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Screening for Binge Eating Disorder in Patients Undergoing a Weight Loss Program

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ABSTRACT

Background: Binge eating disorder (BED) is the most common eating disorder in the United States, it is more prevalent than Anorexia Nervosa and Bulimia combined. BED is characterized by recurrent episodes of binge eating accompanied by feeling a lack of control and marked distress over one's eating behaviors. BED is a serious condition that impairs health-related quality of life (HRQL) and increases health care costs.

Purpose: The purpose of this project was to identify patients at risk for binge eating disorder at an outpatient weight loss clinic using the validated BEDS-7 screening tool.

Evidence-based Intervention: The 7-item Binge-Eating Disorder Screener (BEDS-7), a brief screener for BED, can assist providers in identifying patients who may have BED providing evidence-based treatment options and/or referrals for additional assessment and potential diagnosis of BED.

Evaluation/Results: Screening for binge eating was conducted on all new patients seeking weight loss at the clinic over a 3-month period. Patients who screened positive for binge eating according to the BEDS-7 screening tool were provided with evidence-based treatment options including both pharmacological treatment and referral for psychotherapy and counseling.

Implications for Practice: Screening for Binge eating promotes recognition of binge eating habits in patients undergoing weight loss treatment and awareness about binge eating and its influence on overall quality of life.

Background

Binge Eating Disorder (BED) is the most common eating disorder in the United States compared to Anorexia and Bulimia. Binge eating disorder is characterized by recurrent episodes of binge eating involving consumption of an amount of food that is significantly larger than most people would consume in a similar amount of time or under similar circumstances. Binge eating disorder also features a sense of lack of control over eating during the binge episodes, significant psychological distress such as shame or guilt about binge eating. A sense of loss of control during binge episodes is the core feature of BED. Binge eating is not associated with frequent inappropriate compensatory behavior, such as purging and excessive exercise. (National Eating Disorders Association, 2016)

An estimated 2.8 million people have BED. Binge eating disorder affects approximately 3.5 percent of women, 2 percent of men. Thirty percent of people seeking weight loss treatment exhibit symptoms of BED (American Psychological Association [APA], 2012) Binge eating disorder is most common among women and is seen in all age groups, races and income levels. It typically emerges in early adulthood but may surface in adolescence and persist well beyond midlife (Binge Eating Disorder Association, 2016.) In May 2013, the American Psychiatric Association (APA) recognized BED as a distinct eating disorder in Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) eliminating the designation of BED as a provisional diagnosis.

Binge eating disorder has been associated with psychiatric comorbidity as well as health and psychosocial impairment. Binge eating disorder has been shown to increase the risk of diabetes, obesity, hypertension, hyperlipidemia, heart disease, osteoarthritis and sleep apnea. Patients with BED can also suffer from anxiety, depression, low self-esteem or other issues that

can greatly affect quality of life. Early identification and treatment of binge eating may prevent progression and reduce the risk of chronic health consequences. Binge eating behavior is often overlooked and treatment commonly focuses on obesity and its implication as the presenting problem rather than addressing the core eating psychopathology. It is especially crucial to assess and screen for BED in primary care. Individuals with binge eating tend to utilize more health care services than individuals who do not have the disorder. Primary care providers play a pivotal role in screening, treating and referring patients for specialty treatment (Brownley et al., 2016).

Treatment of BED aims to reduce binge eating frequency and disordered eating, improve metabolic health and weight, and regulate mood. Treatment approaches include psychological and behavioral treatment, pharmacologic treatment, and combinations of the two approaches. Of the pharmacologic approaches, the anti-epileptic drug Topiramate has been found to be useful in BED with obesity, decreasing weight and obsessive-compulsive eating pathology as well as eating impulsivity. According to Brownley et al. (2016), Topiramate was associated with greater reductions in binge eating and produced greater increases in cognitive restraint and reductions in hunger, disinhibition and impulsivity (Brownley et al. 2016).

