. Block et al. (2003) surveyed 87 internal medicine residents about their understanding of obesity and their perceptions of their ability to effectively treat it. While the majority of participants accurately identified the medical consequences of obesity, most were unable to correctly identify the correct BMI scale (60%), almost a third were able to report treatment success (30%), and of great importance almost one third (31%) believed that medical treatment of obesity was futile. This study had a number of limitations including the small sample size for a survey design. Further, the fact that only internal medicine residents were surveyed significantly limits the generalizability of the findings to even other groups of physicians. It is difficult to substantiate whether the lack of perceived competence and the inaccuracies in judgment of how to measure obesity, was the result of the participant's trainee status or rather a reflection of weight bias. Further study is clearly necessary to understand the impact of obesity knowledge and training on perceived effectiveness, for other groups of healthcare providers, as well as medical residents.

Dieticians have also demonstrated that ambivalence toward obesity as well as feelings of incompetence in addressing it with their patients can negatively influence practice behaviors. Harvey et al. (2002) found that beliefs about the causes of obesity correlated with negative perceptions of obese patients, but not overweight patients, in one group of 158 British dieticians. The majority of participants believed that both obese and overweight patients were personally responsible for their condition. Most significantly, beliefs about the causes of obesity were found to influence practice decisions. For

example, a belief that the primary cause of obesity was psychological in nature was more likely to lead to referral to other providers, rather than active treatment by this group of dieticians. The authors acknowledge that although significant, these relationships were rather weak and therefore further investigation is necessary. Another limitation here was the relatively small sample size. Clearly, further understanding of the correlation between negative and/ or inaccurate beliefs and practice decisions of providers is an important means to unpacking the concept of weight bias by healthcare professionals.

#### *Potential Mediators/Provider Characteristics*

Research suggests that a significant factor in bias toward the obese by mental health practitioners was the practitioner's own weight. Obese and overweight practitioners are less likely to demonstrate bias toward their obese clients (Young & Powell, 1985; Schwartz et al., 2003). Also, healthcare professionals who have had personal successful experiences with weight loss were also found to have more favorable attitudes toward obese patients (Maiman et al., 1979). This suggests that levels of weight bias are increased in professionals who have not experienced the problem themselves. Mental health workers who have encountered weight problems may also be more aware and more sensitive to the negative effects of labeling of the obese. Females and younger practitioners demonstrated greater negative bias toward obese clients (Young, & Powell, 1985, Schwartz et al., 2003). In the study discussed earlier by Schwartz and colleagues (2003) being male, older, weighing more, and having obese friends were all related to lower levels of implicit weight bias among health professionals specializing in weight management. Therefore, it seems that gender, age and personal experience with obesity

among clinical practitioners may be important characteristics that impact attitudes toward obese patients.

In contradiction, another study looked at self perception of weight status and ease of weight management counseling for obese patients and found that physicians who perceived themselves overweight, did not significantly differ in their ease of counseling with obese patients (Perrin et al., 2005). In this survey study of 355 physicians, treatment recommendations for obese patients were not influenced by the weight of the provider. The authors caution that these findings require further substantiation through empirical study as there was a trending relationship found, although statistical significance was not reached. Therefore, it seems that there is inconsistent evidence regarding the correlation between personal characteristics of healthcare professionals and their treatment responses to obese patients. Future studies must explore the potential mediating factors that may influence weight bias and therefore the treatment of obese patients.

#### *Potential Mediators/ Patient Characteristics*

Certain patient characteristics may influence weight bias as well. In one study, gender was an important mediating variable whereby obese male patients reported shorter appointment times with their doctors than that of their non-obese counterparts; however, this was not the experience of obese female patients. As the authors discuss, shorter appointment times for a patient population that is at very high risk, can be viewed as inadequate care. This suggests that while weight bias by healthcare professionals is evident among various groups, there may be important additional patient-related factors mediating its expression (Hebl et al., 2003).

Examining the effect of patient characteristics on weight bias, Anderson et al. (2001) surveyed 209 physicians, specializing in family practice, gynecological, and internal medicine. The surveys described hypothetical patients and asked the physicians to rate their attitudes toward the patient as well as the treatment recommendations they would have for them. Half of the surveys depicted male patients and half depicted female patients. In each gender group, there were three separate patients described, each with a different BMI (32, 28, and 25). The findings revealed that female patients were more likely to be encouraged to lose weight, than male patients, controlling for BMI. Further, female patients were more likely to be given a referral to a different provider. Hence, gender was found to be an important mediator to physician response to obese patients. Further, this suggests that overall perception of obese patients may be influenced by additional factors, other than weight. Specifically differential treatment may be rendered to patients based on demographic and other characteristics such as gender.

#### *Social Work as a Mediator to Bias*

A case study by Abramson (1983), of a hospital-based obesity program, also examined the relationship of negative attitudes about obesity to practice behavior. Critically, the author was able to describe the way negative attitudes and discriminatory practice behaviors can develop as healthcare professionals become frustrated or experience helplessness with regard to obese patients and their treatment. Further, one potential practice intervention identified specifically for social workers was the role of “buffer” between obese clients, their families, and healthcare staff. In other words, the social worker in this study was the team member who was responsible for the success of the program and the patients. This was experienced by other staff as a relief and a way to

diminish feelings of pressure and stress which have been identified as potential triggers for negative attitudes toward obese patients (Mizrahi, 1986). Further, this social worker was the individual who maintained collaboration and communication between the patients, doctors, family, and other staff and was responsible for addressing psychosocial factors that had often been identified by other staff as falling outside of the domain of their expertise. Both of these roles were important in diminishing feelings of incompetence and frustration experienced by other healthcare practitioners, according to the author. Hence, this study demonstrates that professional discipline; specifically that of social worker, can mediate the impact of negative feelings toward obese patients. This was an important study as it was one of the few that included social workers in response to weight-biased medical care. Further, it was critically important in defining the specific role for social workers in addressing negative attitudes toward patients' and possibly challenging weight-biased healthcare. While this study was important in advancing the role for social workers in weight bias practice intervention, there were some limitations. First, this was a case study and therefore limited in external validity. It is not possible to suggest that other settings and other healthcare professionals will be as responsive to the social work interventions described here. Further, while examining the role for social workers in challenging weight bias, this study did not actually examine attitudes or weight-biased beliefs toward obese clients, by social workers. This remains an important issue that requires further study as the presence of weight-biased beliefs may also hinder the ability of social workers to fulfill the role defined here. Despite the limitations, this was an important study as it suggests the importance of including social workers in studies of weight bias and further identifies the need for future research studies that

include enhancing our understanding of the specific ways that social workers can intervene positively in challenging weight bias.

### *Impact of Bias on Social Work Practice*

A survey study of homophobia may be particularly helpful in advancing empirical understanding of the impact of the relationship between biased beliefs and social work practice behaviors. Crisp (2006), noted that although the relationship between bias and discriminatory behavior is often assumed, there are few studies that actually measure this relationship in a valid way. While there are many studies of bias among social workers and other practitioners, few examine the relationship of beliefs to behaviors in practice. The hypothesis of Crisp's study was that there is a positive relationship between beliefs about homosexuality and practice behaviors, whereby positive beliefs will correlate with more "gay affirmative practice". The author contends that while negative bias against disenfranchised groups is incongruent with the values of the social work profession, the true social problem is in how these beliefs can negatively influence practice behavior. The findings of this study revealed that of the 477 social workers and psychologists participating, those who reported positive attitudes toward their homosexual clients also demonstrated positive practice behaviors toward those clients. These findings are particularly important as they provide further evidence of a positive relationship between the bias and behavior of practitioners demonstrated through use of a specific scale created to measure such a relationship. They are also particularly significant to this discussion as this is one of very few studies which specifically reflects the attitudes and practices of the often neglected discipline of social work. Limits to external validity exist as this was not a study of weight bias and therefore it is not possible to suggest that the relationship

between homophobia and practice will be equivalent to that of weight bias and practice. Nonetheless, a measurement tool of practice with obese clients was developed in the present study, as an analog to Crisp's Gay Affirmative Practice Scale (GAP) and will be discussed further in Chapter 3.

### *Gaps & Controversies*

Although weight bias by healthcare professionals has been documented extensively, several areas of controversy and unanswered questions remain. The first and foremost of these is to unpack the contradictory evidence that currently exists around the level and extent of weight bias by clinical practitioners, particularly among those groups that have been left out such as social workers. For example, despite the fact that some studies have identified strong evidence of weight bias by healthcare professionals (Schwartz et al., 2003; Teachman & Brownell, 2001; Harvey & Hill, 2001), Anderson & Wadden (2004) found only 13% of 105 obese bariatric surgery patients reported feeling they were always or usually treated disrespectfully by their physicians. As discussed, Kaminsky & Gadaleta (2002) did find that patients perceive social workers, dieticians and psychologists as lacking support, however, overall found their physicians and most other providers supportive. Of significance, another survey study of 259 women, found the vast majority of patients (80%) reported almost never feeling criticized by their physicians, and further that negative attitudes from physicians were not the cause of the patient's resistance to seeking medical care (Wadden et al., 2000). This contradicts findings by Drury & Louis (2002) suggesting that weight stigma is a cause for medical care avoidance or delay.

Also, in almost identical studies, Schwartz et al. (2003) found significant explicit as well as implicit weight bias among a group of healthcare professionals specializing in obesity, yet Teachman & Brownell (2001) found no differences in explicit ratings of obese versus thin people with regard to “goodness” or “badness”, among a similar sample. In addition, while Teachman & Brownell (2001) found the presence of weight bias among healthcare professionals, they also found that the level of weight bias for this group, was lower than that of the general population. In a study by Fabricatore et al. (2005), obese patients reported less discrimination in healthcare settings than would be expected from a review of the literature on weight bias. Yet, these authors also emphasize that there are several limitations to these conflicting studies including problems with selection bias, small sample sizes, and several other issues related to external validity. Clearly, enough is not known about weight bias by clinical practitioners and future studies must first substantiate whether it does exist and if so, to what extent.

While it is necessary to determine whether or not weight bias exists among providers, it is also important to better understand what causes it. As discussed, there are multiple causes cited in the literature to date such as controllability beliefs (Quinn & Crocker, 2003), practice experiences (Reto, 2003; Kaminsky & Gadaleta, 2002; Peternelj-Taylor, 1989) and even a variety of mediating variables such as gender, age, and personal weight history of practitioners (Schwartz et al., 2003; Young & Powell, 1985; Maiman et al, 1979). Yet, there are many contradictions cited above in findings related to what causes clinical practitioners to maintain weight bias. It is necessary to better understand the role of mediators, practice experience, the impact of access to

empirical data about obesity etiologies, and one's level of ascription to controllability attributions in order to truly understand this phenomenon.

While understanding the causes of weight bias is critical to addressing, it is equally important to understand its effects. The relationship of attitudes and beliefs to practice behaviors has been demonstrated by authors in regard to other types of bias (Crisp, 2006), and to some extent by those studying weight bias (Crerand et al., 2007; Hebl & Xu, 2001; Kristeller & Hoerr, 1997; Price et al, 1989; Mizrahi, 1986), however, there are many inconsistencies. In particular, none of the studies of the influence of weight bias on practice have specifically used a scale that has been validated to measure this relationship. This is a critical next step in enhancing empirical understanding of weight bias.

Finally, a significant gap in the literature revolves around understanding the similarities and differences between clinicians from various disciplines. Of particular interest here, social workers have been almost wholly neglected in studies of weight bias by health and mental healthcare providers and, as previously discussed, the studies that have included social workers (Kaminsky & Gadaleta, 2002; Abramson et al., 1983), have significant limits to validity of the findings and/or group social workers with other behavioral health providers. Considering the commitment of the field to challenging bias and discriminatory behavior (NASW, 1996) and recent findings demonstrating the positive effects that social workers can have on practice with disenfranchised groups (Crisp, 2006), it is likely that the field of social work has much to contribute to the development of interventions designed to reduce weight bias. Yet, given the lack of

obesity-relevant research including social workers, their important role in this process cannot be clearly defined at this time.

What emerges from the current empirical literature is the knowledge that weight bias may be influenced by multiple interacting experiences and that enhanced understanding will only come as these experiences are unpacked and clearly delineated. Therefore, future studies must focus on weight bias among social workers and must seek further understanding the role of controllability attributions as well as other mediating variables. Perhaps most importantly, the relationship of biased beliefs to practice behaviors must be better understood. Only through recognizing these gaps as a significant problem, can researchers and clinicians begin to address the serious problem of weight bias by clinical providers. How can we adequately address the problem until we understand it thoroughly?

#### *Policy & Practice Implications*

The previous literature demonstrates that obesity bias is a significant problem with high costs. An implication of these findings is the need for increased sensitivity training and awareness about obesity. Simply teaching people that obesity is not a result of lack of controllability has not been effective in reducing obesity stereotypes, despite the fact this is a clear correlate to weight bias (Anesbury & Tiggeman, 2000). Further, interventions designed to increase empathy have not been able to significantly reduce weight bias (Gapinski, 2003). As neither empathy nor education independently, are able to impact the problem of weight bias, it is likely that effective interventions must be more comprehensive.

One program attempted to address the problem from an environmental approach. On a website called [ObesityHelp.com](http://ObesityHelp.com) forty-five pages are dedicated to teaching employers about obesity sensitivity. The site discusses ways to speak to obese people about their needs in an unbiased and direct way. The site provides quotes from numerous obese people about how they prefer to be treated. It also offers practical suggestions for enhancing the work environment to meet the needs of the obese employee. This is an example of the types of programs that must be developed to educate society about ways to reduce bias against obese people. While very interesting and informative, there was no information about the actual impact and effectiveness of this program. Further, the program targets employers, rather than clinical practitioners, and therefore may be addressing a very different set of mediating variables and contextual factors.

Wadden & Didie (2003) attempt to approach the specific issue of bias by healthcare professionals in a study examining the various terms physicians use to describe obesity. They surveyed 324 obese clients and asked them to rate these terms in order of desirability. Words such as “fatness”, “excess fat” and “obesity” were rated as significantly undesirable while the term “weight” was most desirable. This was an important step in using patient experience to inform physicians about ways to reduce bias and discrimination in their interactions with obese clients.

Fabricatore and colleagues (2005) suggest that environmental manipulation in healthcare settings can be another approach to minimizing bias and improving the experience of obese patients overall. Providing armless chairs, scales that weigh people who are more than 300 pounds, and having examination gowns, blood pressure cuffs, and examination tables that can support obese persons are fairly easy steps that can be taken

by healthcare professionals to increase comfort level of obese patients and to reflect a more validating and supportive attitude.

In minutes from a New York State Association of Family Practitioners (NYSAFP) Commission on Public Health meeting, a program called “Apple Wars” identified obesity sensitivity training as one of its primary objectives. This is a program designed to teach fifth graders about ways to develop healthy lifestyles and to enhance interactions between health care providers and children in communities. While this program has not been formally implemented yet, the planning of such a program suggests that increased sensitivity training about obesity and weight bias is an issue becoming important to physicians.

Unfortunately, available interventions to address weight bias by health and mental healthcare professionals are extremely limited. One of the barriers to developing effective interventions, may be that the problem, its correlates and causes are not wholly understood as of yet. Further, researchers argue that the most significant problem in addressing weight bias is the lack of legal and policy protection that are needed to protect individuals from weight-related discrimination. This lack of protection sends a wide-scale message about the types of attitudes and perceptions that are still acceptable in this society (Schlesinger, 2005; Downey, 2005). This may be the primary reason why some consider weight bias to be the last acceptable form of discrimination today (Puhl & Brownell, 2001).

Another critical issue is that none of the interventions described target differences among professional groups based on their differential experiences with obese patients. They address weight bias as a singular problem without recognizing the contextual

factors that may lead different groups of professionals to perceive their obese clients in various ways. While the literature has attempted to explore group differences among health and mental health care professionals, the findings have been inconsistent and limited. Comprehensive and effective interventions can only be developed when the nature of weight bias by practitioners is wholly understood.

### Summary

Bias against the obese is a serious social problem which can result in avoidance of medical care by the obese patient. Of particular concern is that this client population is at significant medical risk due to obesity. There are a number of characteristics and specific experiences among both clients and healthcare practitioners that may influence the level of bias experienced. Studies comparing levels of weight bias among groups of professionals often ignored in the literature, such as social workers, are important avenues for future research as little is currently known about this, further limiting the potential for developing effective interventions. The current evidence suggests that different professional groups develop negative attitudes toward obesity, in part, based in their professional experiences. Researchers have studied these groups independently for the most part and have wholly ignored social workers. Studies focusing on influential groups like social workers can serve to be both comparisons to existing studies and may offer new information not previously uncovered in studies of other health and mental health care groups. Social workers are a particularly important group to study as they are the primary profession charged with challenging bias and discrimination. In order to enlist their support in addressing weight bias, it is essential to understand the extent to which they as practitioners experience it. Therefore, the current study was designed to

assess the relationship of controllability beliefs and weight bias among clinical social workers as well as to assess the impact of weight bias on social work practice with obese clients. Other socio-demographic variables were included to assess the relationship of possible mediators to the above relationships. The following chapter will discuss the research design and methodology of this study, as well as the demographic characteristics and univariate analyses conducted.

## Chapter Three

### Methodology

#### *Research Design*

The purpose of the current study is to assess weight bias among social work clinicians. As discussed in Chapter 2, there is significant evidence in the non- social work literature to suggest that weight bias by practitioners from a variety of disciplines has become a serious social problem with very negative potential consequences for obese patients. Evidence suggests that obese patients may avoid medical care for fear of experiencing bias by the practitioners they come into contact with. Of equal concern, is evidence that clinicians may provide inadequate care as a result of the bias they maintain. Despite the important role for practicing social workers in challenging various types of bias and discrimination, little research exists to determine whether or not they maintain weight bias and what the potential impact of weight bias could be on their practice. Therefore, this study attempts to assess whether weight bias exists among social workers; whether controllability beliefs influence weight bias; whether there are other factors which either diminish or enhance their weight bias; and the influence of weight bias on social work practice.

#### *Instruments*

To understand the findings as well as controversies surrounding the phenomenon of weight bias by health and mental health professionals, it is essential to become familiar with various ways weight bias is measured through empirical studies. There are two types of measurement tools used to assess bias; overt and covert bias measurements. Most of the original instruments designed to measure bias were created to assess racial bias.

Drawing from the literature on racial bias, most of the early measurement scales of bias were designed to assess direct forms of prejudice and biased beliefs (Teachman & Mallet, 2005; Adorno et al., 1950; Bogardus, 1933). These studies were developed to measure negative beliefs, stereotypes and prejudiced behaviors toward people of color. Instruments of this type are overt measurement tools and are still used frequently today to assess bias among numerous groups.

According to Teachman & Mallet (2005), it was only after the 1960's, following the Civil Rights Movement, that direct expression of bias and hostility toward different social groups became less acceptable in a public and overt format. It was around the same time that researchers began to realize that while overt expressions of bias may have been decreasing; there was significant evidence of its existence, often in more subtle forms, such as support for policies that enforce segregation. In essence, individuals would say they are not negatively biased toward people of color, yet support policies that enforce segregation. This led researchers to consider alternate methods for measuring bias, such as measures of covert bias. Covert instruments were designed to uncover an individual's inherent biases, even when they report no bias overtly. There have been multiple types of these scales created to date (Teachman & Mallet, 2005; McConahay, 1983; Babad et al., 1989; Jones & Sigall, 1971). Through these developments, it is clear that the field of bias research has grown significantly in the past several decades. Through enhanced understanding of the concepts and how they surface for various individuals, a more defined and helpful set of tools have become available.

Covert bias can take many forms. Some researchers believe that certain covert biases, particularly those linked to biased beliefs, can be consciously controlled.

Prejudices can exist at a very automatic level, whereby stereotypes are automatically activated by the presence of a member of a stereotyped group. Yet, the individual harboring the biased beliefs is capable, through a process of dissociation, to respond without prejudice, because he/she is able to control the automatic stereotype (Teachman & Mallet, 2005; Devine, 1989). The model for studying this type of covert bias is known as “The Dissociation Model”. This is clearly a very cognitive process and one which has greatly advanced the field of bias measurement today (Teachman & Mallet, 2005).

While the field of bias measurement in relation to race has a fairly long and rich history, the field of weight bias measurement in particular is much more in its infancy. Since the 1960’s researchers have been developing scales to assess weight bias, however few have been used extensively and the psychometrics on them are somewhat limited (Teachman & Mallet, 2005). The approach to measurement of weight bias has taken many different forms including assessment of explicit attitudes through ranking of pictures and vignettes (Richardson et al., 1961), differences in level of weight bias among various ethnic groups (Sims, 1979), identification of stereotypes through adjective ratings (Staffieri, 1967), direct measure of anti-fat ideations as a parallel to racist beliefs (Crandall, 1994), direct measures of the stigmatization of obesity through a pair of measures designed to assess beliefs about obesity and attitudes toward obese persons (Allison et al., 1991), as well as specific measures of weight bias by health professionals (Bagley et al., 1989; Price et al., 1989). According to Teachman & Mallet (2005), many of these measures have promise in assessing the existence of explicit weight bias; however, several of those developed to directly measure weight stigmatization have been used in few studies and therefore have limited psychometrics available for them. The fact

that so much of the literature suggests that explicit weight biases are still quite present among practitioners (Kristeller & Hoerr, 1997; Kaminsky & Gadaleta, 2002; Foster et al., 2003; Block et al., 2003; Hankey et al., 2004; Loomis et al., 2001; Cowan et al., 1991; Young & Powell, 1985; Harvey & Hill, 2001; Reto, 2003; Hebl & Xu, 2001; Peternelji-Taylor, 1989; Anderson et al., 2001; Bagley et al., 1989; Campbell & Crawford, 2000; Fogelman et al., 2002; Harvey & Summerbell, 2002; Hoppe & Ogden, 1997; Maiman et al., 1979; Oberrieder et al., 1995; Price et al., 1987; Barr et al., 2004; Hare et al., 2000; Chambliss et al., 2004) indicates that further validation of these instruments are a high priority.

Studies demonstrate multiple possible correlates and causes of weight bias by healthcare professionals. While implicit measurement tools have expanded the field of weight bias greatly, there are certain explicit measurement tools that offer significant promise to understanding this phenomenon as well. As recent findings have highlighted several potential correlates to biased beliefs by practitioners (Quinn & Crocker, 2003; Crandall, 1995), increased attention has been given to finding ways to further validate and understand these findings. The companion scales of Allison, Basile, and Yucker (1991) are particularly important as they attempt to specifically relate one's beliefs about obesity and its causes, to the negative attitudes that are so pervasive in this society. Specifically, these scales seek to explore the relationship between controllability beliefs and negative attitudes and can be very useful in understanding between-group differences in regard to this. Attitudes Toward Obese Persons (ATOP) and Beliefs About Obese Persons (BAOP) are these two such scales (Yucker et al., 1991). Considering the inconsistencies that remain regarding the knowledge of various types of practitioners of

the causes of the disease of obesity and the persistent bias that has been demonstrated among them, it is important to conduct further investigation into whether or not beliefs about obesity vary among health professionals based on discipline. For example, a question posed by the current literature is, “does knowledge of the physiological underpinnings of obesity, such as that possessed by physicians, alter the types of attitudes they develop toward obese persons?” Harvey & Hill (2001) used these scales to answer just this type of question, and have clearly indicated the importance of additional studies to further support their findings.

To understand the benefit of these two particular scales in examining weight bias by healthcare professionals, it is necessary to understand the structure and conceptual makeup of them. The Attitudes Toward Obese Persons scale is a 6-point Likert-type scale consisting of 31 statements about obese people. Respondents are asked to indicate the extent to which they agree or disagree with each statement. This scale is designed to identify people who “exaggerate group differences and downplay or ignore within-group individual variability” (pg. 89) as this is believed to indicate stereotypical or negative attitudes toward obesity (Allison et al., 1991).

The Beliefs About Obese Persons Scale is a scale designed to measure respondent’s beliefs about the causes of obesity. It is an 8-item, 6-point Likert-type scale, whereby respondents are asked to rate their level of agreement with each statement. Each item reflects a statement about the etiology of obesity, reflective of a level of personal controllability.

The authors indicate that BAOP and ATOP tend to correlate between .40 and .45. They also emphasize that demonstrations of validity have been limited to construct and

content and therefore these scales, while quite promising, require significantly more testing of their psychometric properties (Allison et al., 1991).

