
Eating Disorders Review

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Looking At Anorexia Nervosa in a New Way

Newer global approaches search for neurobiological causes

Anorexia nervosa still has one of the highest mortality rates among psychiatric disorders, up to 4% among females and 1.3% among males (*Curr Opin Psychiatry*. 2021. 34:515). Eating disorders are likely underreported and undertreated, especially in men, which can skew the statistics, leading to underestimates of mortality. Another challenge is that AN mortality rates are often calculated based on individuals in treatment, which likely gives the same effect.

Relapse is common, and no ideal treatment has been found. Two long-term follow-up studies of 22 and 30 years revealed some positive results, although 1 in 5 patients still had chronic disease after 22 years (*J Clin Psychiatry*. 2017. 78:184; *Br J Psychiatry*. 2020. 216:97). And, in the 30-year follow-up, only 64% of patients with AN had fully recovered. There were no deaths, and although some individuals had been free from an eating disorder for 10 or 20 years, late relapses did occur.

A new approach to AN and other eating disorders will use identification of suspect genes and the biology of the gut to solve some of challenges posed by AN diagnosis and treatment.

International Groups Pursue a Genetic Cause for AN

Dr. Cynthia M. Bulik, founding director of the University of North Carolina Center for Excellence for Eating Disorders, Chapel Hill, and her colleagues are working to analyze the genetics and intestinal microbiota of patients with AN (*Nat. Neurosci*. 2022. 25:543; *Psychiatry Clin Neurosci*. 2019. 73:518). They are exploring possible biologic pathways for the development and outcome of AN. The hope is that the studies will stimulate development of pharmacologic agents that will target the core biology of AN, as well as that of patients with bulimia nervosa (BN) and binge eating disorder (BED). Evaluating the complex microbiota of the gut (intestinal microbiota) underlying biological mechanisms may give new insight into extreme weight dysregulation and new “points of entry for AN treatment,” according to the authors.

The Eating Disorders Genetics Initiative, or EDGI, is an ongoing global research study on the genetics of eating disorders. The initiative is currently the largest-ever research study of genetic and environmental causes of eating disorders. The goal is to identify hundreds of genes that influence the risk of developing AN, BN, and BED. (Website: edgi@unc.edu)

Duration of illness and age as predictors of outcome

Meanwhile, valuable work using more traditional research continues. Dr. Adrian Meule and colleagues at several German hospitals are comparing the duration of illness and age as predictors of short-term treatment outcome. They recruited 902 female inpatients aged 12 to 73 with AN for the study (*Eat Disord*. 2022. Sept 30; 1-11. Published online ahead of print).

Patients who had AN for longer periods gained less weight, had smaller improvements in global functioning, and smaller decreases in self-reported eating disorder symptoms. However, the length of illness almost perfectly correlated with the patients' ages. The results suggest that having AN for a longer period does indeed relate to worse short-term treatment outcome among inpatients with AN.

The authors' findings further support that weight suppression is a robust predictor of weight gain in addition to--and in interaction with--current body weight. As weight suppression can easily be assessed at admission, the authors suggest weight suppression may help to anticipate treatment course and outcome in patients with AN (*J Psychosom Res.* 2022. doi: 10.1016/j.jpsychores.2022.110924).

These findings are important for how we think about "severe and enduring AN." Efforts to link duration to outcome have been mixed, but in this large study there was some relationship between length of illness and poorer outcome.

UPDATE: The 21st Century CURES Act

It all began when US Senators Amy Klobuchar (D-MN), Shelley Moore Capito (R-WV), Tammy Baldwin (D-WI), and Thorn Tillis (R-NC) introduced bipartisan legislation authorizing establishment of a Center for Excellence in Eating Disorders. The Center was designed to provide training and other technical assistance to healthcare workers, teachers, parents, and others on how to identify eating disorders and to support patients in recovery. As a result, the National Center for Excellence in Eating Disorders, directed by Dr. Christine Peat, was founded in 2018 after further efforts by Senators Klobuchar, Capito, and Baldwin.

The Anna Westin Legacy Act was enacted as part of the 21st Century CURES Act. The Anna Westin Legacy Act, established in February 2022, authorizes Center funding at \$5 million for each fiscal year from 2023 through fiscal year 2027. The Act honors Anna Westin, from Chaska, MN.

