
Eating Disorders Review

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Social Media and Body Dissatisfaction

One spinoff is a beneficial tool for identifying teens at risk.

For more than 30 years, traditional media, including magazines, radio, and newspapers, have presented images and information about body norms. Unfortunately, this has also included unrealistic and unhealthy images of "ideal thinness." The rise of social media during the past decade has only increased negative exposure and body dissatisfaction among teens and young adults.

A general lack of data about the use of social media and development of risky eating behaviors led Dr. Barbara Jiotsa and colleagues at Nantes University Hospital, Nantes, France, to investigate the effects of social comparison and internalization of ideals from social media (*Int J Environmental Res Public Health*. 2021. 18:2880). While many studies have evaluated the rise of body dissatisfaction and drive for thinness, not all young adults are vulnerable to social pressure, according to the French researchers.

A profile of participants

Participants in the study included individuals at risk of developing an eating disorder and those free of risk. The general population group was recruited via an ad placed on Facebook, Instagram, and Twitter and from posters placed in commercial gyms. The posters were also distributed to health workers in Nantes and other French cities, who were asked to inform their ED patients about the study. Participants answered a questionnaire online, and were assured that their responses would be anonymous. To be included in the study, the participant had to use his or her Facebook and /or Instagram account each day. Those recruited through referrals from healthcare professionals were required to register their eating disorder diagnoses. Participants were 15 to 35 years of age (mean: 24.2 years of age).

The online questionnaire asked individuals about their gender, age, educational degrees, and requested data on current weight and height, which the authors used to establish participants' body mass index. The second portion of the questionnaire asked about use of social media, including the media platform(s) used, the number of uses per day, the time spent viewing the website, and the frequency of comparing one's appearance to that of other people followed on social media. Participants were also asked to report how often they posted "selfies." The third part of the questionnaire evaluated body image perception, using the French translation of the *Eating Disorder Inventory-2* scale. This self-rated questionnaire evaluates psychological characteristics and symptoms associated with EDs. The last section of the questionnaire, which used the *SCOFF* questionnaire, was designed to screen for EDs.

Of the 1407 questionnaires completed, 1331 were evaluated (1138 from the general population and 193 from people with EDs). Most (98%) were women with bachelor's degrees, and the mean BMI was 22.3 kg/m².

The final sample was divided into two groups, according to SCOFF results (953 in the positive SCOFF

group and 378 in the negative SCOFF group). Those in the SCOFF-positive group used social media significantly more often than did the SCOFF-negative group and spent more time comparing their physical appearance to that of people they had been following on social media. They also posted selfies more frequently. The researchers also reported a significant association between the level of education and the frequency of comparing one's physical appearance to that of others. And, the more an individual compared his or her physical appearance to people followed online, the more his or her body dissatisfaction increased. BMI was not a factor in either group.

The authors suggest that, considering how important social comparison is to body dissatisfaction, one approach might be using health criteria instead of physical appearance as a standard. And, as always, it is useful to remind teens and young adults who continually use social media that some "role models" seen on social media do not really represent the majority of the general population.

Designing an mHealth tool

Despite its many drawbacks, social media has some positive features, too. For example, according to the results of a recent study, social media may be helpful for finding groups at risk for EDs. In addition, its far reach may improve the ability to recruit teens with EDs and those with undiagnosed EDs, who may be harder to identify using traditional recruitment approaches.

Professor Erin Kasson and researchers at Washington University School of Medicine and Stanford University recently successfully used social media to identify teens at risk of EDs (*Int J Environ Res and Public Health*. 2021. 18:7979). First, the authors identified a group of teens who frequently used Facebook/Instagram (which, in fact describes nearly all teens). These teens were asked to use a specially designed mobile app for one week ("Discovery Group"), and then to provide feedback. After reviewing the feedback, Dr. Kasson and colleagues refined their social media outreach to connect with 30 other teens with EDs ("Testing Group"), to help pilot their mobile app, *mHealth*. The authors successfully reached people through a variety of social media routes.

A number of questionnaires were used, including the *Patient Health Questionnaire* scale, a 9-item instrument used to measure the severity of depression. Anxiety disorders were assessed with the *Screen for Child Anxiety Related Disorders*, which has 41 items in 5 subscales, including panic disorder and generalized anxiety disorder. Survey questions also asked about past treatment for EDs, other mental health disorders, and barriers to ED treatment. Members of the Discovery and Testing groups were found to have high rates of depression.