Unfortunately, there have been few studies to date which have used these comparison scales to determine if attitudes differ among disciplines other than physicians (Harvey & Hill, 2001). Most of the existing studies examine one or two groups in isolation. Further, although there are a multitude of existing studies on weight bias among physicians, the specific companion scales (Allison et al., 1991) require further tests of validity and reliability to demonstrate their effectiveness in accurately assessing weight bias among various groups of clinical practitioners (Teachman & Mallet, 2005). To address these limitations, further validation of these instruments is necessary through a study of weight bias. Therefore, the current study includes both the ATOP and BAOP in order to assess the relationship between controllability beliefs and weight bias.

While ATOP and BAOP hold much promise for enhancing empirical understanding of the role of controllability beliefs in impacting weight bias, they offer limited information about the relationship of this potential bias on practice behavior. Unfortunately, all existing studies of the relationship between beliefs and practice in regard to obesity, have used non-validated measures of practice and there is little evidence to assure that the operationalization of practice is a valid one (Block et al., 2003; Harvey et al., 2002; Hebl & Xu, 2001; Kristeller & Hoerr, 1997; Price et al., 1989; Mizrahi, 1986). No specific scales have been created in the field of weight bias to measure weight-based discrimination in practice. However, in a related social work field, one author recently created a scale of affirmative practice behaviors, in her study of “Gay Affirmative Practice” (GAP). In this study of the impact of homophobia on biased

practice with gay and lesbian clients, Crisp (2006) developed a scale specifically to assess the relationship between biased beliefs and practice behaviors. The current study uses an original measurement instrument which was created as an analog to the GAP to assess weight-biased beliefs and practice behaviors.

### *Research Design*

The current quantitative, descriptive and exploratory study has four operationally specific aims. The first is to provide further testing for validation and reliability of two well-known companion measures; Attitudes Toward Obese Persons Scale (ATOP) and Beliefs About Obesity (BAOP) (Allison et al., 1991). In this regard, it was helpful to explore previous findings which suggest that there may be a correlation between beliefs about causes of obesity and the presence of weight bias. The second aim is to determine whether weight bias exists among social work clinicians. The third is to explore whether there are specific practice differences or other demographics, among social workers, that impact the development of weight bias. Finally, the fourth aim is to determine whether weight bias among social workers impacts their practice with obese clients.

The current study is based on self-administered questionnaires (See Appendix A) that were mailed to each sample member's home address as listed in the NASW (National Association of Social Workers) membership listing. Each member of the sample also received a cover letter explaining that the survey was available on-line through a secured site, if the participant wished to complete the survey in this format rather than hard copy (See Appendix B). Therefore, all participants were allowed to choose the method of participation they were most comfortable with and found most convenient.

## Data Collection

The current study was conducted using a survey comprised of a lead-in questionnaire comprised of questions about primary area of practice, job title, years in practice, percentage of time spent in direct practice with clients, percentage of clients that are overweight/obese (Crisp, 2006), and percentage of time spent in direct practice with clients who are significantly overweight or obese. Demographic questions developed by this researcher, were also included to assess gender, age, socioeconomic status (SES), ethnicity, highest level of education, current employment position, political party affiliation, Body Mass Index (BMI), history of significantly overweight or obesity, family history of significantly overweight or obesity, number of friends that are obese or overweight (Schwartz, et al., 2003; Crisp, 2002). According to Springer et al. (2002), when constructing a scale of demographic variables, age, ethnicity and gender should always be included. Beyond those variables, any variables that will be useful to testing convergent and discriminant validity should be included as have been found to be related or unrelated in previous studies. Given the size of the sample, these variables did not identify any person specifically, thereby maintained confidentiality and anonymity.

The Attitudes Toward Obese Persons Scale (ATOP) and the Beliefs About Obese Persons Scale (BAOP) (Allison et al., 1991) were included which were designed to evaluate the relationship between beliefs about controllability and attitudes toward obesity. A scale designed to measure specific practice experiences with obesity was developed by this researcher. This scale was an analog to one created by Crisp (2002) designed to measure gay affirmative practice. This scale measures frequency of contact with obese patients, positive/negative experience in the interaction with obese patients,

amount of time spent with obese patients, potential concerns specific to working with obese patients, and any experienced limits to treatment of obese patients such as equipment or seating.

Respondents were advised to not complete the Scale of Practice with Obese or Significantly Overweight Clients, if they responded that they currently had 0% of their time spent in direct practice with significantly overweight or obese clients (see Appendix A). Clearly, it is essential to obtain information about practice experience with obese clients, only from those clinicians who engage in practice with such clients.

Six questions were included at the end of the questionnaire to assess respondents' opinions about the relevance of weight bias to social work practice. First, a brief definition of weight bias was included to provide respondents with an understanding of the concept. The first question asked whether the respondent had ever heard the term before and the other two asked respondents to rate the importance of weight bias to their own practice and to their clients. The additional three questions were open-ended and asked for opinions about the relevance of weight bias to social work practice directly, any ways that weight bias might influence their own practice or that of their colleagues, and any additional thoughts they could share. These final three questions were not included in analysis for this current report.

Each survey was accompanied by a cover letter (See Appendix B), which explained the purpose of the study and the procedure for returning the survey when completed, as well as a self-addressed, stamped envelope. The return address on these envelopes was a post office box rented by this writer to allow for anonymity and to

address concerns about rapidity of mail processing. The questionnaire should have taken approximately 20-25 minutes to complete.

All participants were instructed, through the cover letter, that once complete the respondent should place them into the self addressed and mail back to Melissa McCardle as was be indicated on the envelope. The cover letter clearly stated that study participation is voluntary. Further, the cover letter as well as the survey clearly stated that participants should not put their names anywhere on the survey. The cost of mailing and coordinating the surveys were covered by this writer and subsidized in part by a grant from the City University of New York, The Graduate Center.

The survey was mailed to participants in hard copy format, along with directions on how to access a computerized version for those who would prefer it. The computerized survey was created and monitored through Psychdata, a company that specifically creates on-line and anonymous surveys for use in studies such as the one described here.

Postcards were mailed within one week after the surveys were mailed to remind potential respondents about the importance of the study and to further request their participation (See Appendix C). It was hoped that this would increase the response rate. As it was determined during the course of the study that there had been a problem with the timing of the mailing and many potential respondents may have received the actual questionnaire after the deadline for response (February 5, 2007), additional postcards were sent approximately three weeks after the first postcards, extending the deadline date to February 28, 2007 (See Appendix D).

The Institutional Review Board of The Graduate Center of the City University of New York approved the current study, prior to implementation. (See Appendix E).

#### Data Management and Storage

As no identifying information was included on the surveys and all completed surveys have been kept in a locked file cabinet in my office located in my home, anonymity and confidentiality was assured. Only I had access to the keys to these filing cabinets.

#### Sampling

##### *Response Rate*

This study is based on a National random sample of social work members of NASW who have identified their primary work focus as direct practice. Of the 3,000 surveys sent to NASW direct practitioners nationwide, 589 were returned through the mail and internet combined, for a total response rate of 19.3 %. 464 surveys were completed in hard copy and 125 were completed online. Of these, 25 (13 online and 12 hard copy) were excluded from analysis because of missing data. A determination was made to exclude any cases that were missing more than 15% of the data in the survey (George & Mallery, 2003). Therefore, the actual sample size from which analyses were conducted was 564. This sample size of 564 produced a small sampling error of  $\pm 3.7\%$  for the total population of 3,000 which were randomly selected. Clearly, non-responders from this population may have compromised the generalizability of findings in this study. Remarkably, 18.3% of respondents (n=103) reported they did not engage in direct practice with significantly overweight or obese clients and were therefore advised to skip a portion of the survey. Those respondents were advised to skip the “Scale of Practice

with Significantly Overweight or Obese Clients” (SPOOC). Therefore, respondents were excluded if they did not complete the SPOOC because they did not engage in practice and had 15% or more of the rest of the questionnaire data missing, or if they completed the SPOOC and had 15% or more of their total data missing.

Sampling was done to include only direct practitioners as participants, because a primary study goal is to understand how bias may influence social work practice with obese patients. This study is also an analog of a similar study of homophobia by social workers and psychologists conducted by Crisp (2002), and therefore the current study used a similar sampling technique to the prior study. As a hypothesis of this study was that there would be a positive relationship between biased beliefs about obesity and negative practice behaviors among social workers, it was essential to specifically target direct practitioners assuming they would be most likely to have the opportunity to exhibit practice behaviors.

Although a desired response rate of 25% was not reached, the current study did have a response rate that exceeded that of previous similar studies (Crisp, 2002). While providing respondents with the option to choose between online or hard copy participation may have lead to a slightly improved sample size from that of similar previous studies (Crisp, 2002), the fact that weight bias is a fairly unexplored topic within the social work literature, suggests that lack of knowledge, understanding, or acceptance of the topic may have contributed to a smaller sample size than expected.

Also, it should be noted that while the initial survey was mailed on January 16, 2007, several of the respondents emailed or called this writer on or after February 5, 2007 (the initial deadline for response) stating that they had just received the survey. Several of

these respondents were unsure of whether they should still complete the survey since it was received after the indicated deadline. Although all were advised to complete the survey and a second postcard was sent to the entire sample advising that the deadline for response was moved to 2/28/07, the unanticipated mail delay may have contributed to a lower than desired response rate.

As this was a National random sample, the results of this study may be generalizable to other NASW member social workers throughout the United States. Generalizability was limited, however, to only social workers who had chosen membership in NASW and who identify as direct practitioners. Nonetheless, it is important to recognize the possibility that there are significant differences among direct practice social workers who do and do not participate in professional organizations.

### *Sample Characteristics*

#### *Administration Method*

Springer et al. (2002) suggest that the effects of any variations in the way that surveys are administered should be studied so as to understand the impact of these differences on validity and reliability of the instruments. Further, others have suggested that this will be an important avenue for future research as little is known about the differences between those social workers who prefer computerized surveys to those that prefer more traditional methods (C. Crisp, personal communication, July 19,2006). As respondents were given the option of responding to this survey through hard copy or online, response method became a variable. This variable had two mutually exclusive and exhaustive categories; hard copy and online. 80% (n=452) of respondents completed the survey through hard copy and 20% (n=112) completed the online version of the

questionnaire. Twenty-seven percent ( $n= 30$ ) of the respondents who chose online participation were male whereas 16% ( $n= 72$ ) of respondents who chose hard copy participation were male. Therefore, although there were much fewer online than hard copy participants, a larger proportion of those online participants were male. There was no significant difference in age between those who chose the online version of the survey ( $M: 53; 10.42$ ) versus those who chose to complete the hard copy version ( $M: 57; SD: 9.95$ ). No significant differences were found in any of the other demographic variables assessed between these two groups of participants.

### *Age*

There was wide variation in age, among respondents, from 22 to 84 years of age ( $M: 56.31, SD: 10.14$ ). The sample was evenly distributed despite the wide range.

### *Gender, Ethnicity, Education*

Of the respondents who provided information regarding gender, 457 (82%) were female and 102 (18%) were male (See Table 1). Respondents were overwhelmingly Caucasian with 504 (87%) identifying in this category. 18 ( 3.1%) respondents identified themselves as African American, 7 (1.2%) as of Hispanic descent, 4 (.7%) as of Asian descent, 1 (.2%) as of Caribbean-American descent and 15 (2.6%) identified other primary ethnicities. It should be noted that 22 (3.9%) respondents identified their ethnicity as “Jewish” and these responses were collapsed with the category of “Caucasian. Three hundred and thirty-nine (62.8%) respondents identified their household income as greater than or equal to \$75,000.00. Five hundred and twenty-one (91.4%) had completed their Master’s Degree as the highest level of education, while 43 (7.4%) had completed a Doctorate (see Table 1).

A comparison of the demographics of the sample in this study and that of Crisp (2002) demonstrate strong similarities with regard to gender and ethnicity. Although the majority of the current sample is comprised of Caucasian females, it is important to note that the majority of the sample from Crisp's previous study were also Caucasian females (See Table 1). Despite the low response rate, this study did have a higher response than that of Crisp, as discussed above. Therefore comparison of both samples suggests that Caucasian female social workers may be participating in studies of bias among social workers at rates which are disproportionate to the total population of direct practice social workers. This highlights the concern that other groups of social workers, those who are not Caucasian females, are not represented adequately in these recent findings on bias. Highest level of education was somewhat varied between the previous study by Crisp (2002) and the current study, as in the former sample almost 50% had received doctorates whereas in the current study it was under 10%. This is most likely accounted for by the fact that Crisp's study included both licensed psychologists, as well as NASW member social workers.

As concerns were highlighted about the disproportionate number of Caucasian female respondents in both this current study and that of Crisp (2002), a direct comparison was also made to the larger population of all NASW social workers. Unfortunately, information was not available on the demographic breakdown of NASW members who are specifically direct practitioners, therefore, the overall demographic data available on all NASW social workers was examined through univariate analysis. Due to the reporting mechanism of NASW, it was not possible to make a direct comparison between education level to the current sample, however it is important to note that as in

the current study 18% ( $n = 25,446$ ) of NASW members are male, therefore 82% ( $n = 112,690$ ) of NASW members are female. Further, 88% ( $n = 83,576$ ) of NASW social workers are Caucasian (See Table 1). This suggests that while the sample in this study is not representative of all social workers and particularly of those who are male and non-Caucasian, the current sample is representative of NASW social workers. Therefore, these univariate analyses suggest that sampling techniques which access other groups, outside of NASW, may be necessary to obtain findings representative of all social workers.

Table 1

*Demographic Characteristics of Participants*

Characteristic	Current Study (N= 564)		Crisp (2002) (N=488)		NASW (N=138,136)	
	n	%	n	%	n	%
<b>Gender</b>						
Male	102	18	125	25.6	25,446	18
Female	457	82	362	74.2	112,690	82
<b>Ethnicity</b>						
Caribbean American	1	.2	N/A		N/A	
Asian	4	.7	5	1	1,802	1
Hispanic	7	1.2	15	2.8	1,956	1
African American	18	3.1	12	2.5	6,414	7
Caucasian (Non-Hispanic)	504	87	449	92	83,576	88
Other	15	2.6	4	.8	2,214	3
<b>Education</b>						
Bachelor's Degree	6	1.1	6	1.2	N/A	
Master's Degree	521	91.4	241	49.4	N/A	
Doctorate	43	7.5	237	48.6	N/A	
Other	N/A		2	.4	N/A	
Missing	9	1.6	2	.4	N/A	

*Note.* The actual values and percentages under “Caucasian” reflect the actual values and percentages of “Caucasian” and “Jewish” combined.

### *Political Party*

The most common political party affiliation was Democrat with 383 (67.9%) identifying in that category, followed by 54 (9.6%), who identified as Independent and 35 (6.2%) who identified as Republican. Seven (1.2%) reported an “other” political party affiliation, while 27 (4.8%) reported no political party affiliation. While similar political party affiliations were not able to be obtained for NASW social workers as a whole, variability in categories was quite similar to that of a recent study of NASW social workers conducted by Crisp (2002).

### *Weight & Body Mass Index*

Forty-nine and one-half percent of (n= 272) respondents were of “normal weight”, using the NIH Body Mass Index Chart (NHBLI, 1998). 29.7% (n=163) were classified as “overweight” and 15.5% (n=85) were classified as “obese categories 1 & 2. 2.9% (n=16) of respondents had BMI’s that classified them as “extreme obese” and 2.4% (n=13) were classified as “underweight”. The Mean weight for respondents was 159 lbs (S.D.± 38.5). Therefore this sample demonstrated less overweight and obesity than has been identified in the general population (NIDDK, 2003). It must be recognized that weight and BMI information for the population of NASW social workers was not attainable and therefore there are limits to generalizability here (see Table 2).

### *Weight Struggle, Family History & Friends*

As it was expected that perceptions of weight and weight struggle may vary considerably from current BMI, respondents were also asked to identify whether or not they had ever struggled with weight. 75% (n=426) had reported they had struggled or were currently struggling with weight (See Table 2). Therefore, more than three-quarters

of this sample reported struggling with weight. Given, the lower than desired response rate and the particularly high report of weight struggle, it is necessary to consider that experience with weight struggle may have been a factor contributing to the decision to participate in this study. One question to consider is “did experience with weight struggle influence the decision to participate?” Those who struggled with weight may have had greater interest in the social problem of weight bias, because they may have been exposed or vulnerable to it themselves. Further, if the majority of respondents have struggled with weight, this suggest that findings are not generalizable to those direct practice social workers who have not struggled and therefore, may have very different controllability beliefs, practice behaviors, and attitudes toward obese people.

More than fifty-two percent (n= 295) of respondents reported a family history of obesity. Although almost 15% (n=78) of respondents reported having no obese or significantly overweight friends, the vast majority of respondents (n = 448) did report having obese or significantly overweight friends (see Table 2). Therefore, this was a sample with a significant amount of personal exposure to obesity through both their own weight struggle as well as that of friends and family.

Table 2

*Weight Characteristics of Participants (N= 564)*

Variables	n	%
Body Mass Index		
Underweight	13	2.4
Normal Weight	272	59.5
Overweight	163	28.2
Obesity/Class 1	60	10.9
Obese Category 2	25	4.6
Obese Category 3	16	2.9
Personal Weight Struggle		
Yes	426	75.1
No	141	24.9
Family History of Significantly Overweight or Obese		
Yes	295	52.7
No	265	47.3
# of Friends Who Are Significantly Overweight or Obese		
0	78	14.8
1	77	14.6
2	141	26.8
3	96	18.3
4	43	8.2

*(table continues)*

Table 2 (continued)

*Weight Characteristics of Participants (N= 564)*

Variables	n	%
# of Friends Who Are Significantly Overweight or Obese		
5	40	7.6
6 or more	51	9.7

*Job Title and Primary Area of Practice*

With regard to practice, 82.9% (n=480) of respondents were direct practitioners. This is important as the sample was chosen to include only direct practitioners and yet, clearly social workers with other job foci were somehow included. Although it is not clear how this occurred, it is quite possible that the remaining respondents had changed positions after completing their NASW registration sheets, and it is also possible that there were errors in registration for NASW members when they completed their initial paperwork. Of the remaining respondents, 8.5% (n=49) were administrators, 1.7 % (n=10) were supervisors, 1.6% (n=9) were educators and 4.7% (n=27) had an “other” job title. Four point eight percent (n= 28) of respondents were retired and these respondents were not included in the Scale of Practice analysis due to the fact that they were no longer in direct practice. The majority of respondents (56%) worked in the mental health field with adults, 9% focused on health as primary practice area, 9% in child and adolescent mental health, 4.8 % worked in schools, 2.2% in child welfare, 4.1 % in geriatrics, 4% worked primarily in addictions, 1% in hospice, 1.2% in grief counseling, .9% in EAP and .7% with the MRDD population (See Table 3).

Table 3

*Primary Practice Area and Job Title (N = 564)*

Variables	n	%
<b>Job Title</b>		
Direct Practitioner	480	82.9
Administrator	49	8.5
Supervisor	10	1.7
Educator	9	1.6
Other	27	4.7
<b>Primary Practice Area</b>		
Mental Health	324	56
Health	57	9.8
Children/Adolescents	52	9.0
School	28	4.8
Child Welfare	13	2.2
Aging	24	4.1
EAP/Occupational	5	.90
Addictions	23	4.0
Hospice	6	1.0
Grief	7	1.0
MRDD	4	.70

### *Practice Experience with Obese Clients*

There was a wide range in practice experience among respondents from 1 to 60 years in practice. The median was 23 years in practice ( $M: 23.7, SD: 9.23$ ). The mean percentage of time in direct practice was 73% of time, with the mode as 100% of time spent in direct practice ( $n=171$ ), and the median was 80% of time spent in direct practice ( $n=51$ ). Twenty-five (4.4%) respondents reported they spent no time in direct practice, which is surprising as this was a sample of “direct practitioners”. On average, respondents reported 20% of their practice included significantly overweight or obese clients. Yet, respondents reported spending only 17.5 % of their time in direct practice with obese clients. Of interest, 11.5% ( $n=65$ ) stated that none of their clients are obese and 18.3% ( $n=103$ ) reported none of their direct practice time is spent with obese or significantly overweight clients (See Table 4).

Table 4

*Participant Practice Experience (N = 564)*

Variables	<u>M</u>	<u>SD</u>
Years in Practice	23.6	9.23
% Time in Direct Practice	73.1	30.6
% of Obese Clients	19.9	19.3
% of Direct Practice with Obese Clients	17.53	20.3

*Relevance of Weight Bias to Social Work*

While most respondents were familiar with the term weight bias, there were discrepancies in the amount of relevance placed on the issue both for practice and for clients. A brief definition of weight bias was given to participants in the survey, before asking whether they had ever heard the term “weight bias” before. Over 77 % (n=425) of respondents indicated that they had heard the term weight bias before. This was an important variable to consider for this study as clearly familiarity with the term and its meaning would be crucial in order to evaluate one’s beliefs about how important it is to social work practice. Respondents were then asked to indicate how important weight bias was to their own social work practice and how important they thought it was to their clients. Of interest, 42% (n= 230) of respondents believed that weight bias was an important issue in their practice, 30.5% (n=166) believed it was neither important or unimportant and 27.2% (n= 148) believed it was unimportant. Therefore, the majority of respondents either had either no opinion or believed it was not important to their practice. On the other hand, 63.8% (n = 340) believed that weight bias was important to their

clients. Whereas only 19.7% (n= 105) thought it neither important or unimportant and only 16.4% (n=88) thought it was unimportant. Therefore, when asked about relevance of weight bias to clients, the vast majority of respondents recognized weight bias as an important issue. This finding suggests a possible discrepancy between the level of importance given to weight bias by clinicians and the clients they treat. Because the study has no direct data for clients, the discrepancy could be even greater.

## Measurement

### *Weight Bias*

In this study the primary dependent variable was weight bias, operationally defined by the Attitudes Toward Obese Persons Scale (ATOP). The ATOP is a 31 item Likert-type scale designed to measure attitudes toward obese persons (See Table 5). This scale yielded a Chronbach's Alpha of .85. This finding exceeded previous studies which indicated that the scale had a reliability range between .80 - .84, when assessing coefficient alpha (Yuker et al., 1991). According to Springer et al. (2002), .85- .89 range is "respectable"(pg. 777). Therefore, this scale has demonstrated reliability in this study.

It is important to note that weight bias was measured based on frequency of expression of negative attitudes toward the obese, therefore lower ATOP scores indicate higher levels of weight bias. Respondents were asked to read the statements provided regarding attitudes toward obese persons, and then circle the response that was most compatible with their level of agreement. There were six possible number responses ranging from -3 (Strongly Disagree) to +3 (Strongly Agree). The range of possible scores for this scale was -93 to 93 and the actual scores for this study ranged from -66 to 64. The modal score for this study was 22 and the median was 5. The total scale score was

calculated by taking the mean ( M: 5.27, SD: 20.82) and adding 60 points (Yuker et al., 1991). The total scale score was 65.27. When employed previously with a group of undergraduate and graduate students (n= 124) as well as a group of members of the National Association of the Advancement of Fat Acceptance (NAAFA) (n= 514), the results were similar in that results were as follows: undergraduates: M: 63.9, SD: 16.7, graduate students: M: 64.8, SD: 14.8, and NAAFA members: M: 67.6, SD: 18.6 (Yuker et al., 1991). This sample of social work clinicians was slightly less biased than undergraduate and graduate students and demonstrated slightly higher levels of bias than members of NAAFA.

#### *Results on Individual Weight Bias Items*

According to Allison et al. (1991), there were three separate domains identified in the ATOP scale, which measure bias toward obese people. These factors were “Different Personality”, “Social Difficulties”, and “Self-Esteem”. This factor analysis was based on the first 20 of 31 items in this scale. Further, the authors suggest although each of these factors were helpful in understanding weight bias, future studies should focus most on the items which measure “Different Personalities” as these were the strongest items in factor analysis for explaining differences in weight bias. These items were those that measured “attributions of negative or different characteristics or inferior abilities to obese persons” (pg 604).

Examination of the individual items in the ATOP scale in the current study (See Table 5), identified several important attributions that may enhance understanding the attitudes toward obese people among social workers in this study. All missing responses were recoded as the mean for purposes of analysis. Of interest, respondents indicated

positive attitudes toward obese people when considering several of the “Different Personality” items in this scale. Therefore, the following discussion will review some of the items identified within the “Different Personality” domain to determine respondent’s level of weight bias based on negative attributions to obese people.

