

SCIENCE SERIES

Destigmatizing Eating Disorders with Medical Writing

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ABSTRACT

Eating disorders are a group of severe medical conditions that center around energy intake and sometimes body dissatisfaction. Despite their severity, eating disorders are often viewed negatively by both lay individuals and health professionals. This stigmatization is the result of inaccurate and exaggerated information about these illnesses. As health educators, medical writers are positioned to challenge and change these stigmas by creating and distributing accurate information about eating disorders. This article provides medical writers with foundational knowledge about eating disorders and background information on their stigmatization and offers suggestions for how to write about these conditions to reduce current stigmas and improve understanding of eating disorders.

EATING DISORDERS IN HEALTH COMMUNICATION

Health content creators construct health narratives by determining what information gets conveyed and omitted as well as the style and tone of that information. Medical writers, therefore, educate and influence people’s attitudes toward medical conditions. These attitudes toward medical conditions can influence a variety of issues, including health research funding, health policy decisions and insurance coverage, support for individuals during medical treatment, and peer acceptance of individuals with certain medical conditions.

Despite the substantial responsibility health communicators have for creating accurate health narratives, online health information is often inaccurate and written by non-experts.¹ This lack of credibility and accuracy in health content creation is concerning because the lay public and health professionals rely on and trust this information to educate themselves.^{2,3} Misleading health information also influences how people think and feel about individuals with medical conditions.⁴⁻⁶

Information about eating disorders has been particularly inaccurate, omissive, and exaggerated in health communication, which has resulted in ongoing stigmatization

of these illnesses.⁴⁻⁶ Medical writers are well positioned to change this narrative by interpreting eating disorders research for nonexperts, yet information articles on eating disorders have largely been absent in medical communication. This absence may have contributed to the negative attitudes lay individuals and health professionals hold about these illnesses.⁴⁻⁶ The pervasiveness of stigmas around eating disorders makes now a good time for medical writers to more deeply understand these medical conditions in order to reframe the narrative and reform attitudes toward them by creating informed, nonjudgmental, and accessible content.

EATING BEHAVIOR

Healthy Eating

Eating behavior exists on a spectrum, with healthy eating on the far left (Figure 1). The US government defines healthy eating as the daily consumption of a variety of nutritious foods and drinks with mindfulness for overeating or undereating.⁷ Fulfilling your body’s homeostatic needs is, therefore, one component of healthy eating. A second component of healthy eating involves a person’s relationship with food.⁸ Enjoying the foods you eat, avoiding food valuation (eg, labeling foods as forbidden), and having a flexible diet are additional aspects of healthy eating.



Figure 1. The eating behavior spectrum. Healthy eating is typically defined as fulfilling the body’s homeostatic needs while maintaining a flexible diet. The transition from healthy eating to disordered eating is not clearly defined and can occur when a person’s eating behavior does not fulfill their body’s homeostatic needs (eg, restrictive or overeating); disordered eating also occurs when an individual experiences guilt or shame for eating. Eating disorders are extreme versions of disordered eating and are identifiable by diagnostic clinical criteria; eating disorders have a severe, lasting impact on the body and brain (eg, heart and gastrointestinal irregularities).

Disordered Eating

To the right of healthy eating on the eating behavior spectrum is disordered eating. Healthy eating becomes disordered when a person engages in one or more of the following behaviors: restricting food, limiting specific foods, eating beyond satiation, experiencing guilt after eating, adhering to an inflexible diet, and/or experiencing nervousness when eating in public.⁹ Under this definition, many accepted eating habits (eg, a low-carb diet) can be considered disordered eating. Disordered eating is not necessarily harmful but becomes a cause for concern when it impairs a person's physical health and life quality. Addressing disordered eating is important because if left untreated, it could progress into an eating disorder.¹⁰

Eating Disorders

Eating disorders are extreme versions of disordered eating and are diagnosable by clinical criteria.

