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Some Highlights of the 2018 iaedp Symposium in Orlando

Bringing the Magic of the Mind to Treatment of Eating Disorders

The International Association of Eating Disorders Professionals (iaedp) 2018 Symposium, held in Orlando from March 22-25, began with multiple sessions on the many advances in neuroscience of the mind and, fittingly, ended by pairing the new with a time-honored approach, using hope in therapy. Nearly 900 eating disorders professionals from the US and abroad attended.

The Symposium's theme, "Focus on Neuroscience: Magic of the Mind & Language of the Body," was reflected in courses, sessions, and plenaries that examined ways that advances in brain and genetic technology are improving the detection and outcome of eating disorders. In seminars, comprehensive training sessions, and keynote speeches attendees also heard new and time-honored applications of therapy. Other sessions addressed some of the most difficult parts of therapy, such as how to break bad news to parents and how to deal with acute food refusal.

Plenaries: Spotlight on practical and technological treatment

At a special plenary session, six leading eating disorders specialists addressed "Making Sense of the Complex Eating Disorder." Dr. Ovidio Bermudez, Senior Medical Director of Childhood and Adolescent Services and Chief Education Officer at the Eating Recovery Center, Denver, served as moderator. Dr. Bermudez was awarded the iaedp Foundation Lifetime Achievement Award at the conference.

[The panel included: Beth Harman McGilley, PhD, FAED, CEDS, associate professor at the University of Kansas School of Medicine, Wichita; Margo Maine, MS, RD, CEDRD, Executive Director, Eating Disorder Treatment Collaborative/F. E. E. D. IOP, Connect and Concierge Programs, and partner, Maine and Weinstein Specialty Group, LLC, Westport, CT; Craig Johnson, PhD, CEDS, Chief Science Officer at Eating Recovery Center and Professor of Clinical Psychiatry at the University of Oklahoma College of Medicine; Philip S. Mehler, MD, FACP, FAED, CEDS, Executive Medical Director and Chief Medical Officer, Eating Recovery Center; and Sondra Kronberg, MS, RD, CEDRD, Founder and Executive Director, Eating Disorder Treatment Collaborative/F.E.E.D. IOP Connect and Concierge Programs. Each participant was given 10 minutes to address a topic of their concern.]

The Challenging Task of Defining Recovery

"Recovery" does happen, it is really messy, and is still largely misunderstood, Dr. Beth Harman McGilley told the audience. While we have quantitative definitions of recovery and outcomes supply extensive

data, the data often overlook the nuances involved, she said. For example, some groups of patients are not included. Thus, an analysis of the AN literature suggests that everyone recovers from anorexia and that no one recovers from anorexia, she said. Adding to the problem of are major differences in the definitions and criteria found in different versions of the *DSM-III* through *DSM-5*. Study lengths can vary widely as well, from as little as 6 weeks to 20 years.

Recovery from an ED also has familial, psychosocial and spiritual underpinnings, she said. Dr. McGilley pointed out that there is a “diversity deficiency,” and praised the work of researchers such as Dr. Cynthia Bulik, whose work reflects that EDs can affect people of all genders, races, ages, body shapes, sexual orientations, and socioeconomic groups.

Dr. McGilley noted that treatment is often a labor of love, and urged the audience to “keep the lights on” for patients’ recovery. In a 22-year follow-up study of women with AN or BN conducted by Dr. Kamryn T. Eddy and colleagues, two-thirds of the women had recovered by the end of the study (*J Clin Psychiatry*. 2017; 78:184). Eddy and colleagues’ study also reinforced the idea that recovery continues over the long term; approximately half of those with AN who had not recovered at the 9-year follow-up point progressed to recovery at 22 years.

Dr. McGilley also called for actively seeking social justice, for example, not remaining silent about weight stigma found in treatment centers. Finally, she said recovery is a misnomer. Instead, she added, what is really being described is inspiration transference; that is, the boundaries of the body no longer define where the self begins and ends.

Eating Disorders at Midlife

Dr. Margo Maine told the audience that eating disorders are major public health problems for women at midlife and beyond. In a recent study in the United Kingdom, for example, while 12.4% of women at midlife had breast cancer, a larger number, 15.3%, had an eating disorder. Of this group, only about 20% got help for their eating disorder. Dr. Maine also noted that the period from 1999 to 2000 showed the greatest upsurge in admissions for EDs for women at midlife and beyond.

We are living in a globalized culture and exposure and cultural shifts are producing nearly a perfect storm for disordered eating, she said, adding that disordered eating is equally common among African American and Caucasian women in midlife.

Dr. Maine said that our species need to know the relationship between the pain of an eating disorder and what is causing the pain. She said that therapists have to help patients understand what is causing their pain. “We need to think more about relationships and spirituality,” she added, pointing out that neuroscience says the human brain is hard-wired but it also says that the psychic need is as real as the physical need. She also reminded the audience members that patients at midlife suffer as much as younger patients do, with menopausal symptoms and muscle aches, for example. Older patients also often have a degree of shame about their eating disorder and don’t want their children to know about their eating disorder. They also must face natural aging and the overall loss of power. Underweight women die earlier, too, she added. The key is education, she said, which will help challenge distorted ideas.

DBS: A New Tool for Seriously Ill Patients

Dr. Craig Johnson praised developments in brain science, especially tools that can be helpful and even lifesaving for seriously ill ED patients. Deep brain stimulation (DBS), for example, “sets an example of the importance of such developments for all of us in the audience who are psychotherapists to pay attention to brain science,” he said.

Dr. Johnson first saw the effectiveness of DBS when a friend who had Parkinson’s disease underwent the

procedure. The surgical implantation procedure dramatically reduced the symptoms of Parkinson's, including tremors, and improved speech and movement. It saved the friend's life, Dr. Johnson said. DBS, which has been approved by the US Food and Drug Administration for 20 years, now has a real application for some more seriously ill AN patients, he said. The results of a small study in China are a case in point. In the study of 4 teens with an 18-month history of AN, use of DBS led to a 65% increase in body weight. Dr. Johnson was at first shocked when he learned that the average age of the teens was 16 to 17 years, since the guidelines are that DBS be performed only in those 18 years of age or older. However, when he considered that the procedure could produce such positive results, he decided it might be worth it, he said.

