

Weighty Consequences: Diagnostic Challenges and Practice Considerations Associated With Obesity

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Abstract

The impact of obesity is detrimental to health, mental health and well-being. Despite the significant increase of adiposity in the past two decades, the condition has gained minimal representation in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR and DSM 5), the primary diagnostic classification system used by mental health practitioners. Because the diagnostic classification of obesity is nebulous, obesity related impairments are often unacknowledged and treatment is compromised. This article explains why changes in the DSM 5 fail to adequately address the relationship between obesity and mental health, utilizing case study examples to elucidate the psychological impact of obesity in varied clinical settings. Additionally, the author reflects on the challenges of diagnosing and treating obesity with high-risk, marginalized populations.

Key words: Obesity; Diagnosis; Practice; DSM 5; Weight stigma

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INTRODUCTION

Obesity is a chronic public health condition that impacts functioning, quality of life, and safety. As a result, obese individuals are at a high risk for medical complications,

negative social stigma and early mortality, increasing their vulnerability for mental health consequences. Obesity is pervasive, influencing health, mental health and the economy. Medical costs associated with obesity total over \$147 billion per year, with medical costs for obese individuals \$1,429 higher than for those at normal weights (Smith, 2012). Obese persons are susceptible to higher rates of depression, anxiety, poor body image, low self-esteem and marital dissatisfaction (Devlin, Yanovski, & Wilson, 2000; Wilson, 1993).

Despite an increased risk for health and mental health concerns, obesity remains relatively invisible in mental health contexts. As long as it remains invisible, it is intangible, challenging clinical assessment and intervention efforts and hindering clients' ability to recover in a timely and cost effective manner. This article will examine the transition from the DSM IV TR to the current DSM 5 as a framework for understanding the challenges clinicians face to interpret and classify obesity in mental health treatment. Case examples will be detailed to demonstrate the presentation and impact of obesity in practice settings with marginalized populations. Finally, implications for practice with obese clients will be evaluated.

1. OBESITY THROUGH THE LENS OF THE DSM IV TR AND DSM 5

Within the scientific, medical and mental health communities, it has been difficult to achieve a consensus in defining obesity. The Centers for Disease Control and Prevention [CDC] (2014) define obesity as a label for a range of weight greater than what is considered healthy. Body mass index (BMI), calculated using weight and height is often used as a measurement of obesity for adults. Children and adolescents' BMI are calculated using weight, height, age and sex specific percentiles. Adults with a BMI of over 30 and children or teens with a

BMI at or above the 95th percentile are considered obese (CDC, 2014). More than 64% of United States adults and one third of children are overweight or obese, reflecting an alarming epidemic (Bean, Stewart, & Olbrisch, 2008; Ogden et al., 2006).

The CDC (2011) state that one of the potential health consequences of obesity is mental health conditions, supporting epidemiological studies that have found a positive association between obesity and mental illness (Dave, Tennant, & Colman, 2011; Luppino et al., 2010; Megna et al., 2011; Wilfley et al., 2007). In 2008, obesity was officially classified as a chronic disease by the American Medical Association (AMA) with the intent to alter the public perception and reduce the stigma surrounding this condition (Chronic Conditions Team, 2013). While obesity is recognized as a pervasive, debilitating and chronic condition, it has historically lacked adequate representation in the primary diagnostic categorization system utilized by mental health practitioners—the *Diagnostic and Statistical Manual of Mental Disorders* (DSM). The relationship between obesity and psychiatric symptomatology is well documented and highlights the challenges in identifying causality and/or consequence from either condition (Karasu, 2012; Luppino et al., 2010; Megna et al., 2011). These challenges indicate a realized need: to change the perspective in which society views obesity and find innovative approaches in the way it is diagnosed, treated and prevented.

The previous DSM-IV-TR (American Psychiatric Association [APA], 2000) did not consider obesity a psychiatric diagnosis. Obesity could only be classified diagnostically significant as a qualifier attached to another Axis I diagnosis (Due to a medical condition, Obesity) or on Axis III under General Medical Conditions (APA, 2000; Karasu, 2012). Clinicians treating obese clients in mental health settings faced a conundrum upon discerning that obesity was a primary or co-morbid problem: to divert treatment focus away from obesity to what was classifiable, billable and treatable, refer out for medical intervention, or attempt to address obesity related issues in the context of the primary mental health concern(s). As a result, obese clients in mental health settings were often treated exclusively for mood, anxiety, behavioral or other disorders, rendering their obesity diagnostically insignificant or invisible despite its weighty impact on treatment.

