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Short Communication

Commentary: Diabetes and Obesity: Risk Factors for the Development of Diabulimia

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Introduction

In recent decades, obesity has become a major epidemic in the United States and worldwide. In the United States, one-third of adults are considered obese and approximately two-thirds of adults are overweight, according to the Center for Disease Control and Prevention (2016). There are several comorbidities associated with obesity such as cardiovascular disease, diabetes, and mental health struggles such as depression, low self-esteem, social anxiety, and eating disorders [1]. Individuals struggling with obesity are at a higher risk of chronic health problems. Obesity remains the underlying issue to related medical complications such as diabetes and heart disease, which is the leading cause of death, especially in poorer communities' [2]. To address the underlying issues of diabetes, it is important that we understand the root causes of obesity from not only a medical perspective but through a mental health perspective. More importantly, it is crucial that we start understanding the complicated relationships between eating disorders, obesity, and diabetes to better universally assess for eating disorders in the treatment of diabetes and weight related health problems [3].

Weight Loss as the Primary Intervention in the Treatment of Diabetes

It has been shown that weight loss of more than 10% of body weight can lead to remission of diabetes [4]. It has been argued that there is a gap in the treatment management of obesity as it relates to diabetes (diabesity) and should be further explored [4]. Intentional weight loss is associated with lower risk of heart failure and cardiovascular disease [5]. When utilizing bariatric surgery for weight loss and 10% of weight loss was achieve, it was found that around 90% of those that lost weight were no longer needing insulin at a five year follow up [6]. It has been argued that the ways in which the diabetic patient loses weight is less important than the actual attainment of sustained weight loss [4]. I disagree with this premise as the way in which weight loss is achieved can have deadly consequences as I will further explore.

Weight Bias and its Consequences

From a medical perspective, weight loss is essential in the treatment of diabetes so reduce the risk of heart failure and mortality. As research suggests, increased rates in type-2 diabetes in younger populations is often associated with several comorbidities such as the reduction of the quality of life from both a sedentary lifestyle and unhealthy dietary habits, leading to depression and eating disorders [7]. It is important to note that there remains a strong belief belief that weight is caused by overeating, lack of will power, or a living a sedentary lifestyle which supports the idea that one's weight is one's personal choice, although research that argues more than 100 factors and 300 connection between these factors [8]. The stronger the belief in the controllability of weight, the stronger the weight bias [9]. The belief that one's weight is controllable, simply by calorie intake and expenditure otherwise termed as 'obesity discourse' [10], oversimplifies the complexities of eating and weight struggles. Research suggests that weight bias has also been shown to decrease the motivation for exercise, decrease quality of life, and overall life expectancy [11]. Weight

bias has negative consequences on one's overall health including poor self-esteem, stress, body dissatisfaction, depression, binge-eating, and an increased risk of developing an eating disorder [12].

Diabulimia

Individuals with type-1 diabetes must be more careful around meal planning and food choices [13]. Unfortunately, this may lead some to adopt rigid behaviors around eating and food choices [13]. A rigid approach to food restriction and eating behavior often leads to a higher preoccupation with food which can lead to binge-eating behavior [14]. [15] Peyrot et al. found that about one-quarter of women diagnosed with type-1 diabetes will develop an eating disorder, which is a concerning statistic.

Maintaining a near-normal blood glucose level with a proper diet and insulin management can delay or prevent serious diabetic complications, however, despite medical education, 50% of adults do not meet the target glycemic levels [16]. Several psychosocial barriers to proper management have been identified such as depression and anxiety, concern about weight gain and related eating disordered behaviors [16]. It has been argued that insulin restriction, although can result in deadly consequences, is an effective weight control strategy [16]. Without insulin, one's body cannot utilize any food eaten, putting the body into a state of starvation [17].