Positive results were also seen from a second study of DBS among older women with AN reported by Dr. Blake Woodside and colleagues at the University of Toronto (*The Lancet Psychiatry*. 2017; DOI:10.1016/S2215-3666(17)30076-7). Among 16 patients with an average age of 34, and 18-year duration of illness, only 2 withdrew (13%). Average dropout rates during treatment for AN are 30% to 45%, he noted. To qualify for the study the patients also had to demonstrate a 3-year history of unsuccessful admissions for treatment. The electrodes were placed into the patients' subcallosal cingulate, the area the center of the brain shown to have altered serotonin binding in patients with anorexia. The average body mass index (BMI) at DBS implantation was 13.83 mg/kg² and mean BMI after 12 months was 17.34. Use of DBS was associated with significant improvement in measures of depression, symptoms of obsessive-compulsive disorder, anxiety and affect regulation. The researchers also detected significant clues in cerebral glucose metabolism in key AN-related structures at 6 and 12 months of ongoing brain stimulation. Dr. Johnson added that the patients also showed remissions of binge eating (3 of 8) and remission of purging behavior in 4 of 11, and the psychology of the illness was receding. This offers hope for patients with AN and before the disease becomes more serious. 'Not just the behaviors but the psychology was also remitting,' he added.

DBS offers hope for severe and enduring anorexia nervosa (SEED-AN) and for patients before they become more severely ill, he said. Dr. Johnson said, "I say to my families, routinely, that from a scientific perspective, without question our best discoveries for eating disorder treatment are ahead of us and not behind us."

Focusing on the Mind as Well as the Body

Dr. Phil Mehler said that although he has spent much of his career studying the medical issues of eating disorder patients [see article elsewhere in this issue], at the symposium he wanted to consider whether clinicians need to spend more time on the mind and a little less on the medical aspects of treatment for eating disorders.

In AN, the GI tract is key to a successful refeeding programs, he said, adding that AN patients have gastroparesis, or slowed emptying of the stomach, that is hard to explain. Perhaps the cause is more in the mind than the gut, he said. Heartburn may not improve with weight gain or with improvement in psychological scores but if these patients with AN are not purging or never have purged, how can their heartburn be explained? Long periods of malnutrition may in the end cause problems in the integrity of the gut wall and as kilocalories are increased this may cause distress.

Many questions about the new microbiome and the mind-gut axis await answers, he said, and added, "If we are not paying attention to chemicals affecting the brain we are missing the boat." The first scientific article, published in 1996, suggested that alterations in the microbiome are increasingly associated with diseases such as Crohn's and celiac disease, as well as irritable bowel syndrome, and with cognitive sensations and pain. Patients with these illnesses have a higher perception of pain. The sense of satiation, and levels of the gut hormone glucagon-like peptide 1 (GLP-1) peak 20 minutes after finishing eating, but satiety factors do not peak until 2 hours later, leaving patients to wonder whether they are full

or not. Esophageal symptoms also do not correlate with manometric tests, he said.

Dr. Mehler noted there is not only an intricate interplay between true organic gut pathology and real alterations affected by the even bigger effects of the mind on the gut. He called for a thoughtful approach to testing and avoiding unnecessary and “overly enthusiastic workups,” which can be costly and ineffective in the long run. While the field is just evolving and there is much to learn, he cautioned that there is a dangerous proclivity among under informed and unseasoned care providers to injudiciously test patients and to use fancy terms and to use new, costly and ineffective medications. Instead, he called for taking time, listening respectfully to patients and providing respectful care, including using less unnecessary testing and medication. He said, “Sustained recovery is a reality, and we need to be more circumspect as we explore the mind-gut axis. Less is indeed more” he said.

Growing Knowledge, Changing Therapy

As Dr. Kronberg summed up the panel’s comments, she said there are many more questions than answers in treatment and recovery of clients with complex eating disorders. Dr. Kronberg related that 30 years ago she was an anomaly as a nutritionist who wanted to learn more about the field of eating disorders. The emphasis then was on the psychosocial and physiologic aspects of treatment, including getting enough but not too many calories, and living with the cultural influence of emphasis on body weight. Now the science is much more complicated, including new information on different parts of the brain being stimulated, neurotransmitters, and conductivity, she said. In addition, genetic influences on disease, how the GI tract works, and pleasure seeking, are just a few of the elements now involved in treatment.

Dr. Kronberg said she likes to use a mountain metaphor with clients, believing that metaphors and pictures might help patients better understand their eating disorders. The mountain metaphor is a way of coping and taking care of yourself, she added. For example, it is possible to explain to an anorexic patient that jumping off the mountain into an eating disorder might be a way to take care of herself. What creates the jump off into the ED? she asked. There are many elements, including the microbiome, the ability to get treatment, how to find help to stay on the mountain, and the physical elements that can impact the emotional side of the disorder.

Today, effective treatment involves more education and training than before, she said, and yet she added that therapy is really still in the early stages. In addition, full recovery is a messy definition, and there is no state of normality. The eating disorders have a social aspect and interpersonal aspect and a spiritual aspect, too, she said. Nutritionists have another large role in educating and training.

Dr. Kronberg also said that treatment still involves a type of bell curve. In the bell curve, most elements fall within or outside the curve. Variables that affect the percentage of clients who fall outside the normal range include genetics, GI traits, and having a compulsive or impulsive brain. We are treating the middle of the bell curve, but most eating disorders clients have problems that fall outside the curve, she said. Dr. Kronberg said that therapists need to be willing to change and to be open-minded and to appreciate the uniqueness of human potential. Referring to the 22-year follow-up study of anorexic patients, she commented that if two-thirds of patients have to wait 22 years for recovery, we know less than more. Therapists need to be open-minded to what is possible, and to understand the contributions each physical body brings to individual eating disorders, she said. Resistance perpetuates the status quo, she added. Finally, Dr. Kronberg said, we need to ask if therapists are certified and do they know what they are doing?