The release of the DSM-5 brought about considerable discussion regarding the merits of including obesity in the new text; however, the APA's DSM-5 Eating Disorder Work Group rejected obesity as a mental disorder (APA, 2010). The APA maintained the position that most obese people do not qualify for a psychiatric diagnosis despite the DSM 5's numerous modifications supporting the diagnostic presentations of many obese clients

(Medical News Today, 2004). Specifically, the DSM-5's new *Feeding and Eating Disorder* category replaced the restrictive *Eating Disorders* category, allowing for diagnostic flexibility in classifying disorders that are germane to both eating and pathology (APA, 2013). Further, the new *Other Specific Feeding or Eating Disorder* and *Unspecified Feeding or Eating Disorder* categories replace the superfluous *Eating Disorder Not Otherwise Specified* category, allowing for presentations of symptoms characteristic of a feeding or eating disorder that cause clinically significant distress or impairment in functioning (APA, 2013, p.354).

While the current DSM-5 allows for a modicum of increased diagnostic utility for clinicians, the distinction between obesity, eating disorders and mental illness remains ambiguous. The lack of scientific evidence distinguishing causality in mental health symptomatology has been a barrier to classification of obesity as a mental disorder. The Central Region Eating Disorder Service (CRED) defines an eating disorder as “a mental illness in which an individual is constantly thinking about eating or not eating, feels out of control around food, uses food to meet needs other than hunger, and/or becomes obsessed about food, weight or body shape” (2007, p.1). The DSM-5 defines a mental disorder as:

[a] syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities. (APA, 2013, p. 20)

Thus, while the specifics of each disorder are germane to their diagnostic category, the line of demarcation between a mental disorder and other problem is the presence of a dysfunction in psychological, biological or developmental processes AND distress or functional impairment. According to this new definition, functional impairment is characterized by disability in social, occupational or other activities, denoting the restrictiveness of these conditions.

Many individuals suffering from obesity experience corresponding health complications (biological and/or psychological dysfunction, functional impairment), internalization of negative social stigma (distress and/or psychological dysfunction) and impaired interpersonal interactions (psychological dysfunction, distress and/or functional impairment). By definition, these risk factors clearly meet the criteria for a mental disorder. Nevertheless, the DSM-5 posits:

Obesity is not included in the DSM-5 as a mental disorder. Obesity (excess body fat) results from the long term excess of energy intake relative to energy expenditure. A range of genetic, physiological, behavioral and environmental factors that vary across individuals contributes to the development of obesity; thus, obesity is not considered a mental disorder. However,

there are robust associations between obesity and a number of mental disorders. The side effects of some psychotropic medications contribute importantly to the development of obesity, and obesity may be a risk factor for the development of some mental disorders [sic]. (APA, 2013, p.329)

While the amendments to the Eating Disorder category are refreshing advances to clinical identification and diagnosis of eating related symptomatology, the inherent obscurity of the changes are insufficient in clarifying or negating the correlation between obesity and mental illness, leaving clinicians unable to effectively treat obese clients. Further, these alterations neglect a sizeable number of clients whose obesity is not derived primarily from disordered eating. For many clients, obesity is the *result* of distress, functional impairment, and/or medications prescribed to the client *after* treatment has begun. Unfortunately, obesity in this and other contexts remains clinically insignificant in the new diagnostic manual. If obese clients meet criteria for an eating disorder, they are recognized as mentally ill, however, obesity alone cannot be considered diagnostically significant even though the symptoms often cause significant psychological distress and functional impairment among clients, corresponding with the APA's definition of a mental disorder.

2. WEIGHT STIGMA AND SOCIAL JUSTICE CONSIDERATIONS

The challenge in consideration of obesity as a mental health diagnosis and treatment of the psychological effects of obesity is the potential to marginalize and perpetuate stigma among this population. Weight stigma, defined as social devaluation and denigration of obese people leading to prejudice, stereotyping and discrimination may be an additional barrier toward the acknowledgement of obesity as diagnostically significant (Tomiya, 2014). There are myriad of factors that contribute to obesity, including heredity, socioeconomic status, psychological factors, environmental factors, cultural and gender differences. However, obese persons are often stigmatized because their weight is attributed to factors within personal control, rendering them responsible for their weight due to lack of control, willpower or motivation (Puhl & Heuer, 2010). Obesity has been described as the last acceptable form of bias, with obese individuals negatively stereotyped as lazy, out of control and unmotivated (Brochu & Esses, 2011; Puhl & Brownell, 2001). However, it is noteworthy that many mental health conditions frequently associated with personal responsibility such as substance abuse, pyromania or gambling retain representation in the DSM. Devlin, Yanovski and Wilson (2000) posited that although overweight people may consume more calories than smaller individuals, they are not necessarily overeating when considering their size differential. They

