

Enhancing Healthcare Provider Awareness and Early Detection of Adolescent Eating Disorder

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ABSTRACT

Eating disorders are mental health conditions characterized by abnormal eating or weight control behaviors, which can result in severe health complications and hinder overall wellbeing or social functioning. These disorders are acknowledged to stem from a combination of individual, genetic, and environmental factors, alongside societal pressure to maintain a thin physique. Research indicates that some young individuals with eating disorders may postpone seeking specialized care by concealing their symptoms due to a lack of awareness among healthcare providers and feelings of shame or stigma. Screening measures have been devised to mitigate the risk of underdiagnosing and inadequately treating eating disorders. Nevertheless, the prevalence of these disorders has doubled in recent years. Consequently, it is crucial to enhance healthcare providers' awareness of this issue, implement screening protocols in high-risk populations, and conduct annual assessments of adolescents' eating behaviors, body image perception, exercise habits, as part of psychosocial evaluations, alongside measurements of weight, height, and body mass index measurements during physical examinations, to facilitate early identification and intervention for adolescent eating disorders.

Keywords: Adolescent, eating disorders, anorexia nervosa, bulimia nervosa, avoidant/restrictive food intake disorder

INTRODUCTION

Eating disorders are psychiatric disorders characterized by aberrant eating or weight control behaviors, resulting in significant health complications (1). The most recent edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR), published by the American Psychiatric Association, categorizes eating disorders into various subtypes, including anorexia nervosa, avoidant/restrictive food intake disorder, binge eating disorder, bulimia nervosa, other specified feeding and eating disorders, unspecified feeding and eating disorders, pica, and rumination disorder (2). Among the most perilous mental health challenges, eating disorders are linked to premature mortality spanning 10–20 years (3). Notably, some children and adolescents with eating disorders may conceal primary symptoms, delaying the pursuit of specialized care due to feelings of shame or stigma (4). Given the risk of underdiagnosis and inadequate treatment of eating disorders, it is imperative to comprehend the scale of eating disorders through an epidemiological lens and ascertain their prevalence in vulnerable populations. Strategizing and executing

interventions for prevention, detection, and management of eating disorders are vital for addressing this escalating public health concern.

Epidemiology

The estimated lifetime occurrence of eating disorders is around 8% among females and 2% among males (5). The most prevalent eating disorders, listed in descending order, encompass other specified feeding and eating disorders, binge eating disorder, bulimia nervosa, and anorexia nervosa. An extensive examination of 94 studies on eating disorders published from 2000 to 2018 revealed a heightened incidence of these disorders in adolescents and young adults, with the point prevalence of all eating disorders doubling (5). A global study examining the lifetime occurrence of eating disorders among adolescents reported the following percentages: anorexia nervosa ranged from 0.8% to 6.3% among females and 0.1%–0.3% among males, bulimia nervosa from 0.8% to 2.6% among females and 0.1%–0.2% among males, binge eating disorder from 0.6% to 6.1% among females and 0.3%–0.7% among males, other specified feeding or eating disorders from

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0.6%–11.5% among females and 0.2%–0.3% among males, and unspecified feeding or eating disorders from 0.2%–4.7% among females and 0%–1.6% among males (6).

Given that eating disorders and symptoms peak during middle and late adolescence, understanding the prevalence of disordered eating among adolescents is vital (7). It is important to differentiate between disordered eating and eating disorders. Not every child or adolescent displaying disordered eating behaviors receives an eating disorder diagnosis. However, disordered eating during this phase can escalate to eating disorders in early adulthood. A systematic review and meta-analysis examining the global prevalence of disordered eating in children and adolescents revealed an overall prevalence of 22%, with higher rates observed among girls, adolescents in late puberty, and those with a higher body mass index (8).

Etiology

Eating disorders emerge through a multifaceted interaction of risk elements, encompassing individual, genetic, and environmental factors, alongside societal pressures emphasizing thinness (9). While genetic predispositions appear significant in anorexia nervosa, they also play a role in bulimia nervosa and binge eating disorder (10).

