Physicians' Knowledge and Attitudes of Disordered Eating Behaviors Among Patients with Diabetes

OAKLAND UNIVERSITY WILLIAM BEAUMONT

IRB-FY2020-139

Nayiri Khatchadourian, MS3, MPH[1], Lowell Schmeltz, MD[2], Michael R Brennan, DO[2], Virginia Uhley, Ph.D., R.D.[3,4]

[1]Class of 2023 M.D. Candidate, Oakland University William Beaumont School of Medicine
[2]Department of Endocrinology, Beaumont Health System, [3]Department of Foundational Medical Studies, Oakland University William Beaumont School of Medicine,
[4]Family Medicine and Community Health, Beaumont Health System

Purpose

Assess physicians' level of training, comfort and attitudes towards providing clinical care to patients diagnosed with Type 1 and 2 Diabetes Mellitus (DM) and their experience in assessing, identifying and treating disordered eating behaviors (DEBs) in this patient population.

Introduction

Adults diagnosed with Type 1 and 2 DM are at higher risk for clinical eating disorders and other DEBs than their peers without diabetes.[1] DEB include maladaptive behaviors like "restricting food intake, binge eating, using laxatives, or performing intense physical Exercise in order to reduce body weight."[1] In individuals with T1DM, insulin omission to lose weight is the most commonly reported DEB, and in those with T2DM , binge eating is most commonly reported.[2] The 2022 "Standards of Medical Care in Diabetes" Journal from the American Diabetes Association (ADA) suggests psychosocial screening to occur at the point of diabetes diagnosis or during regularly scheduled visits and hospitalizations, further highlighting the importance of addressing this topic.[3] The ADA discusses the need for providers to reevaluate treatment regiments of patients with diabetes who present with symptoms of DEB, screening for DEB, and helping patients maintain the pleasure of eating by only limiting food choices when indicated by scientific evidence.[3] Despite the adverse effects of mental health issues associated with DEB and diabetes outcomes, few receive mental health screening or integrated mental health services in their diabetes clinical care.[4] The management of type 1 and type 2 diabetes involves multiple components that could increase the risk of DEBs including: higher rates of obesity, close monitoring of food, restricting dietary choices, loss of autonomy in selection of food, and manipulation of weight through insulin omission or under administration of insulin.[5] The current ADA guidelines states that nutrition therapy should play an integral role in diabetes management and that each person with diabetes should be referred to a registered dietitian.[3] Unfortunately, it is unknown how prevalent the knowledge about the incidence of DEBs among this patient population is to physicians and how often they use screening tools to assess this in their patients.

Studies have shown that DEBs are associated with diabetes complications and poor metabolic control, even if full diagnostic criteria for an eating disorder was not met.[6] This is significant because during binge eating, individuals may struggle to accurately count carbohydrates and estimate their bolus insulin needs.[6] Binge eating may also motivate the use of dangerous behaviors to compensate for excessive calories consumed, further disrupting glycemic control, which is associated with an array of diabetes-related medical complications like neuropathy.[6] It has been reported that there is a high prevalence of "diabulimia", a colloquial term used to describe an eating disorder in patients diagnosed with T1DM, where patients restrict insulin to lose weight.[7]

Health care professionals trained in treating patients diagnosed with diabetes may view eating disorders and diabetes as distinct problems on opposite ends of the weight spectrum, but they frequently co-occur. Despite the significance, this remains an understudied issue, especially since conventional outpatient eating disorder treatments developed for nondiabetic individuals are less effective for those diagnosed with diabetes.[6] To diagnose DEBs, health care professionals must clearly understand the definition of normal eating, which includes eating a nutrient dense diet, having positive attitudes about food intake and not restrictive patterns of eating (i.e. labeling foods as "good" or "bad.").[8] If patients are overweight, recommended weight loss interventions should not just focus on weight as the primary outcome, but should also include psychological measures associated with eating behaviors.[9]

Results

Table 1: Assessing Education and Confidence

	Have you received any education about identifying/assessing for disordered eating behavior among patients diagnosed with diabetes during or after your professional training? n (%)	Do you believe you have the tools/resources available to assist a patient with disordered eating behavior to provide or get the treatment they need? n (%)
No	20 (58.8%)	23 (67.6%)
Yes	14 (41.2%)	11 (32.4%)

Table 2: Assessing Preparation

	If an individual with disordered eating behavior(s) came to you for treatment, how prepared would you be to: Direct them to appropriate treatment facilities/practitioners/resources: n (%)	If an individual with disordered eating behavior(s) came to you for treatment, how prepared would you be to: Provide treatment to patients diagnosed with diabetes and disordered eating behavior: n (%)	If an individual with disordered eating behavior(s) came to you for treatment, how prepared would you be to: Recognize symptoms of disordered eating: n (%)
Prepared	5 (14.7%)	4 (11.8%)	7 (20.6%)
Somewhat Prepared	13 (38.2%)	16 (47.1%)	15 (44.1%)
Somewhat Unprepared	9 (26.5%)	6 (17.6%)	9 (26.5%)
Unprepared	7 (20.6%)	8 (23.5%)	3 (8.8%)