Anorexia nervosa (AN): Individuals must restrict their daily energy intake in ways that interfere with their body's appropriate developmental trajectory.¹¹ Additionally, individuals must have an intense fear of weight gain, disturbed body perception, and denial of the severity of their low weight.

Bulimia nervosa (BN): For at least once a week for 3 months, individuals must engage in recurrent binge eating episodes.¹¹ A food binge is defined as uncontrollably eating an atypically large amount of food during a short period of time. Body disturbance and compensatory behaviors to prevent weight gain (eg, vomiting) must also occur.

Binge eating disorder (BED): For at least once a week for 3 months, individuals must engage in recurrent binge eating episodes.¹² A binge is defined as uncontrollably eating an atypically large amount of food during a short period of time. Eating until uncomfortably full and distress about binge eating behavior might also be present.

Avoidant restrictive food intake disorder (ARFID): Lack of interest in food that results in nutritional and energy deficits.¹³ No body image disturbance should be present, and restrictive eating cannot be attributed to a separate medical condition.

Pica: Persistent eating of nonedible substances (eg, soil, paper, or chalk) for at least 1 month. These items cannot be culturally supported.¹⁴

Orthorexia: Not officially recognized as an eating disorder by the American Psychiatric Association but acknowledged

as an eating disorder by clinicians and the public.¹⁵ Involves an obsession with healthy eating that impairs an individual's well-being.

Subclinical: Individuals who do not meet all necessary criteria to be diagnosed with an eating disorder yet demonstrate extreme levels of disordered eating have a subclinical eating disorder. Subclinical eating disorders can be damaging to a person's health and well-being, despite not being officially recognized by the American Psychiatric Association.

The point prevalence for eating disorders in men and women across eating disorder subtypes has been estimated at 8.8% for adults and 5.7% for adolescents, with women having a higher lifetime prevalence compared with men (8.4% versus 2.2%).¹⁶ In children (ie, ages 9 and 10), the lifetime prevalence for eating disorders across eating disorder subtypes has been estimated at 10%.¹⁷ Historically, there is the misconception that eating disorders predominantly occur in White, heterosexual, cisgender individuals.¹⁸ However, emerging research shows that Native American/Alaska Native women and Black women are as likely as White women to meet criteria for an eating disorder across subtypes, with these populations more likely to develop BED than White women. Similarly, LGBTQIA+ populations are at elevated risk for developing eating disorders and often have higher rates of eating disorder behaviors across subtypes compared with cisgender and/or heterosexual individuals.¹⁹ These estimates across populations, however, could be low and inaccurate, as eating disorders go largely undetected by medical professionals for people of all ages and groups.^{16,17} One reason for the underdiagnosis of eating disorders across populations could be the normalization of disordered eating in diet culture.

EATING BEHAVIOR COMMUNICATION

Diet Culture and Weight Loss

Definitions of eating behavior can be fluid and vague and, therefore, are often inconsistent within health communication. An example of this fluidity is diet culture.²⁰ Within diet culture, certain values are attached to different foods and lifestyle practices (eg, celery is a good food). These beliefs about food values and lifestyle practices are then accepted and ritualistically followed by people to achieve thinness, which is equated with health, morality, and increased social status in diet culture.²⁰

Because diet culture limits what a person can eat and fixates on weight loss, its practices can be considered disordered eating. Dieting, however, is rarely considered disordered eating and has become normalized as a type of

healthy eating through diet culture communication.²⁰ Normalizing disordered eating minimizes the seriousness of eating disorders—it also influences how people think and feel about food, how they eat, and how they relate to their bodies.²⁰