Purpose/Aims

The aim of this evidence-based project is to determine the prevalence of patients at risk for BED by screening for binge eating in patients undergoing a weight loss program. The goal is to identify patients at risk and provide them with adequate support and referrals. The purpose of the project is to increase awareness regarding eating habits and its effects on weight gain or inability to lose weight. According to Zwaan (2010), the prevalence of BED has been found to be 30 percent in individuals who seek weight control treatment. Evidence recommends that

treatment for patients who binge eat should be directed at the disordered eating and associated psychopathology. Undetected and untreated BED can have significant negative implications for health given that it is associated with continued weight gain. Individuals engaging in high-frequency binge eating may continue to gain weight even when concurrently participating in weight management treatment (Zwaan, 2010).

Literature Review

A comprehensive literature review was conducted to identify articles published between 2009 and 2017. Literature has focused solely on Anorexia and Bulimia as the core eating disorders and with a lack of literature on binge eating and its effects. Search engines used included CINAHL, PubMed, Science Direct, Ovid online databases and Cochrane database for systematic reviews. Key terms used for searching engines included binge eating disorder, binge eating, screening for binge eating and treatment for binge eating. A total of 20 articles were reviewed, all of which were relevant, with a total of 6 articles used to support the evidence-based project.

Amianto, Ottone, Abbate, & Fassino (2016), conducted a systematic review and meta-analysis looking at 10 articles focusing on the prevalence of binge eating disorder in patients with obesity. The prevalence of BED was found to be at 30 percent in individuals seeking weight control treatment. Binge eating disorder was found to be more equal in gender ratio (65 percent female, 35 percent male) than in Bulimia Nervosa, for which only about 10 percent of persons affected are men. Approximately 30 percent of those participating in weight loss programs and 70 percent of individuals in Overeaters Anonymous display BED. The studies also found a positive correlation between binge eating severity and degree of obesity. Binge eating obese had an earlier onset of obesity than non-binge eating obese, started dieting at an earlier age, started

worrying about their weight at an earlier age, reported a higher prevalence of marked weight fluctuations in the past and spent more time during adulthood trying to lose weight.

Dorflinger, Ruser, & Masheb (2017), conducted a prospective cohort study looking at the prevalence of binge eating disorder in veterans referred to a primary care-based weight management program. The sample size consisted of 116 veterans with an average BMI of 37.9. Eighty-nine percent were male, and eleven percent were female. Frequency of binge eating ranged from zero to 21 episodes per week. All participants completed the Questionnaire of Eating and Weight patterns, a validated tool to screen for binge eating. The prevalence of BED was 7.76 percent. According to this article, BED is associated with medical and psychiatric conditions commonly seen and managed in primary care. The disorder typically goes undetected and untreated as there are a lack of assessment tools for use in primary care.

According to Dorflinger et al. (2017), primary care providers often do not recognize the presence of binge eating in their patients and binge eating is rarely assessed in primary care. Individuals who binge eat are at a higher risk of medical comorbidities that are commonly seen and treated in primary care, such as metabolic syndrome and cardiovascular disorders, and report higher rates of disability and impairment. It is crucial that primary care practitioners screen for this disorder and provide patients with appropriate treatment and referrals.

Zwaan (2010) conducted a systematic review exploring the evidence on the efficacy of binge eating treatment modalities. The study concluded that eating disorder treatments such as cognitive behavioral therapy or interpersonal psychotherapy improve binge eating with abstinence rates of about 50 percent. Antidepressants were also found to be successful in reducing binge eating frequency. The study also looked at self-help as a treatment option. Self-help is less costly compared to psychotherapy and may help facilitate the dissemination of

treatment to a wider population of individuals. Self-help can be conducted in various modes including group format, online, by video, and by telephone making it easily accessible. Abstinence rates of 40-50 percent could be achieved after 8-12 weeks of working with a self-help manual.