Methods

The cross-sectional prospective study was a 17-question online survey through Qualtrics. We recruited physicians and medical residents that provide clinical care for patients diagnosed with T1/T2 DM. Surveys were emailed to the physicians that work at Beaumont hospital in Michigan; completion was voluntary and anonymous. The survey was developed using several questionnaires provided by the Michigan Diabetes Research Center, including the Diabetes Knowledge Test and Diabetes Attitude Scale.[10] Surveys were sent to a list-serv of Beaumont physicians and residents. After 3 months of response collection, descriptive data analysis was completed. The participants who did not fully complete the questionnaire were excluded from the final analysis.

Discussion

Among the 49 participants who responded, 34 completed the questionnaire in its entirety. 97% of physicians were endocrinologists with years of experience ranging from 6-35 years; others were family medicine physician. 67.6% identified that they did not believe they have the tools or resources available to assist a patient with DEB; requested suggestions included an online learning course or resource, screening questionnaires and specialty training (Table 1).

Responses for tools physicians would like to help with assisting this patient population included: access to counselors, behavioral pediatrics, registered dietitians, access to psychiatry, improved equity to access resources, assistance with identifying different cultural, ethnic or racial presentations or pressures, improved referral network, books and questionnaires, referral resources, diabulimia treatment strategies, improved education, information pamphlets, office screening tools, online learning course, online resources and patient groups and specialty trained dieticians. With respect to physicians' attitudes towards patients with DM and DEB, 76.5% believed patients have very little control over the development of DEB; 75.8% agreed and 15.2% somewhat agreed that individuals with DEB take much more time in clinic to treat; 67.6% agreed and 23.5% somewhat agreed that individuals with DEB are difficult to treat. 52.9% "agreed" with feeling like they need more training around screening for patients with DEB, and only 5.9% disagreed. To the question assessing how prevalent they think the incidence of DEB is among patients diagnosed with type 1 and 2 diabetes, 50% reported somewhat prevalent and 38.2% very prevalent

Conclusion

The research results highlight possible gaps in medical education programs regarding training around DEB. If physicians do not feel well equipped with treating or addressing an issue, they will be less likely to ask the questions to identify that issue. With most physicians requesting additional support like access to psychiatry, DEB trained registered dieticians, training modules or screening tools, this highlights the need to support clinicians and equip them with the proper tools so that they do feel confident in asking evidence based questions. Our future plans are to address this by creating continuing medical education training modules for endocrinologists and endocrinology residents focused on the evaluation, diagnosis, and treatment of DEB in patients diagnosed with DM. We anticipate that this will help to enhance the knowledge and skills of physicians and residents in the clinical care and support of patients diagnosed with DM.

References

1. Nip ASY, Reboussin BA, Dabelea D, et al. Disordered eating behaviors in youth and young adults with type 1 or type 2 diabetes receiving insulin therapy: The SEARCH for diabetes in youth study. In: *Diabetes Care*. ; 2019. doi:10.2337/dc18-2420
2. Young-Hyman D, De Groot M, Hill-Briggs F, Gonzalez JS, Hood K, Peyrot M. Psychosocial care for people with diabetes: A position statement of the American diabetes association. *Diabetes Care*. 2016. doi:10.2337/dc16-2053
3. American Diabetes Association Professional Practice Committee. 1. Improving care and promoting health in populations: Standards of Medical Care in Diabetes—2022. Diabetes Care 2022;45(Suppl. 1):S8–S16
4. Ducat L, Philipson LH, Anderson BJ. The mental health comorbidities of diabetes. *JAMA - J Am Med Assoc*. 2014. doi:10.1001/jama.2014.8040
5. de Groot M, Golden SH, Wagner J. Psychological conditions in adults with diabetes. *Am Psychol*. 2016. doi:10.1037/a0040408
6. Moskovich AA, Dmitrieva NO, Babyak MA, et al. Real-time predictors and consequences of binge eating among adults with type 1 diabetes. *J Eat Disord*. 2019. doi:10.1186/s40337-019-0237-3
7. Torjesen I. Diabulimia: the world's most dangerous eating disorder. *BMJ*. 2019. doi:10.1136/bmj.l982
8. Brooks S, Fletcher M. What Lies Beneath? Identifying Hidden Disordered Eating in Type 2 Diabetes. *AADE Pract*. 2019. doi:10.1177/2325160319839759
9. Peckmezian T, Hay P. A systematic review and narrative synthesis of interventions for uncomplicated obesity: Weight loss, well-being and impact on eating disorders. *J Eat Disord*. 2017. doi:10.1186/s40337-017-0143-5
10. University of Michigan. Michigan Diabetes Research Center: Tools for Health Professionals.