The authors concluded that using social media can be an effective way to recruit teens with EDs. Participants were enthusiastic about the potential role of apps in supporting ED recovery.

One wonders about the potential for such interventions to address rapidly growing needs for screening and treatment in the coming years (see other articles elsewhere in this issue about the impact of the COVID-19 pandemic on increases in EDs).

Update: Exploring Genetic Causes Determining Body Weight

Genetic markers continue to point the way to underlying causes of AN, BN, and BED. By analyzing the genomes of more than 20,000 people in the UK, Dr. Christopher Hübel of Geneva University and his colleagues found similarities between the genetic bases of AN, BN, and BED and those of other psychiatric disorders (*Int J Eat Dis*. 2021.doi:10.1002/eat.23481). The initial data were gathered from the UK Biobank and the Avon Longitudinal Study of Parents and Children (*Eur J Endocrinol*. 2004.

151:141). According to Dr. Nadia Micali, one of the co-authors, "The goal of the study was to better understand similarities and differences among all EDs in the role of genes governing body weight."

The researchers analyzed more than 250 polygenic scores for each person (polygenic scores are used to estimate a person's risk for a particular disease based on their genetic profiles). The authors calculated polygenic scores for psychiatric disorders such as schizophrenia and obsessive-compulsive disorder and metabolic and physical traits, such as insulin sensitivity, obesity, and high BMI. The higher the score, the greater the genetic risk. The team then examined the associations between the polygenic scores.

The data for those with BN and BED appeared similar and thus were grouped together in this study. Findings showed that while there were strong genetic similarities between AN and binge-type eating disorders, there were also notable differences. For example, individuals with binge-type eating disorders had higher polygenic scores than did controls for other psychiatric disorders, including depression, schizophrenia, and attention deficit hyperactivity disorder (ADHD), and higher polygenic scores for higher BMIs, compared to those with AN. As the authors pointed out, a genetic predisposition to a heavier body weight versus a lower body weight may be a determining factor that propels individuals with similar psychiatric genetic risk to develop a particular ED. For example, metabolic and physical components can direct an individual toward developing AN, BN, or BED. The study results also supported a genetic relationship between BED and attention deficit hyperactivity disorder, or ADHD, which might be linked to greater impulsivity, a trait shared by individuals with AN, BN, and BED.

The authors' hope is that better understanding of the genetic basis of EDs may follow, and indeed this work seems a further step in that direction. The authors summarize this as, "Our findings replicate some of the known comorbidities of eating disorders on a genomic level..."

From Across the Desk

The Year May Change but ED and COVID Issues Remain

Even as we greet 2022 with enthusiastic optimism, the shadows of 2021 continue to loom large. EDs and COVID have their own schedule, one that does not consider hour, day or year. Among the articles in this issue, you will find reports on social media and EDs, new information about EDs among military veterans, and a review of a revised standard textbook for parents and friends of ED patients.

The rise of social media over the past decade has only increased negative exposure and body dissatisfaction among teens and young adults. A general lack of data about the use of social media and development of risky eating behaviors led psychiatrist Barbara Jiotso and colleagues to investigate the effects of social comparison and internalization of ideals from social media. The rise of social media over the past decade has only increased negative exposure and body dissatisfaction among teens and young adults.

Atypical AN (AAN) is "new" as of publication of the *DSM-5*. Another new trend is identification of EDs among military veterans. A recent study of more than 1000 veterans showed AAN to be a very common problem among men and women veterans. The prevalence of AAN remains a bit unclear, but some samples have shown it to be among the most common EDs.

Finally, as noted in this issue's Book Review, the 4th revised edition of *Surviving an Eating Disorder: Strategies for Family and Friends* offers advice, hope, and helpful methods for coping effectively with a loved one's eating disorder. As reviewer Kamila Cass PhD, CEDS-S notes, the 4th edition has a welcome emphasis on diversity and inclusion; diversity in sexuality, gender, and body size are also well represented in the latest edition.

Atypical AN and other EDs Among Veterans

EDS were common in male and female veterans.