*Obese people are usually untidy.* This item reflects a negative attribution toward obese people, as it follows a recognized stereotype about obese persons that has been identified previously in the literature (Puhl & Brownell, 2001; Maddox & Liederman, 1969). Overall respondents indicated disagreement with this statement thereby suggesting they are less likely to attribute this stereotype toward obese people. More than half of respondents ( $n= 296$ ), indicated they “Strongly Disagree” with this statement. Further, almost 92% ( $n=517$ ), indicated that they “Strongly”, “Moderately”, or “Slightly Disagree”. Clearly, social workers in this study do not attribute untidiness to obese people as a characteristic that differentiates them from others.

*Most obese people have different personalities than normal weight people.* This was also a negative item in this scale which specifically measures the perception of fundamental differences between obese and non-obese persons, with regard to personality characteristics. Overall, respondents indicated they did not perceive obese people to have different personalities than non-obese people. Overall, 89% ( $n= 501$ ) of respondents either slightly, moderately, or strongly disagreed with this statement. Forty-five percent ( $n= 251$ ) indicated they “Strongly Disagree” suggesting respondents did not attribute to personality differences to be a function of weight. This suggests that for social work respondents in this study, social workers have more positive attributions regarding this

measure of personality, than may have been found previously when examining other groups of healthcare professionals.

*Obese people are more emotional than other people.* This item also reflects a negative personality attribution as it suggests the attitude that obese people experience emotions differently than others. Examination of this item suggests that 35% of respondents ( $n= 197$ ) “Strongly Disagree” with this statement. While 31% ( $n =176$ ) “Moderately Disagree”, 24% ( $n = 136$ ) “Slightly Disagree. Therefore, more than 90% ( $n = 509$ ) of respondents disagreed with this stereotype that obese people are more emotional than non-obese people.

*Obese people are often less aggressive than normal weight people.* This item is also a negative attribution as again, it reflects the perception that there are fundamental personality differences, with regard to level of aggressiveness, between obese and non-obese people. While aggressiveness, may not consistently be perceived as a positive personality characteristic, this item is negatively coded, as any personality difference attributed to an individual solely based on weight, is an indication of bias, according to the literature and the conceptual definitions of this study identified above. Again, respondents indicated positive attributions with regard to this item. Nineteen percent ( $n= 106$ ) indicated they “Strongly Disagree” with this statement, 28% ( $n= 159$ ) indicated they “Moderately Disagree”, and 34% ( $n =191$ ) reported they “Slightly Disagree” with this statement. Although 18% ( $n =108$ ) reported they either “Slightly Agree”, “Moderately Agree” or “Strongly Agree”, clearly the majority of respondents do not believe that obese people have less aggressive personalities.

*Most obese people resent normal weight people.* This item reflects a negative attribution as it also measures perceived differences in the personality of obese people based upon weight status. The responses to this item also indicate more positive attitudes toward obese people from respondents in this study. More specifically, 16% ( $n=91$ ) indicated they “Strongly Disagree”, 31% ( $n= 176$ ) indicated they “Moderately Disagree” and 30% ( $n = 168$ ) indicated they “Slightly Disagree”. While 77% ( $n= 435$ ) indicated disagreement with this item, 22% ( $n= 125$ ) of respondents did report some level of agreement. Therefore, while overall respondents reflected more positive attitudes toward obese people when considering personality factors, they did reflect somewhat greater levels of negativity than in the other “Different Personality” items described above. Overall, they do not believe that obese people resent those who do not struggle with weight.

*Obese people are usually sociable.* This item also reflects a negative attribution toward obese people as it suggests a difference in sociability based on weight status and thereby perpetuates a stereotype regarding personality difference inherent to those who are obese. Although sociability may be a positive attribute to many, it remains a negatively coded item here as in general, sociability will vary among individuals based on numerous factors. Therefore, this statement is a stereotype; agreement with it is representative of bias. About as many respondents “reported they “Slightly Agree” ( $n= 180$ ) as reported they “Slightly Disagree” ( $n = 178$ ). An analysis of responses indicates that for this item, there was actually greater agreement with this statement. In fact slightly more than half of the respondents (51%) reported that they either “Slightly Agree”, “Moderately Agree”, or “Strongly Agree”. Overall, it appears that about half of the

respondents in this study ascribe to the biased attribution that obese people are generally sociable.

*Obese people are as happy as normal weight people.* This item is the one item identified in the “Different Personality” domain that reflects a positive attitude toward obese people, as it suggests that there are no differences in levels of happiness between obese and non-obese people. Overall, respondents indicated a somewhat negative attitude toward obese people with regard to this item. Analysis of responses to this item demonstrated that 10% ( $n = 58$ ) of respondents reported they “Strongly Disagree” with this statement, 23% ( $n = 130$ ) reported they “Moderately Disagree” and 35% ( $n = 195$ ) reported they “Slightly Disagree” with this statement. Only 32% ( $n = 179$ ) reported they either “Slightly Agree”, “Moderately Agree”, or “Strongly Agree”. Respondents in this study indicated greater disagreement with the belief that obese people are as happy as non-obese people. Therefore, social work respondents in this study do perceive differences in happiness levels between obese and non-obese people, suggesting that there are differences in their personality based on weight status.

Overall, analyses of the individual items in the ATOP suggest that respondents in this study did reflect fairly positive attitudes toward obese people, however they did acknowledge biased attitudes with regard to personality characteristics that are often perceived as more “positive”, such as sociability and happiness. This suggests that while social workers may not ascribe to some of the negative stereotypes about obese people, they are more likely to attribute positive stereotypes, hence potentially being unaware that they are perpetuating bias.

Table 5

*Percentages for Individual Items Measuring Attitudes Toward Obese People*

Total Sample (N = 564)						
Attitudes	1	2	3	4	5	6
Obese people are as happy as normal weight people	10.3	23	35	18.1	10.6	3
*Most obese people feel that they are not as good as other people	2.7	13.5	24.3	28.2	24.1	6.9
*Most obese people are more self-conscious than other people	3.9	6.6	16.3	27.8	32.1	12.4
*Obese workers cannot be as successful as other workers	26.6	24.5	12.4	8.7	2.4	.27
*Most normal weight people would not want to marry anyone who is obese	11.7	20.7	25	23.4	15.2	4.3
*Obese people are usually untidy	52.5	29.4	9.8	4.3	2.5	1.1
*Obese people are usually sociable	2.9	13	32.1	33	11	8.7
Most obese people are not dissatisfied with themselves	9.2	29.6	43.2	17.9	7.1	1.2
Obese people are just as self-confident as other people	6.2	22.5	36.7	20.4	10.6	3
*Most people feel uncomfortable when they associate with obese people	10.6	25.7	23.8	28.5	10.3	.5
*Obese people are often less aggressive than normal weight people	18.8	28.2	34	13.3	3.7	.9
*Most obese people have different personalities than normal weight people	44.5	25.5	18.8	6.6	3	.9
Very few obese people are ashamed of their weight	21.5	41.1	24.6	6.6	4.1	1.4
*Most obese people resent normal weight people	16.1	31.2	29.8	16.5	4.3	1.4
*Obese people are more emotional than other people	34.9	31.2	24.1	6.9	1.6	.2

*(Table continues)*

Table 5 (Continued)

Percentages for Individual Items Measuring Attitudes Toward Obese People (N = 564)

Attitudes	1	2	3	4	5	6
*Obese people should not expect to lead normal lives	50.9	27.3	12.4	7.1	1.4	.9
Obese people are just as healthy as normal weight people	31.2	32.6	20.4	7.8	5.9	1.6
Obese people are just as sexually attractive as normal weight people	10.5	31.9	28.5	15.4	7.6	4.3
*Obese people tend to have family problems	21.5	29.1	27.7	13.1	6.2	1.6
*One of the worst things that could happen to a person would be for him/her to become obese	33.7	27.8	16.1	12.2	8	2
Obese people should.....						
*Make efforts to understand what causes them to be obese	2.5	3.7	8.5	31	29.4	24.3
*Motivate themselves to lose weight	3.5	6.4	18.1	37.2	23.9	9.8
*Seek professional advice in order to lose weight	3.2	4.6	18.8	31.6	25.2	16
*Recognize that a problem exists	2.3	6.1	14.4	26.6	28.4	21.5
*Recognize that being obese is a risk to their health	.7	1.8	3.2	14.5	29.4	49.8
*Recognize that being obese may influence the behavior of close other and cause them to be obese also	27.3	20	16.7	21.5	9.4	4.1
Be left alone to be content/happy with their body size/shape	8.3	16.1	27.5	27.5	14.2	5.5
*Recognize that being obese may have a negative effect on others	11.5	17	26.2	29.1	11.9	3.4
Not be subjected to social pressures to lose weight	2.5	9.6	23.6	23.6	22.3	17.7
Be accepted by others, whatever their body weight	.5	1.6	5.5	14.5	27.7	49.8
Not be held responsible for their condition, which may be caused by a complex interaction of factors	8	18.1	24.1	20.2	16.5	12.2

\*Note. \*These items were negative attitudes recoded before the items were summed. 1= Strongly Disagree; 2= Moderately Disagree; 3= Slightly Disagree; 4= Slightly Agree; 5= Moderately Agree; 6= Strongly Agree

*Beliefs About Cause of Obesity*

Beliefs about causes of obesity is an independent variable that was examined to assess whether maintaining a belief that obesity is controllable by the individual, will positively influence the amount of bias one has toward obese persons. The Beliefs About Obese Persons Scale (BAOP) is an 8-item Likert-type scale specifically designed to measure these controllability beliefs. (See Table 6). Reliability analyses indicated that the BAOP yielded a Chronbach Alpha of .699. Although, according to Springer (2002) an alpha below .70 is “unacceptable” (pg. 777), these findings are similar to previous studies which indicate that the BAOP has a reliability range between .65-.82 when assessed by coefficient alpha. In the current study, one particularly weak item of the original 8, “ In many cases, obesity is the result of a biological disorder” was eliminated, which elevated the Chronbach’s Alpha slightly for this scale to .72. According to Springer (2002), this increased the reliability of the scale to an “undesirable” but not “unacceptable” level. As one of the goals for this study was to further clarify the psychometric properties of this standardized scale, even a reliability finding which falls just inside the “undesirable” range may enhance future knowledge about how to study weight bias among various groups. Further, both the use of the 7-item, more reliable version of the BAOP, as well as the original version, were used in data analysis to enhance understanding of the relationship between beliefs about controllability and weight bias. Very little predictive difference was found between the two as will be discussed in the next chapter.

It is important to note that controllability beliefs were measured based on frequency of expression of beliefs that weight is primarily controllable by individual behaviors. Therefore higher BAOP scores indicate higher levels of controllability beliefs.

Respondents were asked to read the statements provided regarding the causes of obesity, and then circle the response that was most compatible with their level of agreement.

There were six possible number responses ranging from -3 (Strongly Disagree) to +3 (Strongly Agree). The range of possible scores for this 7-item scale was -21 to 21 and the actual range of scores was -20 to 21. The Mode was -4 and the Median score was -6. To calculate the correct mean total scale score, it was necessary to add a total of 24 points to the mean scale score calculated (Yuker et al., 1991). Therefore, the mean scale score for this study was 18.57, with a standard deviation of 6.96 (See Table 9). For the 8-item standardized version, the score was slightly higher ( $M: 20; SD: 7.25$ ) (See Table 9). When compared to a previous study of beliefs about controllability among graduate students ( $M: 20.8; SD: 7.0$ ), among undergraduate students ( $M: 19.4; SD: 8.7$ ), and among NAAFA members ( $M: 31.7; SD: 10.5$ ) (Yuker et al., 1991), our sample of social work clinicians in this study, believe more strongly that obesity is within a person's control than some other groups previously studied. However, as indicated above, use of the standardized version of this scale indicates that social workers perceive controllability at about the same rate as college graduate and undergraduate students. This is an important finding as it was expected that training, empirical knowledge and experience may contribute to lower levels of controllability beliefs for social workers than college students who have not had such training and education.

#### *Results on Individual Controllability Belief Items*

According to Allison et al. (1991) the Beliefs About Obese Persons scale was developed to assess beliefs about the personal controllability of obesity. Individual items were analyzed for the current study to examine the extent to which specific beliefs were

held by respondents (See Table 6). Analyses of these individual items yielded interesting findings about the beliefs of social workers in this study and will be discussed below.

*In many cases, obesity is the result of a biological disorder.* This item reflects a positive belief that for many, obesity is not personally controllable through behavioral means, but in fact may be involuntarily the result of a physiological problem. As the literature suggests knowledge of the physiological underpinnings of obesity is a reflection of understanding the empirical evidence on obesity and is also likely to lead to less weight bias (Horgen & Brownell, 2002), this item was included to assess knowledge of the accurate etiological basis for obesity. Although this item was removed from analysis in the revised version of the BAOP as it demonstrated particularly weak reliability, it is included in this discussion to demonstrate respondents understanding of the physiological underpinnings of obesity. Critically, responses indicate that most respondents did recognize biology as an important cause for obesity. Further analysis of responses to this item indicate that of those who responded, almost 86% ( $n = 484$ ) reported they either “Slightly Agree”, “Moderately Agree”, or “Strongly Agree” with this statement. Only 13% ( $n = 73$ ) reported they either “Slightly Disagree”, “Moderately Disagree” or “Strongly Disagree”. Therefore, overall respondents demonstrated an accurate understanding of the physiological underpinnings of obesity. Of interest, despite reported knowledge of the biological basis for obesity, many still report strong controllability beliefs when examining other negatively coded items. Further, strong beliefs that obesity is caused by overeating and poor eating habits as will be discussed below, may explain why this item was not correlated with the other items in this scale. This may explain the

weakness of the item in relation to the reliability of the scale. Further assessment of these items will be discussed below.

*Obesity often occurs when eating is used as a form of compensation for love or attention.* This item reflects a stronger belief in the controllability of obesity as it suggests that overeating is a chosen coping response to lack of love or attention, thereby is a controllable behavioral reaction. Respondents indicated a fairly strong belief in this statement and therefore identified it as a primary cause for obesity. A further analysis of responses to this item indicate that of those who responded, 19% ( $n = 108$ ) reported they “Strongly Agree”, 38% ( $n = 213$ ) reported they “Moderately Agree”, and 27% ( $n = 150$ ) reported they “Slightly Agree” with this statement. Therefore, about 84% agree that obesity is controllable in that it is a chosen coping mechanism to deal with lack of love or attention.

*Obesity is usually caused by overeating.* This item reflects a belief that obesity is personally controllable by individuals as it assesses a strictly behavioral cause of the condition. Thus, those who respond with strong agreement will likely believe that overeating is the primary cause for obesity, and are more likely to fail to recognize environmental and physiological causes. Respondents indicated fairly strong agreement with this statement, thereby suggesting fairly strong controllability beliefs in this regard. More specifically, analysis indicated that more than 82% ( $n = 465$ ) of respondents reported they either “Slightly Agree”, “Moderately Agree”, or “Strongly Agree” with this statement. Hence, the vast majority of respondents believe that obesity is usually caused by behavioral means; overeating. This is particularly interesting in light of the above finding that the majority of respondents also reflected belief that biology is often the

cause. Therefore, while they recognize biology plays a role, this belief does not mediate more controllability based beliefs assessed through this current item.

*Most obese people eat more than non-obese people.* This item reflects controllability beliefs as it emphasizes the role of eating and possibly overeating, in causing obesity. Again, this item focuses specifically on behavioral causes for the condition. Overall, respondents reported stronger agreement with this statement, thereby suggesting stronger controllability beliefs. More specifically, of those who responded to this item, 26% ( $n= 144$ ) reported they “Slightly Agree”, 29% ( $n= 162$ ) reported they “Moderately Agree”, and 16% ( $n = 88$ ) reported they “Strongly Agree” with this statement. Almost 70% ( $n= 394$ ) reported agreement with the belief that eating is what causes obesity in people who struggle with such condition. Caloric intake through overeating is consistently perceived to be critical in each of the items that measure controllability through food. Again, examination of these individual items suggests that respondents have very specific controllability beliefs, and they seem to focus primarily on the use of food. Strong agreement with this item may explain why beliefs in the physiological underpinnings of obesity, may not have correlated with other items in this scale.

*The majority of obese people have poor eating habits that lead to their obesity.* This item also reflects stronger controllability beliefs as it suggests that eating behaviors are the cause for obesity rather than environmental or physiological factors. Analysis of the responses to this item suggest that respondents did agree and therefore believe more strongly that poor eating habits are a significant cause of obesity. Further analysis reveals that more than three-quarters (77%) of respondents either “Strongly Agree”, “Moderately

Agree”, or “Slightly Agree” with this statement. This analysis further highlights the focus on eating habits and food intake behaviors on controllability beliefs. While respondents may believe in a biological underpinning, they are strongly focused on the controllability of eating as a primary cause for obesity. Again, the strong agreement with this item may have resulted in a weak correlation with beliefs about physiological causes for obesity and the rest of the scale items.

*Most obese people cause their own problem by not getting enough exercise.* This item reflects a belief in the behavioral controllability of obesity as it emphasizes the role of exercise in causing the physical condition. Those respondents who report strong agreement with this statement are those who are more likely to demonstrate strong controllability beliefs and are less likely to recognize the environmental and physiological causes of the condition. Analysis of this item indicated that overall, that there was a normal curve to the response rate overall. Further analysis indicated that almost half of respondents (49%) reported that they either “Strongly Disagree”, “Moderately Disagree”, or “Slightly Disagree”, while the other half (49%) report either “Strongly Agree”, “Moderately Agree”, or “Slightly Agree”. The remaining participants (2%), did not respond to this item. Therefore, analysis of this particular item suggests it was not helpful in this study as an indicator of controllability beliefs. Exercise was believed to be an important cause of obesity by some respondents, however an equal number of respondents believed it was not a critical factor to causing obesity.

*Obesity is rarely caused by a lack of willpower.* This item reflects the belief that lack of willpower is not a particularly strong cause for obesity for most people. The item is a positively coded item as it attempts to assess disagreement with a stereotype often

identified in the literature among healthcare professionals which holds that obese people have weak willpower. Overall, analysis of this item indicates that respondents did not agree with this statement although their disagreement was slight to moderate. More specifically, of those who responded to this item 23% ( $n = 128$ ) reported they “Slightly Agree”, 24% ( $n = 134$ ) reported they “Moderately Agree” and 15% ( $n = 84$ ) reported they “Strongly Agree”. Yet, about 20% ( $n = 111$ ) reported they “Slightly Disagree” and 15% ( $n = 83$ ) reported they “Moderately Disagree”. Therefore, while the majority of respondents did not agree that low willpower was the cause of obesity, willpower was an important etiological cause for many respondents.

*People can be addicted to food, just as others are addicted to drugs, and these people usually become obese.* This item reflects the controllability belief that food addiction, which is a behavioral response, is a significant cause for obesity. Those respondents who reflect stronger agreement with this statement are more likely to reflect stronger controllability beliefs. Analysis of this item indicates that respondents overall agree with this statement and therefore demonstrate stronger controllability beliefs with regard to addiction to food as a cause for obesity. Further analysis reveals that of those who responded to this item, the greatest numbers reported they “Strongly Agree” (34%) and “Moderately Agree” (34%), followed by those who reported they “Slightly Agree” (20%). Only 11% of respondents indicated any level of disagreement with this statement. Of all items in this scale, this one item seemed to elicit the most skewed response and further the strongest degree of controllability beliefs. Therefore, it seems that social workers in this study hold strong beliefs that people can be addicted to food and that this is a major cause for obesity. Respondents demonstrated strong agreement with

controllability beliefs related to eating behaviors overall however they most strongly agreed with addiction as a primary cause for overeating behavior. Although only 4% of respondents indicated that their primary practice area was “addictions”, it is possible that many other direct practitioners are exposed to addictions in their training and practice. Social workers may be more familiar with addictions than other types of eating problems, and therefore more likely to perceive medical conditions such as obesity to be caused by addictive behaviors.

Overall, respondents indicated fairly high levels of obesity-related controllability beliefs, specifically with regard to the role of food intake as a cause for obesity. Of interest, exercise was not particularly seen as important to obesity. Further, respondents did indicate knowledge of other empirically supported causes, such as biology. Yet, beliefs in the physiological underpinnings of obesity did not correlate with the other items in the scale as controllability beliefs were very strong with regard to eating habits and behaviors. This would explain why removal of this item resulted in stronger reliability for the scale overall.

Table 6

*Percentages for Individual Items Measuring Obesity Controllability Beliefs*

Total Sample (N = 564)

Beliefs	1	2	3	4	5	6
*Obesity often occurs when eating is used as a form of compensation for love or attention	2.7	6.4	5.3	26.6	37.8	19.1
In many cases, obesity is the result of a biological disorder	1.2	5.1	6.6	26.6	39.5	19.7
*Obesity is usually caused by overeating	2.3	6.2	7.4	24.1	41.7	16.7
*Most obese people cause their own problem by not getting enough exercise	8.7	21.1	19	30.3	17	2.1
*Most obese people eat more than non-obese people	5.3	10.8	12.4	25.5	28.7	15.6
*The majority of obese people have poor eating habits that lead to their obesity	2.5	8.3	10.3	30.3	33.5	13.5
Obesity is rarely caused by a lack of willpower	2.8	14.7	19.7	22.7	23.8	14.9
*People can be addicted to food, just as others are addicted to drugs, and these people usually become obese	2.3	3.7	5.3	19.7	33.5	34.2

\*Note. \*These items were negative attitudes recoded before the items were summed. 1= Strongly Disagree; 2= Moderately Disagree; 3= Slightly Disagree; 4= Slightly Agree; 5= Moderately Agree; 6= Strongly Agree

*Practice Experience With Obese or Significantly Overweight Clients*

Practice experience is an independent variable measured through a 14-item Likert-type scale that was used to measure beliefs about treatment with obese or significantly overweight clients as well as behavioral responses of practitioners toward their obese or overweight clients. The original 17- item scale has a Chronbach's Alpha of .809. However, as respondents were instructed through the survey to "not complete" this scale if they indicated "0" % of their time is spent in direct practice with obese or

significantly overweight clients, the reliability analysis had to be re-calculated to exclude all of those respondents who did not complete this scale or who had missing items (n=157). All inclusive data was collected and data analysis performed on this scale for 407 respondents. Once the missing cases were eliminated, the alpha was reduced to .744, which according to Springer (2002) is in the “undesirable”, but not “unacceptable” range. Springer (2002) emphasizes that there has been an increased need for practitioners to answer questions about their work with clients. Further, the main goal of a measurement scale, such as the SPOOC, is to give practitioners a chance to reveal how they really behave and feel about clients. The need to develop reliable and valid measures of these feelings and behaviors cannot be underestimated (Springer, 2002). Therefore, to enhance reliability of this measure, the three weakest items were eliminated which resulted in a coefficient alpha of .80. The three items eliminated were, “I try to help my obese/significantly overweight clients recognize the importance of weight loss, despite their presenting problems”, “When obese/significantly overweight clients report weight-based discrimination, I try to help them recognize the value in losing weight to avoid such experiences in the future”, and “I spend more time than average with obese/significantly overweight clients”. The final version of the scale included fourteen items.

The scale has face validity (Babbie, 2002) as the items appear to measure self-reported practice behaviors and experiences in work with obese or significantly overweight clients. Content validity was demonstrated as these items were created from an earlier study of practice behaviors in social work clinicians which covered both beliefs

and behaviors in relation to practice and were shown to be content valid for such an inquiry (Crisp, 2002).

It is important to note that practice experience was measured based on agreement with statements about beliefs and behaviors related to practice with obese or significantly overweight clients. Therefore higher SPOOC scores indicate higher levels of affirmative practice behaviors and beliefs. Respondents were asked to read the statements provided regarding their practice beliefs and behaviors with obese and significantly overweight clients, and then circle the response that was most compatible with their level of agreement. There were six possible number responses ranging from -3 (Strongly Disagree) to +3 (Strongly Agree). The range of possible scores for this scale is -42 to 42. The actual range of scores was -25 to 42. The Median score was 18 and there were two modal scores: 20 and 30. The Mean scale score was 16.72 (SD: 12.33) (See Table 9).