The funds will go toward adapting screening, brief intervention, and referral to treatment for pediatric patients. This will expand adaptive in-person and online training modules on eating disorders.

The goal is reaching frontline professionals and provides for consultation with the Department of Defense and Department of Veterans Affairs, to prevent, identify, and treat EDs for veterans and military service members, and to integrate screening, brief intervention, and treatment using electronic health record systems.

In a more recent action, the three Senators reached out to social media in October. Senators Klobuchar, Capito, and Baldwin sent a letter to Facebook (now Meta), which owns Instagram, expressing their concern that information on the company's website encourages disordered eating among young viewers, particularly teenagers and girls. In September, Facebook's vice president of Global Safety, Antigone Davis, admitted that the company knew about the findings but did not take immediate action to help protect teenagers from such messages.

From Across the Desk: New Approaches to Old Disorders

Anorexia nervosa has a long *history*. It has been traced back to religious fasting during the Hellenistic era, and reportedly affected Catherine of Siena in the 1300s and Mary, Queen of Scots in the mid-1500s. While Richard Morton is credited with describing AN in 1689, it was Sir William Gull, one of Queen Victoria's personal physicians, who published a paper on AN in 1873, with a number of case descriptions

and treatments. In the same year, French physician Ernest-Charles Lasègue published his paper on AN, *De l'Anorexie Hystérique*.

Today's AN research is turning to genetic possibilities, and traces to the human microbiome. According to the National Institutes of Health, these analyses reveal that each individual has his or her own microbiota that play a role in health and disease (see "Looking at Anorexia Nervosa in a New Way," elsewhere in this issue.)

And in this issue, a pilot program with multi-family therapy for bulimia nervosa is showing positive results. This therapy is less intense than multi-family therapy for AN, and also reduces a patient's sense of isolation. The effects of isolation during the COVID "lockdown" worsened eating disorder symptoms, as many recent studies have shown. This issue includes two of many such studies, including one in which isolation made some persons more vulnerable to intimate partner violence (see "Loneliness, Social Withdrawal and the Connection to Intimate Partner Violence").

The New Year is a reminder of the promising advances being made in eating disorder research to combat these age-old disorders.

—MKS

The COVID-19 Lockdown and Eating Disorder Symptoms

Two studies showed the effects of isolation

As the COVID-19 pandemic has continued, research on its effects on eating disorders has flourished, and it is now possible to review some effects of the lockdown. Did the pandemic lockdown worsen eating disorder symptoms among those with eating disorders? Yes, according to the results of two recent studies.

Symptoms worsened during lockdown

A team of Australian researchers led by Dr. Yunqi Gao of Australian National University, Acton, Australia, reported that eating disorder symptoms worsened during the isolation period (*J Public Health*. 2022. Doi.org/10.1007/s10389-022-01704-4). The team concluded this after evaluating 132 studies from Great Britain, Italy, Spain, Belgium, and Portugal.

According to the authors, the pandemic lockdown disrupted lifestyle routines, and led to social isolation, reduced access to the usual support networks, limited or no access to healthcare and mental healthcare services, and social anxiety. Isolation led to worsening symptoms and depression and anxiety among ED patients. Social isolation included working from home or being unemployed during the confinement period and limited interactions with friends and relatives as well.

A major problem for persons with eating disorders was reduced during in-person treatment. As the authors point out, even though patients could receive online treatment through teletherapy and videoconferencing, these approaches could not replace the traditional support they derived from in-office visits. Also, during the pandemic, some psychiatric wards were downsized, closed, or converted into treatment centers for COVID patients.

The lockdown disrupted normal living situations, bringing social isolation and loneliness, financial difficulties, and unhealthy eating patterns. The authors reported that most of the studies showed a moderate to extreme impact on persons with EDs, and that many patients had difficulty getting

healthcare services, including mental healthcare.

One of the limitations of the study was that all reports evaluated by Dr. Gao and associates were conducted in Europe, and thus the results may not be generalizable or applicable to other geographic settings, where the regulations may be different or even absent.

A second study: a three-fold increase in consultations

In a "Letter to the Editor" of the *Journal of the American Academy of Child and Adolescent Psychiatry* (March 2022), Drs. Jake Reed and Katherine Ort provide a valuable real-world example of the increased service demands during early stages of the pandemic. They reported a three-fold increase in the number of consultations for restrictive eating disorders, from 5 to 15, in the child and adolescent psychiatry consultation liaison service at their hospital over a 6-month period. These patients were from 5 to 18 years of age and most had diagnoses of AN.