A systematic review and meta-analysis conducted by Brownley et al., (2016) analyzed 34 trials and determined that therapists-led cognitive behavioral therapy, lisdexamfetamine, second generation antidepressants (mainly selective serotonin reuptake inhibitors) and Topiramate were effective in decreasing binge-eating frequency, increased binge-eating abstinence and improved other eating-related psychological outcomes. Topiramate and lisdexamfetamine were effective in reducing weight in adults with binge eating disorder.

Brewerton (2000), conducted a systematic review of the evidence on the diagnosis and treatment options for BED. The study analyzed 15 articles pertaining to the medical and psychiatric comorbidity associated with BED. Medical conditions associated with BED included higher mortality and morbidity from adult-onset (type 2) diabetes mellitus, obesity, hyperlipidemias, cardiovascular diseases, several cancers and sleep apneas. The disease prevalence increases as body mass index (BMI) increases. Binge eating occurs in a subset of obese patients in response to emotional stress, a phenomenon known as ‘emotional eating’. Patients with binge eating disorder were found to be more likely to over-eat in response to negative emotional states and were also found to have higher rates of anxiety, major depression, post-traumatic stress disorder and impulsive disorders such as compulsive buying and kleptomania. The study concluded that cognitive behavioral therapy and pharmacological therapy with antidepressants and Topiramate are effective in treating BED.

Perkins, Murphy, Schmidt, & Williams, (2009) conducted a systematic review of 15 studies and evaluated the effectiveness of pure self-help and guided self-help interventions for BED. These treatment modalities have some utility as a first step treatment and have potential as an alternative to formal therapist-delivered psychological therapy. These forms of therapy for BED allow treatments with proven efficacy to be accessed with minimum delay. They were also found to be popular and acceptable to many patients and cost associated was low. Patients found these options attractive as they avoid the stigma or embarrassment of formal psychotherapy. Patients with BED are often ashamed of their disorder and find it hard to confide in a therapist about their symptoms. The pure self-help and guided self-help allow patients to work in their own time and pace. Patients reported a sense of empowerment and thus promoted collaboration. These treatments are flexible as, they allow patient to renew or update treatments as often as they wish. They are also important in reinforcing and consolidating information about BED and can be used to focus on teaching patients about this disorder, health implications, and better eating habits.

The Agency for Healthcare Research and Quality [AHRQ] (2015) conducted a systematic review of evidence on the effectiveness of binge eating treatments and to help patients make informed choices among treatment alternatives. Therapist-led cognitive behavioral therapy was found to reduce binge eating frequency and increase binge eating abstinence. Eight randomized controlled trials (RCTs) (all placebo controlled) examined the effectiveness of antidepressants for treating BED patients. As a class, antidepressants were associated with better binge-eating outcomes than placebo, abstinence, reduction in frequency of binge episodes per week. They were also associated with greater reductions in eating related obsessions and compulsions. Three placebo-controlled RCTs provided evidence about treating BED patients with anticonvulsants,

specifically Topiramate. Topiramate was associated with abstinence among a greater percentage of participants and with greater reductions in binge eating, obsessions and compulsions related to binge-eating and weight. It also produced greater increases in cognitive restraint and reductions in hunger, disinhibition, and impulsivity.

Methods

The purpose of this project was to determine the prevalence of being at risk for BED in patients undergoing weight loss management at a non-insurance-based weight loss clinic. The first step was to look at how the clinic screened patients for BED on intake. Pre-intervention intake forms, given to all new patients at the clinic, asked patients if they binge eat and if so when and with what food. Out of the 100 clinic charts, 20 percent were found to be positive for BED, with 1 in 5 patients stating that they binge eat based on the three questions asked on intake. This initial pre-intervention data suggested the need to provide more thorough BED screening and to provide these patients with evidence-based treatment recommendations, support and referrals.