#### *Results on Individual Practice Items*

There were two types of questions included in this scale; those measuring beliefs about treatment and those measuring practice behaviors. The beliefs questions were important to include in this scale as according to Crisp (2002), beliefs about treatment with certain clients groups, are very influential on actual practice behaviors with those groups. Further, this particular set of items (See Table 7) are specific to practice experience with obese clients and therefore measure very different types of beliefs than those assessed in the BAOP scale, which is focused on controllability beliefs about obesity in general. There were five items that were included in the “Belief” domain. They measured several beliefs including respondent’s comfort level addressing weight in treatment and perception of responsibility to adjust treatment environment to meet the

needs of obese clients (See Table 7). The remaining 9 items in this scale were included in the “Behavior” domain. (See Table 8). The literature on bias among social workers working with other disenfranchised groups (Crisp, 2006; Crisp, 2002), suggests that specific practice behaviors can enhance an affirmative treatment environment and conversely others can contribute to a negative treatment experience, potentially leading to discrimination. Crisp (2002) has identified numerous behaviors that may contribute to either an experience of bias or affirmative practice with gay and lesbian clients. As an analog to this earlier study, the SPOOC therefore included behavioral questions that assessed behaviors that enhance an affirmative practice experience with obese clients and those that express negative bias toward obese clients (See Table 8). Tables 7 and 8 report the valid percentages of response for each individual item in the SPOOC. Percent of “Missing” responses are also provided to exhibit the proportion of respondents who did not respond to this scale because they were not engaged in direct practice.

### *Beliefs*

*I find work with obese/significantly overweight clients to be overwhelming.* This item reflects a negative belief about work with obese clients indicating a perception that practice with them may cause a significant amount of stress on the practitioner. An analysis of responses to this item indicate that overall respondents disagree with this statement as 85.2% ( $n= 381$ ) reported they either “Slightly Disagree”, “Moderately Disagree”, or “Strongly Disagree”. The vast majority of respondents in this study did not report feeling overwhelmed by their practice with obese people.

*I am frustrated by the lack of time and energy obese/significantly overweight clients spend on losing weight.* This item reflects a negative belief about the amount of

perceived time spent in weight loss efforts, among their obese clients. Almost three-quarters of respondents (73.9%) disagreed with this statement. Further analyses of responses to this item indicate that 34.5% ( $n = 154$ ) report they “Strongly Disagree”, 21.5% ( $n = 96$ ) report they “Moderately Disagree”, and 17.9% ( $n = 80$ ) report they “Slightly Disagree”. Therefore, even among the respondents who disagree, “Strong” disagreement with frustration over perceived lack of effort to lose weight by obese clients, is the most reported response. One problem with this item is that it is difficult to know whether respondents are disagreeing with the perception that obese clients do not put enough effort into weight loss, or if they are disagreeing with the feeling of frustration over obese client’s lack of weight loss effort. Future studies may consider revision of the language in this item, to more accurately assess respondents’ beliefs about their client’s weight loss efforts.

*I am comfortable discussing a client’s weight when relevant to treatment.* This item reflects a positive belief about the experience of comfort in addressing weight with clients who struggle with obesity. Almost all respondents (97.1%) reported that they do agree with this statement and therefore indicate comfort in discussing weight-related issues in practice with obese clients. Further analysis of this item indicates that the majority of respondents (60.4%) report they “Strongly Agree”, 29.6% report they “Moderately Agree”, and 7.1% report they “Slightly Agree”. Clearly, social workers in this study report comfort in discussing weight with obese clients.

*I am uncomfortable discussing weight specific issues with an obese/significantly overweight client.* This item reflects a negative belief about level of comfort discussing weight issues with a client who struggles with obesity. It is a reverse item to the one

discussed directly above and was included to control for response bias. While again the majority of respondents (84.9%) report disagreement with this statement, they do express somewhat more discomfort when comfort-level is measured this way. Seven and one-half percent ( $n= 34$ ) of respondents reported they “Slightly Agree”, 3.5% ( $n= 16$ ) reported they “Moderately Agree” and 3.8% ( $n=17$ ) reported they “Strongly Agree”. Therefore, almost 15% of respondents reported agreeing that the discussion of weight-related issues with obese clients is uncomfortable for them. This poses the question, “ How are social work clinicians behaviorally responding to their levels of discomfort when obesity-related issues arise in treatment ?”

*I should not have to purchase additional equipment (ie: chairs, guardrails, etc.) to accommodate clients who are obese or significantly overweight.* This item reflects a negative belief about the responsibility of practitioners to create a comfortable and adequate environment for their obese clients who seek services from them. This item assesses the perception that such accommodation is not the responsibility of social work clinicians. An analysis of the responses to this item indicate that most respondents (69.8%) disagree with this statement. More specifically, 29% ( $n= 128$ ) report they “Strongly Disagree”, 18.8% ( $n= 83$ ) report they “Moderately Disagree”, and 22% ( $n =97$ ) reported they “Slightly Disagree”. Therefore, most respondents believe that they should purchase additional equipment to accommodate obese clients, when necessary. While encouraging, it is important to note that more than one-quarter of respondents ( $n = 126$ ) reported disagreement with this statement, suggesting that a significant number of respondents do not believe environmental adjustment for obese clients, is a responsibility in their practice.

### *Practice Behaviors*

*I have purchased additional or special equipment to accommodate obese/significantly overweight clients such as extra large chairs, chairs with arms, guardrails, etc.* This item reflects a positive behavior change made in practice with obese clients, such that environmental change was conducted to make obese clients more comfortable. Analyses of responses to this item indicate that the majority of respondents (63.7%) have not made purchases to accommodate obese clients. In fact, of all responses, the most frequently indicated response was “Strongly Disagree” (36.9%). This suggests that overall social work clinicians are not engaging in an affirmative practice behavior that they have indicated they believe is their responsibility to do. One possible explanation for the significant disparity between respondents’ belief that they should make these changes and their indication that they have not made them, is that many respondents may not be in positions where they have control over the purchase of equipment in their practice. Hence, those who are in charge of purchasing or who engage in individual private practice may have the ability to actually determine what equipment is purchased; other direct practitioners may not. Therefore, while they may recognize the importance of accommodating obese clients, they may not have the power to do so with regard to purchase of new equipment. Several respondents did note directly on the questionnaire, that they had no choice in the purchase of equipment.

*I acknowledge to obese/overweight clients, the impact of living in a weight-biased society.* This item reflects a positive practice behavior as it assesses the action of validating the experience weight bias that is prevalent in society. As respondents have indicated comfort in discussing weight-related issues overall, this item was analyzed to

assess whether comfort leads to various types of affirmative practice behaviors (Crisp, 2002) such as validation and acknowledgement. More than three-quarters (76.9%) of respondents reported that they agreed with this statement either “Slightly”, “Moderately”, or “Strongly”. On the other hand, 10.3 % ( $n= 46$ ) reported they “Slightly Disagree”, 7.2% ( $n = 32$ ) reported they “Moderately Disagree”, and 5.6% ( $n = 25$ ) reported they “Strongly Disagree”. Therefore, almost one-quarter of respondents report that they do not address weight bias in their practice with obese clients. While the majority of respondents are validating obese clients with regard to weight bias, it is a concern that still many are not.

*I help obese/significantly overweight clients overcome discrimination they have experienced based on weight.* This item also reflects an affirmative practice behavior as it indicates recognition of the discriminatory behavior that obese persons face as well as active attempts to help clients challenge it. Given the social work profession’s mandate to challenge discrimination and oppression toward undeserved groups, it was included as a measure of action to this mandate. An analysis of this item demonstrated that most respondents agreed with this statement (65.3%) indicating that they either “Strongly Agree”, “Moderately Agree” or “Slightly Agree”. Of these, most (35.9%) reported they “Slightly Agree”. Of concern however, was that 18.2% ( $n = 81$ ) reported they “Slightly Disagree”, 8.3% ( $n=37$ ) reported they “Moderately Disagree” and 8.1% ( $n = 36$ ) reported they “Strongly Disagree”. Therefore, more than one-third of respondents (34.6%) reported that they do not engage in practice to help clients overcome discrimination based on weight.

*I educate myself about concerns specific to obese/significantly overweight clients.*

This item reflects an affirmative practice behavior as it measures whether respondents actively engage in efforts to better understand their obese clients and the obesity-related issues they may encounter. An analysis of this item indicates that the vast majority of respondents (85.7%) do engage in efforts to educate themselves about concerns of their obese clients. More specifically, 23% ( $n = 103$ ) reported they “Slightly Agree” with this statement, 33.7% ( $n = 151$ ) reported they “Moderately Agree” with this statement, and 29% ( $n = 130$ ) reported that they “Strongly Agree” with this statement. This suggests that most social workers in this study do actively attempt greater understanding through education, of the specific issues that their obese clients face.

Overall social work respondents report that they do not perceive frustration or discomfort in their work with obese clients. Further, they report recognition of their responsibility to create an affirmative practice environment through equipment change and validation. Respondents report they are seeking education to better understand the issues their obese clients face, as well. Conversely, certain factors continue to limit their ability to engage in specific positive, direct, practice behaviors such as equipment purchase and active work to help clients overcome discrimination.

In summary, an examination of all the individual items measuring weight bias, controllability beliefs, and discrimination in practice among social workers in this study, highlights several areas of concern. 68% of respondents do not believe that obese people are as happy as others and 22% reported they believe that obese people usually resent non-obese others. 77% of respondents believe that poor eating habits are a primary cause of obesity and further 70% of respondents agree that obese people eat more than non-

obese people overall. The implications of these types of bias and beliefs on social work practice with obese clients is indicated in that 25% of respondents do not believe they should have to make environmental accommodations for obese or significantly overweight clients and further almost 64% have not made such active accommodations. The fact that 35% of respondents acknowledged that they do not actively attempt to help obese or significantly overweight clients overcome the discrimination they face, suggests that a key mandate of this profession is being neglected, in work with obese clients. Clearly, while social workers in this study do recognize some of the physiological underpinnings of obesity and do demonstrate some positive attitudes toward obese people, analyses of these individual scale items suggests the existence of weight bias and its impact on practice is a concern that must be further examined.

Table 7

*Percentages of Individual Items on Practice Behavior with Obese or Significantly Overweight Clients: Belief Domain*

Total Sample (N= 564)	1	2	3	4	5	6	7
<b>Beliefs of Practice</b>							
*I find work with obese/significantly overweight clients to be overwhelming	45	26.6	13.6	11	2.5	1.3	20.7
*I am frustrated by the lack of time and energy obese/significantly overweight clients spend on losing weight	34.5	21.5	17.9	16.6	7.4	2.0	20.7
I am comfortable discussing a client's weight when relevant to treatment	.9	.9	1.1	7.1	29.6	60.4	20.4
*I should not have to purchase additional equipment (ie: chairs, guardrails, etc.) to accommodate clients who are obese significantly overweight	29	18.8	22	13.8	8.2	6.6	21.8
*I am uncomfortable discussing weight specific issues with an obese/significantly overweight client	51	24.8	9.1	7.5	3.5	3.8	20

\*Note. \*These items were negative attitudes recoded before the items were summed.  
 1= Strongly Disagree; 2= Moderately Disagree; 3= Slightly Disagree; 4= Slightly Agree; 5= Moderately Agree; 6= Strongly Agree; 7 = Missing/ Not Engaged in Direct Practice

Table 8

*Percentages of Individual Items on Practice Behavior with Obese or Significantly Overweight Clients: Behavior Domain*

Total Sample (N= 564)

	1	2	3	4	5	6	7
<u>Practice Behaviors</u>							
I help obese/significantly overweight clients reduce shame about their weight	2.8	5	6.4	24.8	26.2	14.4	20.2
I help obese/significantly overweight clients address shame created by societal prejudice	4.9	5.8	11.8	29.5	30.6	17.5	20
I acknowledge to obese/significantly overweight clients, the impact of living in a weight-biased society	5.6	7.2	10.3	31	27	18.9	21.1
I educate myself about concerns specific to obese/significantly overweight clients	3.3	4.2	6.3	23	33.7	29	20.6
I help clients identify their own internalized weight bias	7.2	6.7	11.2	28.7	26.7	19.5	20.9
*I spend less time than average with my obese/significantly overweight clients	66.4	16.8	8.7	2.5	3.1	2.2	20.7
I facilitate appropriate discussion of anger by my obese/significantly overweight clients about oppression and discrimination they have experienced	6.3	6.5	13.6	27.5	30.6	15.4	20.7
I help obese/significantly overweight clients overcome discrimination they have experienced based on weight	8.1	8.3	18.2	35.9	24	5.4	20.9
I have purchased additional or special equipment to accommodate obese/significantly overweight clients such as extra large chairs, chairs with arms, guardrails, etc.	36.9	14.9	11.9	13.3	9.9	9.9	22.7

\*Note. \*These items were negative attitudes recoded before the items were summed.

1= Strongly Disagree; 2= Moderately Disagree; 3= Slightly Disagree; 4= Slightly Agree; 5= Moderately Agree; 6= Strongly Agree; 7 =Missing/ Not Engaged in Direct Practice

### *Height, Weight, and Body Mass Index*

Questions about respondent's height and weight were included as independent variables, to allow for calculation of Body Mass Index (BMI) for each respondent. As a provider's own BMI may influence their level of weight bias (Schwartz, et al., 2003), this is an important variable to examine. BMI was not specifically included because in this writer's experience, most lay as well as healthcare professionals do not know how to calculate BMI. Having height and weight for each respondent allowed easy calculation of BMI by this writer, through a PalmOne Zire 31, National Institutes of Health, Obesity Education Initiative, BMI Calculator. Accordingly, each respondent's BMI was calculated as well as the category for which this BMI fell, based on a BMI chart (National Heart, Lung and Blood Institute, 2004). The categories included underweight, normal, overweight, obesity class 1, obesity class 2, and obesity class 3 (extreme obesity). Use of this system assured that all categories are mutually exclusive and exhaustive. Based on height and weight reports, the majority of respondents (59.5%) had BMIs within the "Normal" range. Over one-quarter of respondents (28.2%) reported heights and weight that classified their BMIs as "Overweight". Further, 18.9 % reported heights and weights that classified their BMIs as either "Obese Class 1", "Obese Class 2", or Obese Class 3". (See Table 2). Therefore, while the majority of respondents reported weights within the normal range, almost half of respondents were either overweight or obese.

### *History of Weight Struggle*

Current or past personal struggle with weight by the respondent was included as an independent variable in order to evaluate whether having a perceived personal struggle

with weight, regardless of current BMI, can influence the level of weight bias, one's beliefs about the causes of obesity, and possibly one's practice with obese clients. Again, prior research demonstrates that this can be an important variable to consider when exploring weight bias (Schwartz et al, 2003). This variable has two categories; yes and no. Three-quarters of respondents reported that they were currently or had in the past, experienced a weight struggle. The majority of respondents perceived that they have struggled, despite the fact that most currently report heights and weights within the "Normal" BMI range (See Table 2). This suggests that for many, either their struggle with weight was not current, or perhaps, that perception of weight status was distorted for many respondents in this study. In other words, it is possible that one's perception of weight struggle may not often correlate with an overweight or obese weight status.

#### *Family History of Obesity*

Family history of obesity is an independent variable that has several categories. The first two categories were 1) yes and 2) no. If a respondent answered "yes", this became an independent variable and was broken into five additional categories: spouse/partner, parent, grandparent, child, other. The "other" category is open-ended to allow for participant explanation and responses that do not fit into the specified categories. All responses were grouped into mutually exclusive categories prior to data analysis. These categories were included to assess whether particular relationships with family members who are obese impact one's level of weight bias and possibly one's practice with obese clients.

About half of respondents (52.7%) reported a family history of obesity. (See Table 2). Again, this is a high proportion considering the prevalence of obesity within the

general population (National Institutes of Diabetes and Digestive and Kidney Diseases, 2003). Yet, when further analyses were conducted to determine the closeness of these obese family members to respondents, there was a notable discrepancy. For example, only 15% of respondents reported being married to an obese person, only 30.7% reported that their obese family member was a parent, only 16.8% reported that a grandparent had a family history of obesity and only 10.2% of respondents indicated that they had a child struggling with obesity. Further, only 21% indicated that they had an “other” family member who was obese. Therefore, while many respondents do report a family history of obesity, they are not identifying who that family member is, in equivalent numbers.

*Number of Friends Who Are Significantly Overweight or Obese*

The current number of respondent’s friends who are obese or overweight were included as an independent variable in order to assess whether having overweight friends can influence one’s attitudes and/or one’s practice with obese clients. This variable was an open-ended question. This is also an important variable which has been linked to a relationship with weight bias in previous studies (Schwartz et al., 2003), and has been found to have a statistically significant relationship to positive attitudes toward obese people, in other studies (Yuker et al., 1991). The vast majority of respondents (85.2%) indicated that they did have friends who were significantly overweight or obese. In fact, almost 10% of respondents indicated that they had “6 or more” obese friends (See Table 2). Again, the respondents in this sample report a significant amount of personal exposure to obesity through close family and friends.

### *Years in Practice*

Years in practice was an independent variable included in the lead-in questionnaire, which was open-ended. Previous studies in the social work literature identified this as an important variable to include in studies of bias and effects on practice with clients from certain underserved groups (Crisp, 2002). Respondents reported a Mean number of years in practice as 23.6 (*SD*: 9.23) (See Table 4). Therefore, this sample was fairly experienced with regard to practice.

### *Primary Practice Area*

Primary practice area was an independent variable included in the lead-in questionnaire, which was open-ended. This variable was later categorized based on representation from the sample data and categories used by both NASW and Crisp (2002). The categories included were mental health, health, adolescent/ child, school, child welfare, aging, employee assistance programs/ occupational, addiction, hospice, mental retardation/ developmental disability, grief, other and missing. Unless a respondent indicated specifically working in a school or within child welfare, they were coded as “child/adolescent”, when this was their indicated primary practice area. This decision was made to attempt to address overlap between those categories and to maintain categories as mutually exclusive and exhaustive. The majority of respondents (56%) indicated that “Mental Health” was their primary focus in practice, followed by “Health” (9.8%), “Children and Adolescents” (9%) and “School” (4%). (See Table 3).

### *Job Title*

Job title was an independent variable, included in the lead-in questionnaire, which was open-ended. This variable was later categorized based representation from the

sample data and categories used by both NASW and Crisp (2002). The categories included were direct practice, administration, supervision, research, education, other, and missing. Although only social workers who had identified their primary work focus as “Direct Practice” were included in the sample, there was adequate representation in the other categories, other than research. This may be explained by the fact that some respondents may have changed their primary work focus and jobs since completing their registration for NASW membership. This was the reason for including this open-ended variable in the survey initially, rather than assuming based on the sampling procedure, that all were direct practitioners. Although 82.9% of respondents reported that they were direct practitioners, it was surprising that the proportion was not greater given the sampling technique described above. Eight and one-half percent ( $n = 49$ ) of respondents identified “Administrator” as their primary job title, 1.7% ( $n = 10$ ) as “Supervisor”, 1.6% ( $n = 9$ ) as “Educator”, and 4.7% ( $n = 27$ ) as “Other” (See Table 3). As many respondents identified job titles other than “Direct Practitioner”, this may account for the significant number of respondents who did not complete the SPOOC due to no direct practice with obese or significantly overweight clients.

#### *Percentage of Time in Direct Practice*

Percentage of time in direct practice with clients was included as an independent variable in the lead-in questionnaire, which was open-ended. As related to the above item, the average amount of time in practice was reported as 73.1% (See Table 4). More specifically, only 30% of this sample reported spending 100% of their time in “Direct Practice” and 58.1% of respondents reported spending three-quarters of their time or less

in direct practice. Again, while this was a sample of primarily direct practitioners, it is clear that a significant amount of work time is not spent in direct practice.

#### *Percentage of Significantly Overweight or Obese Clients*

Percentage of clients who are significantly overweight or obese was an independent variable included in the lead in questionnaire to assess the impact of amount of exposure to obese clients on attitudes toward them. On average, respondents reported that 20% of their clients are significantly overweight or obese ( $M: 19.9; SD: 19.3$ ) (See Table 4). 11.4% ( $n = 63$ ) reported they had no clients who were obese or significantly overweight.

#### *Percentage of Direct Practice with Significantly Overweight or Obese Clients*

Percentage of direct practice with obese or significantly overweight clients was included in the lead in questionnaire to assess whether amount of direct practice experience impacts attitudes toward obese or significantly overweight clients. Respondents reported that about 18% of their direct practice was with obese or significantly overweight clients ( $M: 17.5; SD: 20.3$ ) (See Table 4). Of all who responded, 18.3% ( $n = 101$ ) reported that none of their direct practice was with obese or significantly overweight clients.

#### *Sociodemographic Variables*

Gender, age, ethnicity, education level, and family income were each included as independent variables to determine whether personal characteristics of social workers are related to the level of weight bias they maintain. As gender and age have been previously related to weight bias (Young & Powell, 1985; Schwartz et al., 2003), these demographic variables were included to examine whether these findings can be replicated. Gender was

a two category variable; 1) female and 2) male. The majority of respondents were female (82%) (See Table 1). Age was an initially open-ended variable which was later categorized based on the responses. The categories were classified as follows, based on analysis of frequency distribution: 20-25, 26-35, 36-45, 56-65, 66-75, 76-85. Similar categories were also used in a similar prior study (Crisp, 2002). The mean age reported by respondents was 56.3 (*SD*: 10.14) (See Table 1). Ethnicity was also purposefully open-ended to allow for mutually exclusive and exhaustive categorization by this writer later as appropriate, based on the responses of participants. The categories determined most representative after frequencies were analyzed were Caucasian, African American, Hispanic, Asian, Caribbean American, Other, Missing. The vast majority of respondents were “Caucasian” (88%), followed by “African American” (7%), and “Other” (3%) (See Table 1). Family income was divided into seven mutually exclusive and exhaustive categories; \$15,001-\$25,000, \$25,001-\$34,999, \$35,000- \$44,999, \$45,000- \$54,999, \$55,000- \$74,999, greater than or equal to \$75,000. Most respondents (62.8%) reported that their household income was “\$75,000.00 or greater” (See Table 1). About eighteen percent of respondents reported a household income of less than \$55,000.00 per year. Highest level of education was divided into seven mutually exclusive and exhaustive categories; less than high school, high school diploma, some college, associate’s degree, bachelor’s degree, master’s degree, Ph.D./ D.S.W. The vast majority (91.4% ) of respondents had completed their Master’s Degree while only 7.4% had received a doctoral degree.

### *Political Party Affiliation*

Political party affiliation was included as an independent variable to assess the relationship of one's political ideology to beliefs and attitudes toward obese persons. Further, it was important to assess the relationship of political beliefs to practice with obese clients as this is a relationship that has not been studied previously, although conservatism has been linked to discriminatory behavior in other domains (Quinn & Crocker, 2003; Crisp, 2002; Crandall, 1995). Political party had 5 mutually exclusive and exhaustive categories; democrat, republican, independent, other, and none. Following data collection, these categories were collapsed into democrat and not democrat as the distribution was quite skewed. For example, 67.9 % of respondents identified "democrat" as their political party affiliation, 9.6% identified an "Independent" political party affiliation, and only 6.2% identified a "Republican" political party affiliation. Further analysis revealed that collapsing these categories did not enhance our ability to effectively measure conservatism.

### *Relevance of Weight Bias to Social Work*

Three variables were included to assess respondent's perception of the importance of weight bias to social work. The first variable was having heard the term weight bias prior to this survey. This variable had two categories; yes and no. The second variable was the importance of weight bias to personal practice with clients. This variable had seven categories; very unimportant, unimportant, somewhat unimportant, neither unimportant or important, somewhat important, important, very important. The third variable in this section was the importance of weight bias to clients. This variable also had seven categories; very unimportant, unimportant, somewhat unimportant, neither

unimportant or important, somewhat important, important, very important. These variables were included to enhance understanding of the perception of the relevance of the issue of weight bias to social work, as it is an issue which has been inadequately addressed in the social work literature to date. Forty two percent ( $n = 230$ ) of respondents reported the belief that weight bias was important to social work practice however a significant portion of the sample believed it was “Neither Unimportant or Important” (30.5%) or “Unimportant” (27.2%). Therefore, the majority of respondents did not perceive weight bias to be important to their practice. On the other hand, almost 64% ( $n = 340$ ) believed that weight bias is important to their clients. As discussed above, this suggests a clear discrepancy between the level value given to weight bias by social work practitioners and the clients they serve.

#### Plan for Data Analysis

##### *Univariate Data Analysis*

Frequency distributions were calculated to develop a clear picture of the sample and the types of social workers they represent with regard to demographic variables. Frequencies were calculated for the ratio variable of age, as well as the ordinal variables of family size, SES, education, and the nominal variables of ethnicity, gender, and political party. BMI scores which were interval variables, and weight categories which were ordinal variables, were calculated once all data was entered regarding height and weight. This writer used the National Institutes of Health (NIH) Body Mass Index Palmone program to calculate BMIs and determine the correct category they fell into. Frequencies were also calculated for the nominal variables of current or past personal struggle with weight and family history of significant overweight or obesity, as well as

for specific family members identified on the survey. Frequencies were also calculated for the ratio variable of “number of friends who are significantly overweight or obese” as well as the ordinal variables of “ever heard of weight bias before”, “importance of weight bias to practice” and “importance of weight bias to clients” . The interval variable assessing percentage of friends who are significantly overweight or obese was also analyzed through frequency distribution, however only 12 respondents answered this question and therefore a valid assessment was not possible. Frequencies were also calculated for variables assessing respondent’s familiarity with and perception of how important the issue of weight bias was to their practice and clients. All univariate analyses were discussed in this Chapter above.