Atypical AN (AAN) is “new” as of the *DSM-5*. The prevalence of AAN remains a bit unclear, but some samples have shown it to be among the most common EDs. A recent study showed AAN to be very common among military veterans (*Eat Behav.* 2021. 41:101496).

The study looked at all ED diagnoses, and the prevalence data themselves are very interesting. Historically, EDs were viewed as “not a VA issue,” but this perception has been changing as more data accumulate. This fits with a growing recognition that factors like the common focus on weight, use of weigh-ins, and traumatic experiences may all combine to increase risk among veterans.

Screening showed AAN was the most common ED among veterans

In the study, 1137 veterans were screened for EDs. The most common ED seen was AAN (13.6% of females, 4.9% of males). Rates of other EDs were high, too: 19.2% of females and 13.9% of males had a diagnosis of an additional ED (mostly BN or BED). No cases of AN were seen.

This study shows that EDs are common in veterans, both male and female. The pattern may differ from the general population without AN, but perhaps with especially high rates of AAN. These results further underscore the importance of AAN.

Feeding and Eating Disorders after Bariatric Surgery

Three studies report connections between the two.

Bariatric surgery has emerged as one of the most common approaches to weight control and initially leads to greater weight loss than other treatment approaches. Most bariatric procedures are performed in the US and Brazil (101,000 procedures in the US and 65,000 in Brazil, respectively, in 2018). Sleeve gastrectomy became the most performed bariatric surgery procedure in the US in 2018. In the U.S. an estimated 278,000 bariatric surgeries were performed in 2019, and this was expected to rise to an average of 297,000 in 2020.

Interestingly, over 6,000 to 8,500 bariatric surgeries were also performed in Mexico in 2019. The primary reason why Mexico is a popular choice for bariatric surgery is the markedly lower cost of the procedure—about 70% less in Mexico than in the US. For example, lap band surgery in the US costs from \$12,000 to \$29,000, compared to \$3,000 to \$5,500 in Mexico; gastric bypass surgery in the US costs from \$23,000 to \$31,000, compared to \$6,500 to \$9,000 in Mexico. Insurance coverage varies widely.

Certainly, there are risks associated with weight loss surgeries and the development of disordered eating may be one of them. A recent meta-analysis and two more recent studies evaluated the development of EDs one and two years after bariatric surgery.

Challenges from lack of standards and guidelines

A team of Brazilian researchers recently analyzed the development of EDs after bariatric surgery, as they sought to find a relationship between the use of bariatric surgery and development and recurrence of EDs. Only 14 of 155 eligible studies were included in the authors’ qualitative synthesis and 17 in a meta-analysis. Dr. João Victor Taba and researchers at the University of São Paulo, Brazil, found a 7.8% prevalence of EDs during the postoperative period after bariatric surgery (*Nutrients.* 2021. 13:2396),

with BED accounting for roughly 50% of that total.

The authors also noted issues with work in this area, including variable diagnostic definitions and assessments. Additionally, the picture may be complex over time, with at least some studies showing an initial decrease in disordered eating post-surgery, but with later increases (for example, see Smith, KE, *Obese Surg.* 2019. 29(6)1773). The authors suggest that much more research is needed.

Food addiction, BED after surgery

A team of Israeli clinicians headed by Dr. Tair Ben-Porat of Hebrew University, Jerusalem, recently examined food addiction (FA) and BED before and one year after sleeve gastrectomy. The team evaluated 54 women who underwent sleeve gastrectomies, with baseline data and at follow-up visits 3, 6, and 12 months after gastrectomy (*Obes Surg.* 2021. 31:603). The mean age of participants was 32 years, and the mean BMI was 44.9 kg/m². In the study, the Israeli team used anthropometric measurements, dietary intake, food tolerance, and data from physical activity. The *Yale Food Addiction Scale* was used to assess FA and BED, respectively.

Before surgery, FA and BED were common (40.7% and 48.1%, respectively). After surgery, rates of BED dropped. At the sixth month after surgery, FA had also decreased, but then climbed to 29.3% one year after surgery. Those who met the criteria for FA at 1-year follow-up had significantly less weight loss at 12 months compared with those who did not meet these criteria.