The project included screening patients at the weight loss clinic for binge eating using the Binge Eating Disorder Screener-7 (BEDS-7). This is a validated patient-reported screening tool designed to identify individuals with probable BED for further evaluation or referral to specialists. This screener was developed based on the DSM-5 diagnostic criteria for binge eating and is intended for screening use only and should not be used as a diagnostic tool. According to Herman et al. (2016), the seven BEDS item (BEDS-7) yielded 100 percent sensitivity and 38.7 percent specificity when used on 97 participants in a noninterventional study. Sixteen were diagnosed with BED (16 percent female; 17 percent male). The study concluded that

implementation of the screener in clinical practice would promote better understanding of BED characteristics and help practitioners identify patients who may have BED for further treatment.

The BEDS-7 screener consists of 7 questions (See Appendix H). Each question assesses the patient's eating patterns and behaviors over the last 3 months. If a patient answers "YES" to question 1, the clinician should continue with questions 2 through 7. If the patient answers "NO" to question 1, there is no need to proceed with the remainder of the screener. If the patient answered "YES" to question 2 and checked one of the boxes which assessed how often a patient engaged in a behavior; sometimes, often, always for all questions 3 through 7, follow-up discussion of the patient's eating behaviors and his or her feelings about those behaviors should be considered. Step 3 of the screener included evaluating the patient based upon the complete DSM-5 diagnostic criteria for BED.

The second phase of the project included treatment recommendations for patients who screened positive for binge eating. This included self-help, determining patient interest in pharmacological treatment especially with Topiramate, and referrals to psychotherapy or support groups. Patients were asked to choose a preference of what might work best for them. Handouts with a brief description of BED and the three treatment options were given to patients at risk (See Appendix H). According to Perkins et al., (2009), self-help treatments in BED aim to improve clinical outcome as well as provide information by teaching patients relevant skills to overcome and manage this disorder. Self-help treatments have shown efficacy, can be accessed with minimum delay and are acceptable to many patients. The self-help option consisted of free online modules and self-help programs for BED with a psychotherapist and an eating disorder specialist as well as an online training for mindful eating for BED. These were free of charge and the patient could do them at their own pace. The purpose of the self-help option was to teach

patients better eating habits, to teach them how to recognize their triggers, and to educate them on the health impact of BED.

Of the pharmacological options available in treating binge eating disorder, Topiramate has been found to be useful in BED with obesity, decreasing weight and obsessive-compulsive eating pathology, as well as eating impulsivity. It has been shown to reduce hunger, promote weight loss and reduce binge episodes and impulsivity. Topiramate was associated with abstinence and with greater reductions in binge eating, obsessions and compulsions related to binge-eating, and weight; it also produced greater increases in cognitive restraint and reductions in hunger, disinhibition, and impulsivity. (AHRQ, 2015) Pharmacological therapy in BED is specifically focused on the reduction of eating impulsiveness, binges and negative feelings. Data were not sufficient to recommend pharmacotherapy as single first-line therapy however, medications do play an important role in BED management.

The referrals option included both online and in class support groups as well as referrals to psychotherapists. The class support groups included organizations such as Compulsive Eaters Anonymous and Overeaters Anonymous which provided face to face or telephone meetings as well as group meetings. Online support groups were available through social media and other popular support group platforms. Patients who scored positive on the screener were educated on BED, the signs and symptoms, risk factors and health implications. Treatment options were discussed with each patient and they were asked to choose a treatment preference based on what would ideally work the best for them stressing the importance of compliance.

Results

A total of forty-four patients were screened for binge eating disorder. Thirty patients screened positive for being at risk for BED with a score of 2-6 on the BEDS-7 Screener. A score

of 2-3 were considered mildly at risk of BED, a score of 4-5 were determined to be moderately at risk for BED, and a score of 6 indicated severely at risk for BED. Eight patients were in the mild category, 10 patients were moderate, and 9 patients were in the severe category. Demographics for the patients included an average age of 47.2 years old. 89 percent were female, 11 percent were male, 73 percent were Caucasian, 20 percent were Hispanic, and 7 percent were Asian.