#### *Bivariate and Multivariate Data Analysis*

Bivariate analyses were conducted to determine the relationship between beliefs about controllability of obesity and attitudes toward obese persons, in order to test the hypothesis that beliefs that obesity is strongly controllable by the obese person will correlate with negative attitudes toward obese people. A Pearson’s product-moment correlation coefficient was used to test this hypothesis and to assess whether a positive relationship exists between these two variables. Previous studies have suggested that further validation of these two instruments is essential in order to provide more accurate measure of their psychometric properties (Yuker et al., 1991). Total scale scores were calculated prior to assessing this relationship in order to conduct these statistical calculations.

Practice experience with significantly overweight or obese clients is an important variable in this study as one critical hypothesis to be tested is that negative attitudes

toward obese clients will correlate with biased practice behaviors. Practice experience was assessed through an original scale, called “The Scale of Practice with Significantly Overweight or Obese Clients”. Reliability was determined through measures of Chronbach’s Alpha coefficient, as recommended by Springer et al. (2002). Pearson product-moment correlation coefficients were used to assess two separate relationships; attitudes toward obese persons and practice behaviors with obese or significantly overweight clients and beliefs about controllability of obesity and practice behaviors with obese or significantly overweight clients.

Bivariate analyses were conducted to test hypotheses that other variables of interest would correlate with attitudes toward obese persons or beliefs about controllability of obesity. Pearson product-moment correlation coefficients were used to determine whether BMI, age, years in practice, percentage of time in direct practice, number of friends obese, or percentage time spent in direct practice with obese clients relates to either beliefs about controllability or attitudes toward obese persons. Gender, personal struggle with weight and family history of obesity were assessed in relation to beliefs about controllability and attitudes toward obese persons through use of independent t-tests. Ethnicity, political party, primary practice area and job title were assessed in relation to attitudes toward obese persons and beliefs about controllability of obesity through use of one-way ANOVA tests.

Multivariate analyses were conducted on all variables that were identified as significantly related to the central dependent variables, in order to determine the predictive ability of these variables on weight biased attitudes, controllability beliefs and

social work practice behavior. Multiple regression analyses were conducted for each of these tests. Later, each analysis was also tested again controlling for gender.

Data analyses were conducted using the Windows version of the Statistical Package for the Social Sciences (SPSS Version 12.0, by SPSS Company, Inc., 2003).

Results from the data analyses described above, will be discussed in the next chapter.

## Chapter Four

### Findings

The current study examines weight bias; specifically the relationships between controllability beliefs and weight bias as well as the relationship between weight bias and social work practice. This chapter presents the bivariate and multivariate analyses discussed in Chapter 3. The first section describes the bivariate analysis examining the relationship between attitudes toward obese persons and beliefs about causes of obesity. The next section describes the bivariate analyses examining the relationship between both beliefs and attitudes toward obese persons and practice behaviors of clinical social workers. The third section describes bivariate analyses examining the personal experience of weight struggle or obesity on attitudes toward obese persons and beliefs about controllability of obesity. The fourth section describes the bivariate analyses examining the relationship between social work practice experience on the one hand and both beliefs and attitudes toward obese persons on the other. The fifth section examines bivariate analyses of the relationships between several other independent variables of interest and beliefs about obese persons as well as attitudes toward obese persons. The sixth section describes a bivariate analysis examining the perceived relevance of weight bias to social work clinicians and their clients. Finally, the last section will review a number of multivariate analyses conducted to examine the predictive ability of several independent variables on weight bias, controllability beliefs and practice with obese clients, as well as certain analyses which specifically controlled for gender.

*Bivariate Analyses of Major Study Hypotheses*

The link between controllability beliefs about obesity and negative attitudes toward obese persons has been well documented in the non- social work literature (Quinn & Crocker, 2003; Harvey & Hill, 2001; Wadden & Stunkard, 1985; DeJong, 1980; Allon, 1975). Bochierri et al. (2002), found multiple links between weight bias and beliefs about controllability, as they cited examples of the link between discrimination, bias and beliefs that individuals were to blame for this medical condition. They emphasize empirical understanding of the phenomenon, because they believe that causes of weight bias are often related to lack of understanding of its physiological rather than psychological etiology.

**Hypothesis 1:** Among clinical social workers, there will be a positive relationship between beliefs about personal controllability of obesity and negative attitudes toward obese persons.

A Pearson product-moment correlation coefficient was used to analyze the first hypothesis. As predicted, there was a moderately high correlation between negative attitudes toward obese persons and beliefs that obese persons can control their obesity ( $r = .49, p=.000$ ). (See Table 12). Therefore social workers who have more positive attitudes toward obese persons are less likely to believe that personal responsibility is a primary cause for obesity. This supports previous studies of other professional and lay populations which have resulted in similar findings (Yuker et al.,1991) and provides additional validation for the two standardized measures used to analyze this relationship (Attitudes Toward Obese Persons Scale and Beliefs About Obese Persons Scale; Yuker et al., 1991). It must be noted however that the Beliefs About Obese Persons Scale (BAOP)

(Yuker et al., 1991) was revised for this study by removing one particularly weak item, in order to enhance the reliability of the measure. Hence, caution should be exercised about generalizing to previous studies. Nonetheless, it should also be noted that a second Pearson product-moment correlation was used to test this hypothesis using the complete standardized measure of the BAOP, reported in the literature to date, yielding essentially the same finding ( $r = .48, p = .000$ ) (See Table 9). Therefore, further evidence is provided supporting the positive relationship between attitudes toward obese persons and beliefs about obese persons. Consequently, the first hypothesis of this study is supported.

While the impact of weight bias on practice may be demonstrated in the literature on other healthcare practitioners, there are no studies examining the impact of weight bias on social work practice. Therefore, it is valuable and groundbreaking to study the impact of beliefs and attitudes toward obese persons on social work practice. This is additionally important as social work sees itself as challenging bias and reducing discrimination (NASW, 1996).

Recognizing a similar gap in the social work literature with regard to understanding how bias impacts practice with gay and lesbian clients, Crisp (2002) developed a scale (Gay Affirmative Practice Scale/ GAP) specifically to assess the relationship between biased beliefs and practice behaviors. In the current study, I used the GAP as an analog to create a new scale measuring social work practice behaviors. This scale, the Scale of Practice with Obese or Significantly Overweight Clients (SPOOC) was therefore created to measure discriminatory/ affirmative practice with obese or significantly overweight clients and to enhance empirical understanding of weight bias by

practitioners overall. This scale was also used to test both hypotheses two and three of this study.

**Hypothesis 2:** Among clinical social workers, there will be a relationship between positive attitudes toward obese and significantly overweight persons and affirmative social work practice with such clients.

Again, a Pearson product-moment correlation coefficient was calculated to test this hypothesis. A moderately positive relationship was found between social work attitudes toward obese persons and affirmative practice behaviors ( $r = .34, p=.000$ ). (See Table 9). This indicates that social workers who have more positive attitudes toward obese clients are more likely to use affirming behaviors in their practice when working with obese and significantly overweight clients. Therefore, the second hypothesis of this study was also supported.

**Hypothesis 3:** Among clinical social workers, there will be a positive relationship between beliefs in the personal controllability of obesity and weight biased practice behaviors.

The third hypothesis was also tested through use of a Pearson product-moment correlation coefficient. A weaker, although statistically significant, positive relationship was found between these variables as well ( $r = .28, p= .000$ ) (See Table 9). A slightly stronger positive relationship was found when the same variables were tested using the original version of the BAOP (Yuker et al., 1991) ( $r= .30, p=.000$ ) (See Table 9), further supporting that those social workers who more strongly believe in the personal controllability of obesity demonstrate more negative practice behaviors with obese or significantly overweight clients. The third hypothesis of this study was supported.

Table 9

*Intercorrelations, Means and Standard Deviations for Scores on Attitudes Toward Obese Persons and Beliefs About Obese Persons Scales With Scores for Scale of Practice with Obese or Significantly Overweight Clients*

Measure	ATOP	BAOP	SPOOC	<u>M</u>	<u>SD</u>
ATOP	---	.48	.34	65.27	20.82
BAOP	---	---	.30	18.57	6.96
SPOOC	---	---	---	16.72	12.33

Note. All coefficients are significant at  $p < .01$ . ATOP = Attitudes Toward Obese Persons Scale; BAOP = Beliefs About Obese Persons Scale; SPOOC = Scale of Practice with Obese or Significantly Overweight Clients

*Personal Weight Experience*

This study also explored the relationship between personal weight experience and both beliefs about obesity and attitudes toward obese persons, predicting that greater personal exposure to obesity will relate to more positive attitudes. To test the hypotheses examining these relationships, beliefs about obese persons and attitudes toward obese persons were each dependent variables and the following independent variables were analyzed with them: Body Mass Index (BMI), perceived personal struggle with weight, family history of weight struggle, number of friends who are obese.

**Hypothesis 4:** Among clinical social workers, there will be a positive relationship between perceived personal struggle with weight and attitudes toward obese persons.

A one-tailed independent t-test was used to test this hypothesis. This analysis compared mean scores on attitudes toward obese persons for respondents who indicated they either are struggling or had struggled with their weight ( $M = 6.83$ ) with those

respondents who indicated they had never struggled with their weight ( $M = .99$ ). This was a statistically significant difference ( $t = 2.70$ ,  $p = .004$ , for one-tailed test). Social workers who reported a history of weight struggle had significantly more positive attitudes toward obese people. This finding supports the literature suggesting a personal experience with weight problems may lead to greater empathy and less bias toward others who are obese. The fourth hypothesis of this study was supported.

**Hypothesis 5:** Among clinical social workers, there will be an inverse relationship between perceived personal struggle with weight and beliefs about the controllability of obesity.

A one-tailed independent t-test was used to test this hypothesis. There was no significant difference among those who did and did not report a personal struggle with weight, on mean scores on either the standardized or revised scale of beliefs about controllability of obesity. This suggests that attitudes may be more influenced by personal experience than beliefs, with regard to perceptions of obese people. The fifth hypothesis of this study was not supported.

**Hypothesis 6:** Among clinical social workers, there will be a positive relationship between Body Mass Index and attitudes toward obese people.

While the tests of the fourth and fifth hypotheses examined social workers' perceptions of a weight struggle in relation to attitudes and beliefs, this study also examined the relationship between a more objective measure of weight and attitudes and beliefs about obese persons. The BMI of each respondent was calculated based on the reported height and weight they provided in their survey response, and this number was categorized based on a standard BMI chart (National Heart Blood and Lung Institute,

1998). The sixth hypothesis of this study was tested through a one-way ANOVA. Attitudes toward obese persons were found to differ significantly among those in different BMI categories  $F(5, 475) = 3.87, p = .002$ . (See Table 10). Specifically, Tukey post hoc tests ( $p < .05$  or better for all significant contrasts) for pairwise comparisons between BMI groups (means provided in parentheses) indicated that those categorized as Class 2 obese ( $M = 16.13$ ) held more positive attitudes than those who were categorized as normal weight ( $M = 2.48$ ) and those categorized as underweight ( $M = -4.38$ ). No other significant differences in attitudes toward obese people were found between groups categorized by BMI by NIH criteria. Underweight respondents held particularly negative attitudes toward obese and those categorized as Obese class 2 held the most positive attitudes. Of interest, the relationship between attitudes and BMI was a non-linear one as those in the most extreme category of Class 3 Obesity ( $M = 12.31$ ) did not indicate the most positive attitudes and further, those categorized as Overweight ( $M = 8.42$ ) held more positive attitudes than their more obese counterparts in Obese Class 1 ( $M = 3.94$ ). Again, the difference between these two groups was not significant. This suggests that perception of current or prior weight struggle may be more strongly related to attitudes toward obese persons, than actual level of weight difference. While further study is necessary to understand this relationship better, it does appear that perceived struggle with weight and BMI may influence the attitudes of social workers toward obese persons. The sixth hypothesis of this study was supported.

Table 10

*One-Way Analysis of Variance for Body Mass Index by Attitudes Toward Obese Persons*

BMI Source	df	SS	MS	F
Between groups	5	58028.41	1605.68	3.87**
Within groups	475	197302.85	415.37	
Total	480	205331.26		

Note. BMI= Body Mass Index

\*\*p < .01

**Hypothesis 7:** Among clinical social workers, there will be an inverse relationship between Body Mass Index and beliefs about the controllability of obesity.

The seventh hypothesis of this study was tested through a one-way ANOVA. No significant difference was found in a similar analysis of beliefs about obese persons and BMI, using either the revised or standardized version of the BAOP. Hypothesis seven of this study was not supported.

**Hypothesis 8:** Among clinical social workers, there will be a positive relationship between family history of obesity and attitudes toward obese persons.

The eighth hypothesis of this study was tested in two ways. First, respondents were asked to indicate, in a yes/no response whether they had a family history of obesity. A one-tailed independent t-test was conducted to test this relationship. The mean scores for attitudes toward obese persons was compared between those had a family history of obesity (M= 7.48) and those who did not have a family history of obesity (M= 3.03). This was a statistically significant difference ( $t= 2.38, p=.009$ , for one-tailed test), suggesting

that those with a family history of obesity had more positive attitudes toward obese persons overall. When tested this way, the eighth hypothesis of this study was supported.

Second, respondents were asked which family members were obese and then these groups were categorized into independent variables and tested separately. One-tailed independent t-tests were conducted to compare means on attitudes toward obese people among those who had an obese parent ( $M=10.09$ ) and those who did not have an obese parent ( $M= 3.14$ ). This was a statistically significant difference ( $t= 3.43, p= .001$ , for one-tailed test). Those with obese parents had more positive attitudes toward obese people.

Also one-tailed independent t-tests were used to compare means on attitudes between those with an obese grandparent ( $M= 9.90$ ) and those without an obese grandparent ( $M= 4.34$ ) and again this was a statistically significant relationship ( $t= 2.22, p= .014$ , for one-tailed test). Those with obese grandparents also had more positive attitudes toward obese people. One-tailed independent t-tests were conducted to compare the mean scores on attitudes toward obese people between those who indicated they had a spouse who was obese ( $M= .876$ ), those who did not have an obese spouse ( $M = .476$ ). This was not a statistically significant difference. Finally independent t-tests were used to compare means among those who had obese children ( $M=5.62$ ) and those who did not have an obese child ( $M= 5.24$ ) and this was not a statistically significant difference. Therefore, while overall having a family history of obesity was significantly related to more positive attitudes, it seems that specific family members and potentially those that may serve as models when one is in development, are the most influential in the development of positive attitudes. The eighth hypothesis of this study was partially

supported, as reported family history, having obese grandparents, and having obese parents were all positively related to attitudes toward obese people.

**Hypothesis 9:** Among clinical social workers, there will be an inverse relationship between family history of obesity and beliefs about the controllability of obesity.

The same analyses used to test hypothesis 8, were used to test hypothesis 9 of this study. No significant relationships were found between family history of obesity and beliefs about obese persons, in any of the bivariate analyses conducted. The ninth hypothesis of this study was not supported. This suggests that personal family experience with weight struggle may influence attitudes and biases, however not beliefs about controllability of obesity, among the social workers in this study.

**Hypothesis 10:** Among clinical social workers, there will be a positive relationship between having friends who are obese or significantly overweight and attitudes toward obese people.

(Note: some respondents ( $n=12$ ) indicated a percentage of friends who were obese rather than a whole number and these respondents were not included in the analysis). The tenth hypothesis of this study was tested using a Pearson product-moment correlation coefficient. For those who responded that they did have friends who were obese ( $n= 469$ ), the mean number of obese or significantly overweight friends reported was 2.88. There was a weak but statistically significant positive relationship between having obese friends and attitudes toward obese persons ( $r= .15, p= .002$ ). Therefore, having more obese friends related to having slightly more positive attitudes toward obese people. These findings are supportive of previous studies which also found a weak positive relationship

between attitudes towards obese people and having obese friends (Schwartz et al., 2003; Yuker et al., 1991). The tenth hypothesis of this study was supported.

**Hypothesis 11:** Among clinical social workers, there will be an inverse relationship between having friends who are significantly overweight or obese and beliefs about the controllability of obesity.

The eleventh hypothesis of this study was tested using Spearman rho correlations. Both the standardized and revised measures of the BAOP were tested. Weak but statistically significant positive relationships were found between the original scale measuring beliefs about controllability of obesity (BAOP) and number of friends obese or significantly overweight ( $r = .10, p = .02$ ) and between the revised BAOP and number of friends ( $r = .09, p = .04$ ). The standardized version of the BAOP contributed to slightly improved strength in measuring this relationship. These findings suggest that having more significantly overweight or obese friends will relate to lesser perceptions that obesity is wholly controllable by individuals. The eleventh hypothesis of this study was supported.

### *Practice Experience*

While the relationship of practice experience to weight bias has not been studied among social workers to date, a recent study by Crisp (2005) examining the correlation between practice experience and homophobia suggests that biased attitudes toward gays and lesbians has a connection to social work practice with them. Previous evidence suggests that in particular, primary practice area may correlate with attitudes and bias in social work practitioners. In the current study, practice experience was measured through several variables; years in practice, primary practice area, job title, percentage of time in

direct practice, percentage of client population obese or significantly overweight, and percentage of time in direct practice with significantly overweight or obese clients.

**Hypothesis 12:** Among clinical social workers, there will be a positive relationship between percent of obese clients and attitudes toward obese people.

The twelfth hypothesis of this study was tested using a Pearson product-moment correlation coefficient. A weak but statistically significant relationship was found between attitudes toward obese persons and percentage of clients who are significantly overweight or obese ( $r=.12, p=.01$ ). (See Table 11). This finding suggests that having more overweight or obese clients will relate to having more positive attitudes, and therefore less weight bias, toward obese people. The twelfth hypothesis of this study was supported.

**Hypothesis 13:** Among clinical social workers, there will be an inverse relationship between percent of obese clients and beliefs about the controllability of obesity.

The thirteenth hypothesis of this study was also tested using a Pearson product-moment correlation coefficient. No relationship was found between beliefs about controllability of obesity and percentage of clients who are obese or significantly overweight. (See Table 11). The thirteenth hypothesis of this study was not supported.

**Hypothesis 14:** Among clinical social workers, there will be a positive relationship between percent of time in direct practice with obese or significantly overweight clients and attitudes toward obese people.

The fourteenth hypothesis of this study was tested using a Pearson product-moment correlation coefficient. No significant relationship was found. (See Table 11). The fourteenth hypothesis of this study was not supported.

**Hypothesis 15:** Among clinical social workers, there will be an inverse relationship between percent of time in direct practice with obese or significantly overweight clients and beliefs about the controllability of obesity. Again, no relationship was found using either the standardized or revised version of the BAOP. (See Table 11). The fifteenth hypothesis of this study was not supported. Therefore, having more clients who are significantly overweight or obese may relate to less weight bias, however, more practice time with this population of clients may not be related.

**Hypothesis 16:** Among clinical social workers, there will be a relationship between percent of time in direct practice and attitudes toward obese people.

**Hypothesis 17:** Among clinical social workers, there will be a relationship between percent of time in direct practice and beliefs about the controllability of obesity.

**Hypothesis 18:** Among clinical social workers, there will be a relationship between years in practice and attitudes toward obese people.

**Hypothesis 19:** Among clinical social workers, there will be a relationship between years in practice and beliefs about the controllability of obesity.

Pearson product-moment correlation coefficients were also used to test hypotheses sixteen, seventeen, eighteen, and nineteen. No significant relationships were found in these analyses (See Table 11). Hypotheses sixteen through nineteen were not supported.

**Hypothesis 20:** Among clinical social workers, there will be a relationship between primary practice area and attitudes toward obese people.

**Hypothesis 21:** Among clinical social workers, there will be a relationship between primary practice area and beliefs about the controllability of obesity.

**Hypothesis 22:** Among clinical social workers, there will be a relationship between job title and attitudes toward obese people.

**Hypothesis 23:** Among clinical social workers, there will be a relationship between job title and beliefs about the controllability of obesity.

The twentieth, twenty-first, twenty-second, and twenty-third hypotheses of this study were tested using one-way ANOVA tests. Unlike in the study by Crisp (2005) looking at bias toward gay and lesbian clients, no relationship was found between primary practice area and either attitudes or beliefs about obese people. In fact, no relationships were found between any of the other independent variables measuring practice experience and either attitudes or beliefs about obese persons. Therefore in this study, only the percentage of clients who are obese or significantly overweight relates to the level of weight bias among social workers, when considering practice experience (See Table 11). The twentieth, twenty-first, twenty-second and twenty-third hypotheses of this study were not supported.

Table 11

*Correlations Between Practice Experience Measures and Scores on Attitudes Toward Obese Persons and Beliefs About Obese Persons Scales*

Measure	ATOP	BAOP	BAOP2
Years in Practice	-.02	.06	.06
% Time in Direct Practice	-.035	-.02	-.03
% of Obese Clients	.12**	-.02	-.02
% of Direct Practice with Obese Clients	.05	-.02	-.03

Note. ATOP = Attitudes Toward Obese Persons Scale; BAOP = Beliefs About Obese Persons Scale

\* $p < .05$ . \*\* $p < .01$ .

*Sociodemographic Variables*

**Hypothesis 24:** Among clinical social workers, there will be a relationship between age and attitudes toward obese persons.

In prior studies, relationships were found between weight bias among healthcare professionals and several sociodemographic variables (Schwartz et al., 2003; Quinn & Crocker, 2003). For example, Schwartz et al. (2003) found that being male and older, were related to less weight bias among a group of healthcare professionals specializing in obesity treatment, from a variety of disciplines. To determine if a similar relationship existed among social workers, the current study used a Pearson product-moment correlation to test the relationship between age and attitudes toward obese persons. There was a weak but statistically significant negative correlation between age and attitudes toward obese persons ( $r = -.16, p = .000$ ). This suggests that younger social workers have more positive attitudes toward obese persons, which contradicts findings by Schwartz et al. (2003) described above. The twenty-fourth hypothesis of this study was confirmed.

**Hypothesis 25:** Among clinical social workers, there will be a relationship between age and beliefs about the controllability of obesity.

The twenty-fifth hypothesis of this study was tested through the use of a Pearson product-moment correlation coefficient. No significant relationship was found between controllability beliefs and age in this study. The twenty-fifth hypothesis of this study was not supported.

**Hypothesis 26:** Among clinical social workers, there will be a relationship between gender and attitudes toward obese people.

The twenty-sixth hypothesis of this study was tested using a two-tailed independent t-test, as earlier findings indicated that men demonstrate less bias than women, among healthcare professionals specializing in obesity treatment (Schwartz et al., 2003). There were no significant differences between mean scores on attitudes toward obese persons between males and females, suggesting gender was not related to attitudes among social workers in this study. The twenty-sixth hypothesis of this study was not supported.

**Hypothesis 27:** Among clinical social workers, there will be a relationship between gender and beliefs about the controllability of obesity.

A two-tailed independent t-test was used to test hypothesis twenty-seven. Of interest, while no significant relationship was found between gender and the revised version of the BAOP used in this study to measure beliefs about obese people, an independent t-test was also used to examine the relationship between gender and beliefs about obese persons using the original BAOP measurement scale (Allison et al., 1991). Although not statistically significant, there was a trend found between mean scores

among females ( $M = -4.24$ ) and males ( $M = -2.84$ ) on beliefs about obese persons ( $t = -1.76, p = .08$ ). This suggests that female social workers may be less likely to hold controllability beliefs about obesity, although further testing would be necessary to confirm this. Nonetheless, hypothesis twenty-seven of this study was not supported. Further validation of measures of beliefs about obese people must clearly be undertaken as mixed findings in this study suggest the risk of missing important relationships in the future.

**Hypothesis 28:** Among clinical social workers, there will be a relationship between political party affiliation and attitudes toward obese.

**Hypothesis 29:** Among clinical social workers, there will be a relationship between political party affiliation and beliefs about the controllability of obesity.

