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Scott Crow, MD, Editor-in-Chief

Effects of COVID-19 on Eating Disorder Patients in the UK

A small study identified three main effects of the lockdown on patients.

As the COVID-19 global pandemic continues, researchers at the University of Edinburgh sought to determine how the pandemic was affecting patients with eating disorders. To do so, they conducted in-depth, in-person interviews with 10 adults (24 to 38 years of age) with a self-reported eating disorder during lockdown (*Appet.* 2021. 104977). Because of international restrictions, Dr. SiennaMarisa Brown and her team limited their interviews to eating disorder patients living in the UK (5 in Great Britain, 5 in Scotland).

The team and two female interviewers used one-on-one Skype interviews, which were recorded and transcribed. Before the interviews, the authors sent a semi-structured interview form to participants who wanted more information about the pandemic or samples of the types of questions that might be asked during the interview.

Three areas of greatest effect

The research team identified three major effects of the lockdown on eating disorders patients: social restrictions, functional restrictions, and restricted access to professional support. Social distancing clearly had the most direct influence on the participants' well-being. This was especially true for ED patients living alone. Loneliness was often cited by respondents as interfering with their desire for social contact. Being alone while struggling with an eating disorder was linked with a person's tendency to become even more focused on food and disordered eating. Thoughts about food grew as the patient filled time that before would have been spent on social interactions and activities.

The researchers also noted changes in accountability among the study participants. Depending on their living situation, participants felt either increased or decreased accountability to others for their behavior during lockdown. One participant used the lack of normal face-to-face contact to actively participate in disordered eating, which was a form of relief to her. In contrast, another patient, who lived with a partner, reported an increased sense of accountability. Sharing meals with another person promoted regular mealtimes.

Less professional support

Because of restrictions and social distancing, participants had less or modified professional support, and mostly used the phone or internet to communicate with friends and family instead. Most participants reported having increased personal responsibility, but the effects differed according to their living situation, the severity of their eating disorder, and accessibility to professional help. Due to the lockdown, participants had to establish new routines, such as shopping for food and timing of meals. According to the authors, most of the patients' challenges involved eating routines. Unhealthy eating habits became

more severe and participants reported being disconcerted by having to deconstruct rigid regimens to adjust to their current situation. Depending on their living situations, the participants commonly reported increased secrecy, guilt, and fear.

But, a positive effect as well?

The third important impact was the change in access to professional contact and support. Here the response was mixed. While some study participants believed their situation was not as serious as that of persons dealing with COVID symptoms, they did not get as much attention as they would like. Others liked the restrictions and reported enjoying avoiding in-person appointments. Some had less-than-ideal resources to be able to use online services. One patient was embarrassed to disclose her need for support; but, since she lived alone, she also felt free to talk about her need for support without being overheard by others.

These results highlight the complex and variable nature of the pandemic's impact on those with EDs. Overall, the disruption of life as usual and the effects on meal patterns, routines, and physical activity had an impact on the lives of the study group and on their ED symptoms. Although previous reports have emphasized the negative effects of the COVID-19 lockdown, the authors viewed the lockdown, in some cases, as a "catalyst for recovery" from disordered eating behaviors. Some patients were motivated and had a sense of accomplishment in managing without professional support. Not all participants experienced this, and some reported having no improvement in their severe eating disorders.

The individual perceptions of negative impact were highly dependent on how the participants viewed their current ED symptoms. The authors also pointed out that "Exploring how existing professional support services can best adapt to help those with eating disorders manage these difficulties would be valuable going forward." One wonders, based on these results, whether a return to more usual health care provision will have similarly variable impacts as the nature of the pandemic changes with time.

Update: Investigating the Genetics of Eating Disorders

We are increasingly aware of the genetic basis of AN but know far less about the genetics involved in binge eating. By analyzing the genome of tens of thousands of people living in Great Britain, a team headed by Drs. Christopher Hübel and Nadia Micali and their colleagues at the University of Geneva, and three other colleges have now described similarities and differences between the genetic bases of AN, BN, and BED and other psychiatric disorders.

The researchers also used health data and replies to health questionnaires from more than 20,000 volunteers, all taken from the UK Biobank. With this information, the team calculated more than 250 polygenic scores for each person. (Each polygenic score adds the risk of genes involved in a specific trait, such as depression.)

Significant associations were tested for replication in the Avon Longitudinal Study of Parents and Children (up to 217 cases and 3,018 controls). The researchers found that eating disorders differ in their genetic association with anthropomorphic traits, such as weight, waist circumference, and body mass index (*Int J Eat Disord.* 2021.54:785).