The origin of eating disorders may be linked to nonspecific risk factors like exposure to physical and/or sexual trauma, problematic parenting, and concurrent psychiatric conditions (11). Research indicates that individuals with eating disorders are roughly two to four times more prone to experience abuse, varying depending on the type of abuse, compared to healthy individuals (11). Nevertheless, the precise involvement of abuse as a predisposing vulnerability to eating disorders or its contribution to their initiation or worsening, remains unclear. The perpetuation of an eating disorder in an individual depends on factors such as conditioned learning, habit formation, and physiological and neurobiological complications arising from starvation or overeating behaviors (9).

Screening

Screening for eating disorders is crucial to enable early detection, aiming to prevent their oversight and persistence into later life stages (12). This screening should target individuals with a history of adverse childhood experiences and trauma, young adults, females, transgender individuals, athletes, and those exhibiting symptoms and signs indicative of eating disorders (such as rapid weight loss, bradycardia, amenorrhea, and preoccupation with food and appearance), as well as individuals with anxiety disorders, depressive disorders, and perfectionistic tendencies (12,13).

There is insufficient evidence to advocate for screening for eating disorders in individuals with a normal or high body mass index who lacks symptoms or signs of an eating disorder (13). Clinicians can conduct screening for eating disorders by inquiring whether the patient or their family has concerns regarding the patient’s weight, body shape, body image, or eating behaviors. Utilizing screening tests can aid in identifying

patients who warrant further evaluation (14). Table 1 outlines commonly utilized screening methods for diagnosing eating disorders (9).

Table 1: Screening methods used in eating disorder diagnosis

1. Sick Control One stone* Fat Food (SCOFF) *One stone 6,35 kg
2. Eating Disorder Screen for Primary Care (ESP)
3. Eating Attitudes Test (EAT)
4. Ch-EAT
5. Primary Care Evaluation of Mental Disorders Patient Health Questionnaire

*One stone: 6.35 kg

The SCOFF (Sick, Control, One, Fat, Food) questionnaire, comprising five questions, is widely employed as a screening tool for eating disorders (15). Clinicians administer the SCOFF questionnaire, which includes the following inquiries (16):

1. Do you induce vomiting because you feel uncomfortably full (S-sick)?
2. Do you fear losing control over your eating habits (C-control)?
3. Have you experienced a weight loss of more than one stone (6.35 kg) within a 3-month period (One stone)?
4. Do you perceive yourself as overweight despite others suggesting you are underweight (F-fat)?
5. Would you say that food significantly dominates your life (F-food)?

A test result is deemed positive if there are two or more affirmative responses. A positive outcome warrants further evaluation to establish or rule out a diagnosis (17).

Another screening tool is the Eating Disorder Screen for Primary Care (ESP) (18), which comprises a five-item questionnaire:

1. Are you content with your eating habits? (An answer of “No” is considered abnormal.)
2. Do you consume food in secret? (An affirmative response is deemed abnormal.)
3. Does your impact your self-perception? (An affirmative response is considered abnormal.)
4. Has any member of your family ever suffered from an eating disorder? (An affirmative response is deemed abnormal.)
5. Have you ever experienced or are currently experiencing an eating disorder? (An affirmative response is considered abnormal. A positive outcome is indicated by two or more “abnormal” responses.)

The Eating Attitudes Test (EAT) is a highly dependable self-report tool used to screen for eating disorders. Its short version,

the EAT-26, has been translated into numerous languages, validated across clinical and non-clinical populations, and employed in studies involving adolescents and adults globally. However, it is important to recognize that low scores on the EAT-26 should not necessarily exclude the possibility of an eating disorder, as individuals may deny or downplay their symptoms (19). Additionally, the Ch-EAT serves as a simplified version intended for children aged 8-13 (20).

The Primary Care Evaluation of Mental Disorders Patient Health Questionnaire aids in diagnosing bulimia nervosa, binge eating disorder, and other mental health conditions. Its eating disorder module consists of eight items and is tailored specifically for primary care environments (21).

Given this information, it is imperative to conduct annual assessments on all adolescents to appraise their eating behaviors, body image perception, exercise habits, as part of a psychosocial evaluation. Furthermore, incorporating weight, height, and body mass index measurements into physical examinations is crucial. This comprehensive approach may facilitate early detection and treatment of eating disorders, ultimately aiding in their prevention.