Beliefs about controllability of weight have been linked to certain ideological positions such as conservatism and even the Protestant Ethic (Quinn & Crocker, 2003). Researchers have found that weight bias is more prevalent among those who hold strong conservative beliefs and among those more likely to ascribe to a Protestant Ethic ideology (Quinn & Crocker, 2003). In relation, a recent study of the prevalence of bias toward gay and lesbian clients among social workers, examined the relationship between political ideology and bias; operationalizing political ideology by current political party affiliation (Crisp, 2002). Unfortunately, the limited variability in response to this variable limited the potential for a valid analysis of the relationship between political party affiliation and controllability beliefs and weight bias. Although, no relationships were found through bivariate analyses, further testing must be done to assess these

relationships further. Hence, hypotheses twenty-eight and twenty-nine could not adequately be tested.

**Hypothesis 30:** Among clinical social workers, there will be a relationship between ethnicity and attitudes toward obese people.

**Hypothesis 31:** Among clinical social workers, there will be a relationship between ethnicity and beliefs about the controllability of obesity.

**Hypothesis 32:** Among clinical social workers, there will be a relationship between highest level of education and attitudes toward obese people.

**Hypothesis 33:** Among clinical social workers, there will be a relationship between highest level of education and beliefs about the controllability of obesity.

**Hypothesis 34:** Among clinical social workers, there will be a relationship between socioeconomic status and attitudes toward obese people.

**Hypothesis 35:** Among clinical social workers, there will be a relationship between socioeconomic status and beliefs about the controllability of obesity.

**Hypothesis 36:** Among clinical social workers, there will be a relationship between family size and attitudes toward obese people.

**Hypothesis 37:** Among clinical social workers, there will be a relationship between family size and beliefs about the controllability of obesity.

One-way ANOVA tests were used to test hypotheses thirty and thirty-one. No significant relationships were found. Therefore, these hypotheses were not supported. Hypotheses thirty-two and thirty-three were also tested through use of one-way ANOVAs and again no significant relationships were found. Hypotheses thirty-two and thirty-three were not supported. A Spearman rho correlation was used to test hypotheses thirty-four

and thirty-five. A weak, but statistically significant negative relationship was found between beliefs about obese people and socioeconomic status ( $r = -.09, p = .03$ ) using the revised version of the BAOP. Use of the standardized version of the BAOP (Yuker et al., 1991), improved the strength of this relationship slightly ( $r = -.11, p = .014$ ). This finding suggests that greater total household income relates to having stronger beliefs about the controllability of obesity. Hypothesis thirty-five was supported. No relationship was found between socioeconomic status and attitudes toward obese people. Thus, hypothesis thirty-four was not supported. Pearson product-moment correlation coefficients were performed to test hypotheses thirty-six and thirty-seven. No significant relationships were found. Therefore these hypotheses were not supported.

#### *Administration Method*

**Hypothesis 38:** Among clinical social workers, there will be a relationship between chosen method of participation in this questionnaire, and attitudes toward obese people.

**Hypothesis 39:** Among clinical social workers, there will be a relationship between chosen method of participation in this questionnaire, and beliefs about the controllability of obesity.

Although no demographic differences were found between those respondents who chose to complete the questionnaire online compared to those who completed the hard copy, bivariate analyses were conducted through use of independent t-tests, to test hypotheses thirty-eight and thirty-nine. No significant differences in scores were found among respondents for either attitudes toward obese people or beliefs about the controllability of obesity. Therefore, in this study, response method was not related to

weight biased attitudes or to beliefs about controllability of obesity. Hypotheses thirty-eight and thirty-nine of this study were not supported.

#### *Relevance to Social Work*

**Hypothesis 40:** Among clinical social workers, there will be a difference between perceived relevance of weight bias to social work practice and perceived relevance of weight bias to clients.

As discussed in Chapter 3, univariate analyses revealed a discrepancy between respondent's perceptions of the importance of weight bias to their practice and the relevance of weight bias to their clients. Hypothesis forty was tested using a paired samples t-test to compare the mean score rating the importance of weight bias to respondent's own practice ( $M=4.09$ ) to mean score rating the importance of weight bias to their clients ( $M=4.74$ ). A statistically significant difference was found suggesting that for all respondents ( $n=503$ ), the perceived importance of weight bias to their practice is significantly different than the perceived importance of weight bias to their clients ( $t= -10.06, p=.000$ ). Further, the findings also indicate that there is a strong correlation between the two ratings ( $r= .67, p= .00$ ), suggesting that those who more strongly believe that weight bias is important to their clients, are also more likely to place higher importance on the issue for their practice. Therefore, in practice while social workers are more likely to value the issues they perceived as valued by their clients, there are discrepancies in the levels of this value. The fortieth hypothesis of this study was supported. Researchers have suggested that social workers may in fact devalue certain groups through neglect of key issues, perpetuating further bias and discrimination (Crisp,

2002). It is crucial to understand if this discrepancy in perceived relevance of weight bias is an example of this problem.

### *Multivariate Analyses*

As both beliefs about controllability of obesity and practice with obese or significantly overweight clients were found to be significantly related to attitudes toward obese clients, multiple regression analyses were used to better understand the predictive nature of these relationships. A stepwise multiple regression analysis was used to determine the predictive ability of weight bias and beliefs about controllability of obesity on social work practice behaviors. Coefficient of determination ( $R^2$ ) was .135, indicating that these variables explained 14% of the variance in social work practice with obese or significantly overweight clients. Attitudes toward obese persons or weight bias had the greatest influence on practice behaviors ( $\beta = .27$ ) followed by beliefs about controllability ( $\beta = .15$ ). The direction of influence is positive for both independent variables.

Additional stepwise multiple regression analyses were conducted to determine the predictive ability of attitudes toward obese people and obesity-related controllability beliefs, on practice behaviors with obese clients, while controlling for gender, as this had been an important mediating relationship in previous studies of weight bias (Schwartz et al., 2003; Fu & Goldman, 1996). There was little difference in the predictive ability of weight bias and controllability beliefs for women ( $R^2 = .13$ ) as 13% of the variance in practice behaviors was explained by these variables. However, for men, there were differences as only 9% of the variance in practice behaviors could be explained by their attitudes toward obese people. ( $R^2 = .09$ ). Further, controllability beliefs were excluded

from the analysis as they were not significantly related to practice with obese or significantly overweight clients. This suggests that in work with obese clients, the social work practice of male social workers may be less influenced by the obesity-related biased attitudes and beliefs. An important note is that gender was disproportionately distributed in this study and therefore validity is limited in these analyses examining differences in weight bias between male and female social workers.

A stepwise multiple regression analysis was also used to determine the predictive ability of beliefs about controllability of obesity and social work practice behaviors with obese or significantly overweight clients on attitudes toward obese persons or weight bias. Coefficient of determination ( $R^2$ ) was .277, indicating that these variables explained 28% of the variance in attitudes toward obese persons. Beliefs about controllability was the most influential ( $\beta = .42$ ) followed by practice behaviors ( $\beta = .22$ ). The direction of influence was positive for both variables.

Additional stepwise multiple regression analyses were conducted to control for gender while determining the predictive ability of practice with obese and significantly overweight clients and beliefs about controllability on attitudes toward obese people. Again, there were no differences for women as 28% of the variance in attitudes were explained by controllability beliefs and practice behaviors ( $R^2 = .28$ ). Yet, for men, practice behaviors were excluded from the analysis as they were not significantly related to attitudes toward obese people. This suggests that, once controllability beliefs were controlled, practice with obese clients was not able to explain a significant portion of the variance in attitudes toward obese people for male social workers. Again, the disproportionate number of males in this study may limit validity of these findings and

therefore further research is necessary to clarify if there are true gender differences in social work practice with obese clients.

A stepwise multiple regression analysis was also used to determine the predictive ability of attitudes toward obese persons and practice behaviors with obese or significantly overweight clients on beliefs about controllability. Coefficient of determination ( $R^2$ ) was .246, indicating that these independent variables explained 25% of the variance in beliefs about controllability of obesity. Attitudes toward obese persons was most influential ( $\beta = .44$ ) followed by practice behaviors ( $\beta = .13$ ). The direction of influence was positive for both variables.

The same stepwise multiple regression analyses were again conducted, while controlling for gender, to determine the predictive ability of attitudes toward obese people and practice with obese or significantly overweight clients on beliefs about controllability. There were no differences for female respondents as 25% of the variance in beliefs about controllability were explained by attitudes toward obese people and practice behaviors ( $R^2 = .25$ ). For male respondents, practice behaviors were excluded from the analysis as it was not significantly related to controllability beliefs. This suggests that once attitudes toward obese people are controlled, practice behaviors among male social workers did not explain a significant portion of the variance in beliefs about controllability.

Finally, a stepwise multiple regression analysis was used to examine the predictive ability of each of the variables related to experience with obesity that were identified through bivariate analyses to be significantly related to attitudes toward obese persons, in order to more accurately understand the influence of experience with obesity

on attitudes toward obese persons. This analysis examined the predictive ability of beliefs about controllability of obesity, practice behaviors with obese clients, BMI, number of friends obese, family history of obesity, and percentage of clients who are obese or significantly overweight. Four independent variables met criteria for inclusion in this analysis which were beliefs about controllability of obesity, practice with obese or significantly overweight clients, BMI and percentage of clients who are obese or significantly overweight. Coefficient of determination ( $R^2$ ) was .311, indicating that 31% of the variance in attitudes toward obese persons was influenced by the four independent variables listed above. Further, beliefs about controllability of obesity was the most influential ( $\beta = .39$ ), followed by practice behaviors with obese or significantly overweight clients ( $\beta = .22$ ), followed by BMI ( $\beta = .14$ ), followed by percentage of clients who are obese or significantly overweight ( $\beta = .12$ ). The direction of influence was positive for all variables. Both number of obese or significantly overweight friends and family history of obesity were excluded from this analysis as they were not significantly related to attitudes once all other variables listed were controlled.

Again, similar stepwise multiple regression analyses were conducted also to control for gender. Of interest, when female respondents were analyzed separately, number of friends was included as a predictive variable through this analysis. Coefficient of determination ( $R^2$ ) was .33, indicating, 33 % of the variance in attitudes toward obese persons was explained by beliefs about controllability ( $\beta = .39$ ), practice with obese or significantly overweight clients ( $\beta = .22$ ), number of friends obese or significantly overweight ( $\beta = .13$ ), and BMI ( $\beta = .13$ ) respectively in order of influence. Although the predictive variables differed, there was little difference in the amount of prediction when

female respondents were compared with the entire sample. For females, percent of obese clients and family history of obesity were excluded from analysis because they were found to be unrelated to attitudes toward obese people, when the other independent variables were controlled.

For male respondents, when a stepwise multiple regression analysis was conducted to identify the predictive ability of the same variables on attitudes toward obese people, a somewhat different set of predictors were identified. Only two independent variables met the criteria for inclusion here and they were beliefs about controllability and family history of obesity. Coefficient of determination ( $R^2$ ) was .36, indicating that 36% of the variance in attitudes toward obese people were influenced by the two independent variables included. As with female respondents, beliefs about controllability was the most influential ( $\beta = .49$ ) followed by family history of obesity ( $\beta = -.35$ ). The direction of influence of controllability beliefs was positive whereas the direction of influence was negative for family history of obesity. Hence, male social worker attitudes toward obese people may be influenced by some but not all of the variables than that of female social workers. Four independent variables were excluded from analysis as they were not able to explain a significant portion of the variance in attitudes toward obese people, once the other independent variables identified were controlled. The excluded variables were practice with obese or significantly overweight clients, BMI, number of friends obese or significantly overweight, and percent of obese clients. As discussed above, the disproportionate gender distribution in this study, limits the validity of these findings. However, these findings are noteworthy in that they concur

with the research literature on gender differences in the experience and expression of weight bias (Schwartz et al., 2003; Fu & Goldman, 1996; Young & Powell, 1985).

### *Summary of Findings*

This study provides evidence that among clinical social workers, a positive relationship does exist between beliefs about the controllability of obesity and weight bias. This parallels prior findings with other healthcare professionals. (Allison et al., 1991; Yuker et al, 1991). Likewise, clinical social workers who demonstrated more positive attitudes toward obese persons were less likely to believe that obesity is mainly controllable by individual behavior.

Another important finding was that there is a relationship between attitudes toward obese persons and social work practice behaviors. Participants revealed that those with more positive attitudes were more likely to report affirmative practice behaviors with obese or significantly overweight clients. Of significance, beliefs about controllability were also related to practice with this client population. Therefore both attitudes toward obese persons and beliefs about the controllability of obesity, are important factors to consider when examining the influence of social work practice on obese clients.

Several other variables were found to relate positively to attitudes toward obese persons in this study. Reporting a personal experience with weight struggle, a family history of weight struggle, and having more friends who are obese or significantly overweight were all related to more positive attitudes toward obese persons. Hence, it appears that these personal experiences with obesity may contribute to more positive attitudes toward others who struggle with the same issue.

Significant to practice experience, those participants who reported more obese or significantly overweight clients, reported more positive attitudes toward obese people overall. Again, it appears that exposure to obesity, even through contact with more clients struggling with the condition, may lead to more positive attitudes and perhaps less weight bias.

Younger participants reported more positive attitudes overall. However, age had no relationship to beliefs about controllability. Those with higher socioeconomic status tended to believe more in the personal controllability of weight, however income had no relationship to attitudes toward obese persons.

In an attempt to better understand the complex relationships between practice experience with obese or significantly overweight clients, attitudes toward obese persons and beliefs about the controllability of obesity, several relationships and non-relationships were revealed. Beliefs about the controllability of obesity and practice with obese or significantly overweight clients had considerable influence on the attitudes of respondents toward obese persons. As these variables explained 28% of the variance in attitudes, they are important factors to look at when assessing weight bias. Further attitudes toward obese persons and practice experience with obese or significantly overweight clients had a considerable influence on beliefs about controllability. 25% of the variance in beliefs about controllability was explained by these two independent variables. This was an interesting finding, as few studies have attempted to look at the relationship between attitudes and beliefs with regard to obesity, in this direction.

Attitudes toward obese persons and beliefs about controllability were only able to explain 14% of the variance in practice with obese or significantly overweight clients.

Therefore, while important factors to consider in understanding social work practice with obese clients, there are clearly other significant influences that should also be identified.

Beliefs about obesity, practice experience with obese or significantly overweight clients, current BMI and percentage of clients who are obese or significantly overweight were the most influential on attitudes toward obesity. Examined together, these independent variables were able to explain 31% of the variance in attitudes toward obese persons. This suggests an important set of factors that must be considered when assessing weight bias.

Further, although gender was not significantly related to weight bias through bivariate analyses, multivariate analyses demonstrate that there are differences between male and female social workers in the specific factors that influence weight bias, controllability beliefs and practice with obese or significantly overweight clients. Controllability beliefs are the most influential on weight bias, for both male and female respondents as well as for the sample as a whole, however family history of obesity only influences weight biased attitudes for male respondents. Conversely, only female respondents demonstrate influence of BMI, percent of obese clients, number of friends obese or significantly overweight, or practice experience with obese or significantly overweight clients, on weight biased attitudes.

The following chapter will attempt to interpret these findings discussed above as well as discuss the limitations of the current study. Future policy, practice and research implications will be considered in light of the above.

## Chapter Five

### Discussion

#### *Introduction*

This study focused on the relationship between beliefs about controllability of obesity and weight bias among clinical social workers, as well as the relationship between weight bias and clinical social work practice. As this study was designed to enhance understanding of weight bias among social workers, the relationships between several other sociodemographic variables and weight-biased attitudes were also examined. The chapter begins with a discussion of the specific findings of this study and their place within the existing literature on weight bias among other disciplines. Next, the limitations of this study will be examined considering the study design, sampling, and instrumentation. Finally, the implications of these findings for social work practice, policy formulation and future research will be reviewed.

#### *Interpretation of Findings*

The current study findings provide validation for two standardized measurement scales, which have been used in several prior studies of weight bias. Multiple instruments have been designed to measure weight bias and beliefs about obesity (Friedman et al., 2005; Allison et al., 1991; Crandall, 1994; Bagley et al., 1989; Price et al., 1989), and it has remained unclear which instruments are the most effective. Authors have suggested that certain scales linking beliefs about controllability and negative attitudes must be further validated to support their utility (Yuker et al., 1991). Two of these were the companion scales; Attitudes Toward Obese Persons and Beliefs About Obese Persons (Allison et al., 1991). The current study contributes support for the validation of these

instruments and therefore has enhanced current knowledge about the effectiveness of these scales in studies of weight bias and controllability beliefs. Yet, it must be recognized that the weak coefficient alpha of the BAOP may require alternate methods for assessing controllability beliefs in the future.

Findings of the current study also indicate that on the one hand, respondents do maintain positive attitudes toward obese people overall, yet on the other hand, they still ascribe to certain stereotypes of obese people such as those that perceive obese people to be happier or more social than the general population. Analyses of the individual items in the BAOP-scale indicate that respondents do maintain fairly high levels of controllability beliefs, particularly in regard to perceiving overeating as a primary cause for obesity. Finally, analyses of the individual items in the SPOOC-scale indicate that clinical social workers are not uncomfortable in their practice with obese clients and do seek increased education about obesity-related issues they perceive their clients to face. Further, they do recognize their responsibility in addressing environmental changes to accommodate such clients. Nonetheless, they report less active behavior in creating these environmental changes or in helping clients overcome discrimination. Discrepancies in their beliefs about their practice with obese clients and their actual practice behaviors exist.

The first of the central hypotheses of this study was confirmed indicating that there is a significant relationship between beliefs about weight controllability and negative attitudes toward obese persons. This was an important finding as it reveals a relatively high correlation and therefore a strong relationship between these two variables. This finding concurs with much of the existing literature on weight bias among

healthcare professionals and is particularly significant in that it is the first to study weight bias among social workers specifically.

As indicated in Chapter 2, the significance of negative attitudes among healthcare professionals toward obese people has been documented in numerous prior studies. Recently, Schwartz et al. (2006) found, in a study of 4,283 online survey respondents, 46% would prefer to give up one year of life rather than be obese. Further, in similar studies, Latner & Stunkard (2003) and Latner et al. (2005) reported that obese people are often one of the least “liked” groups among both children and adults. As liking may be related to “attitude toward”, these studies are significant because one author posits that controllability beliefs and blame of the individual may be related to attitudes. Findings from the current study suggest that negative attitudes toward obese people exist among social workers, suggesting that this is a population that should be included in future studies examining the impact and correlates of weight bias among clinical practitioners.

Further, in their literature review, Wadden & Stunkard (1985) cite multiple studies demonstrating the negative connotations and biased beliefs that are common among the general population, with regard to obesity. Moreover, they indicate that several studies of healthcare professionals have demonstrated a strong connection between beliefs about obesity, immorality, and self-indulgence; often characteristics perceived of as at odds with the Protestant Ethic that is so highly regarded in our society (Crandall, 1994; Allon, 1975, Keys, 1955). Again, the current study supports these earlier findings and suggests that social workers, like other healthcare professionals, are not immune to the effects of controllability beliefs on their attitudes toward obese people.

Further, researchers have suggested that this relationship is important because of the way weight bias and controllability beliefs may impact obese clients and the treatments designed for them. The cultural attribution of faulting individuals for their problems with weight regulation has led to very specific, individually-based approaches to addressing obesity; those that fail to acknowledge the role of the environment and one's biology. In some cases, these attributions have led to direct expressions of bias and discrimination. In other cases, they have simply led to a failure to recognize the other factors, environmental and genetic, that have led to the problem (Horgen & Brownell, 2002). Social workers should utilize the current findings to increase awareness of the relationship between inaccurate controllability beliefs and weight bias, and therefore to design more effective treatment approaches which truly address the multiple etiologies of obesity.

While clearly supportive of much of the theory regarding weight bias and controllability beliefs, the current findings do contradict some earlier studies. Although several studies have found a connection between controllability beliefs and attitudes toward obese persons, recently Friedman et al. (2005) found that beliefs about controllability were not particularly influential among 93 obese, treatment-seeking adults. However, it is important to note that in this study, the sample was comprised of clients rather than healthcare professionals and therefore it is not reasonable to suggest that generalizability would exist between the current study and this earlier finding.

Also, Anesbury & Tiggeman (2000) found that reducing controllability beliefs does not necessarily reduce weight bias. In this study however, the sample was comprised of children and therefore generalizability to studies of weight bias by healthcare

professionals, particularly social workers, is quite limited. Further, at baseline, controllability beliefs and attitudes toward obese people were strongly linked, it was only in attempting to reduce weight bias by reducing controllability beliefs that the two variables weakened in their relationship. Hence, the study design and sample were so different from the current study that both generalizability and external validity are limited with regard to the current study.

The second and third central hypotheses of the study were also confirmed indicating that there is a relationship between attitudes toward obese persons and social work practice with obese or significantly overweight clients and there is a relationship between obesity-related controllability beliefs and social work practice with obese or significantly overweight clients. Therefore, those social workers who report more negative attitudes toward obese persons tend to report more negative practice behaviors with their obese or significantly overweight clients; those with more positive attitudes demonstrate more affirmative social work practice with this client population. Further, social workers who endorsed more beliefs that obesity is personally controllable, reported more negative practice behaviors with obese or significantly overweight clients. These were important findings as the study of social work practice with obese clients is an arena that has been wholly neglected. While recognizing the existence of bias is a critical step, some might argue that the relevance of this issue really lies in how weight bias effects practice behaviors with clients. These findings highlight two key factors that are related to the way social workers interact with their obese clients; attitudes and controllability beliefs.

Evidence exists that there is a link between weight bias and negative practice among clinical practitioners in other disciplines. Studies suggest that biased beliefs of healthcare professionals may impact the way they treat their obese patients. Obese patients do not feel that their physicians provide effective obesity interventions (Murphree, 1994; Wadden et al., 2000). Numerous studies document the fact that obese women often delay needed medical care. (Olson et al., 1994; Fontaine et al., 1998; Yanovski, 1998) There is evidence that negative bias from medical professionals may have a particularly significant impact on obese people. Perceived bias may lead obese people to avoid medical care resulting in failure to obtain treatment for serious medical conditions. (Drury & Louis, 2002).

In one study, 216 women were surveyed and it was determined that there was a direct relationship between BMI and health care avoidance. Women reported that concerns about the response of their physician to their weight, were related to this avoidance (Drury & Louis, 2002). Another study found that 12.7 % of the 310 women surveyed delay or cancel medical appointments because of weight concerns (Olson et al., 1994). In a qualitative study, 20 female participants reported that they often feel disrespected and berated by their physicians. The findings of that study revealed that women frequently avoid or delay medical care, particularly for gynecological assessment and treatment (Packer, 1990). Experiences of weight bias by medical professionals can lead to fear of medical appointments and medical professionals and as a result needed care can be delayed or avoided. While these studies confirm the significant effects that perceived bias can have on this client group, they are unable to reflect how this bias has been demonstrated. In other words, while these findings support the fact that perceived

bias is a serious problem with significant effects on clients, they do not explain how weight bias and discrimination is enacted by the practitioners themselves. In part, this is related to the design of these studies whereby the samples are comprised of clients, rather than practitioners. Hence, they are unable to make direct links to the specific behaviors that practitioners engage in with obese clients. The current study addresses this limitation as both the second and third hypothesis focus specifically on practitioner behavior and further, confirmation of both hypotheses highlights correlates that may influence this behavior among social workers whose practice includes obese or significantly overweight clients.

The confirmation of the second hypothesis of this study also confers with previous findings by Crisp (2006) who examined the relationship between homophobic bias and practice behaviors among social workers. This author reported a strong positive relationship between bias and practice behaviors among social workers and in doing so also reflected on the dearth of other studies looking at the influence of bias on social work practice. Crisp (2006), noted that although the relationship between bias and discriminatory behavior is often assumed, there are few studies that actually measure this relationship in a valid way. The author contends that while negative bias against disenfranchised groups is incongruent with the values of the social work profession, the true social problem is in how these beliefs can negatively influence practice behavior. Further, it is this problem which is wholly neglected in the social work literature. The findings of the current study support Crisp's finding of a positive relationship between attitudes and affirmative practice behaviors. These findings also begin to further address this gap in the literature, as they substantiate this relationship among social workers in

particular. Clearly, generalizability between the current findings and those of Crisp are limited as these are very different client populations and further, the measurement scales used to measure attitudes and practice behaviors were different in the current and previous study (Crisp, 2006). It should be noted however, that the Scale of Practice with Obese or Significantly Overweight Clients (SPOOC) used in this study, was created as an analog of the Gay Affirmative Practice Scale (GAP) developed by Crisp (2002).