A Course in Brain Plasticity from Keynote Speaker Norman Doidge, MD, FRCPC

In a special 3-hour presentation, Dr. Norman Doidge, author of the best-seller, *The Brain's Way of Healing: Remarkable Discoveries and Recoveries from the Frontiers of Neuroplasticity*, explained the new science of neuroplasticity, then applied principles to eating disorders. Dr. Doidge is a psychiatrist,

psychoanalyst, and researcher on the faculty of Columbia University Center for Psychoanalytic Training and Research, New York City, and the University of Toronto Department of Psychiatry. His latest book, *the Brain's Way of Healing Itself*, he describes natural avenues into the brain and the energy around us that can awaken the brain's own capacity to heal itself.

According to Dr. Doidge, modern medicine began with modern science, viewed as a way to conquer nature—and the idea of conquest then gave rise to the many military metaphors used so commonly to describe treatment, such as “a battle” against disease, “the war against cancer,” and the “therapeutic armamentarium. In this view, the patient's body is less an ally than a battlefield, and the patient is encouraged to become a helpless bystander. In contrast, the neuroplastic approach calls for the active involvement of the whole patient in his or her care. The therapist searches not just for the problem but healthy areas of the brain that may be dormant and for other existing capacities that may help recovery. Dr. Doidge views the discovery of neuroplasticity—or the thought that mental experience can change brain structure and function, as “the most important change in our understating of the brain in 400 years.”

Dr. Doidge explained the development of function in the right and left hemispheres, and noted that if trauma occurs before or around 3 years of life, sensory integration problems can arise. In the first 2 years of life, infants crave love and attachment, and gain this by eating, nutrition, nurturing, being held, gazing into their mother's eyes. If the child feels unconsciously that for some reason his or her feelings are not reciprocated, dissociation can occur. In anorexia, a girl's feelings dissociate from her body and are mostly processed by the right hemisphere.

To avoid development of a false self, an infant needs an age-appropriate omniscience—the true self is expressive, feels love and is loved. Dr. Doidge said that sometimes a struggling true self stays dormant and a false, superficially compliant, self appears. This persona or mask is not by itself pathological, he added. This can be a parent who confuses his feelings or is too accurate, too demanding, or actively rejects the child, or for example occurs when parents are conflicted about parenting.

Dr. Doidge said that while eating disorders behaviors and attitudes may be rigid, this does not automatically mean that brains of patients with disorders are too rigid or that they lack plasticity. He added that of being and doing, disturbances in being are more troubling than those in doing. For humans being is the primary capacity; this means having the sense it is okay to just be without having to perform. Doing too much too early can also lead to a false self, he said.

In the next issue, look for more highlights from the iaedp 2018 Symposium, including treatment of severe and enduring anorexia nervosa, breaking bad news to families; movement therapy for trauma, and nutritional approaches to EDs.

From Across the Desk: Uncovering the Power of our Brains to Improve ED Treatment

Our beautiful, complex, and changeable brains contain pathways to recovery that apparently have been hiding in plain sight, waiting for technology to catch up. The 2018 iaedp Symposium embraced technologic advances that are enabling eating disorders professionals to enlist patients in the effort to improve their treatment outcome. The neuroplasticity of the brain, or its ability to change its own structure and function in response to activity and mental experiences, can be used to change what may have once seemed hopeless and untreatable. Our lead article contains just a few highlights from Symposium 2018 and more will follow in the next issue.

Dr. Phil Mehler and colleagues reported “a substantial and troubling presence of medical complications” in the largest study of medical complications and EDs thus far. Dr. Mehler and colleagues studied 1026 adult inpatients and residential care patients admitted to the Eating Recovery Center in Denver from October 2012 to July 2015. See “Medical Complications: A Troubling Presence at Admission.”

The negative effects of pro-ana websites have been widely publicized. Studies of site visitors have shown a connection between viewing these sites and lower self-esteem, higher perceived body weight, and an increased chance of using methods to restrict weight. Although it seems counterintuitive, exposure to some of these sites might be beneficial in some ways, according to two recent studies. (See: Twitter’s Link to Pro-ana Sites.)

And, finally, good news from our former publisher, Leigh Cohen, who announced that G&L Books has been acquired by Turner Publishing Company, Nashville, TN.

—MKS

UPDATE: Predicting Suicidal Ideation in College Women with EDs

Researchers have identified several factors that help predict suicidal ideation (SI) among college students. As scheduled for a poster session at the 2018 International Conference on Eating Disorders (ICED) in Chicago, Neha J. Goel from Stanford University School of Medicine, Palo Alto, CA, and colleagues from 27 other universities across the US reported that depression, anxiety, and vomiting all were independent predictors of SI among the women. The study participants were 690 female college students from 28 universities across the U.S. who had screened positive for an eating disorder (with the exception of anorexia nervosa). The researchers evaluated ED pathology with the *Eating Disorders Examination-Q Global* questionnaire and subscales of disordered eating behaviors, including binge eating, vomiting, use of laxatives, compulsive exercise, and comorbid psychopathology (such as depression, anxiety, and insomnia). ED-related clinical impairment, weight and shape concerns, body mass index were all independent predictors of SI. More than a fourth of the women reported having suicidal thoughts. The authors recommend that ED screening programs on college campuses assess students for SI, and advise that treatment should be aimed at targeting comorbid psychopathology and vomiting among this population at risk.

Twitter’s Link to Pro-ana Sites

Two studies look at the internet community aspects of these sites.

Pro-ana websites are important internet communities that portray ultra-thin and often skeletal images of individuals. There is significant worry about the impact of these sites on people with EDs and on risk for ED.