The authors suggest several contributing factors, including transition of their healthcare delivery methods to telehealth, increased parental knowledge of ED symptoms, and increased need for supervision of children at home.

Toward a Better Definition of Food Addiction

The only tool currently available is the Food Addiction Scale

Is food addiction, or FA, often formally defined as a substance-use disorder, actually connected with an eating disorder, especially binge eating disorder, or BED? Dr. Ester di Giacomo of the University of Milan, Italy, and her colleagues recently sought to answer this question with a review and meta-analysis. They explored whether food addiction occurs with a specific eating disorder or as a separate entity, or is comorbid with eating disorders or other conditions such as obesity, and if FA exists in the general population (*Eat Weight Disord.*2022. 27:1963).

"Food addiction" is a term coined to demonstrate behavior that resembles that of substance-use disorder. The definition of substance-use disorder includes a strong urge to consume, made worse by abstinence, followed by failure to limit consumption (in this case, of food) despite awareness of the side effects. A person with FA eats despite feeling full, has cravings without hunger, and has feelings of guilt or shame soon after eating excessive amounts of food. As the authors point out, many neurobiochemical and neurogenetic studies have shown that typical mechanisms of FA are crucial in problematic nutrition. Genetic similarities between overeating and substance addiction have been identified as variants in genes encoding the dopamine D2 receptor.

Food addiction is not yet categorized in the *Diagnostic and Statistical Manual of Mental Disorders*, or *DSM*, but shares many overlapping criteria of *DSM-5* Substance Use Disorder, including a substance taken in larger quantities and for a longer period than expected, a persistent desire or repeated failed attempts to stop over-consuming the substance, a large amount of time used to obtain, use, or dispose of a substance, and withdrawal symptoms, among others.

A scale to categorize FA

The Yale Food Addiction Scale (YFAS) was developed in an attempt to categorize the concept of FA. This 25-item self-report questionnaire adapts the diagnostic criteria of substance dependence outlined by the *DSM-IV-TR* to eating behavior or abuse of specific foods, and is the only validated tool currently available for assessing "food addiction." The authors note that more than 11% of the general population may show symptoms of FA, while from 25% to 42% of obese patients meet the YFAS criteria.

The authors identified six studies involving 2476 subjects (539 affected by BED, 178 by BN, 18 by an eating disorder not otherwise specified (EDNOS), 65 by restrictive-type AN, 33 by purging-type AN, 442 with obesity, and 1146 from the general population, who had no eating disorders).

A connection with BED

The authors found that patients with BED had an increased prevalence of meeting FA criteria compared to patients with other eating disorders. BED, BN, and FA have overlapping symptoms. "It is crucial to underline that FA is also detected in persons with no eating disorders or obesity, but also in persons from the general population who have no psychiatric issues," say the authors. The authors interpret these findings to show that FA is a separate and distinct diagnostic entity.

The finding of FA symptoms independent from having other ED symptoms is an interesting and important point. However, in considering a possible diagnostic entity one would also be interested in establishing predictive validity: Does having an FA diagnosis inform outcome or treatment response? This will be critical in supporting FA as a separate diagnosis.

Earlier Screening May Aid in Detection of Eating Disorders

In one study, boys and girls as young as 10 had signs of disordered eating

How common are eating disorders among preteens in the US? We know a lot about ED prevalence in teens and adults, but for pre-teens, the answer is largely unknown. A recent study at the University of Southern California, Los Angeles, has added new and helpful data. The USC researchers sought to add new estimates of EDs in preadolescents by using cross-sectional data from the first-year sample of the nationwide Adolescent Cognitive Brain Development (ABCD) study. ABCD is an important nationwide study examining brain development in nearly 12,000 kids who entered the study when they were 9 to 10 years old.

Extensive assessment of participants allows examination of a myriad of questions. For example, the data allowed Murray and colleagues to estimate the incidence of anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED) and other specified ED subclinical markers among 10- to 11-year-olds in the US (*J Adolesc Health*. 2022. 70:825).