state: "This distinction is important, as the idea that obese individuals bring about or maintain their obesity by inappropriate overeating underlies many of our culture's negative stereotypes about obesity (p.857)." Because weight bias is also exhibited by physicians, psychologists and therapists, it signifies an additional barrier to treatment efficacy (Foster, et al, 2003; Puhl, Schwartz, & Brownell, 2005).

The pervasiveness of cultural, social and professional weight stigma may reinforce the justification of excluding obesity from diagnostic consideration, engendering social justice concerns. Carels and Musher-Eizenman (2010) assert "overweight individuals experience weight based discrimination at rates that rival racial discrimination (p.143)." Disenfranchised populations are substantially more susceptible to obesity, and research reflects that obesity is a source of marginalization in and of itself (Bomback, 2014; Tomiyama, 2014). Because obese individuals occupy various intersecting identities based on gender, race, socioeconomic status, age and numerous other social positions, the degree of marginalization they experience may be compounded (Bomback, 2014, p.1). Health risks increase as communities become darker or poorer; neighborhood conditions that increase risk of obesity include lack of access to healthy food items, unsafe neighborhoods and disempowerment resulting from marginalization (Keenan-Devlin, 2014, p.18). Currently, 45% of African American women are obese and 76% are overweight, and African American women are more likely than women of other ethnic backgrounds to become extremely obese (Ogden et al., 2006). 17% of children and adolescents in the United States are currently obese, triple the rate of the previous generation (CDC, 2014). Children of color living in poverty suffer disproportionately from obesity and diabetes and are most at risk for gangs, drugs and violence (Garcia, 2013). These staggering statistics denote the significance of cultural competence when assessing and intervening with clients at elevated risk. Clients with multiple marginalization (African American, women, children, foster care, and poverty) may be disproportionately more vulnerable, necessitating the application of an intersectionality lens to consider the impact of identity factors, power and privilege of obese clients.

3. CASE EXAMPLES

Nora: Nora, a 13 year old, African American female, was seen in a community mental health setting. She reflects the presentation of a multitude of obese clients who were treated under the DSM IV TR with more diagnostically suitable codes. In particular, Nora's experience as an African American marginalized teenager in foster care rendered her more vulnerable to the painful impact obesity can have on youth.

Nora was referred by the Department of Children and Family Services (DCFS). After experiencing abuse, trauma and being in the foster care system for seven years with minimal to no contact with family members, food became a significant source of comfort for Nora. Perhaps it was the monitored family visits at McDonalds after she was first detained; the cheeseburger Happy Meals the Social Worker started buying to ease the psychological distress when her mom stopped coming; or the side effects of prescribed medications that sparked her relationship with food. Wherever it originated, it was manifested in the 80+ pounds of Nora gained between the ages of 12 and 13.

Nora began treatment meeting criteria for several parity diagnoses; however, over time her impulsive eating intensified and the resulting weight gain became its own source of functional impairment. Her extremely aggressive and sexualized behaviors prompted psychiatric staff to administer a bevy of psychotropic medications, adding to her weight gain and emotional lability. Obesity prematurely exacerbated the development of secondary sexual characteristics and injured Nora's self-esteem, increasing depressive symptoms and escalating her vulnerability to additional emotional, verbal and sexual assault. While Nora's primary presenting problems were trauma, loss and abuse, the co-morbid obesity she developed demanded clinical attention.

Diagnostically, Nora met criteria for Post-Traumatic Stress Disorder (PTSD), Major Depressive Disorder and Sexual Abuse of a Child. Obesity was documented on Axis III of her diagnostic formulation, but was never formally addressed as a mental health concern. Nora's treatment goals were developed based on the behaviors that were most concerning to those who mandated her treatment: the court system and her group home. Her treatment remained congruent with her diagnostic formulation, focusing on sexual acting out, aggressive behavior, and depressive symptoms. However, her discomfort within her body remained a primary treatment issue. Her psychiatrist insisted that her weight gain was a temporary side effect of her psychotropic medication and denigrated the relevance of including obesity on her treatment plan. Although Nora made small gains in symptom reduction and the development of more adaptive coping skills, after two years she moved to a higher level of care. She had decompensated to the point of being lethargic, amotivational and suicidal.