The negative effects on site visitors are well known, including lower self-esteem, higher perceived body weight, and an increased chance of weight restriction. Although it seems counterintuitive, exposure to some of these sites might be beneficial in some ways, according to two recent studies.

Positive benefits include feelings of social support, acceptance, and belonging, according to Dr. Elad Yom-Tov et al. (*JMIR Mental Health*. 2018; 5:e6). In an earlier study, Dr. Yom-Tov and co-workers pointed

out differences in different pro-ana communities; for example, the MyProAna website was associated with the least harmful behaviors and the highest percentage of treatment-seeking among users of current various pro-ana websites (*Eat Behav.* 2016; 22:109).

In their fascinating recent randomized controlled study, Dr. Yom-Tov and colleagues randomly exposed web searchers for pro-ana online information to 10 randomly selected test ads referring visitors to one of three 3 websites, MyProANA, the National Eating Disorders Association, and the National Institutes of Mental Health. Using the search engine Bing, the authors were then able to track the individual visitors' future searches.

The Israeli researchers reported that when the visitors were exposed to the test ads, there was a decrease in future searches for pro-ana sites and to sites featuring self-harm content. The reductions were greatest among those who were referred to the MyProAna site (a 34% reduction) and a 37.2% decrease in their searches for pro-ana and self-harm sites, compared with users who were not shown the ads. Ads for sites we might usually recommend (NEDA or the NIMH) yielded smaller decreases (3% to 5%). Another benefit was that individuals referred to the MyProAna site increased their searches for treatment, as did the control users not exposed to the ads.

The authors concluded that online advertisements may change the online search behavior of individuals looking for pro-ana content. An important point was that the results did not indicate that the ads led to additional harmful online behavior.

Using hashtags to reach patients

In a second study, Jenine K. Harris PhD, and her colleagues evaluated the effects of Twitter hashtags #thinso and #fitspo. Hashtags provide a way to more quickly find specific sites and information, and in this case identified tweets designed to inspire thinness (thinspiration, or thinspo) and fitness (fitspiration, fitspo). The authors collected 1035 tweets, 67% of which were related to body image, fitness, food, dieting, or eating disorders (*Prev Chronic Dis.* 2018; 15:170309). #Fitspo tweets largely were promotional in nature, came from businesses and promoted nutrition and the benefits of exercise, and provided links to other websites. In contrast, #thinpo tweets came from individuals and were centered on thinness and disordered eating behaviors. Ninety-five percent of the tweets for #thinpo included images or videos showing an individual's body or a portion of the body: about a third of these images centered on the waist, stomach, and hips. About 75% of the #thinspo tweets included an extremely skinny or skeletal person; in contrast, only 3.4% of fitpo tweet images and videos did so. Re-tweets were significantly more common for #thinspo than for #fitspo.

The #thinspo tweets were positively and significantly associated with retweets and "likes," and focused on unhealthy eating behaviors and images. According to the authors, these characteristics are clues that this is an engaged community sharing information that normalizes disordered eating. They also suggest that although eating disorder-focused advocacy agencies, research centers, and treatment facilities are active on Twitter, more professionals might consider using #thinspo to reach the #thinspo group. Such efforts will require caution, though; prior evidence suggests pro-recovery messages delivered to pro-ana visitors may have paradoxical effects (Yom-Tov et al., *J Med Internet Res.* 2012; e151).

Medical Complications: A Troubling Presence at Admission

Comorbid medical complications were common among adults admitted with EDs.

The importance of medical complications in ED is well recognized within the ED treatment community, but a comprehensive view of their frequency has been lacking. Now, a team of researchers has found “a substantial and troubling presence of medical complications” in the largest single-site study thus far of medical conditions reported among adults being admitted for eating disorders treatment. The study included 1026 adult inpatients and residential care patients admitted to the Eating Recovery Center in Denver from October 2012 to July 2015. Dr. Phillip S. Mehler and colleagues also found that patients with severe eating disorders have increased complications related to the presence or absence of purging behaviors (*Int J Eat Disord.* 2018. DOI:10.1002/eat.22830).

The researchers used medical records from a transdiagnostic sample of patients with eating disorders (anorexia nervosa-binge-purge type, or AN-BP, AN-restrictive type, or AN-R, bulimia nervosa (BN), and eating disorders not otherwise specified (EDNOS) to find medical complications present on admission. Demographic, medical history, and clinical data were extracted from the records in retrospective review. Laboratory tests were used to detect hematologic, electrolyte and acid-base abnormalities, including hyponatremia, hypokalemia, metabolic acidosis, hypoglycemia, and hypophosphatemia. Results from cardiac and bone mineral density (BMD) tests were also included.

General characteristics: mostly female, white, and under 30

The great majority of patients were Caucasian (93.2%); 96.3% were female, and the average age was 28.1 years (range: 17 to 69 years). Males were younger than females, had higher BMIs, and overall a shorter duration of illness. The average BMI was the same for patients with AN-R and AN-BP, 15.5 mg/kg². In contrast, the average BMI for patients with BN was 20.8 mg/kg². Among patients with purging behaviors, 79.5% used self-induced vomiting. More than a third (38.4%) of patients with AN-BP abused laxatives. Diuretics were abused by 8.0% of those with AN-BP, compared to 13.1% of those with BN.

Laboratory values: multiple abnormalities were seen

The authors reported that the admission laboratory results showed a large number of abnormalities. For example, hypokalemia was identified in 42.4% of those with AN-BP, while 16% of those with AN-R were found to have hyponatremia, as were 17.1% of patients with AN-BP.

Metabolic and biochemical abnormalities were also seen. One of the most marked results was vitamin D deficiency and insufficiency, a particularly troublesome problem among ED patients (*Int J Eat Disord.* 2015; 48:607). Vitamin D deficiency was found in 30.0% of those with AN-R, 33.9% with AN-R, 43.0% of those with BN, and 54.1% of patients diagnosed with EDNOS. Hypoglycemia was reported in 7.1% of those with AN-R, 5.0% of those with AN-BP, and 6.5% of those with BN.