BED was the most prevalent in preteens

The researchers found that full-blown or full-threshold EDs are relatively uncommon among 10- to 11-year-olds in the US. Of all the ED phenotypes they evaluated, BED was the most prevalent, at 1.1%. There were no cases of AN, and few of BN (*JAMA Pediatr*. 2019. 173:100). However, threshold cases were much more common: 6%, 0.2%, and 0.5% for subthreshold AN, BN, and BED, respectively.

These findings underscore the importance of early screening for BED and other EDs among preadolescents. Earlier screening may also potentially "aid efforts to curb pediatric obesity and related side effects throughout later adolescence," according to the authors. They note the prevalence of EDs is not markedly higher in preteen females than males, unlike the cases seen at older ages. This is another really interesting finding that could fit well with twin research (by Klump and colleagues, among others), showing differential risk by gender at different ages.

Multi-Family Therapy for Bulimia Nervosa: A Pilot Study

Some benefits and obstacles of multi-family therapy

Multi-family therapy (MFT) is a newer approach for adolescent patients with bulimia nervosa (BN). It differs from the better-known family-based treatment for BN by offering treatment that can include a number of families, rather than one. The families meet weekly, for 20 weeks, with a team of clinicians.

This approach contrasts with that of multi-family therapy for anorexia nervosa (AN), which is far more intense and often involves meeting for 4 or 5 consecutive full days of intervention, which then may be followed by stand-alone days of intervention over several months. In Great Britain, MFT is now recommended for patients with AN; one earlier study showed that offering MFT-AN with family therapy for AN leads to better outcomes than FT-AN alone (*BMC Psychiatry*. 2016. 16:422).

Researchers at the Maudsley Hospital in London recently invited participants from two multi-family groups at their hospital to share their experiences in a focus group or individual qualitative interviews (*J Eat Disord*. 2022.10:91).

The multi-family design is based on the single-family model, with a few differences. First, the families are offered weekly sessions. Once established, the groups are closed to new participants. The 90-minute sessions include systemic family therapy, cognitive behavioral therapy, and dialectical behavior therapy. In this study, participants from two consecutive MFT-BN groups were invited to participate. The eligible sample included 7 mothers, 2 fathers, 1 older sibling, and 9 adolescents with diagnoses of BN. Most (15 of the 19) participated. The adolescents who joined the study were between 13 and 17 years of age; 4 had BN, and 2 had atypical BN.

Those taking part in MFT-BN reported it poses definite benefits, but also some obstacles. On the plus side, patients and caregivers alike describe the value of hearing about new perspectives, sharing their own experiences, and learning new skills. The teens and parents/caregivers liked some benefits of the multi-family approach: a reduced sense of isolation, a chance to learn new techniques from each other, gaining improved function and coping skills, and practical skills as well. A final theme was "what remains unspoken." The parents/caregivers noted that BN symptoms were difficult for their teens to talk about, both with their families and in a group setting. It was challenging for the teens to actively address emotions such as shame, embarrassment, or guilt.

Adolescents had some reservations

The teens were uneasy with sharing unhelpful eating disorder behaviors, especially when other adolescents in the group were at different stages of BN or in recovery. The teens also expressed some direct reservations about MFT-BN. Several felt that the group structure and process sometimes interfered with their ability to express themselves. A balance between openness, confidentiality, and risk was also hard to navigate for some teens. Their worry that parents or clinicians would "overreact" led them to omit certain details and experiences, especially around the subject of "risk." Several expressed their desire to have more unstructured time during the sessions, mostly time with a peer group, away from the adults. While they felt the structured approach was good, they wanted to share their experiences in a more unstructured way.

The authors stress that further research is needed to explore the experience of MFT-BN and its outcomes across a more diverse range of families and in different treatment settings.

Book Review

Temperament Based Therapy with Support for Anorexia Nervosa. A Novel Treatment

(Laura L. Hill, Stephanie Knatz Peck, and Christina E. Weirenga. Cambridge University Press, 2022. Paperback and Kindle editions available.)

Numerous treatments have been shown to be helpful for people with anorexia nervosa, but more—and more effective—treatments are needed. Existing treatments have generally had good research support, but to date they have not really grown out of our knowledge base about the neuroscience underpinnings of ED symptoms. This new and highly valuable book describes a new approach that is based on this kind of newly evolving knowledge.

Drs. Hill, Peck, and Weirenga lay out a new approach that they have developed and tested. This will be a valuable resource for clinicians.