Overall, the study results show that while there are strong genetic similarities between AN, BN, and BED, there are also striking differences. One major difference concerns the associated genetics of body weight regulation, which are opposite between AN on one side and BN and BED on the other. The latter are linked to a high genetic risk of obesity and a high BMI, according to the researchers. They added that the study results also support a clear genetic relationship between BED and attention deficit disorder, which has been noted clinically in the past.

From Across the Desk

As our attention turns back to pre-pandemic life, we can return to the ongoing unchanging research efforts into the causes of eating disorders. One recent study reported by Drs. Christopher Håbel and Nadia Micali and their colleagues found strong genetic similarities between persons with anorexia nervosa, bulimia nervosa, and binge eating disorder. However, the genetics of body weight regulation are opposite between AN and BN on one side and BN and BED on the other.

Another large study in Sweden examined the genetic and environmental factors underlying crossover between BN and AN. The researchers report that that genetic and environmental effects are both relevant, and that they overlap in those with AN and BN. Research also continues into the effects of COVID-19 on patients with eating disorders. Not surprisingly, a study in Great Britain found that social distancing had the most decisive influence on the study participants' well-being. This was especially true for ED patients living alone. Being alone while struggling with an eating disorder was linked to an even greater tendency to become more focused on food and disordered eating.

— MKS

Working Toward a Better Definition of Orthorexia

A small Dutch study seeks to trace the pathways from a healthy lifestyle to an eating disorder.

According to Google Trends (a Google website), the number of searches for the term 'How to eat healthy' has nearly tripled over the last 16 years (Google, 2018). This search for healthier eating can also lead to problems when these ideas are taken too far. One of the possible consequences of the rise in popularity of the healthy eating trend among various populations is the risk of developing a problematic preoccupation with the perceived quality of food. Orthorexia nervosa (ON) has been suggested as the supreme manifestation of this, but more work is needed to more fully understand its definition and implications.

Dr. Emma R. Douma and her colleagues at the Athena Institute, Vrije University, Amsterdam, recently studied factors that contribute to a progression from healthy eating to unhealthy and excessive preoccupation with healthy eating, or ON (*Appetite*. 2021. 105008).

No clear definition exists

One important distinction said to separate ON from established eating disorders such as AN and BN is the fact that the preoccupation is not linked to the amount of food or weight loss, but rather to the perceived quality of the foods consumed. However, there is no consensus about a clear definition of ON, or even clear diagnostic criteria, according to the authors. The main characteristics of this phenomenon are: (1) spending an excessive amount of time thinking about, looking for, and preparing food; (2) feeling superior to those with different eating habits; (3) rigidly following a particular health food diet and engaging in compensatory restrictions to make up for dietary indiscretions; (4) associating self-esteem with adherence to the diet; and, finally, (5) turning 'eating properly' into a central focus of life.

Dr. Douma's study collected clinician perspectives on ON. First, qualitative interviews were conducted with 10 health professionals 27 to 60 years of age, including nutritionists, a nutritionist/therapist, a psychologist, a nutritional psychologist, a pediatrician, a professor specializing in eating disorders, and a support worker with personal experience of working at an ED treatment facility. The authors then administered a questionnaire online to the 10 health professionals. Each phase of the study focused on

hypothesized stages of ON evolution: in the discussion of each stage, the authors sought biological, psychological, interpersonal, and contextual factors that played a role in the patients' lives and that might have contributed to the development of ON eating patterns.

To explore baseline risks for individuals to develop ON, the researchers asked participants to identify what characterized the patients they had encountered. In all cases, the patient was a 16- to-35-year-old woman with an intermediate or high level of education. Having an active lifestyle and an ambitious personality type were also prominent characteristics (both mentioned in six interviews). Some health professionals elaborated upon the ambitious personality type, mentioning perfectionism and giving high importance of school or work (mentioned in three and two interviews, respectively). As for body weight, the health professionals had contradicting results. Four mentioned that their patients had always had healthy weights, whereas three mentioned that their patients were all overweight. Contrasting opinions about self-confidence were observed as well: three women were said to have a high degree of self-confidence, whereas four were said to have a low level of self-confidence.

Stages leading to development of ON behaviors

There was a better consensus about the development of ON behaviors. The authors posited two broad stages leading to the development of ON-related behavior. The first was a relatively harmless choice to pursue a healthy diet, and the second was an unhealthy obsession evolving from the first seemingly healthy and harmless lifestyle choice. The authors concluded that over time ON has a developmental pathway of biological, psychological, and social dynamics. Just as in earlier studies, they had inconclusive results when they sought any association between age, sex, and educational level and ON. They also reported that a better understanding of whether the two proposed phases of ON, "healthy orthorexia" and "orthorexia nervosa," would be beneficial for clinical and therapeutic practice.