As illustrated in Figure 1, the prevalence of being at risk for BED in this clinic was found to be 52 percent which surpasses the results of APA at 30 percent of those seeking weight management. (APA, 2012).

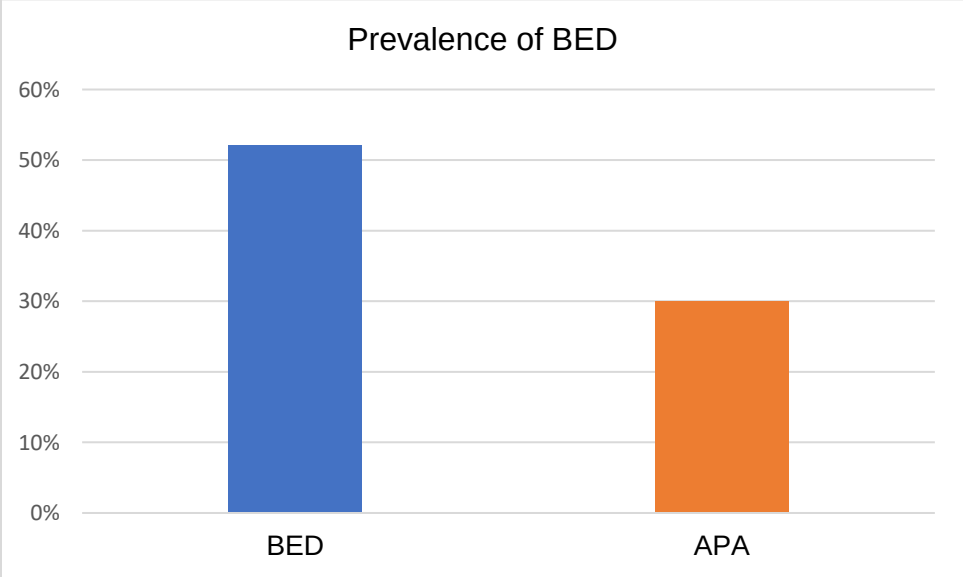

Figure 1: This figure illustrates the prevalence of BED at this clinic as compared to the results from a study conducted by the American Psychological Association (APA)

The mean body mass index (BMI) at the beginning of the project was 30.7 which falls into obese category. The BMI was calculated 1 month after the screening intervention had been implemented and treatment recommendations provided. The mean BMI was found to be 28.3,

which falls in the overweight category indicating that these patients did lose weight a month after starting the weight loss program and after being screened for BED. The average weight loss of the patients who screened positive for being at risk for BED was 2 pounds compared to 2.9 pounds for those patients who scored negative on the screener indicating the possibility that patients with BED have a slightly harder time losing weight compared to those patients who do not have BED.

Comorbidities were also compared in those patients with BED and those without BED to determine if there was an increase in comorbidities associated with BED and if these patients had a difficult time losing weight. Only a few of the patients at this clinic had major comorbidities, specifically, the metabolic syndromes of diabetes mellitus, hypertension, hyperlipidemia and heart disease. Only 6 out of the 44 patients were found to have either diabetes mellitus, hypertension or hyperlipidemia. There were no patients with heart disease. These patients lost the same amount of weight as their counterparts. Patients with the above comorbidities did not score higher or lower on the BEDS-7 screener.

As outlined in Figure 2, the treatment preferences for BED, 63 percent chose the self-help option, 32 percent chose medications specifically Topiramate, and 5 percent chose referrals. The patients who chose the self-help option preferred this mode of treatment due to its ease of access.