FA 2 years after surgery

An Iranian team led by Maryam Mousavi of Shahid Beheshti University of Medical Sciences, Tehran, Iran, also evaluated FA, but later after the procedure: for example, 2 years after sleeve gastrectomy (*Obes Surg.* 2021. 31:3444). Among 450 individuals who had undergone sleeve gastrectomy 2 years before, the researchers found that 89, or about 20%, met the criteria for FA disorder. Those with FA had significantly lower physical activity scores, and higher BMIs. Younger age, higher BMIs at baseline, and more excess weight were related to higher odds of having FA disorder two years after sleeve gastrectomy.

These studies show the complexity of disordered eating prior to and after bariatric surgery and show clearly that more work is needed.

BOOK REVIEW

Surviving an Eating Disorder: Strategies for Family and Friends. 4th Revised Edition. (By Michele Siegel PhD, Judith Brisman PhD, CEDS, and Margot Weishel LCSW. Harper Perennial, 320 pages, paperback, \$15.99)

Now in its fourth edition, *Surviving an Eating Disorder: Strategies for Family and Friends* offers advice, hope, and helpful strategies for coping effectively with a loved one's eating disorder. Books written explicitly for family and friends of those with eating issues are a much-needed resource and are too often neglected in the treatment world. The authors, Judith Brisman, Margot Weishel, and the late Michele Siegel (who initiated the idea for the book and whose influence remains throughout this iteration), immediately create a compassionate setting, sympathizing with the helplessness and confusion that parents, partners, and friends feel. They write, "Yours is a difficult position to be in. You want to help, but you're not sure what is best...this book is written for you." With each chapter, the book offers a touchstone with which to navigate the depths that are required when caring for someone with an eating disorder.

Divided into three parts, the book offers a wealth of practical information about eating disorders. "Part I.

Gaining Perspective,” is an introduction to eating disorders, explaining essential features, signs and symptoms, and why an individual may be vulnerable to anorexia nervosa, bulimia nervosa, binge eating disorder, orthorexia, and avoidant restrictive food intake, or ARFID. Particularly helpful are checklists of warning signs and symptoms of each illness. Parents will appreciate the clarity the checklists provide. The authors explore the function of eating disorders, noting how they are often an external solution to inner turmoil. Paying attention to both the “visible and invisible,” the authors note, is necessary for someone with an eating disorder to be treated as a whole person. Part I closes with a discussion of family rules, with the hopeful message that an eating disorder is an opportunity to increase flexibility and growth in a family system.

“Part II. Confronting the Problem” offers guidance on how to discuss an eating disorder with a loved one. The authors teach communication strategies to increase the likelihood that confrontations about eating disorders are solution-focused and do not end in a stalemate. Especially helpful is advice about how to deal with denial or being told to “mind your own business.” The authors recommend involving an eating disorder specialist and offer specific strategies for parents, partners, adult children, and friends to use when the individual with the eating disorder believes that nothing is wrong. Suggestions to get an individual to accept help include having an open talk about what is observed, focusing on the emotional impact of the behavior, and staying firm that help is needed. This section also includes a discussion of the Relationship Model, an alternative approach to engaging parents in the treatment of their anorexic child, which differs from Family-Based Treatment in that parents do not directly feed the child. Working with a multidisciplinary team, this model encourages parents to set up and enforce clear and realistic consequences if weekly weights gain goals are not met, with therapists providing support to parents regarding limit setting. In addition to weight interventions, the focus is on family communication and connection, and relational dynamics are explored. Taking the task of refeeding out of the hands of the parents “allows for other means of both authority and support to be set up” and may work better when parental re-feeding is stressful or ineffective.

“Part III. Using New Strategies” offers advice, often in the form of questions and answers, for dealing with specific problems with food, eating, finances, and body image. Individuals with eating disorders are encouraged to take responsibility for the consequences of disordered eating behaviors, be that cleaning a messy bathroom or replacing food consumed in a binge. How to deal with a multitude of tricky situations, such as talking to a partner about the impact of his weight gain on sexual attraction, responding to “Am I too fat?” queries, and dealing tactfully with comments from relatives about a child’s body size are all covered in this section of the book. The book concludes with a chapter reminding readers to relate to the person, not just the eating disorder, as this will best help “pave the way for the possibility of recovery-- for everyone involved.”