Hematologic and bone abnormalities

Low white blood cell counts were reported in 38% of those with AN. Anemia, particularly macrocytic anemia, was seen in about 20% of AN patients. The authors pointed out that when microcytic anemia is present in patients with eating disorders, the eating disorder may not be the only cause.

On electrocardiograms, bradycardia (slow heart rate) was common. It was notable that normal QTc intervals were found in the vast majority of patients with AN. The authors made an interesting point about the long-time concern that marked increase of sudden cardiac death among AN patients might be partially caused by a prolonged QTc interval. However, newer evidence has shown that the QTc is not inherently prolonged in AN and when it is prolonged, it might be due to either aberrant electrolyte levels or to an adverse reaction to medication (*Vascular Health & Risk Management.* 2012; 8:91). The study results further show that when a patient with AN has a dangerously prolonged QTc interval (>480 milliseconds), it is best not to immediately ascribe it to AN but to look for other possible causes.

Â A final area of concern was the bone density results, which underscored the aggressive bone loss often

seen among eating disorders patients. More than half of the patients with AN had significant loss of BMD, placing them in the osteopenic or osteoporotic categories. Among those with AN, 31.3% had osteopenia, and 25.9% had osteoporosis, leaving them at a lifetime risk of fragility fractures. The authors recommend that “each time a patient enters treatment, they should be asked when their last DXA scan was done.

The results from this valuable study of more than 1000 patients illustrates the wide array and high frequency of medical comorbidities found in adult patients with eating disorders, and once more underscores the importance of timely diagnosis and treatment, with continuing close involvement by skilled clinicians.

How Race, Weight, Sex and Socioeconomic Background Affect ED Diagnoses

SWAG stereotypes are still prevalent.

It remains the case that most people with EDs will not be treated. This probably reflects issues with case-finding, with potential patient awareness of ED, and with treatment access. One more reason, according to Drs. Kendrin Sonneville and S.K. Lipson of the University of Michigan School Of Public Health, Ann Arbor, is the persistence of antiquated ideas about who develops an eating disorder. Historically, EDs have been relegated to the realm of skinny, white affluent girls, a group popularly referred to as “SWAG.”

A study of 1,747 students

The Michigan researchers designed a study to evaluate variations on perceived need for ED treatment, ED diagnosis, past year treatment for an eating disorder, and barriers to receiving treatment, according to weight, race/ethnicity, socioeconomic status, and gender (*Int J Eat Disord.* 2018; DOI: 10.1002/eat.22846). The authors turned to data from the Healthy Bodies Study, taken from two academic years, 2013-2014 and 2014-2015.

A student’s perception of the need for eating disorder treatment was elicited with the following question: “Over the last 12 months, do you think you needed help such as counseling or therapy for issues related to eating and/or body image?” The students who responded were then asked about any counseling or treatment they had subsequently received. The study also asked about prior ED diagnosis. The authors also collapsed self-reported race/ethnicity responses into two major categories, white students and students of color. Socioeconomic status was determined by questions about the student’s family financial situation growing up, and several categories were offered: well to do, comfortable, enough to get by, very poor, and not having enough to get by. Students who responded to the question of gender with answers other than male or female were excluded from the final study group.

Certain disparities by race, weight, and gender emerged

When the authors analyzed their data from 1,747 students with symptoms of an eating disorder, they found that participants with EDD were mostly white(79.9%) and female (84.9%), but most were not affluent (only 19.9% were).Notably, only 2.0% were underweight. Underweight students were far more likely to perceive that they needed treatment, to have received a diagnosis, and to have been treated for their disorder.

White students were more likely to have received a diagnosis than were students of color. Socioeconomic background was involved with perception of a need for treatment and for receiving treatment during the past year; affluent students were far more likely to have received treatment than were poorer students.

When students were asked their reasons for not seeking treatment, 28.1% said they preferred to deal

with health issues by themselves. Other responses included not needing counseling or therapy (23.9%), and uncertainty about how serious was their need for treatment or counseling (23.9%).

Students with symptoms of threshold AN were significantly more likely to perceive that they needed treatment, to receive a diagnosis, and to be treated, compared with individuals with other types of eating disorders. The authors stress that their results point to the importance of not perceiving need, rather than traditionally considered barriers such as cost.

Drs. Sonnevile and Lipson noted that ED researchers often rely on studies based on clinical rather than community samples, which may perpetuate the myth that there is an increased prevalence of eating disorders among more affluent groups.

As for gender discrepancies, the authors point out that most studies of ED-specific treatment-seeking among community samples do not include men. These are critically important insights. Historically, important ED studies have been conducted with women participants in clinical settings, often in what are likely to be relatively high socioeconomic settings. Each of these factors has shaped our understanding of EDs.

A call for better screening

According to the authors, the results point to the need for examining ways to address the inequities in diagnosis and treatment of EDs, including work to dispel the stereotypes and myths about who gets an ED. Better screening, including universal screening, could be more fully adopted in clinical and community settings, such as at colleges and universities which usually add targeted screenings.

When Parents Encourage Children and Teens to Diet

A study shows negative and long-lasting effects.

Parents who tell a child or teen they need to go on a weight loss diet might be surprised at the long-term outcome. According to Dr. Jerica M. Berge and researchers at the University of Minnesota, Minneapolis, encouraging children and teens to diet can have harmful long-term weight, weight-related and emotional health effects in adulthood and can even be transmitted to the next generation (*Pediatrics*. March 2018; published online before print.)

Dr. Berge and her fellow researchers have hypothesized that teens who were encouraged to diet by their parents before the age of 19 would be at higher risk for developing unhealthy dieting behaviors, would weigh more and have worse emotional health when they became adults. They also would be more likely to encourage their own kids to diet.