The professionals in their study did agree that young age, female gender, and a high level of education, along with perfectionism and regular use of social media, were baseline risks for ON. Also in the current study, the health professionals reported weight loss as a symptom rather than a motivation to engage in ON-like behavior.

The authors suggested that ON has a developmental pathway, and thus does not appear suddenly. Instead, its development can be interpreted as a continuous interaction of biological, psychological, and social dynamics over time. This is useful information that describes the experiences of clinicians encountering people with ON symptoms, but it will be valuable to measure these same potential factors in those with ON symptoms themselves.

Relapse Following AN Treatment

Tracking the timing of relapse

It is well known that relapse is common in those who have been treated for AN, but a new study helps to clarify the time course for relapse.

B. Timothy Walsh, MD, and colleagues have published a follow-up analysis of data from a two-site study of fluoxetine treatment to prevent relapse in those with AN (*Am J Psychiatry*. 2021; *AJP*-in-Advance). The original landmark study from 2006 (*JAMA*. 2006; 295) showed that fluoxetine did not prevent relapse. The new analysis examines the time to relapse in detail, and finds that risk of relapse rises promptly after the end of acute (in this case, inpatient) treatment and peaks after about 60 days, then gradually falls.

A Body Image Intervention for Preteens

Results of a 5-session intervention administered by teachers.

Dissatisfaction with body image is particularly common during preadolescence, or during the period between 11 to 14 years of age, and this dissatisfaction can predict future psychological and physical health problems. A study conducted in British schools showed that intervening with sessions delivered by teachers could improve students' body self-esteem and reduce the degree of appearance-based teasing as well (*J Adolesc Health*. 2021. 68:331).

Phillippa C. Diedrichs, PhD, and a group of researchers at the University of the West of England and the University of Bristol, both in Bristol, UK, designed the study as a two-arm, randomized-control effectiveness trial. Six middle schools participated with teacher-led lessons given during classroom time, with no strict exclusion criteria for students. Participating students and control students were assessed at baseline and at 2-, 6-, 12-, 24-, and 36-month follow-ups. The study group included 1495 seventh and eighth grade students 11 to 13 years of age. A control group had school lessons as usual, with no intervention.

A 5-session workshop

To test their intervention theory, the authors selected the "Dove Confident Me: 5-Session Workshop for Body Confidence" program, which involves five 45-minute interactive sessions using visual aids, PowerPoint slides, videos, and activity sheets. Lasting a total of 225 minutes, this program is shorter than previous multi-session interventions. The students learned about "appearance ideals" and the obsession with trying to look like their appearance ideals. They also studied media messages and practiced confronting appearance-related social comparisons. They learned how to banish "body talk," to help the students understand the negative consequences of engaging in and even overhearing body-oriented talk. The groups made a commitment to avoid "body talk." Finally, they were urged to become "body confidence champions" by identifying and committing to challenge appearance ideals, and to plan a campaign to share the messages of the workshops with a broader audience. The final lesson was dedicated to designing a group "take-action" project, to promote body confidence in the students' school and surrounding communities.

Outcome of the sessions

Compared with the control group, the intervention led to improvements in girls' and boys' body image that was maintained for at least 6 months. The authors noted that this is the longest sustained improvement in a cognitive-affective measure of body image reported in a school-based intervention led by teachers. Prior teacher-led interventions have led to improvements in body image up to 3 months later among girls (*Br J Psychiatry*. 2013;203:428) or up to 12 months when using self-reported body image avoidance behaviors (*Prev Med*.2019.123:3234). In this study, the teachers were able to deliver 75% of the original intervention plan. The teachers dedicated more time than recommended for the first section of each session, and the mean time for lesson completion was 50 minutes, 5 minutes longer than the 45 minutes allocated in the study plan.

Dr. Diedrichs and her co-authors also reported one unexpected effect of the program. Girls in the intervention group reported having more conversations about appearance than did girls in the control group; this was noted at the 12-month follow-up. However, the nature of the conversations was unclear. The researchers suggest future work to look at this highly deliverable intervention should examine whether these conversations were negative or neutral (or suggestive and positive).

A Track from Diet Pills and Laxatives to an Eating Disorder

First-time diagnoses appeared 5 years later.

Diet pills and laxative use are known to be linked to ED symptoms. A new study confirms prior work showing us that diet pills and laxatives to lose weight by teens predicts a first-time diagnosis of an eating disorder within the next 5 to 10 years, according to a study by Dr. Vivienne M. Hazzard and colleagues at Sanford Center for Biobehavioral Research, Fargo, ND, and the University of Minnesota (*Int J Eat Disord.* 2021. May 5. 2021; doi:1002/eat.23531. Published online ahead of print).