The Introduction provides an accessible and clear view of the concepts of temperament, personality, and character. Next, the basic neurobiological ideas underlying the treatment are described. The authors note that there is a growing evidence base for temperament based therapy with support (TBT-S), but that results from controlled trials are not yet available. The treatment is presented in two forms: one for “young adults,” aged 17-27, and one for those with severe and enduring AN. This seems a real strength; many treatments are presented in a single form for all cases, but clinicians are well aware of the varying presentations seen in practice.

The treatment itself is described in the chapters that follow. Neurobiological psychoeducation modules are provided. Skills training and dietary approaches are laid out. The manual addresses a variety of “situational” factors, such as multifamily groups, use in different levels of care, incorporation into existing programs, use for those with severe and enduring AN, and so on.

Valuable appendices are also provided. These are a particular strength of the book, and constitute nearly half of the volume.

This valuable addition to the literature is highly readable as well. [As an aside, the authors have dedicated the book to Dr. Walter Kaye.] A particularly nice feature is that key points are summarized in a clearly marked fashion. We have learned a great deal to date about the neurobiological underpinnings of ED, and this wonderful volume provides a method to harness those findings in treatment.

—SC

Vitamin D Inadequacy in Male ED Patients

Low levels affected nearly half of the patients

Currently, males with eating disorders are not as likely as before to be overlooked, but their vitamin status often is, according to results from a recent study at the University of California-San Francisco.

Dr. Jason M. Nagata and coworkers recently reported that electronic medical records from May 2012 to August 2020 showed that nearly half of males 9 to 25 years of age admitted to the UCSF Hospital for treatment of malnutrition secondary to eating disorders had low 25-hydroxyvitamin D levels (*J Eat Disord.* 2022. 10:104). Males were more likely than females to have severe vitamin D inadequacy. (The authors believe this is the first study to report vitamin D levels specifically in a male eating disorders sample, and the first to examine sex differences in 25-hydroxyvitamin D concentrations.)

[Note: There is a great deal of debate about diagnosing vitamin D deficiency based on blood levels alone. While blood levels do indicate inadequacy, without clinical symptoms of deficiency, that particular

diagnosis cannot be substantiated. Vitamin D is one of many hormonal and dietary symptoms of deficiency and one of many that contribute to bone density and osteoporosis.]

Gender differences

What is so important about vitamin D deficiency, particularly in males? Physiology plays a role, according to the authors. Vitamin D is a fat-soluble vitamin that is distributed into fat and muscle tissue and may be held in adipose tissue. Thus, greater fat and muscle mass is often associated with lower serum levels of vitamin D. Vitamin D influences cell growth and immune function, helps the body absorb calcium, and is essential for nervous system function. Higher protein intake and muscle-building exercise could lead to low serum levels of vitamin D, compared to restricting behaviors. Just as females, males with eating disorders have skeletal complications such as bone fractures and bone mineral density deficiencies.

Dr. Nagata and his colleagues collected data from electronic medical records of 601 patients (93 males, 472 females) presenting for inpatient hospitalization in the eating disorders program at his hospital. The patients were between 9 and 25 years of age at admission, and their eating disorder diagnosis was made by a psychiatrist or psychologist. The final study group included 565 patients (93 males and 472 females).

The average age was 15.5 years, and 44% of the males had 25-hydroxyvitamin D levels <30 nanograms (ng)/ml; 18% had levels <20 ng/ml, and 9% had levels <12 ng/ml. Severe deficiency levels, or levels <12 ng/ml) were found in about 9% of males compared to only 1.9% of females. Mean calcium levels were slightly lower among female participants (9.0 vs. 9.5 ng/ml, respectively), and mean phosphorus levels were similar. Only 3% of males were taking vitamin D or calcium supplements immediately before admission; three times as many were taking multivitamins. Overall, fewer than 11% of the males (compared to 17% of females) reported taking any calcium or vitamin D supplements or multivitamins before being admitted to the hospital.

A deficiency that affected nearly half of the patients

This pattern was very common: nearly half of the male and female teens and young adults with eating disorders who required inpatient medical stabilization had vitamin D deficiency or insufficiency on admission, yet only 3% were taking calcium or vitamin-D-specific supplements.

In addition to low vitamin D and calcium levels, other factors have been linked to bone mineral density in females and males with eating disorders. Suppression of the hypothalamic-pituitary-gonadal axis can occur with low energy intake, leading to lower estrogen and testosterone levels so critical for bone growth during adolescence. High cortisol levels can also cause further alterations in bone metabolism.