The authors used data from 1998-1999 and follow-up surveys about 17 years later from Project EAT, a longitudinal study of dietary intake, physical activity, weight control behaviors, and weight status (<http://www.sphresearch.umn.edu/epi/project-eat/>). After initial school-based surveys and anthropometric measurements with middle school and high school students and interviews and surveys of their parents, the students were followed after 5 and 10 years, as they transitioned to early and middle young adulthood. The EAT surveys also trace behavioral changes during the transition from young adulthood to parenthood. The study group included 556 socioeconomically, racially and/or ethnically diverse adolescents (64.6% female) who provided data at both time points.

What the analysis showed

The authors' hypotheses were largely confirmed. Teens who were encouraged to diet by their parents had a higher risk of using unhealthy diet behaviors, had poorer emotional outcomes, and worse body

satisfaction. There was, in fact, intergenerational transmission: teens who were encouraged to diet were more likely to encourage their children to diet.

Finding ways to intervene earlier

The authors discussed their work from the perspective of Family Systems Theory (FST), which states that the family's home environment has the greatest influence on weight and weight-related behaviors among children, and that behaviors learned in the family setting in which a person is raised are passed on from generation to generation. They highlight the potential value of the findings for developing preventive interventions. The same preventative effects might be used in treatment to help build a rationale for change (that is, changing eating behaviors and attitudes via ED treatment and to avoid intergenerational transmission of thoughts and attitudes).

BOOK REVIEW

Eating Disorders: A Guide to Medical Care and Complications, 3rd Edition.

(Philip Mehler, MD, FAED and Arnold Anderson, MD, Editors. Paperback, \$35; hardcover, \$73. Baltimore, MD: Johns Hopkins University Press, 2017.)

Prominent medical complications and an expanded role for medical assessment set eating disorders treatment apart from the treatment of most other mental health conditions. This exceptionally useful, mid-sized volume addresses these issues both in broad strokes and in detail, and would be a useful addition to any eating disorder clinician's bookshelf.

The book begins with general chapters addressing eating disorder diagnosis, medical assessment, and nutritional rehabilitation. The coverage of the most basic topics is brief, which seems desirable for a volume with this specific focus. Then, in-depth coverage of specific, important topics of common interest to eating disorder clinicians follows. Many types of medical complications of eating disorder are covered in detail, organ system by organ system. Other chapters address medical issues specific to athletes and to males with eating disorders. Another chapter comments on medical-legal issues relative to the medical complications of eating disorders.

A unique and particularly valuable contribution in this book covers the psychotherapeutic use of medical information in eating disorder treatment. While medical information plays a role early in family-based therapy, its use is not emphasized much in other therapies, and this chapter highlights its possible uses.

Each chapter is prefaced by a list of frequently asked questions, which the chapter then addresses. Descriptive cases help illuminate clinical scenarios.

All in all, this is a highly valuable book. It will serve as a very useful reference for established and experienced eating disorders professionals and as a valuable information source for non-medical professionals working with people who have eating disorders. I think a common role for the volume will be its use in training new providers entering the field. Thus, this volume will serve both as a reference work for many professionals, and as an introduction to an important aspect for new clinicians entering the field.

Identifying Disordered Eating Among Young Men

A first step is paying attention to concerns about leanness, muscle mass, and use of steroid products.

Traditionally, most research on eating disorders has centered on thin, white females, and it is easy to overlook disordered eating among males. The lack of research on males can also be attributed to the mistaken view that men are not at risk, the small numbers of male patients in clinical treatment, and the lack of population-based data on concerns about appearance and disordered eating behaviors among men.

To better define disordered eating among males, Jerel P. Calzo, PhD, and a team of researchers at Boston Children's Hospital and Harvard Medical School studied males 13 to 26 years of age who were participants in the Growing Up Today Study. That study followed children of women in the Nurses' Health Study II who were 9 to 14 years old in 1996. All participants completed annual questionnaires from 1996 to 2001 and then every other year after 2001. Dr. Calzo's group used data from the 1999-2007 questionnaires. The men were asked about their concerns about leanness, thoughts of wanting to be thinner, worries about having fat on their bodies, and feeling fat. They also were asked about the frequency of use of creatinine, amino acids, steroids, growth hormone and anabolic/injectable steroids, except for products used to treat medical conditions.

Study participants also supplied information about using vomiting or laxatives to lose weight or to keep from gaining weight during the past year. Other questions were designed to identify overeating and binge-eating with loss of control. Those who reported binge-eating at least once monthly were followed up with questions about feeling out of control, even if they wanted to stop bingeing. Participants also recorded their weight and height at each study point, and BMIs were coded as overweight at 25 mg/kg² or greater and obese when BMIs were 30 kg/m² or greater.

The participants were also asked about drug use, such as use of ecstasy, heroin, cocaine, crystal meth, or amphetamine, and degrees of depression were gauged with the McKnight Risk Factor Survey (*Int J Eat Disord.* 1999; 25:195), which uses a 5-point scale to measure the frequency that participants experienced a particular concern about weight and disordered eating during the past year

Four specific risk groups emerged

Dr. Calzo and colleagues identified one large asymptomatic group (91%-97% in each age group) and 4 other groups with disordered eating symptoms they felt are "of clinical relevance." The 4 groups included (1) Body Image Disturbance (1% to 6% per age group), (2) Binge Eating/Purging (binge eating and purging and used of muscle-building products; 0.1%- 2.5%); (3) Mostly Asymptomatic (low levels of concern about muscularity, product use and overeating, 3.5% to 5%), and (4) Muscularity Concerns (0.6%). By the age 22, 6% of the males had body image disturbances, which also correlated with a high risk of depressive symptoms throughout adolescence. The researchers also identified a subset of young men in their mid-to late teens who had high levels of muscularity concerns and reported weekly use of muscle-enhancing substances. Like those in the Binge eating/Purging group, the Muscularity Concerns class was prone to use drugs and frequently used binge drinking.