Porsha: Porsha, a 32 year old, African American female was seen in a private practice setting. Porsha represents a number of successful African American women tortured by weight gain and its insidious impact on every area of her life.

Porsha was self-referred following a painful break up. Presenting symptoms included sad mood, tearfulness, and difficulty concentrating. Her impetus to obtain treatment was to figure out what went wrong in her relationship and

to identify how to develop healthy intimate relationships in the future. Porsha was a high level executive with very successful business acumen. However, she carried herself awkwardly and expressed feeling "uncomfortable in her skin". She confessed that she "gained quite a few pounds" over the past couple of years but struggled to articulate whether that was a problem for her. Themes of physical discomfort and body dissatisfaction permeated treatment sessions.

Porsha met criteria for Depressive Disorder NOS, and treatment focused on addressing her depressive symptoms and identifying strengths and barriers to intimacy. While her weight was a clinical concern, there was no diagnostic classification for her symptoms under the DSM-IV-TR. Thus, her body concerns were explored in the context of her depression. After several months, she made considerable progress. However, one session, Porsha reported that her long term primary physician told her she was "fat". She assumed he was joking, however, the doctor clarified that he was not joking, and informed her that she was classified as medically obese. He urged Porsha to make some serious changes to address her weight. This visit was a crisis for her. Porsha was horrified and ashamed to be considered obese. She was motivated to strategize how to integrate obesity into her treatment plan. Over the next few months, Porsha focused on the emotional and psychological issues feeding her obesity. In addition, she embarked on a healthy eating and exercise plan as a supplement to her mental health treatment, eventually losing over 30 pounds.

4. DISCUSSION

Obesity played a critical role in both of the aforementioned cases. Nora and Porsha had significant presenting mental health concerns, but co-morbid obesity contributed to their overall level of distress. These case studies point to critical deficits in how practitioners identify, address and document obesity as a comorbid condition. Neither Nora nor Porsha could be diagnosed as obese under the previous DSM IV TR or the current DSM 5 classification systems because their obesity manifested as a consequence rather than a cause of their symptom presentation and corresponding functional impairment.

The case examples exemplify the significance of the inclusion of obesity on treatment plans; there are potentially markedly improved results when obesity is integrated in treatment. Due to the flexibility in diagnosing and billing in private practice, Porsha benefitted from addressing the psychological effects of obesity into her treatment plan, while Nora's condition worsened over time. Porsha's success precipitated improved body image, decreased depressive symptoms and improved intrapsychic and interpersonal relationships. Although the development of a solid therapeutic relationship provided the trust that engendered addressing some of

Nora's behavioral and emotional symptoms, there was a definitive incongruence between her physical and mental health care. While it is impossible to identify the extent to which her treatment would have been altered through addressing her obesity, Nora certainly did not benefit from the lack of consideration given to obesity by her treatment providers.

The case studies have distinct differences: Nora was seen in a community mental health setting. While her obesity was a clinical concern midway through treatment, her access to resources was severely limited and her treatment team did not agree on the diagnostic significance of her obesity. An unfortunate result was extensive weight gain and decompensation, illuminating the need for increased collaboration between medical and mental health providers. Porsha was seen in a private practice setting, and obesity was not acknowledged until later in treatment. Porsha, in comparison with Nora, had quite a bit of agency, financial means and access to resources. Unlike Nora, Porsha's medical doctor was concerned with her weight, and identified obesity as a primary medical concern. With significantly more privilege, opportunity, and treatment collaboration, Porsha was successful in losing weight and improving her health.

Additionally, the case studies point to the critical role of access to resources and the acknowledgement of obesity as a clinical concern. Both clients are African American females, highlighting some of the ethnic differences that exist among groups disproportionately impacted by obesity (Bean, Stewart, & Olbrisch, 2008, p.215). Foster children are at exceptional risk. Hadfield and Preece (2008) found that 35% of foster children increased in BMI while in the child welfare system. Marginalized, vulnerable clients like Nora may need additional support and collaboration to address their obesity. Mental health practitioners who are providing services for disenfranchised clients need additional advocacy and resources to provide diversity competent treatment and care in a system where nontraditional symptomatology is not recognized.