Dr. Nagata and his colleagues underscore the importance of assessing vitamin D levels among eating disorder patients, especially male teens and young adults with eating disorders.

Loneliness, Social Withdrawal, and the Connection to Intimate Partner Violence

Social isolation and fear of being alone increase susceptibility

Fear of loneliness and social withdrawal may help explain the relationship between having an eating disorder and risk of a violent intimate partner relationship, according to a recent study from Madrid (*Nutrients*. 2022.14:2611).

Dr. Janire Momene, of the University of Deusto, Bilbao, Spain, and colleagues in Great Britain and Madrid

evaluated 683 individuals to study the mediating role of fear of loneliness and poorer social functioning, and among persons with eating disorders who also must deal with intimate partner violence. Intimate partner violence includes stalking, and actual or threats of physical, verbal, emotional, economic, and sexual abuse.

Some coping mechanisms increase the risk

The authors noted that persons with an eating disorder predominately use coping mechanisms to gain control over stressful circumstances. Social isolation and fear of being alone may make someone with an eating disorder vulnerable to staying in a violent relationship. The study included 683 participants (78% female and 22% male; average age: 21). This study sought to analyze the mediating role of the fear of loneliness and the effects of an eating disorder have on the relationship with a violent partner.

Participants were recruited online and through social networks and advertisements. Surveys were available through an online platform; the authors also used social networks and ads on research websites. Face-to-face recruitment occurred at the Complutense University of Madrid and at gyms in Madrid. All participants were at least 18 years old. The authors then used a series of questionnaires to evaluate eating disorders characteristics (*Eating Disorders Inventory-2; EDQ-2*); fear of loneliness (Emotional Dependency subscale of the *EDQ*); social avoidance from the *Coping Strategies Inventory (CSI)*; and perceived violence (the *Violence Received, Exercised and Perceived in Youth and Adolescent Dating Relationships Scale*, or *VREPS*). The last questionnaire, the *VREPS*, rates violence on a five-point scale, from “no violence” to “very violent.”

Results supported a relationship between some ED symptoms and risk of violence, and suggest that fear of loneliness often helps explain the relationship.

The pandemic also played a role

Unfortunately, the pandemic and other social restrictions “have limited and deprived individuals of social interactions, resulting in decreased social support and similar coping strategies,” say the authors. [Also, see “The COVID-19 Lockdown,” elsewhere in this issue.] This lack of social support, associated with exposure to partner violence, could lead to many psychological consequences, such as depression, post-traumatic stress disorder, or PTSD, and anxiety, for example. Low levels of social support have also been related to increased risk of eating disorder symptoms among women exposed to intimate partner violence. Children exposed to violent situations also appear to be more susceptible to developing eating disorders.

The authors stressed the importance of developing strategies to intervene while working with individuals, male and female, who experience violence from an intimate partner. They underscore the importance of developing paths of intervention for those who are experiencing intimate partner violence. The authors suggest that individuals exposed to violent situations in relationships may also develop eating-disorder-related symptoms as a way of coping with their adverse situations.

One helpful approach for clinicians is to work with the patient, male or female, on his or her fear of loneliness and social withdrawal, to decrease the chances of establishing a violent intimate partner relationship. [Note: a wide range of websites, videos, and books are available for clinicians and patients who are dealing with violent intimate partnerships. For example, see the National Domestic Violence Hotline, 1-800-799-SAFE and www.thehotline.org/get-help, the Centers for Disease Control and Prevention Strategies: Intimate Partner Violence, www.cdc.gov/violenceprevention, or, for veterans, www.veteranscrisisline.net].

QUESTIONS AND ANSWERS

Higher-Weight Patients with Eating Disorders

Q. Recently, I have seen several clients with bulimia nervosa and binge eating disorder, who are in larger bodies. I am trying to find specifically tailored approaches for such patients. Do you have any suggestions? (*TS, Charlottesville, SC*)

A. Eating disorders affect people in bodies of all sizes, but little research has been done in this area. Too often, those living in larger bodies are overlooked and thus not treated appropriately, according to results of a recent study and guidelines from the National Eating Disorders Collaboration (*J Eat Disord.* 2022. 10:21). This group outlined numerous barriers to care of such patients, and these guidelines may be helpful for you.