Differences also appeared in different age groups. For example, between 16 and 18 years of age, men in the Muscularity Concerns group had more than 4 times the estimated prevalence of drug use than did men in the Asymptomatic group. And, compared to the Asymptomatic group, the Body Image class had nearly 3 times the prevalence of depressive symptoms. The men in the Muscularity Concerns class had nearly 3 times greater incidence of drug use than the Asymptomatic and Body Image Disturbance group.

Implications for screening

According to the authors, the study findings have real implications for assessing and screening for risk of eating disorders among males. Males are far less likely than females to report concerns about their appearance. The study results underline the importance of being aware of the possibility of concerns about leanness, muscularity, and use of muscle-building products when assessing disordered eating

Examining the Value AN Patients Place on their Illness

Unraveling some of the many paradoxes of the disorder.

Among the many paradoxes of treating anorexia nervosa (AN) is the high value patients place on maintaining the disorder in spite of its many physical, psychological, and social costs. Psychologists Eva C. Gregertsen, William Mandy, and Lucy Serpell of University College, London, recently offered suggestions for dealing with the egosyntonic nature of AN (*Front Psychol.* 2017; Vol 8, article 2273, published online). (Egosyntonic refers to aspects of one's behavior or attitudes viewed as acceptable and consistent with one's fundamental personality and beliefs.)

Unraveling the 'benefits' patients derive from AN

The authors sought to untangle the many complex threads of the benefits AN patients feel they receive via their illness. An interesting series of studies on this topic has accumulated and it is reviewed and summarized in this paper. Some of these benefits include an enhanced sense of security and control, mental strength and skill, and confidence. For others, AN provides a means of avoiding negative experiences and emotions through a myopic focus on the body, food, and weight. Patients reported feeling an inner sense of strength, mastery, and skill by keeping such a focus. For others, AN provided a way of promoting care and gaining attention. One more paradox is the popular view that AN is a disorder mainly centered about physical appearance and an ideal of beauty. Instead, the authors argue that the gap between the public perception of AN and the true experience of AN challenges the central role many cognitive theories ascribe to the importance of weight and shape in maintaining the disorder.

But, negative feelings as well

There is also another side to the paradox—patients' negative feelings about AN. One of the authors, Dr. Lucy Serpell, has written extensively about the paradox of AN, and the negative side and the perceived burden of the illness. She notes that AN patients describe feeling "cheated" or tricked by the disorder because it "had made false or empty promises." The ramifications of AN had caused the patients to lose friends, alienate family members, and to give up their social life and career opportunities. Some reported feeling numb and emotionally stifled from the constant battle with the illness.

Dr. Gregertsen and colleagues note that the growing understanding of perceived advantages of AN endorsed by patients underscores the importance of developing ways to counteract this barrier to recovery. Concentrating on changing behaviors without understanding the individual patient's underlying motivations to maintain AN despite the costs, may leave him or her with a set of helpful but never used tools, according to the authors. In addition, emphasizing the negative sides of AN without exploring and dismantling the patient's perceived benefits may be of limited use. "Focusing only on eating disorder behaviors as opposed to exploring the *meaning* of the behaviors may leave the patient feeling unheard," write the authors. Instead, by giving the patient a chance to express the unique significance that AN holds for her or him helps build understanding and rapport between patient and therapist, and may improve treatment outcome.

Caring for Transition Age Youth

Using a new form of family-based therapy for a young age group.

Transition age youth (TAY), are teens and young adults from 16 to 25 years of age who while seeking

independence, still live with their family and/or receive substantial emotional and financial support, particularly when being treated for an eating disorder like AN. This is particularly true during treatment for AN. To better address this group's needs and to improve treatment outcomes, Dr. Gina Dimitropoulos and colleagues conducted a multi-center study open trial of family-based treatment for TAY (*J Canad Acad Child Adolesc Psychiatry*. 2018; 27:50).

The traditional form of family-based therapy (FBT) for AN is delivered in three phases. The first enhances parental self-efficacy over AN, and parents are urged to assume chief responsibility for helping their child restore their weight by closely monitoring and preparing all meals. In the next two phases, the parents hand control back to the adolescent, and the entire family then discusses developmental issues as treatment ends. Some have questioned the appropriateness of using the current form of FBT for older adolescents and young adults who may be experiencing a number of transitions.

In a pilot open study, Dr. Dimitropoulos and fellow researchers made several changes to this traditional approach to better fit FBT to TAY adolescents and young adults. First, they recruited 26 participants between the ages of 16 and 22 years (mean age: 18.15 years) who were being treated for AN. The primary goal of their study was to assess the possibility and acceptance of a manualized model of FBT adapted for TAY in pediatric and adult specialized eating disorder programs. The authors' second goal was to evaluate the clinical outcome (eating behaviors) and secondary outcome (weight restoration) of these patients. In the FBT-TAY approach, young adults with AN had the option to choose which family members to include in treatment. Next, a therapeutic stance was taken with the young adult. In the third phase, increased attention was placed upon developmental issues, and individual sessions were incorporated. Thus, the emphasis was on the individual patient, with secondary inclusion of family members. The major change that crossed all phases was integrating individual time with the young patient. The treatment program included 25 sessions, scheduled once weekly at first and then, when feasible, sessions were scheduled twice a month for the last two phases of treatment. Family was defined as a parent, sibling, extended family member, partner, friend or "supportive other."

The majority of the 25 women and 1 male in the study lived with their families and most were single; two reported being in committed relationships. The mean duration of illness was 2.29 years. All chose to have their family members participate, and only 3 also asked that a friend or partner be included.