A primary concern in the inclusion of obesity as an eating disorder or other mental health condition is the potential for pathologic obese individuals (Karasu, 2012). Pathologizing is defined as judgment that a form of behavior or experience is deviant or abnormal (Haslam, 2005, p.36). The assumption that all obese people have eating or other disorders perpetuates the myth that obesity itself is pathological, fostering professional bias (Melcher & Bostwick, 1998). Therefore, the inherent challenge in assessing and treating obese clients in mental health settings is the capacity to clarify clinically significant symptomatology. The DSM-5 (APA, 2013) asserts that clinical significance is established through utilizing distress or functional impairment as the gold standard for distinguishing conventional from pathological. Thus, functional impairment criteria in conjunction with the condition that the client must indicate a level

of distress or disability provide boundaries to protect clients while allowing clinicians to accurately classify diagnostic symptoms. Ironically, perhaps it is efforts to avoid pathologizing clients that have contributed to a polarization in how we interpret the impact of obesity. If obesity has been clinically significant, functionally impairing symptomatology, mental health practitioners are challenged to attempt to quantify it in the current classification system or categorize it as a medical problem only, out of the realm of mental health influence. Both options minimize the impact obesity has on clients' mental health and obscure its relevance in treatment. In order to accurately diagnose and effectively treat clients with comorbid obesity, mental health clinicians need a variety of additional diagnostic options to address the complex nature of obesity and its effects on clients' psychological well-being, at any given time before, during, and/or after treatment has begun.

CONCLUSION

The changes in the DSM 5 allow for the identification of obesity as diagnostically significant under the *Feeding and Eating Disorder* category, however, innumerable clients without eating disorder symptomatology are excluded from classification. While the DSM 5 modifications are a positive step toward recognizing obesity as a mental health concern, there is considerable work yet to be done. There are numerous people who report sad mood, poor attention, impulsivity and mood shifts; they are not assigned a depressive disorder, attention deficit hyperactivity disorder or bipolar disorder diagnosis based on symptoms alone. Obesity, like other medical and mental health conditions is diagnostically significant only when it impairs functioning. Ultimately, the lack of inclusion in the DSM as a mental disorder is less important than consistent consideration of obesity in the assessment, management, and treatment of mental illness (Marcus & Wildes, 2009). When service provision is with high risk, marginalized populations such as African Americans, youth, women, impoverished clients, and those in the foster care system, clinicians have the additional challenge of developing the flexibility to discern clinically significant obesity with diverse symptom presentations. Further, mental health practitioners retain the responsibility of identifying the influence of weight stigma and fat phobia in how we understand and treat obese clients. The failure to advocate for a population where discrimination is socially condoned is an imperative social injustice.

REFERENCES

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington D. C.