Dr. Hazzard and her colleagues used data from 1015 female adolescents and young adults participating in the well-known PROJECT EAT (Eating and Activity in Teens and Young Adults) project to examine prospective associations between past diet pill and laxative use for weight control and self-reports of a first-time diagnosis of an eating disorder. The women were assessed at average ages of 14.9 years, 19.5, and 24.8 years.

The results showed an elevated risk for subsequent diagnosis of an eating disorder, about 3 and one-half times increased for diet pills, and a little less than three-fold for laxatives. Such efforts at weight control are often described as unhealthy, and the current results support that characterization.

Family-based Behavioral Weight Loss Programs: A Risk to Siblings?

Would such programs put siblings at risk years later?

Family-based behavioral weight loss programs are effective for reducing childhood obesity in the long and short term. Part of the program involves changing the home environment. Parents are encouraged to modify both their regular food and physical activity environments to support healthier choices for the whole family. This means limiting access to high-fat, high-calorie foods and increased use of fruits and vegetables. Changing the activity portion involves limiting the number of computer and television screens at home, and time spent watching television, playing video games, and using computers for long periods (*Pediatr Obes.* 2019. 14:e12477).

Increased risk to siblings?

A group led by Dr. Batya Shaharabany at Maccabi Health Care Services, Haifa, Israel, sought to explore if one unexpected result of such family-based weight-loss programs might be increased risk for developing eating disorders among siblings (*Obes Res Clin Pract.* 2020. 14:279).

To test their theory, the authors designed a 30-month retrospective follow-up study of two groups (18 families in an intervention group and 26 families in a control group), and a 14-month prospective follow-up study including families with one or more obese or overweight children 8 to 14 years of age (42 families and 78 children and siblings). All the parents and children participated in a multidisciplinary parent-child program called Maccabi Active. The researchers used the results from the children's version of the eating attitude test (ChEAT) questionnaire, family eating and activity habits questionnaire (FEAHQ) and BMI z-scores.

No increase in disordered eating behaviors was found among children with overweight or obesity or their siblings, doing away with concerns about the development of disordered eating after participation in a family-based intervention. In fact, improvements in the obesogenic environment pointed to potential benefits for the entire family, according to the authors.

Genes, Environment, Act in AN and BN Crossover

A large Swedish study confirms the importance of vigilance for crossover during treatment.

Although anorexia nervosa and bulimia nervosa are distinct eating disorders, they share some symptoms, and crossover is common. A recent report from Sweden has added new data showing that genetic and environmental mechanisms underlie mechanisms for both genetic and environmental actions in patients with AN and BN (*Psychol Med.* 2010. 51:62).

Dr. Shuyang Yao of the Karolinska Institute, Stockholm, and colleagues used several national health registers in their study, including the Swedish Population Register and the Multi-generation Register, to include 782,938 randomly selected full sisters and maternal half-sisters born in Sweden between 1970 and 2005. The researchers found that 6104 (0.9%) of the full sisters and 938 (0.82%) of maternal half-sisters had been diagnosed with AN. Of the full sisters, 3142 (0.47%), and 79 of the maternal half-sisters (0.51%) had been diagnosed with BN. Both disorders were diagnosed in 679 (0.10%) of full sisters and IN 122 (0.11%) of maternal half-sisters.

Analyses showed that that the genetic and environmental effects are both relevant and that they overlapped in those with AN and BN. These findings demonstrate the contribution of both genetic and environmental factors and support conceptual overlap between AN and BN. We know this to be true at a clinical phenomenon level, and this study provides some explanation for what is seen clinically.

Questions and Answers: Excessive Exercise

Q. I have a young patient (23 years old) with AN who has a consistent exercise program. However, according to her description of her exercise program, I suspect she is seriously over-exercising. Is this unusual among younger ED patients? (**J.W.**, Atlanta)

A. Exercising excessively is not uncommon among those with anorexia nervosa. According to a recent study, the internet may also be contributing to this excess (*J Psych Res.* 2020. 11:004). The study involved young adults, who were grouped as having a probable eating disorders with excessive exercise, and a control group. The study concluded that youths with eating disorders and increased exercise levels may have increased obsessive thoughts of threat, along with compulsivity traits, and sensation-seeking impulsivity. The study found that obsessive thoughts and eating disorders, paired with sensation-seeking, were partially mediated by problematic use of the internet. [Also see the article on orthorexia nervosa elsewhere in this issue.]

— SC

In the Next Issue

- Risks of Intermittent Fasting
- Treatment-resistant Anorexia Nervosa
- How Genes and Environment Influence Anorexia Nervosa and Bulimia Nervosa
- Body Cues and Food Biases and How They Affect Disordered Eating
- The Role of Prenatal and Perinatal Factors in Eating Disorders
- and much more...

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