The group, based in Australia, has developed 21 clinical guidelines to help clinicians in this understudied area.

Those with eating disorders living in larger bodies report being misdiagnosed and dismissed by healthcare professionals, and encounter delays in treatment or are excluded from treatment services. Much of this is due to weight stigma, according to Dr. Angelique F. Ralph of the National Eating Disorders Collaboration, in Sydney, Australia, and her colleagues. The group reports that too often these patients have a lifetime of weight-related trauma, such as bullying in high school or weight-related emotional abuse. Experiences with stigma and discrimination may lead these individuals to be reluctant to speak about their weight or eating, for fear of being shamed further and/or not being believed, and because of prior negative experiences related to their weight.

A few recommendations include: (1) psychological first-line treatment for BN for patients with higher weights; (2) supporting physical activity for positive physical and mental health and intrinsic quality of life, as opposed to exercising solely for weight loss or changing shape; (3) family interventions; and (4) addressing poor nutritional status and diet quality. Further, it is important during treatment to address the impact of the patient's experience with bullying, and the trauma of ongoing weight stigma and marginalization. Among the group's recommendations is "promoting the need for research into weight-neutral approaches and other treatment approaches in this field."

—SC

Track and Field Athletes: At Risk of Eating Disorders

Coaches are in an excellent position to detect suspicious patterns, but too few do

Track and field athletes are one group of frequently overlooked persons at risk of developing disordered eating and eventually an eating disorder. Track and field athletes usually compete in sports where leanness and restricting calories are viewed as conferring a competitive advantage. Coaches are ideally situated to identify EDs in athletes. How well do coaches identify an athlete at risk and, if so, what treatment advice would they offer?

A group from the School of Psychological Science at the University of Western Australia, Perth, took a creative approach to investigating how well coaches might suspect an athlete was at risk of disordered eating or an eating disorder, and if so, the action they would take (*BMJ Open Sport Exerc Med.* 2022.8 e001333.doi:10.1136/bmjsem-2022-001333).

Dr. Margaret Catherine Macpherson and colleagues created vignettes of fictitious track athletes that

portrayed symptoms consistent with anorexia nervosa (AN) and bulimia nervosa (BN), and then used these profiles to survey 185 British and Irish coaches. They compared the results with those of a community control group of 105 non-coaches, who were surveyed about their ability to recognize and respond to symptoms of an eating disorder. The final group of vignette-participants included 99 males (53.5%) and 84 females (45.4%). One participant was identified as "Other" and 1 had missing data (both <1.0%).

Disordered eating is a key contributor to Relative Energy Deficiency in Sport (RED-S), a clinical syndrome that "can lead to severe long-term health consequences," according to the authors. The results of one study estimated that one element of RED-S, the prevalence of low energy availability, affected an estimated 22% to 58% of track athletes, including elite athletes (*Nutrients*. 2020. 12:835).

Coaches vs. non-coaches

Overall, the coaches were no more likely than non-coaches to identify an athlete with symptoms of AN or BN. One exception involved identifying symptoms of BN, where coaches more successfully identified disordered eating; this was not the case for RED-S, where very few coaches correctly identified those with symptoms (7 identified the AN vignette and 2 identified the BN vignette). Coaches were significantly more likely than non-coaches to recommend professional treatment for an athlete who had symptoms of AN. They were less successful with BN symptoms, and were no more likely than non-coaches to detect suspicious signs of BN. Among the coaches, two factors that affected their ability to refer an athlete to professional treatment were their degree of mental health literacy (MHL) and years of coaching experience.

Suggestions for improving detection and referral of athletes at risk

The authors suggest that MHL programs focusing on disordered eating and eating disorders in athletes be added to national and international coaching qualifications. In addition, education and intervention should emphasize that male athletes, as well as female athletes, are at risk of developing disordered eating and an eating disorder. Irrespective of an athlete's gender, coaches have a duty to identify such symptoms among all their athletes.

In the Next Issue

Eating Disorders Later in Life

By Kirsten Book, PMHNP, FNP-BC

Eating disorders do not discriminate based on age, sex, or race. There is a long list of triggers, including stress and body dissatisfaction, as well as comorbidities, and the effects of perimenopause. The older adult continues to be misunderstood, underdiagnosed, and not well suited for treatments that are geared specifically toward teens and younger adults.

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