In addition the findings of the current study conferred with those of previous studies (Friedman et al., 2005; Schwartz et al., 2003; Young & Powell, 1985) which found that practitioner weight was related to attitudes toward obese persons and therefore weight bias. There was a significant relationship between respondent's report of ever having struggled with weight and attitudes toward obese persons whereby those who reported they had struggled with weight either in the past or currently, reported significantly more positive attitudes toward obese people than those who stated they had no history of weight struggle. Those with a history of weight struggle reflected more positive attitudes toward others who struggle with weight problems. Also, actual weight status measured through BMI classification, was also significantly related to attitudes toward obese people as demonstrated by a one-way ANOVA. Of interest, the relationship between attitudes toward obese people and BMI was non-linear. Underweight respondents demonstrated the most negative attitudes, and obese class 2 respondents indicated the most positive. It is not clear why overweight respondents indicated more positive attitudes than those who identified as obese class 1, and further obese class 3 demonstrated less positive attitudes than those in obese class 2. Therefore, while there is a positive relationship between BMI and attitudes toward obese people, there may be

other factors mediating this relationship among social work respondents in this study. Further research is necessary to better understand this connection.

In any case, the findings of this study do confer with prior research suggesting that a significant factor in bias toward the obese by mental health practitioners was the practitioner's own weight (Young & Powell, 1985). The current findings support earlier evidence by Schwartz et al. (2003) as well as Young & Powell (1985) indicating that those practitioners who are themselves obese or overweight are less likely to demonstrate bias toward their obese clients. Also related to the current findings are those by Maiman et al. (1979) indicating that healthcare professionals who have had personal successful experiences with weight loss were also found to have more favorable attitudes toward obese patients. Unfortunately, the current study did not examine weight loss history, rather it focused specifically on having an experience with weight struggle and current weight status and therefore, it is impossible to note whether weight loss history or weight status alone were more influential on attitudes toward obese persons overall. Yet, what is suggestive of the findings of the current study is that those practitioners who have encountered weight problems may also be more aware and more sensitive to the negative effects of labeling of the obese. Those who have not struggled with weight themselves, may be more likely to negatively perceive overweight or obese clients. As this was a correlational finding, causation cannot be determined and therefore future studies should seek to understand if in fact having experience with obesity through personal struggle is the cause of more positive attitudes.

The current findings confer with those of earlier studies that suggest experience with obesity through having friends who are obese or significantly overweight is

significantly related to weight bias, among healthcare professionals. Yaker et al. (1991) report a small but statistically significant relationship between having friends who are obese and more positive attitudes toward obese people. In a study by Schwartz et al. (2003) weighing more and having obese friends were all related to lower levels of implicit weight bias among health professionals specializing in weight management. Also, in a similar study examining practice behaviors of social workers and psychologists with gay and lesbian clients, having friends who are gay or lesbian was also inversely related to homophobia (Crisp, 2006). Again, this suggests that exposure to individuals who belong to certain underserved groups via friendship, may be important to understanding biased attitudes toward those populations overall. All of the findings described above, however, although significant were very weak, suggesting that friendship with obese or significantly overweight individuals may be important but not sufficient to understand weight bias among social workers. Further study of weight bias and its correlates is clearly needed.

The current study also found that having obese or significantly overweight friends is inversely related to beliefs about controllability of obesity. This was important as there is no previous research specifically examining the relationship between number of friends who struggle with weight and beliefs about controllability of obesity. As controllability beliefs have been consistently related to weight bias and attitudes to obese persons, this finding may contribute to future research which explores how number of obese friends can influence this already established relationship between controllability beliefs and bias. It is possible that having greater exposure to obesity through having more friends who are obese, may contribute to enhanced understanding of the physiological

underpinnings of obesity and hence may also lead to greater empathy and more positive attitudes toward obese people overall. Clearly, further study is necessary to understand the role of exposure to obesity through friendships with obese people, on influencing understanding of causes of the condition and attitudes toward those who struggle with it.

When examining the relationship between practice experience and weight bias, only the percentage of clients who are obese or significantly overweight was significant. These findings confer with those of Schwartz et al. (2003) who also found that direct work with obese clients, lead to lower levels of bias among healthcare professionals and researchers. In the current study, there was no relationship between primary practice area, job title, years in practice, percentage of time in direct practice, or percentage of time in direct practice with obese or significantly overweight clients and attitudes toward obese people. Of interest here is that it was not the amount of time spent with this population of clients, but the overall percentage of those clients in one's practice that was significant to weight bias. As no other studies of healthcare professionals have explored the relationship of weight bias and specific types and amounts of practice experience with obese clients, these findings support the need for more understanding of the role of one's work in influencing perceptions of and attitudes toward clients among social work practitioners.

These findings are not consistent with those of Crisp (2005) who found that primary practice area was related to homophobia in a sample of 477 social workers and psychologists. Crisp (2005) also examined the relationship of practice among social workers to bias and practice behaviors and was in fact the first study of its kind to do so. As the current study was an analog to this earlier study, it is important to note that the difference in findings may suggest that practice mediates relationship to bias differently

when working with different underserved client populations. As samples in both studies were limited with regard to demographic representation, further investigation of the relationship of practice experience to weight bias is needed, and possibly to bias overall among social workers.

The current study also examined a number of sociodemographic variables to determine their relationship to weight bias. There was a significant though relatively modest inverse relationship, found between age and attitudes toward obese persons, in that younger respondents reported more positive attitudes than their older counterparts. This finding does not concur with earlier studies by Young & Powell (1985) and Schwartz et al. (2003) who actually found positive relationships between age of respondent and attitudes toward obese people. In both of these studies, it was the older respondents who demonstrated more positive attitudes. Clearly age is related to weight bias as is supported in the current and previous studies discussed, however it seems that further investigation is necessary to understand the direction of this relationship.

No other sociodemographic variables were found to have significant relationships to attitudes toward obese persons. Of importance however, a weak but significant relationship was found between socioeconomic status and beliefs about controllability. These findings suggest that respondents with lower incomes were more likely to recognize the physiological underpinnings of obesity. In this study as household income increases, so do beliefs that obesity is wholly controllable by individual behavior. It is interesting to note however, that socioeconomic status was not related to attitudes toward obese persons and therefore not related to weight bias. Hence, socioeconomic status may

be important to understanding what people believe causes obesity, but this variable cannot be used to understand weight bias alone at this time.

Also, it is important to recognize that although no significant relationship was found between gender and beliefs about controllability or attitudes toward obese people, a trend was noted whereby females demonstrated fewer controllability beliefs than male respondents overall. Again, no relationship was found between attitudes toward obese people and gender and therefore this finding offers no additional information about weight bias. Of importance this finding is inconsistent with the earlier study by Schwartz et al. (2003) which found that men demonstrated significantly less weight bias than women among healthcare professionals specializing in obesity. Again, this is the first study of its kind to examine factors related to weight bias among social work practitioners and therefore much remains to be studied to enhance understanding of this complex phenomenon.

No other sociodemographic variables were related to beliefs about controllability or attitudes toward obese people. Political party was also not related to either controllability beliefs or attitudes toward obese people. Unfortunately the fact that the majority of respondents were Democrat and there was very little variability in response to this item, the potential for a valid analysis of its relationship to weight bias and controllability beliefs is limited. As it can be assumed that the majority of social workers would identify with “Democrat” as their political party affiliation, using party affiliation as a measure of “conservatism” may have been a problem. Future studies, should assess level of conservatism directly to determine if there is in fact a relationship to weight bias.

Although the profession of social work places value on equality and social justice, Crisp (2002) found that the field has been remarkably neglectful of certain undeserved groups. This author has suggested that this neglect may be an example of placing greater value on one group over another and therefore perpetuating social injustice and bias. Further, there is evidence that this type of differential valuing by social workers may affect their practice in negative ways, possibly perpetuating further discrimination toward undeserved groups (Crisp, 2002). Although Crisp (2002) was not specifically addressing obesity or weight bias in her study, the issue of neglect and its potential influence on bias and discrimination must be recognized as a potential factor in regard to the dearth of studies acknowledging weight bias by social workers or examining the role that social work could play in reducing this significant problem. Therefore, the importance of the finding of the current study cannot be underestimated. A paired sample t-test was performed to examine the difference between respondent's perception of value of the issue of weight bias to their own practice and the respondent's perception of how important weight bias was to their clients. First, it is important to note that the highest correlation in this study was found between the importance of weight bias to practice and the importance of weight bias to clients. This suggests that social workers in this study value weight bias as important when they perceive clients to do so. However, the difference in the level of that value was also significantly different with perception of the importance to clients as higher than that of importance to respondent's own practice. Therefore, there was a significant difference in respondent's own perception of importance than that of what they believe their clients to perceive. What are the potential consequences of such differential valuing of importance between clients and those

charged with treating them? According to Crisp (2002), one answer may be the perpetuation of bias and discrimination by social workers themselves. As this is the only study to address the issue of weight bias among social workers and therefore the only study to examine differences in value placed on the issue between clients and their providers, clearly much more investigation is necessary to better understand the dearth of social work literature on the issue and further how this may relate to bias itself.

Several stepwise multiple regression analyses were conducted to attempt to explain some of the bivariate findings discussed above. In attempting to determine the level of influence of both attitudes toward obese people and controllability beliefs on social work practice behaviors, it was determined that only a small portion of the variance in practice behaviors with obese or significantly overweight people can be explained by these two independent variables. Further, respondent's attitudes toward obese people were more influential than the level of their controllability beliefs. Therefore, while both attitudes and beliefs are somewhat predictive of how social workers practice with their obese clients, clearly attitudes and controllability beliefs are not sufficient to understand why some social workers demonstrate more affirmative practice than others. When attempting to make sense of these findings, it is important to remember that in this study social workers reported fairly affirmative practice beliefs and behaviors with their clients. Therefore, it is possible that for respondents in this study, social work training in remaining non-judgmental and supportive may have mediated some of the effects of negatively biased attitudes or controllability beliefs. This suggests that social workers may be demonstrating affirmative practice behaviors, despite their beliefs and attitudes toward the groups they work with. On the other hand, there are

specific practice behaviors, such as changing the environment and helping clients overcome discrimination, that are less likely to be employed by the clinical social workers in this study. Therefore, in regard to these types of negative practice behaviors, future studies should explore some of the other variables that may be limiting clinical social workers in the use of affirmative practice.

In connection with the above analysis, this study also examined the predictive ability of both controllability beliefs and practice behaviors on attitudes toward obese people. These findings suggest that more than one-quarter of the variance in attitudes toward obese people is explained by controllability beliefs and practice behaviors. The more influential of these two independent variables was controllability beliefs which are expected given the high correlation found between attitudes and controllability beliefs discussed above and in Chapter 4. Therefore, these findings suggest that controllability beliefs are very predictive of one's attitudes toward obese people. These findings conferred with many previous studies (Bochierri et al., 2002; Crandall, 1994; Wadden & Stunkard, 1985; Allon, 1975, Keys, 1955). While lack of understanding of the physiological as well as psychological causes of obesity has been found in previous studies to perpetuate controllability beliefs and therefore weight bias (Horgen & Brownell, 2002), it is possible that a different set of factors is contributing here. This is supported as respondents in this study reported high levels of recognition of the biological base for obesity, yet still endorsed high levels of controllability beliefs, specifically eating behaviors as primary etiological causes. As the study by Anesbury & Tiggeman (2000) contradicted other findings of controllability as highly correlated with negative attitudes toward obese people, the current study findings indicate that it may in

fact be specific types of controllability beliefs that most influence weight bias.

Nonetheless, these findings do support the importance of addressing controllability beliefs in relation to weight bias and possibly in eating-based beliefs as more significant than others with regard to controllability.

The current study also examined the predictive ability of attitudes toward obese people and practice behaviors of social workers working with obese or significantly overweight clients on controllability beliefs. Again, a fairly high portion of the variance in controllability beliefs was influenced by these two independent variables. As expected, attitudes were much more important in explaining beliefs about controllability of obesity, than practice behaviors. Again, given the high correlation between attitudes toward obese persons and controllability beliefs, discussed above and in Chapter 4, it was expected that attitudes would influence controllability beliefs. However, this finding is important as most previous studies have suggested that beliefs predict attitudes, and while that was also a finding of this study, the idea that one's attitudes may predict one's beliefs was somewhat unique. Clearly, further study must be conducted on this relationship, however, as Anesbury & Tiggeman (2000) found that reduction of controllability does not necessarily reduce negative attitudes, it is possible that these future studies should examine whether or not development of more positive attitudes through exposure and other means, may lead to reduced blame and controllability beliefs.

Finally, this study also examined the predictive ability of exposure to obesity through work, personal experience, family history, as well as beliefs about controllability and practice behaviors on attitudes toward obese persons. Only BMI, percentage of clients who are obese or significantly overweight, controllability beliefs and practice with

obese or significantly overweight clients were predictive of respondent's attitudes. When looking at these variables together, they were able to explain 31% of the variance in attitudes toward obese people. This was a significant finding which highlights several key variables that are predictive of weight bias among the social workers in this study. Controllability beliefs were the most predictive, followed by practice behaviors. However, BMI and percent of obese of significantly overweight clients were each also important. Therefore, as this is the first study to examine weight bias among social workers, it is clear that one's personal weight experience as well as one's exposure to obesity through practice with clients who struggle with it, are important avenues to continue further investigation. These findings concur with that of Schwartz et al. (2003) and Young & Powell (1985), which looked at weight bias among other healthcare disciplines and also found that weight of practitioner was related to weight bias. The findings of the current study also suggest that exposure to the struggle of obesity through having clients with the condition is predictive of more positive attitudes toward obese people. One possible explanation is that as social workers are trained to be empathic to clients with various types of struggles, it is possible that this training may help to increase empathy toward obesity and obese clients and therefore reduce blame. If so, this would suggest that practice with obese clients may mediate the relationship between controllability beliefs and weight bias.

Further, when controlling for gender, the attitudes and practice behaviors of male respondents appear to be influenced by a somewhat different set of variables, than they are for female respondents. Only controllability beliefs were influential for both men and women when these two groups of respondents were analyzed separately. These findings

concur with prior research on gender differences with regard to weight bias (Schwartz et al., 2003). One explanation could be that as unrealistic expectations for female body shape and appearance have been established and accepted throughout this society (Greenberg et al., 2003), women are more likely to ascribe to these “norms” for themselves as well as others. This could render them more vulnerable to multiple influences on weight-biased attitudes. In essence, female social workers who are unable to achieve body type ideals or perceive others to be unable to do so, may be more likely to elicit negative emotions toward clients who are struggling with the same condition.

As this is the first study to examine practice experience among social workers in relation to weight bias, further investigation is necessary which can include greater focus on mediators, specifically gender, to the relationship between controllability beliefs and weight bias, and possibly longitudinal studies to more clearly understand causation. Practice and personal experience with obesity should be variables included in these studies to better understand the roles they play in influencing social work attitudes toward the obese clients they treat.

#### *Limitations of the Current Study*

##### *Sampling*

There were several limitations of this study that require review. First, the response rate of this study was low as only 19% of the social workers to whom the surveys were mailed, responded. While, this was an improved response rate compared to an earlier study of bias in social workers (Crisp, 2002) of which the current study was an analog, it is still a relatively low response rate. Mailing difficulties discussed in Chapter 3 as well as possibly low interest in or acceptance of the topic of weight bias may have contributed

to fewer responses than predicted. The concern here is that a low response suggests it cannot be known to what degree the respondents in this study represent all NASW social workers and therefore generalizability limited.

With regard to sampling, including only those social workers who are members of NASW also limits generalizability. As discussed in Chapter 3, the limited variability in gender and ethnicity among members of NASW, makes generalizing to clinical social work groups other than Caucasian females, impossible. Further, it is also likely that social workers who are members of a professional organization such as NASW demonstrate beliefs and attitudes different from other social workers who are not members in such organizations. It must be recognized therefore that the findings of this study represent attitudes of NASW social workers rather than social workers overall, and important information about other social work groups remains unknown.

Overall, therefore this study is limited with regard to representation as 87% of respondents identified themselves as “Caucasian” and 82% of respondents were “female”. Further, almost 70% of respondents identified themselves as “Democrat”. While the proportion of female and Caucasians in this sample are similar to that in both the earlier study by Crisp (2002) and NASW membership overall, these results do not offer information about weight bias among male social workers or those who are of ethnic groups other than Caucasian. There was no available data from NASW on the political party affiliation of its members, however the proportion of Democrats in this study was similar to that of the earlier study by Crisp (2002). Again, it is not possible to generalize the findings reported in this study, to NASW members who are not members of the Democratic Party. Also, analyses involving political party were not valid beyond

exploratory purposes, as limited variability in responses prevented a valid assessment of conservative beliefs. Future studies should seek more effective methods of assessing conservatism. Further, although statistical testing did examine the relationship between gender, ethnicity, and political party with attitudes toward obese persons, the lack of variability in responses, suggests that reliability may be compromised for understanding these relationships.

The particularly high number of respondents who endorsed having experienced a past or current personal struggle with obesity as well as a family history of obesity, may be a potential limitation to this study. As more than three-quarters of respondents reported such a personal experience with weight struggle, and more than half endorsed a family history of obesity, it is possible that findings from this study are not generalizable to clinical social workers who have not struggled with weight through personal or family experience. It is possible that interest in participation in this study was prompted mainly by personal or family experience and therefore the positive attitudes toward obese people identified in the findings are only reflective of clinicians who have experienced obesity and perhaps weight-related bias. If so, social work clinicians who have not been personally exposed to weight bias, are not represented here. In fact, it is not possible to know whether the lack of participation from people who have not struggled with weight is the result of a perception that weight bias is irrelevant or uninteresting in related to social work practice. Given this assumption, the beliefs, attitudes and practice behaviors of an important group of social work clinicians with potentially higher levels of negative attitudes or controllability beliefs, were not assessed in this study.

*Design*

This was a quantitative study using a mailed self-administered questionnaire to assess attitudes toward obese people, beliefs about controllability of obesity, and social work practice with obese or significantly overweight clients. There are several limitations to this design. First, using a mailed self-administered questionnaire was helpful in accessing 3000 social workers throughout the country and clearly this would not have been possible if the study was conducted in face to face interviews. The sample size in this study was enhanced through use of this design. However, the questionnaire was 10 pages long and some respondents did indicate that it was “too long”. The length of the questionnaire and the fact that respondents were able to complete it in an anonymous format may have contributed to response bias in that respondents may have become bored or tried to rush through completion, without concern for accurately reporting their beliefs and attitudes. Further, the guarantee of anonymity also may have contributed to a low response rate as all social workers who received the questionnaire may have felt less obligated to complete it.

As this was a study of weight bias among social workers, another limit of this study was the validity of the definition of weight bias. Although several other studies of weight bias have used the ATOP ( Crerand et al., 2007; Friedman et al., 2005; Harvey et al., 2002; Harvey & Hill, 2001;Allison et al., 1991), it is possible that negative “attitudes” are operationally different from bias. Review of other studies of bias among healthcare professionals (Friedman et al., 2005; Harvey et al., 2002; Harvey & Hill, 2001), including the study of social workers by Crisp (2002), have used measurement scales of attitudes to measure bias, however findings from other recent studies suggest other measurement

tools may be as or more effective (Schwartz et al., 2006; Schwartz et al., 2003). At this time, a gold standard for measuring weight bias has not been established, however, it is important to recognize that in this study weight bias can only refer to negative attitudes toward obese people, and no other definition will be accurate.

Some authors have suggested that healthcare professionals are less likely to respond openly to questionnaires which explicitly assess their own levels of bias (Schwartz et al., 2003; Greenwald, 1998) and have therefore chosen to use implicit tests of bias to measure weight bias. Clearly, it may be difficult for social workers, who are charged with social justice and reduction of inequality, to acknowledge that they may possess some of the same biases and attitudes that they are taught to fight against. Hence one potential limitation of this study was that it risked a social desirability influence in responses. Although the survey was anonymous, some respondents may have had difficulty being honest and open about their beliefs, particularly if they perceive those beliefs to counter what they believe the profession of social work expects of them. If inaccuracies in reporting of attitudes existed, validity of the findings may have been compromised.

Beliefs about controllability have been identified as significantly related to weight bias in this and other studies (Crerand et al., 2007; Friedman et al., 2005; Harvey et al., 2002; Harvey & Hill, 2001; Allison et al., 1991) and while recent studies (Crerand et al., 2007) have cited the adequate psychometric properties of the Beliefs About Obese Persons Scale (BAOP) (Allison et al., 1991), reliability of this measure has been previously inconsistent (Yuker et al., 1991; Allison et al., 1991). In fact, the initial studies used to develop the scale cited an alpha range of .65 to .80. In the current study,

use of the standardized version of the scale (Allison et al., 1991) revealed an alpha of .70. To enhance reliability, one very weak item was removed to produce an alpha of .72. While this may be considered an adequate reliability by some (Crerand et al., 2007), others report it to be “undesirable” (Springer, 2001). Therefore, it may be that other measures of controllability beliefs are necessary to enhance reliability of findings and therefore knowledge about this important relationship, or simply this measure would benefit from further revision to enhance consistency of its reliability .With regard to the current study, it is necessary to recognize that relatively low reliability in this measurement scale may influence the interpretability of findings related to controllability beliefs.

As this is the first study of the relevance of weight bias to social work practice, the Scale of Practice with Obese or Significantly Overweight Clients (SPOOC) was developed to assess social work practice with obese clients. Although this scale demonstrated good reliability in this study, this is the first and only time this measurement tool has been used. Further, although this scale was created as an analog to the Gay Affirmative Practice Scale (Crisp, 2002) which has very strong psychometric properties, SPOOC is unique to social workers working with obese clients and therefore further testing of its psychometric properties is necessary to learn about its true potential to contribute to knowledge about weight bias and social work practice. It should be recognized that the lack of standardization of this scale may limit the validity and reliability of the findings of this study.

As a key question underpinning this study was the relevance of weight bias to social work practice, it must be recognized that the validity of the specific question used

to assess this may be limited. Two questions specifically asked respondents to report their perceptions of the importance of weight bias to their work. The first question was “How important is weight bias to your practice with clients?”. On several of the questionnaires returned, respondents wrote notes indicating confusion regarding this question. The second question was “How important is the issue of weight bias to your clients?”. The finding of significant difference levels between perceived importance of weight bias for their practice versus the perceived level of importance to their clients, was recognized as an indication that social workers in this study may not place as much value as their clients do, on this important issue. If a significant number of clients were confused by the first question, they may have answered inaccurately. Thus the validity of the findings here would be questionable. This is further substantiated by the fact that the wording between the two questions varied in that the second question asked about “the issue of weight bias” whereas the first only asked about “weight bias”. It is possible that respondents interpreted this first question to assess whether or not they demonstrate biased behaviors in practice. If so, this would suggest a very different interpretation of the findings of significant difference between the two variables. As this was an anonymous survey, respondents cannot be interviewed about their understanding of the question and therefore the validity of this finding must be recognized as questionable, requiring further study in the future. A more extensive pilot study with this questionnaire would possibly have been very useful in identifying this issue prior to the actual study, thereby allowing an opportunity to alter the language of these questions to enhance face validity. The lack of pilot testing can be viewed as a limitation of this study.

## *Implications of Findings*

### *Implications for Policy Formulation*

It has been recognized, the lack of support for education about the genetic and environmental causes of obesity, the failure of insurance companies to cover obesity treatment, and the dearth of efforts to reduce weight-based discrimination are examples of the influence of weight bias on public policy in this country (Downey ,2005). The current findings both further substantiate the connection between blame-based controllability beliefs and weight bias, as well as suggest that even among social workers, these beliefs and attitudes may influence practice behaviors. Given the above consequences and those identified in the present study, it is clear that there is a significant opportunity for social workers to engage in policy transformation that can begin to help this largely neglected population in our society.

For individual social work practitioners, these findings emphasize the importance of challenging controllability beliefs and engaging in both education for themselves and their colleagues regarding the empirical evidence supporting multiple physiological underpinnings of obesity and the negative effects of weight bias on clients. Within agencies and in private practices, social work clinicians and administrators must enact policies which prohibit weight-based discrimination and which challenge weight biased thinking whenever it is present. These findings can have many implications for policy transformation among practitioners and administrators as clearly, the impact of not doing so may only serve to perpetuate this bias further.

On a macro policy level, social workers must recognize the failure of current policies to protect obese individuals from bias and discrimination. The current findings

can be utilized to support the imperative to force social workers to recognize that they too are vulnerable to these biases, and therefore that weight bias may be influencing their lack of participation in needed policy change. Examples of the need for change are prevalent in many of the existing policies and laws. The American Disabilities Act of 1990 (ADA) was initially designed to protect individuals from discrimination based on physical or mental disabilities, within the public and private sectors. To date, almost no court has been willing to recognize obese individuals as one of these protected groups, despite the plethora of evidence that obese people are often discriminated against in employment settings (Puhl & Brownell, 2001).