What has been found to be the most common in disordered eating patterns is skipping insulin injections, known as diabulimia [18]. Diabulimia is a term coined by the media that refers to an individual with, typically, type-1 diabetes, who intentionally restricts their insulin in order to lose weight [17]. Medical and mental health professionals are now referring to this type of eating pathology as eating disorder-diabetes mellitus type 1 (ED-DMT1) [17].

There is no separate diagnostic code in the DSM V for diabulimia, as it will depend on one's specific eating behavior pathology [17]. Restricting insulin results in the excretion of glucose into the urine, thus, the sugar is essentially "purged" allowing an individual to eat without the consequences of weight gain [15]. The DSM V classifies insulin restriction as a type of purging behavior if the individual restricts after binging food, therefore would be classified as bulimia nervosa [19]. Further it would be considered a purging disorder if there is no apparent binging but restriction of insulin, and anorexia nervosa is the individual is severely restricting both food and insulin [19]. Diabulimia can also be diagnosed under the category of Other specified feeding and eating disorder (OSFED) [19].

There are severe consequences for diabulimia. Research has shown that insulin restriction is correlated with increased risks of diabetes complications and increased risk of mortality [16]. In fact, individuals that struggle with diabulimia are 3.2 times more likely to die over an 11-year period of study and died, on average, 13 years younger than those who did not restrict insulin [17].

Eating Disorder Pathology

In the United States alone, 30 million people are suffering from some form of an eating disorder, globally the number increases to 70 million people [18]. Even with the high prevalence of eating disorders in this country, only 6% of people who struggle with eating disorders are diagnosed by a medical professional (NIMH, 2022) leaving many to remain untreated. Unfortunately, we can assume that the claim of 5.5% struggling with BED, 2% struggling with bulimia, and 1.2% with anorexia [18] is actually much higher.

These are concerning statistics because of all the mental health illnesses, ED are the deadliest with 10,200 annual deaths, or to put it into perspective, 52 deaths every minute [18]. This tops the percentages of deaths from opiate overdoses [18]. Further, if we believe that the rates of eating disorder incidence is much higher, there are many deaths unaccounted for. It is important to note that this statistic does not represent other feeding and eating disorders and unspecified eating disorders represented in the DSM-V-TR (2022).

Body dissatisfaction is the most notable risk factor for the development of an eating disorder [20]. The National Eating Disorders Association (NEDA) defines body image as encompassing how one feels and experiences one's body (2022). Individuals with eating disorders are more likely to have internalized the society's body ideal leading to higher rates of body dissatisfaction, body dysmorphia, and poor body image [17].

Weight stigma or weight bias supports the idea that thinner is better which ultimately is one of the main societal factors that leads to increased body dissatisfaction [17]. As discussed, weight bias leads to seeing one as "bad" or "undeserving" can lead to a greater sense of isolation and loneliness, and a smaller support network with fewer friendships, which are significant risk factors in the development of an eating disorder [17]. The anti-obesity messaging leads to body shaming and bullying [17]. We see it all the time in the media and on social media. It is not uncommon that an article on body positivity is accompanied by an advertisement for a weight loss pill, program or diet.

The Need for More Appropriate Treatment and Assessment Interventions

There is no doubt that obesity and diabetes are a serious epidemic in public health, but we need to rethink our overall understanding of the complexities of food and weight. As discussed, eating disorders are not statistically represented accurately and are grossly underdiagnosed. Both medical and mental health providers need to understand the issues around weight and food from a clinical standpoint. Just as we wouldn't tell someone suffering from anorexia to "just eat", we shouldn't tell individuals struggling with larger bodies to "just lose weight". What is needed in healthcare is a universal assessment for disordered eating pathology. We also need to look at the underlying issues around eating pathology. Research strongly supports the strongest risk factor for the development of eating disorders of all subtypes is early childhood trauma [3]. Eating pathology, whether it be starvation or binge-eating, are found to be maladaptive ways in which to regulate overwhelming affective states [3]. To ultimate address the issues around obesity and diabetes, we need to see our patients from a holistic perspective.

Acknowledgement

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Conflict of interest

None.

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