The fourth edition of *Surviving an Eating Disorder: Strategies for Family and Friends* has a welcome emphasis on diversity and inclusion, and diversity in sexuality, gender, and body size are well represented. Eating disorders themselves can be diverse and can include severe and enduring cases for which no amount of intervention is successful. Acknowledging the powerlessness that family members feel and encouraging acceptance of limitations will be a healing message to many with an adult son or daughter with chronic anorexia nervosa. The book also offers general information about raising children with a healthy relationship to food, as well as tips for effective communication and parenting skills. Readers will appreciate the first-person vignettes offered on each topic, as well as the authors’ reflections on past clients and family dynamics. First published 30 years ago, this book remains a classic, and is a must-read for anyone who cares for someone with an eating disorder.

— Kamila Cass PhD, CEDS-S

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COVID-19's Impact on Acute Care Visits by Young Patients

A startling rise in admissions was traced to the pandemic.

A recent study gives us a clearer perspective on increasing pediatric acute care visits for eating disorders. When Dr. Aléne Toulany and her fellow researchers in Toronto, Canada, compared the rates of emergency department visits and hospitalizations for pediatric eating disorders before and during the first 10 months of the COVID-19 pandemic, they found marked increases during the pandemic (*J Adolesc Health*. 2021. 70:42). Acute care visits increased immediately after the onset of the pandemic, and reached a 4-week peak annualized rate of 34.6 per 100,000 population(emergency department visits), or 43.2 per 100,000 population (hospitalizations), in October 2020, according to the authors.

The patient population surveyed by the authors included almost 2.5 million children and youths younger than 18 years of age.

Underlying factors at play

The Toronto researchers theorize that the rise in acute ED admissions among children and teens in Canada may be related to increased anxiety and feelings of loss of control, triggering ED behaviors. Others have suggested that changes in opportunities to exercise, fear of weight gain, increased time spent using social media, and increased stress within the children's and teens' families all may have also contributed to the rise in acute ED-related visits.

QUESTIONS AND ANSWERS BN and Esophageal Cancer?

Q. I am treating someone with bulimia nervosa who has developed squamous cell carcinoma of the esophagus. Is this common among people with EDs? (*J.C., Dunhill, NC*)

A. Although squamous cell carcinoma is the most common form of esophageal carcinoma worldwide, and is tied to advancing age, smoking, and alcohol abuse, finding it in someone with BN is rare. As a recent report concludes, acidic damage to esophageal mucosa caused by self-induced vomiting practiced as a method of weight control may be traced back to untreated BN.

Indian researchers led by Dr. Shivam Khanna recently reported a case of carcinoma of the esophagus that had some interesting and thought-provoking ties to BN (*Cureus*. 2021. doi: 10.7759/cureus 15636). The authors reported the case of a 20-year-old woman who presented complaining of dysphagia, or trouble swallowing, for the past 2 months. This occurred more commonly after eating solid foods than after drinking liquids. She reported having binge-eating episodes over the past 6 years. These binges were followed by guilt and episodes of self-induced vomiting. These actions had all arisen because of her concern about her body shape and weight.

When she was examined, her BMI was 18.2 kg/m². She had eroded dental enamel, but all her lab test results were all within normal limits. On the basis of the eroded enamel and reflux acid erosion, the physicians tentatively diagnosed long-standing BN leading to esophageal carcinoma.

Endoscopy revealed a growth in her esophagus, and a biopsy found squamous cell carcinoma. She was placed on 5-fluorouracil and cisplatin, along with cognitive behavioral therapy and short serotonin reuptake inhibitors, in an attempt to treat her BN. She was reported to be doing well on follow-up.

This case highlights the possibility of uncommon but serious medical problems arising from eating disorders symptoms, even in a young person like this.

— SC

In the Next Issue

- **Eating Disorders Following Over-exercise Linked to Internet-based Programs**
- **From The Patient's Perspective: What It's Like to Have an Eating Disorder**
- **A Five-Session Body Image Intervention Delivered at School**
- **How Effective Are Internet-Based ED Prevention Programs?**
- **Resilience and Its Effect on PTSD Symptoms among Sexually Victimized College Women**
- **Low-Carbohydrate Diets and Diabetes Type 1 with Eating Disorders**
- *And much more...*

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