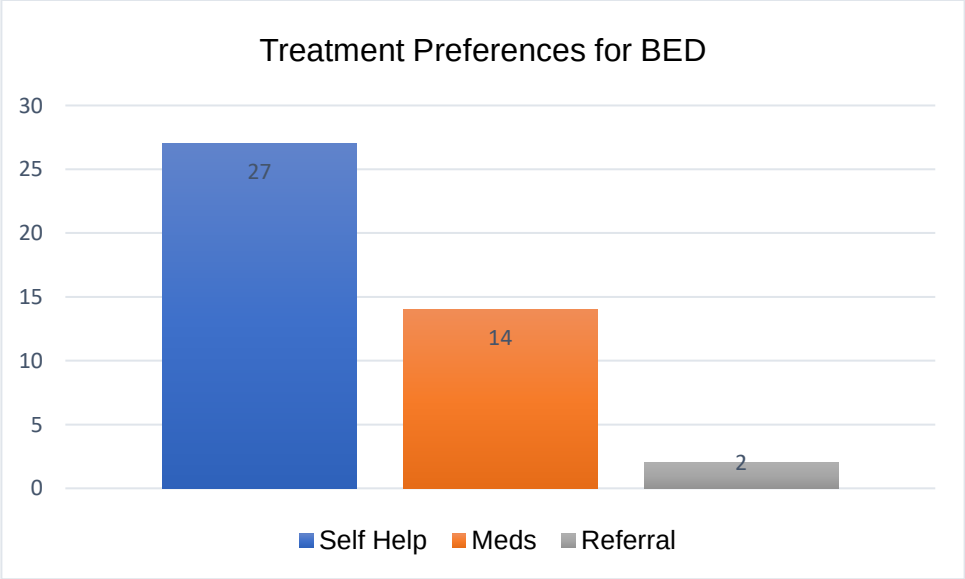

Figure 2: This figure illustrates the patient treatment preferences for BED

This project concluded that BED is prevalent in those seeking weight loss at this clinic. Twenty-seven of the total patients screened preferred the self-help option which allowed them control over their management of this disorder. Fourteen patients were interested in Topiramate as a treatment option, and only 2 chose referrals to support groups and psychotherapy.

Cost Benefit Analysis

Binge eating disorder is a serious health serious condition that impairs health-related quality of life (HRQL) and increases health care costs. Evidence shows that patients with BED have higher health care costs compared to patients who do not. Per year health care cost for patients with BED is estimated at $33,000 compared to $19,000 in patients without BED (Binge Eating Disorder Association, 2016). Patients who seek help with BED may reduce their overall health care costs. Since this was a screening project which included recommendations for treatment, no cost was charged to the patients for the screening as this was provided cost free by the clinic. The total cost of printed materials given to patients was $ 50 dollars. The patient

handout was given to all patients at no charge. The clinic did not incur any costs associated with screening these patients. Patients seeking weight loss at this clinic pay for their treatments out of pocket, as it is not an insurance-based clinic. Future considerations include the potential financial cost of Topiramate, as this project only focused on assessing the interest in Topiramate in those patients who screened positive for BED.

Discussion

The prevalence of being at risk for BED in this weight loss clinic is 52 percent, which is significantly higher than other patients seeking weight loss. The prevalence of being at risk for BED demonstrates the need for increased screening methods in primary care settings. The 7-item Binge-Eating Disorder Screener (BEDS-7), a brief screener for BED, can assist practitioners in identifying patients who may have BED and making the necessary follow-up decisions related to patient referrals or additional assessment and potential diagnosis of BED. Providers can easily identify those patients at risk for binge eating disorder and provide them with the appropriate and evidence-based treatments, referrals and follow up. Screening patients for BED helps promote a better understanding of binge eating habits and raises awareness of its overall impact on health and quality of life.

Implications for Practice

Binge eating disorder has been linked with several comorbid health conditions, including diabetes, hypertension, stroke, and heart disease, and other psychiatric illnesses such as anxiety and depression. It is prevalent in patients seeking weight loss management and is likely to be prevalent in primary care settings. The condition is significantly under diagnosed despite it being the most common eating disorder in the United States and is more prevalent than anorexia and

bulimia combined. Health care practitioners can be influential in ensuring that patients are adequately screened and provided with adequate treatment, referrals and follow up.

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