Three phases

In phase 1, which lasted for approximately 10 sessions, the patient and family members were urged to work together against the eating disorder, with the study therapist acting as a consultant. The patient had a say in how treatment was delivered by helping define the support needed from family members during meals. In the second phase (sessions 11 and on), control over meals was returned to the patient, and an emphasis was placed on preparing to eat meals in various situations, as well as in-home meal preparation. During phase 3, which usually involved the last 4 sessions, the patient attended 2 to 3 individual sessions to develop a plan to maintain recovery and also to talk about transition challenges, such as returning to school or a job or living with a partner or friend. The patient then shared this plan with family members during one to two final sessions. Some of the most common topics were warning signs of relapse, planning to transition into adult life and achieving long-term life goals.

The participants were assessed with the *Eating Disorder Examination Questionnaire (EDE-Q)* at baseline, at the end of treatment, and 3 months later. The researchers also evaluated weight restoration with defined as median body mass index (MBMI); for teens this was defined as the 50th percentile for age and gender; in adults the MBMI plateaued as it approached 22 kg/m² in young women aged 20. Height and weight were measured at baseline and because the median age was 18.5 years, past the linear growth spurt for most girls and boys, and height was not expected to change significantly during the study period, height was not reassessed at the end of the sessions.

How effective was the new approach?

According to the authors, FBT-TAY was found to be feasible for specialized pediatric and adult programs. One participant dropped out of therapy before the third phase began. All who completed treatment achieved weight restoration by the end of treatment; however, the authors reported a pattern of weight loss beginning at the 3-month follow-up.

It was interesting that more than 95% of participants chose to have their family of origin participate in their treatment, even though they had the option to invite nonfamily members to fill this role. The authors believe this is evidence that including parents in treatment for AN may be also be helpful for young adults, especially when they are still living at home. The high dropout rate raised questions about the unique challenges of working with TAY whose independence creates many opportunities for them to withdraw from family-based treatments.Â Â

Thirteen patients were lost to follow-up. In 5 cases, the patient and/or family initiated withdrawal from the study; 1 patient missed 3 consecutive sessions and thus was lost to follow-up. Fifteen of the 26 original participants were found to have comorbid conditions. Of the original 26 individuals in the study, 12 (46%) withdrew, 5 after 4 weeks of treatment.

Â Reasons for withdrawal included an overly long commute, acute suicidal ideation, need for inpatient treatment, and lack of financial means. Four families withdrew from the study due to high stress at seeing their family member's distress while participating in the study. Global end-of treatment scores and scores at 3 month follow-up were significantly reduced from baselines scores. Of those who completed all sessions, 100% achieved weight restoration by the end of treatment. The authors acknowledged the high dropout rate but also had suggestions for improving this. First, the 3-month follow-up may have been too brief to adequately follow patients. Next, a random control study comparing CBT and FBT-TAY might reveal helpful information. Also, future adaptations in FBT-TAY could help address the ego-syntonic nature of AN and encourage parental empowerment to help young adults even if the support "does not seem developmentally appropriate," write the authors.

QUESTIONS & ANSWERS

Suspicious Cardiac Signs in Young AN Patients

Q. Is there any new information about young patients with anorexia nervosa (AN) and suspicious cardiovascular signs? That is, is there a way to predict cardiac complications besides the amount of weight loss and chronic nature of the illness? I've read that even an echocardiogram can't detect subtle changes in myocardial function. (H.Y., Omaha, NE)

A. Cardiovascular complications are common among patients with AN, and have been reported in up to 80% of cases. This is problematic when young AN patients don't have conventional clinical symptoms such as bradycardia and hypotension. Clinicians still don't have longitudinal markers of myocardial adaptation to eating disorders.

In a retrospective pilot study at Goryeb Children's Hospital, Morristown, NJ, pediatrician Philip T. Levy and his colleagues used conventional echocardiography and a newer imaging technique, myocardial strain analysis, to evaluate ventricular function in children newly diagnosed with AN and a group of age-, gender- and race-matched controls (*Global Pediatric Health*. 2017; 4:4). Global and regional strain imaging uses two-dimensional speckle tracking echocardiography-driven strain imaging of the left ventricle. The higher the magnitude of strain, the better the LV function.

One of the clues that emerged from the authors' study was the presence of ventricular remodeling found in the subgroup of young patients with purging behaviors. Most of the AN patients, who had a median age

of 13 years, reported risky behaviors: 23 (77%) exercised excessively, 5 (17%) had purging behaviors, and all had restrictive eating behaviors.

There were no differences in electrolyte levels between the AN patients with purging behavior and those without purging behavior. While the mechanism is still not clear, purging behavior may alter torsional mechanisms and decrease electric excitation of cardiac motion that begins at the apex and has a slower transit time to the base, according to an earlier study by two of the authors (*Echocardiography*. 2016; 29:209).

According to the National Institutes of Health, purging behaviors may increase the risk of hypokalemia and subsequent cardiac dysrhythmias (*Vasc Health Risk Manag*. 2012; 8: 91). Thus, monitoring vital signs and performing electrocardiograms and serial measurements of plasma potassium are relevant. The presence of purging behaviors increases cardiovascular risk. Medical problems associated with laxative abuse include electrolyte and acid/base changes that can involve the renal and cardiovascular systems and may become life-threatening. The same applies to the use/abuse of emetics.

Dr. Levy and fellow researchers feel that echocardiography-derived strain imaging holds promise for assessing LV function in young patients newly diagnosed with AN, who are at increased risk for developing serious cardiac dysfunction.

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Also in This Issue

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Coming in the May/June Issue

In the Next Issue

- **A Broad View: Disordered Eating on the Autism Spectrum**
By Janice Goldschmidt, MS, RD, LDN

A standard approach states that if an eating disorder is subsidiary to a mental condition, such as autism, then a secondary diagnosis is not warranted except in certain circumstances (e.g., pica) where outcomes are "sufficiently severe." According to the author, the consequences of this are profound, as it prevents autism researchers from, among other factors, determining rates of

prevalence. The author focuses on four categories of disordered eating on the autism spectrum: behavior rigidity, sensory abnormalities, a disparate group of behaviors that require substantial resources and staff to manage, and, finally, rumination.

PLUS

- **Treatment of Severe and Enduring Anorexia**
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