Another example of the need for social workers to recognize the opportunity available to them in the policy arena is that within this country only two states and two cities have laws banning discrimination based on weight (Theran, 2005). The current study findings can be used to support the importance of including obese persons in laws designed to protect against discrimination and where they don't exist, to create new ones. One example of a specific policy change supported by the current findings is to require all practice settings to make environmental accommodations for obese people. Oversized chairs, chairs with arms, and guardrails should be installed and used in all treatment settings, as these can enhance the ability of obese people to access these services that are currently inaccessible. As indicated through the current findings, many social work clinicians recognize the need for these changes in their practice environments, but may be limited with regard to control over whether these changes are actually made. Social work policy advocates can use the current findings to support the recognized need and to

challenge policies which limit access to this important and deserving segment of our society.

*Implications for Social Work Practice*

The current findings suggest there are multiple opportunities to enhance social work practice with obese and significantly overweight clients. The SPOOC can be used in practice settings to assess negative practice behaviors with this population. As has been identified by other developers of measurement tools to assess practice behavior (Crisp, 2002), these types of instruments are very useful for practitioners to assess their own practice and to identify ways to improve or alter interventions that are ineffective. Crisp (2002), when discussing the responsibility of practitioners to remain culturally competent, identified this type of self assessment as critical to keeping with the ethical mandates of the social work profession. She highlights the necessity of practitioners working with gay and lesbian clients to be aware of their own biases and to challenge them through creating an affirmative practice setting. Even in cases where weight is not the presenting problem, it is equally essential that social workers who treat obese or overweight clients are aware of their attitudes and beliefs. Further, it is the responsibility of social workers armed with this information, to consistently assess that they are creating an atmosphere of affirmation and support. Again, obese clients must be recognized as a group vulnerable to disenfranchisement, in practice and other settings. The findings of this study support the need for more awareness on the part of social workers to their attitudes and behaviors in practice, and the need for greater opportunities to create more affirming practice experiences for obese clients.

Reduction of controllability beliefs may be an important first step in practice with obese clients. As the current findings substantiate the link between controllability beliefs and weight bias, it is possible that increased education of practitioners, administrators, as well as clients about the specific causes of obesity is an important first step in challenging the many stereotypes that are prevalent among social workers. Educational programs designed around the empirical evidence regarding the etiology of obesity are essential. Although social workers may recognize the biological basis for obesity, the current study finds many social workers still maintain beliefs that are inaccurate and could potentially lead to biased attitudes and behaviors. Again, self reflection and education about treatment issues specific to diverse groups, are important responsibilities of social workers who are committed to the ethical mandates of the profession. This study supports the need for social workers to be more aware of the myths and inaccuracies they hold in regard to obesity.

An important step in creating a change with regard to practice education could be to enlist the support of the Council on Social Work Education (CSWE). The findings of this study should be considered in the development of new curriculum to be included at both the Master's and post- Master's levels to offer knowledge to students about weight bias; what it is, it's impact on clients, and it's role in social work practice. As weight bias is particularly new to the field of social work, it is necessary for those responsible for developing the knowledge-base in the field, to highlight all undeserved groups that may benefit from social work intervention and social work's commitment to social justice. All CSWE accredited schools should be required to include weight bias in their curricula on other forms bias and discrimination. As this study demonstrates, obese and significantly

overweight individuals are clearly in need of support to challenge the weight- based bias and discrimination which has become so prevalent in this society. This cannot be accomplished without the support of the accrediting bodies and educational systems.

With regard to direct practice interventions, studies have demonstrated that treatment efforts aimed at educating obese clients about weight bias and discrimination can contribute to enhanced self esteem and self-acceptance (Crerand et al., 2007). One possible intervention to enhance social work practice with obese clients, therefore would be to use the current study in conjunction with other educational materials, to validate and educate clients about their experiences with weight-based discrimination. Helping clients to discuss their feelings and experiences is a first step to creating a treatment atmosphere of acceptance. Educating them about the relationship between their experiences and potentially internalized weight bias is an important intervention that can add to their success in treatment and possibly to an improved sense of self overall. The findings of the current study should be used as means to begin this discussion and to help clients discuss their treatment experiences. Commitment to helping clients enhance their lives, requires recognition of the need to address weight bias openly and honestly with obese clients.

#### *Implications for Future Research*

This was the first study to assess weight bias among social workers and to explore its potential impact on practice. While the findings have contributed to knowledge about the strong relationship between controllability beliefs and weight bias and how negative attitudes toward obese people can influence social work practice behaviors, future studies

must be conducted to better understand these relationships and the tools used to assess them.

An important aim of future studies should be further testing of the psychometric properties of the SPOOC. Clearly, this tool offered important information about the strong relationship between both beliefs and attitudes toward obese people and the practice behaviors of social workers who treat obese clients. Yet, future studies should seek further standardization of this measurement tool to enhance knowledge of its reliability and validity. Studies which focus on samples of different groups of clinicians, possibly psychologists, nurses, dieticians, and even social workers who are not members of NASW, could be useful in demonstrating the generalizability of this measure. While the current findings are of significance, it is also essential to determine the extent to which practice behaviors are affected by weight bias among other groups as well.

A study using an expert review panel to would also be an important step in enhancing content validity (Babbie,2005). There are many experts now in the field of weight bias who could possibly review an instrument of this type and offer suggestions as to language and organization, to enhance its utility in the field. Other researchers studying bias among social workers have used this technique and found it quite useful in enhancing content validity (Crisp, 2002). Such a study examining weight bias in social work practice, could enhance knowledge of the validity of the SPOOC which could greatly advance the knowledge-base on weight bias and social workers overall.

Future studies should also review the use of the BAOP as a reliable tool for assessing controllability beliefs. Although there were significant findings in the current study as well as other recent studies (Crerand et al., 2007; Friedman et al., 2005), the

reliability of this instrument remains inconsistent. Some researchers have revised the instrument (Harvey et al., 2002) and it is possible that future studies should seek additional revision or alternative means to assess controllability in a more reliable way. Possibly, the creation of new measurement tools which examine blame of obese persons as well as knowledge of current empirical evidence of the physiological and environmental underpinnings of obesity, would be a useful pursuit in enhancing understanding of the relationships of controllability beliefs to weight bias.

Future studies should also consider incorporating an Implicit Association Test (IAT) of weight bias (Greenwald et al., 1998) into the research design, in order to address concerns about social desirability responses. These measures require participants to pair words or pictures in super ordinate categories and based on timing, matches the correctly paired to incorrectly paired items to determine the level of negative implicit attitudes toward obesity. Studies have found that there can be marked differences between implicit and explicit reports of weight bias among healthcare professionals (Teachman & Brownell, 2001). Considering those concerns in the current study, regarding social desirability, use of an IAT may help to determine if social workers are limited in their reports of weight bias, by concerns that negative attitudes are too uncomfortable or incompatible with the expectations of this profession.

Future studies should seek a more representative sample of social workers overall. This may require a different sampling technique such as stratified sampling (Babbie, 2005), whereby participation from certain groups not adequately represented in this study are sought through assuring that there are appropriate numbers of potential participants in each group, before random sampling from each of them. As the current sample contained

insufficient numbers of male social workers, those of an ethnicity other than Caucasian, and those of political parties other than democratic, representation from other groups should be sought so that information about the effects of weight bias on social work practice among these groups of social workers, can be attained and compared to findings from the current study.

Another important goal for future research would be development of qualitative studies to assess the meaning of weight bias to social workers and how they perceive it to impact on client care. Although the quantitative nature of this study allowed for substantiation of the existence of weight biased attitudes and beliefs and also offered a preliminary understanding of social work practice with obese clients, the next critical step would be to learn about the meaning of these concepts to clinicians and to give voice to social workers about their experiences in work with obese clients. The questionnaire used in this study did contain three open-ended questions that were not used in analysis for this current study, but could serve as a starting point for future qualitative studies on weight bias among social workers. Important steps in future qualitative designs would be to develop guides to assess the meaning of weight bias to participants, the experience of working with obese clients and the perceived impact it has on practice. This would allow for greater understanding of the processes that were identified in this current study. Overall, such future studies would allow for a much more comprehensive understanding of this important social problem, and one that had been wholly neglected until now.

In conclusion, there has been a significant neglect of the problem of weight bias among social workers in the literature to date. Little had been known about whether or not the problem even existed among this group of clinical practitioners and further, if it

did, how it would impact practice with obese clients. This study demonstrated that weight bias does exist, although overall social workers do exhibit fairly positive attitudes, further that controllability beliefs among social workers are strongly linked to weight bias, and finally that attitudes and beliefs are related to the practice behaviors of social workers in this study. These findings should serve as a starting point for future studies and will hopefully highlight the importance of further investigation so that we as a profession are not contributing to the neglect and harm, of a group of clients who actually need our help in advocacy, education and better practices.

## Appendices

Appendix A.....Study Questionnaire

Appendix B.....Letter to Participants

Appendix C.....Reminder Postcard

Appendix D.....Extension Postcard

Appendix E.....IRB Approval Letter

## Appendix A

**Practice Experience With Obese or Significantly Overweight Clients**

The following group of questions are designed to describe your practice experience and the amount of contact you have with obese or significantly overweight clients.

1. What is your job title? \_\_\_\_\_
  
2. What is your primary area of practice? \_\_\_\_\_
  
3. How many years have you been in practice? \_\_\_\_\_
  
4. What is the approximate percentage of time that you spend in direct practice with clients (0-100%)? \_\_\_\_\_%
  
5. What is the approximate percentage of clients who are obese or significantly overweight (0-100%)? \_\_\_\_\_%
  
6. What is the approximate percentage of time that you spend in direct practice with clients who are obese or significantly overweight (0-100%)?  
\_\_\_\_\_%

If your answer to question 6 is “0%”, skip questions 7-23 and go immediately to question 24.

**Scale of Practice with Obese or Significantly Overweight Clients**

Please circle the single option that best expresses you level of agreement with each of the items below using the following scale:

	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
	<b>I strongly</b>	<b>I moderately</b>	<b>I slightly</b>	<b>I slightly</b>	<b>I moderately</b>	<b>I strongly</b>
	<b>Disagree</b>	<b>Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Agree</b>	<b>Agree</b>
7. I help obese/ significantly overweight clients reduce shame about their weight	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
8. I help obese/ significantly overweight clients address shame created by societal prejudice	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
9. I find work with obese/significantly overweight clients to be overwhelming	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
10. I am frustrated by the lack of time and energy obese/ significantly overweight clients spend on losing weight	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
11. I acknowledge to obese/ significantly overweight clients, the impact of living in a weight-biased society	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
12. I am comfortable discussing a client's weight when relevant to treatment	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
13. I educate myself about concerns specific to obese/ significantly overweight clients	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
14. I help clients identify their own internalized weight bias	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
15. I spend less time than average with my obese/ significantly overweight clients	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
16. I facilitate appropriate discussion of anger by my obese/ significantly overweight clients about oppression and discrimination they have experienced	<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>

**Scale of Practice with Obese or Significantly Overweight Clients**

<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
<b>I strongly</b>	<b>I moderately</b>	<b>I slightly</b>	<b>I slightly</b>	<b>I moderately</b>	<b>I strongly</b>
<b>Disagree</b>	<b>Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Agree</b>	<b>Agree</b>

17. I should not have to purchase additional equipment (i.e.: chairs, guardrails, etc.) to accommodate clients

who are obese or significantly overweight

<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
-----------	-----------	-----------	-----------	-----------	-----------

18. I am uncomfortable discussing weight specific issues with an obese/ significantly overweight client

<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
-----------	-----------	-----------	-----------	-----------	-----------

19. I try to help my obese/ significantly overweight clients recognize the importance of weight loss, despite their presenting problems

<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
-----------	-----------	-----------	-----------	-----------	-----------

20. I spend more time than average with obese/ significantly overweight clients

<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
-----------	-----------	-----------	-----------	-----------	-----------

21. I help obese/ significantly overweight clients overcome discrimination they have experienced based on weight

<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
-----------	-----------	-----------	-----------	-----------	-----------

22. When obese/ significantly overweight clients report weight-based discrimination, I try to help them recognize the value in losing weight to avoid such experiences in the future

<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
-----------	-----------	-----------	-----------	-----------	-----------

23. I have purchased additional or special equipment to accommodate obese/ significantly overweight clients such as extra large chairs, chairs with arms, guardrails, etc.

<b>-3</b>	<b>-2</b>	<b>1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
-----------	-----------	----------	-----------	-----------	-----------

### Attitudes Toward Obese Persons

This section aims to establish your thoughts about the obese person. For each of the following statements below, please indicate the extent to which you agree or disagree with it. **Please do not leave any blank.**

	Strongly Disagree					Strongly Agree
	1	2	3	4	5	6
24. Obese people are as happy as normal weight people	1	2	3	4	5	6
25. Most obese people feel that they are not as good as other people	1	2	3	4	5	6
26. Most obese people are more self-conscious than other people	1	2	3	4	5	6
27. Obese workers cannot be as successful as other workers	1	2	3	4	5	6
28. Most normal weight people would not want to marry anyone who is obese	1	2	3	4	5	6
29. Obese people are usually untidy	1	2	3	4	5	6
30. Obese people are usually sociable	1	2	3	4	5	6
31. Most obese people are not dissatisfied with themselves	1	2	3	4	5	6
32. Obese people are just as self-confident as other people	1	2	3	4	5	6
33. Most people feel uncomfortable when they associate with obese people	1	2	3	4	5	6
34. Obese people are often less aggressive than normal weight people	1	2	3	4	5	6
35. Most obese people have different personalities than normal weight people	1	2	3	4	5	6
36. Very few obese people are ashamed of their weight	1	2	3	4	5	6
37. Most obese people resent normal weight people	1	2	3	4	5	6

**Attitudes Toward Obese Persons**

Strongly Disagree						Strongly Agree
1	2	3	4	5	6	6

38. Obese people are more emotional than other people

1	2	3	4	5	6
---	---	---	---	---	---

39. Obese people should not expect to lead normal lives

1	2	3	4	5	6
---	---	---	---	---	---

40. Obese people are just as healthy as normal weight people

1	2	3	4	5	6
---	---	---	---	---	---

41. Obese people are just as sexually attractive as normal weight people

1	2	3	4	5	6
---	---	---	---	---	---

42. Obese people tend to have family problems

1	2	3	4	5	6
---	---	---	---	---	---

43. One of the worst things that could happen to a person would be for him/her to become obese

1	2	3	4	5	6
---	---	---	---	---	---

Obese people should.....

44. ...make efforts to understand what causes them to be obese

1	2	3	4	5	6
---	---	---	---	---	---

45. ...motivate themselves to lose weight

1	2	3	4	5	6
---	---	---	---	---	---

46. ....seek professional advice and help in order to lose weight

1	2	3	4	5	6
---	---	---	---	---	---

47. ....recognize that a problem exists

1	2	3	4	5	6
---	---	---	---	---	---

48. ...recognize that being obese is a risk to their health

1	2	3	4	5	6
---	---	---	---	---	---

**Attitudes Toward Obese Persons**

Strongly Disagree						Strongly Agree
1	2	3	4	5		6

Obese people should.....

49. ....recognize that being obese may influence the behavior of close others and cause them to become obese also

1	2	3	4	5	6
---	---	---	---	---	---

50. ....be left alone to be content/happy with their body size/shape

1	2	3	4	5	6
---	---	---	---	---	---

51. ....recognize that being obese may have a negative effect on others

1	2	3	4	5	6
---	---	---	---	---	---

52. ....not be subjected to social pressures to lose weight

1	2	3	4	5	6
---	---	---	---	---	---

53. ....be accepted by others, whatever their body weight

1	2	3	4	5	6
---	---	---	---	---	---

54. ....not be held responsible for their condition, which may be caused by a complex interaction of factors

1	2	3	4	5	6
---	---	---	---	---	---

**Harvey, E., Summerbell, C., Kirk, S., & Hills, A. (2002). Dieticians views of overweight and obese people and reported management of practices. *Journal of Human Nutrition and Dietetics*, 15, 331-347.**

**BAOP: 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.

<b>-3</b>	<b>-2</b>	<b>-1</b>	<b>+1</b>	<b>+2</b>	<b>+3</b>
<b>I strongly disagree</b>	<b>I moderately disagree</b>	<b>I slightly disagree</b>	<b>I slightly agree</b>	<b>I moderately agree</b>	<b>I strongly agree</b>

55.\_\_\_\_\_ Obesity often occurs when eating is used as a form of compensation for lack of love or attention.

56.\_\_\_\_\_ In many cases, obesity is the result of a biological disorder.

57.\_\_\_\_\_ Obesity is usually caused by overeating.

58.\_\_\_\_\_ Most obese people cause their own problem by not getting enough exercise.

59.\_\_\_\_\_ Most obese people eat more than nonobese people.

60.\_\_\_\_\_ The majority of obese people have poor eating habits that lead to their obesity.

61.\_\_\_\_\_ Obesity is rarely caused by a lack of willpower

62.\_\_\_\_\_ People can be addicted to food, just as others are addicted to drugs, and these people usually become obese.

**Personal Information**

Please answer the following:

63. Gender (Please circle one):      1) Female      2) Male

64. Age: \_\_\_\_\_

65. Family Size (please circle one):

a) 1      b) 2      c) 3      d) 4      e) 5      F) 6 or more

66. Household Income:

a) < \$ 15,000      b) \$15,001-25,000      c) \$25,001- 34,999      d) \$35, 000-\$44,999  
e) \$45,000-54,999      F) \$55,000-74,999      g) ≥\$75,000

67. Ethnicity: \_\_\_\_\_

68. Highest Level of School Completed (Please circle one):

a) Less than High School    b) Some High School    c) High School Diploma/GED  
d) Some College    e) Associate's Degree    f) Bachelor's Degree    g) Master's Degree  
h) Ph.D./D.S.W.

69. Political Party Affiliation: \_\_\_\_\_

70. Current Height: \_\_\_\_\_

71. Current Weight: \_\_\_\_\_

72. Are you now or have you ever struggled with your weight? (Please circle one):

1)yes    2) no

73. Family history of obesity/ significantly overweight ? (Please circle one):    1) yes 2) no  
If yes, please circle as many of the following as applicable:

Spouse/Partner      Parent      Grandparent      Child      Other \_\_\_\_\_  
Please specify

74. Number of friends who are significantly overweight/obese: \_\_\_\_\_

**Opinions**

Weight bias has been defined as negative attitudes toward people who are visibly overweight or obese, that may lead to discriminatory behaviors (Brownell, 2005). Please circle the answer below which best reflects your experience.

**75. Have you ever heard the term weight bias before?**

(Please circle one)

1) yes    2) no

**76. How important is weight bias to your practice with clients?**

(Please circle one)

Very Unimportant	Unimportant	Somewhat Unimportant	Neither Important/Unimportant	Somewhat Important	Important	Very Important
1	2	3	4	5	6	7

**77. How important is the issue of weight bias to your clients?**

(Please circle one)

Very Unimportant	Unimportant	Somewhat Unimportant	Neither Important/Unimportant	Somewhat Important	Important	Very Important
1	2	3	4	5	6	7

**Opinions**

Please write your responses in the space provided.

**78. What is your opinion about the relevance of weight bias to social work?**

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**79. Please describe any ways that you believe weight bias might influence your practice or that of your social work colleagues?**

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**80. Are there any other thoughts you would like to share on this topic?**

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**Thank you for taking the time to participate in this study.**





Doctor of Social Welfare Program

The Graduate School and University Center

Hunter College School of Social Work  
The City University of New York  
129 East 79 Street  
New York, NY 10021  
Tel: 212-462-7048 Fax: 212-452-7150

Surveys completed online will be stored in a secured database that only I will have access to through a unique password and will be coded so that outside sources cannot access the information you provide. While confidentiality can be maintained through either method, as you probably know, there is no way to fully assure anonymity when using the internet. Therefore, you will be assured complete anonymity only through completion of the hard copy version of the survey.

Your decision to participate or not, is completely voluntary and you may refuse to answer any questions. Completion and return of the questionnaire implies consent to participate in this study.

Eventually, I intend to disseminate the results of this study. At no times, will names or identifying characteristics be used. If you would like a copy of the study, or a brief 1-2 page summary, please send me your name and address in a separate envelope and I will be pleased to share with you the results of this study.

You may keep this letter for your records. If you have any questions about this research, you can contact me at (516) 780-5989 or [mmccardle@optonline.net](mailto:mmccardle@optonline.net), or you may call the chair of my dissertation committee, Irwin Epstein, Ph.D. at (212) 452-7030. If you have any questions about your rights as a participant in this study, you can contact Kay Powell, IRB Administrator, The Graduate Center/City University of New York, (212) 817-7525, [kpowell@gc.cuny.edu](mailto:kpowell@gc.cuny.edu).

Thank you for taking the time to assist with this important research.

Sincerely,

*Melissa McCardle LCSW, ACSW*

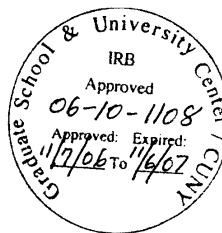
Melissa McCardle, LCSW, ACSW

Doctoral Candidate

Hunter College School of Social Work

129 East 79<sup>th</sup> Street

New York, NY 10021



## Appendix C

Dear Colleague:

This is a reminder to participate in the important study “The Relevance of Client Weight to Social Work Practice”, by either filling out the brief questionnaire that you received or will be receiving in the next few days, or by logging on to [www.psychdata.com](http://www.psychdata.com) and entering 120181 in the survey code section.

Please complete and return the surveys by **2/5/07**.

Your willingness to assist with this research is greatly appreciated.

## Appendix D

Dear Colleague:

This is an announcement that the deadline for participation in the important study “The Relevance of Client Weight to Social Work Practice” has been extended to 2/28/07. Please consider participating by either filling out the brief questionnaire that you recently received in the mail, or by logging on to [www.psychdata.com](http://www.psychdata.com) and entering 120181 in the survey code section. Your willingness to assist with this research is greatly appreciated.

---

## Appendix E



Office of the Vice President for Research and Sponsored Programs

Committee on the Protection of Human Subjects

The Graduate School and University Center  
The City University of New York  
365 Fifth Avenue  
New York, NY 10016-4309  
TEL: 212.817.7523 FAX: 212.817.1629

**Date:** Tuesday, November 07, 2006  
**To:** McCardle, Melissa (Social Welfare)  
**Study:** 06-10-1108 "The Impact of Weight Bias on Client Care"

The Institutional Review Board (IRB) of The Graduate Center of the City University of New York has approved the above study involving humans as research subjects. This study was approved through expedited review based on 45CFR46.110.(a) 7.

**IRB Number** (IRB #06-10-1108) This number is an IRB number at the Graduate Center which should be used on all consent forms and correspondence.

**Approval Date:** 11/7/2006

**Expiration Date:** 11/6/2007

**This approval is for a one-year period. You should receive a courtesy renewal notice approximately four weeks before the expiration of this project's approval. However, it is your responsibility to insure that an application for continuing review approval has been submitted by the required time. RESEARCH MUST BE SUSPENDED IF YOUR APPROVAL HAS EXPIRED. In addition, you are required to submit a final report of findings at the completion of the project.**

**Consent Form:** The approved and stamped consent form must be used by all subjects. You are responsible for maintaining signed consent forms for a period of at least three years after study completion.

**Reporting:** The principal investigator must report to the IRB any serious problem, adverse effect, or outcome that occurs with frequency or degree of severity greater than that anticipated. In addition the principal investigator must report any event or series of events that prompt the temporary or permanent suspension of a research project involving human subjects.

**Modifications:** All modifications of protocols involving subjects must have prior approval except those involving the prevention of immediate harm to a subject which need to be reported within 24 hours to the IRB.

If you have any questions, please do not hesitate to contact me through the IRB Office at 817-7525.

Sincerely,

Richard G. Schwartz, Ph.D.  
Chair, Institutional Review Board  
c: Irwin Epstein

Please return one copy of this letter to the attention of Kay Powell at the above address:

**Verification:** By signing below, I acknowledge that I have received this letter and am aware of and agree to abide by all of its stipulations in order to maintain active approval status, including prompt reporting of adverse events/serious problems and annual continuing review. I am aware that it is my responsibility to be knowledgeable of all federal and state regulations including CUNY's Multiple Project Assurance (MPA) with the Department of Health and Human Services.

Signature of Principal Investigator

Date

<http://www.gc.cuny.edu>

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