Eating Disorder Stigmas

The normalization of eating disorder behavior (eg, food restriction) in diet culture has contributed to stigmatization about eating disorders.²¹ The most prevalent stigmas about eating disorders include personal responsibility for illness (eg, people with eating disorders are vain), attention-seeking (eg, people with eating disorders are not truly sick), and weakness (eg, people with binge-type eating disorders are too lazy and/or weak to lose weight through diet and exercise).²² Consequently, people with eating disorders are often blamed for their illness and might internalize this self-blame.^{4-6,23} Internalizing this self-blame might lower self-esteem, hope, and empowerment during treatment for people with eating disorders, which could prolong illness and decrease quality of life.²⁴ For example, women diagnosed with AN who feel stigmatized for their eating disorder (ie, personal responsibility) have a longer duration of illness, lower self-esteem, and more severe eating disorder symptoms compared with women who feel less stigmatized for their eating disorder.²⁰ Stigmatization about eating disorders can also foster negative reactions toward these illnesses in medical spheres, leading to the underdiagnosis of eating disorders.^{6,23}

USING NEUROSCIENCE TO CHALLENGE EATING DISORDER STIGMAS

Destigmatizing Eating Disorders with Neuroscience

Eating disorders have a weak presence in medical communication, despite these illnesses involving and impacting nearly every organ in the body.²⁵ One reason for the weak presence of eating disorders in medical communication could be that these disorders are not considered to be serious medical conditions.²¹⁻²⁴ Unlike other illnesses, few pharmaceuticals have been effective in reducing symptoms; instead, treatments have centered around psychotherapy and behavioral therapy.²⁶ Emphasis on therapy in eating disorders treatment might be perpetuating the belief that these illnesses are solely psychological in nature. The omission of eating disorders from medical communication, however, needs to change, because medical communicators have a responsibility to accurately inform the public and health professionals about the complexities of medical conditions.

Writing about the brain's role in eating disorder signs and symptoms is one way medical communicators could reduce eating disorder stigmas within the public sphere and

among health professionals. Research has demonstrated that people judge arguments supported by neuroscience information as more alluring and of higher quality than arguments supported by information from other sciences (eg, social science).²⁷ For example, when asked to judge the quality of several scientific arguments, university students rated arguments supported with neuroscience information (eg, brain image) as superior to the same arguments without neuroscience information. Research also shows that enhancing discussions about eating disorders with biological information, rather than strictly sociocultural information, improves people's attitudes toward these illnesses.^{28,29} Consequently, including neuroscience information in communication about eating disorders could improve understandings of these illnesses and potentially reduce their stigmatization.

The Brain's Role in Eating Disorder Signs and Symptoms

Acknowledging the brain's role in eating disorder signs and symptoms (eg, restrictive eating) in medical communication could help destigmatize these illnesses by deemphasizing personal responsibility for eating disorder behavior. For example, research shows that atypically high levels of brain serotonin could contribute to AN signs and symptoms (eg, restrictive eating, anxiety, and cognitive inflexibility), whereas atypically low levels of brain serotonin could explain BN and BED signs and symptoms (eg, compulsivity, impulsivity, and binge eating).³⁰ Based on this evidence, selective serotonin reuptake inhibitors have been used with limited effectiveness in eating disorder treatments to rebalance serotonin and reduce symptoms associated with eating disorders (eg, depression).²⁶ Whether serotonin imbalances are present before eating disorder onset (eg, the result of genetic variants) or if serotonin imbalances emerge in response to disordered eating behavior (eg, starvation or excessive carbohydrate intake), however, is unclear.

Acknowledging how the brain constructs body image during an active eating disorder might also explain signs and symptoms of these illnesses. Body image is a complex concept describing how we perceive and feel about our bodies. This construct, which we create using our perceptions of and our feelings toward our bodies, influences the third-person image of ourselves we keep for self-reference in our long-term memory.³¹ Consequently, our internal body construct might not accurately represent how we appear to others. Nonetheless, our brains work to make this construct as accurate as possible by updating it daily with current sensory information (eg, seeing our reflection). These daily updates to our body construct explain how our mental self-representations change as our weight fluctuates. The brains of people with AN, however, might not update

the body construct following weight changes because of disruptions in short-term memory processing.³¹ These neurological disruptions to body construct updates in people with AN could explain why severely underweight people with AN insist that they are overweight. Potential causes for these processing disruptions include, but are not limited to, stress and social influence (eg, media images of idealized body types).³² It is unclear, though, whether disruptions in body construct processing are present before AN onset or if they emerge in response to AN illness. Additionally, people with AN have reduced communication (ie, connectivity) between brain regions responsible for estimating body size and shape (eg, extrastriate and fusiform body areas).³³ As a result, these individuals assess their body dimensions erroneously. Body image therapy has shown to increase communication between these brain regions, resulting in more accurate estimates of body dimensions in people diagnosed with AN.³⁴