- American Psychiatric Association. (2010). *Eating disorders: Proposed revisions for DSM-5*. Retrieved 2011, June 28 from <http://dsm5.org/proposedrevisions/pages/eatingdisorders.aspx>
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington D. C.
- Bean, M. K., Stewart, K., & Olbrisch, M. E. (2008). Obesity in America: Implications for clinical and health psychologists. *Journal of Clinical Psychology in Medical Settings, 15*, 214-224.
- Bomback, A. E. (2014). The contribution of applied social sciences to obesity stigma related public health approaches. *Journal of Obesity*, Article ID 267286, 8-15.
- Brochu, P. M., & Esses, V. M. (2011). What's in a name? The effects of labels "fat" versus "overweight" on weight bias. *Journal of Applied Social Psychology, 41*(8), 1981-2008.
- Carels, R. A., & Musher-Eizenman, D. R. (2010). Individual differences and weight bias: Do people with an anti-fat bias have a pro-thin bias? *Body Image, 7*, 143-148.
- Centers for Disease Control and Prevention (2011). *Obesity: Halting the epidemic by making health easier. At a Glance 2011*. Retrieved 2011, October 19 from <http://www.cdc.gov/chronicdisease/resources/publications/AAG/obesity.htm>
- Centers for Disease Control and Prevention (2014). *Defining overweight and obesity*. Retrieved 2014, October 22 from <http://www.cdc.gov/obesity/adult/defining.html>
- Central Region Eating Disorder Service (CRED). (2007). *What is an eating disorder?* Retrieved from <http://www.eatingdisorders.org.nz/common-questions/what-is-an-eating-disorder/#c92>. Retrieved 6/28/2011
- Chronic Conditions Team. (2013). *Obesity is now considered a disease*. Cleveland Clinic News Wire. Retrieved 2014, October 10 from <http://health.clevelandclinic.org/2013/06/obesity-is-now-considered-a-disease/>
- Dave, D. M., Tennant, J., & Colman, G. (2011). Isolating the effects of major depression on obesity: Role of selection bias. *Journal of Mental Health Policy and Economics, 14*(4), 165-186.
- Devlin, M. J., Yanovski, S. Z., & Wilson, G. T. (2000). Obesity: What mental health professionals need to know. *American Journal of Psychiatry, 157*(6), 854-866.
- Foster, G. D., Wadden, T. A., Makris, A. P., Davidson, D., Sanderson, R. S., Allison, D. B., & Kessler, A. (2003). Primary care physicians' attitudes about obesity and its treatment. *Obesity Research, 11*(10), 1168-1177.
- García, R. (2013). The George Butler lecture: Social justice and leisure. *Journal of Leisure Research, 45*(1), 7.
- Hadfield, S. C., & Preece, P. M. (2008). Obesity in looked after children: Is foster care protective from the dangers of obesity? *Child: Care, Health and Development, 34*(6), 710-712. doi: <http://dx.doi.org/10.1111/j.1365-2214.2008.00874.x>
- Haslam, N. (2005). Dimensions of folk psychiatry. *Review of General Psychology, 9*(1), 35-47.
- Karasu, S. R. (2012). Of mind and matter: Psychological dimensions in obesity. *American Journal of Psychotherapy, 66*(2), 111-128.
- Keenan-Devlin, L. (2014). *The weight of structural violence: Syndemic stress and obesity among black urban youth in the US*. (Order No. 3626766, Northwestern University). ProQuest Dissertations and Theses, 187. Retrieved from <http://search.proquest.com/docview/1558126615?accountid=7285.1558126615>
- Luppino, F. S., de Witt, L. M., Bouvy, P. F., Stijnen, T., Cuijpers, P., Penninx, B. W., & Zitman, F. G. (2010). Overweight, obesity and depression: A systematic review and meta-analysis of longitudinal studies. *Archives of General Psychiatry, 67*(3), 220-229.
- Marcus, M. D., & Wildes, J. E. (2009). Obesity: Is it a mental disorder? *International Journal of Eating Disorders, 42*(8), 739-753.
- Medical News Today. (2004). *Is obesity a mental health issue?* Retrieved 2011, June 11 from <http://www.medicalnewstoday.com/releases/14355.php>
- Megna, J. L., Schwartz, T. L., Siddiqui, U. A., & Herrera Rojas, M. (2011). Obesity in adults with serious and persistent mental illness: A review of postulated mechanisms and current interventions. *Annals of Clinical Psychiatry, 23*(2), 131-140.
- Melcher, J., & Bostwick, Jr, G. J. (1998). The obese client: Myths, facts, assessment, and intervention. *Health and Social Work, 23*(3), 195-202.
- Ogden, C. L., Carroll, M. D., Curtin, L. R., McDowell, M. A., Tabak, C. J., & Flegal, K. M. (2006). Prevalence of overweight and obesity in the United States. *The Journal of the American Medical Association, 295*(13), 1549-1555.
- Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: Important considerations for public health. *American Journal of Public Health, 100*(6), 1019-1028.
- Puhl, R. M., & Brownell, K. D. (2001). Bias, discrimination and obesity. *Obesity Research, 9*(12), 788-805.
- Puhl, R. M., Schwartz, M. B., & Brownell, K. D. (2005). Impact of perceived consensus on stereotypes about obese people: A new approach for reducing bias. *Health Psychology, 24*(5), 517-525.
- Smith, R. (2012). Obesity costs "significant". *Feedstuffs, 84*(37), 9.
- Tomiyama, A. J. (2014). Weight stigma is stressful. A review of evidence for the cyclic obesity/weight-based stigma model. *Appetite, 82*, 8-15.
- Wilfley, D. E., Bishop, M. E., Wilson, G. T., & Agras, W. S. (2007). Classification of eating disorders: Toward DSM-V. *International Journal of Eating Disorders, 40*, S123-S129.
- Wilson, G. T. (1993). Relation of dieting voluntary weight loss to psychological functioning and binge eating. *Annals of Internal Medicine, 119*(7), 727-730.

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