Dysfunctions in gut-brain interactions might also contribute to eating disorder signs and symptoms.³⁵⁻³⁷ The gut communicates information to the brain that influences not only what we eat but also our behavior and how we feel. Disorders of gut-brain interactions (DGBIs) (eg, dyspepsia) are common among people with ARFID, possibly because gastrointestinal discomfort contributes to food avoidance.³⁵ In these cases, an eating disorder likely develops in response to a DGBI, and treating the DGBI could reduce eating disorder signs and symptoms. Dysbiosis also plays a role in eating disorder signs and symptoms. In AN, certain bacteria imbalances in the gut microbiome could contribute to the reduced appetite, depression, anxiety, and challenges with weight gain associated with this illness.^{36,37} For example, previous research shows that germ-free mice that receive fecal microbes from women with AN have reduced food intake, difficulties gaining weight, and increased anxiety-like and compulsive behavior compared with control mice.³⁸ How dysbiosis in AN contributes to these outcomes, however, is unclear. Increased gut permeability during an active eating disorder might also alter the immune system in ways that contribute to eating disorder pathology (eg, cytokines decreasing appetite).³⁷ It is unclear, though, if atypical gut composition and/or permeability develops prior to and/or during an active eating disorder.

DISCUSSION

The absence of eating disorders coverage in medical writing has potentially contributed to ongoing misinformation about and stigmatization of these conditions in public and health professional contexts.⁴⁻⁶ Reducing these stigmas and improving eating disorders education in medical settings is important because the eating disorder recovery process requires a team of health professionals

(eg, physicians, dieticians, and psychologists). Professionals working on an eating disorder treatment team, however, often lack specialized knowledge in eating disorders, which can slow communication between team members and interfere with treatment decisions.^{39,40} Medical writers, therefore, could play an integral role in facilitating communication within eating disorder treatment teams by providing clear and accurate educational information about eating disorders. Effective communication among treatment team members is crucial for a patient's recovery; the longer an eating disorder persists, the more treatment-resistant it becomes, and the more it damages the brain and body (eg, heart and gastrointestinal conditions).

Educational content about eating disorders for health professionals could also help prevent these illnesses.^{41,42} Physicians often overlook warning signs of an eating disorder, particularly in children and athletes, because of miseducation about these disorders and/or not taking these illnesses seriously.^{43,44} Acknowledging signs of an eating disorder in children is important because eating disorders increase injury susceptibility and impact growth, brain development, and immune response. Physicians, therefore, need a more comprehensive understanding of eating disorders and disordered eating, specifically early warning signs (eg, lanugo body hair growth), common medical complications with eating disorders (eg, slow heart rate), biochemical markers of eating disorders (eg, low potassium levels), how to safely stabilize a patient with a chronic eating disorder, and how to define eating disorder recovery.

Finally, medical writers can help destigmatize eating disorders in the public sphere by interpreting emerging research about these illnesses for lay audiences. Important topics to write about include the underlying biology of eating disorders, emerging treatments, population-specific eating disorders (eg, different genders and ages), health consequences of eating disorders, obscure eating disorders (eg, ARFID), and recognizing subclinical eating disorder behavior (eg, inflexible eating). A challenge for medical writers communicating information about eating disorders to a nonexpert audience will be to acknowledge the limitations of the available information while maintaining credibility and authority. To accomplish these tasks, it will be essential for medical writers to dispel previous misconceptions about eating disorders and embrace the complexities of the evolving science.

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