Anorexia Nervosa

Anorexia nervosa (AN) presents a formidable challenge as an eating disorder, often marked by recurrent relapses (22). Diagnosis follows the criteria outlined in the DSM-5, which include notably low body weight due to restricted energy intake, an intense fear of weight gain, persistent behaviors aimed at preventing weight gain, and disturbances in the perception of body weight or shape. Notably, individuals with AN may fail to acknowledge the seriousness of their low body weight (2). The disorder manifests in two subtypes: the restrictive type and the binge eating/purging type (9).

Restrictive type: Individuals achieve weight loss primarily through dieting, fasting, and/or excessive exercise over the preceding 3 months, without engaging in binge eating or purging episodes (9).

Binge eating/Purging type: Conversely, the binge eating/purging subtype entails repeated instances of excessive eating followed by purging behaviors, such as self-induced vomiting, misuse of laxatives, diuretics, or enemas over the same period (9).

Assessment of AN severity is typically based on the body mass index (BMI), although it may be adjusted based on clinical symptoms, level of functional impairment, and the need for supervision (9).

Mild: BMI \geq 17 kg/m²

Moderate: BMI 16–16.99 kg/m²

Severe: BMI 15–15.99 kg/m²

Extreme: BMI < 15 kg/m²

Epidemiology: AN exhibits significantly higher prevalence rates among females compared to males (9). The lifetime prevalence in the general population is roughly 12 times higher in females

than in males (1.42% in females and 0.12% in males) (23). A recent global study examining the lifetime prevalence of eating disorders found AN present in 0.8%–6.3% of females and 0.1%–0.3% of males among adolescents (7). Moreover, the frequency of AN in males appears to elevate compared to adults.

Etiology and Neurobiology: AN is characterized by a multifaceted etiology influenced by genetic and environmental factors. Genetic investigations, such as Genom-Wide Association Studies (GWAS), have revealed that genetic variants contribute to approximately 20% of AN cases (24). In a GWAS encompassing more than 16,000 cases from 17 countries, 8 loci on chromosomes 1, 3, 10, and 11 containing genes were confidently identified (25). AN exhibits a genetic predisposition that can heighten susceptibility to various psychiatric disorders, including anxiety disorders, obsessive-compulsive disorder, major depression, substance use disorders, and bulimia nervosa (26, 27). Moreover, sociocultural pressures emphasizing thinness, heightened concerns regarding body image, weight, dieting, exercise, and a family history of eating and weight control behaviors are recognized as risk factors for AN (28). Childhood maltreatment and abuse are strongly linked to psychiatric issues that contribute to the onset of AN. Additionally, low BMI and dieting behaviors are significant triggers for AN onset, with excessive exercise preceding dieting behaviors being a well-documented symptom (29). Gastrointestinal complications, such as early satiety, gastroparesis, gastrointestinal reflux, and constipation, arise due to the gradual compulsive nature of restrictive eating behaviors, the formation of abnormal eating habits, and alterations in hormones and neuropeptides, all of which contribute to the persistence of AN (30).

Numerous studies have provided evidence indicating alterations in both the structure and function of the brain in individuals with AN (31). Functional magnetic resonance imaging (fMRI) studies suggest that abnormal functioning in various brain regions may play a role in the initiation or perpetuation of AN (31). Individuals with AN often exhibit deficiencies in dopaminergic functions associated with eating behavior, motivation, and reward, as well as serotonergic functions linked to mood regulation, impulse control, and obsessive behaviors (31).

Medical Complications: AN can result in complications impacting almost all bodily systems due to weight loss and malnutrition. Nevertheless, with prompt and efficient treatment, many of these complications can be reversed (32). The medical ramifications induced by AN are detailed in Table 2 (9,32-35).

Avoidant/Restrictive Food Intake Disorder (ARFID)

ARFID is diagnosed according to DSM-5 criteria due to inadequate nutrition and/or energy intake stemming from limitations in the quantity or types of foods consumed. Negative experiences associated with food intake, such as choking, vomiting, or abdominal discomfort, along with aversions and revulsion toward sensory aspects of food, are the primary triggers for this disorder. ARFID manifests

Table 2: Medical complications of AN

Constitution/Physical	Cachexia, Low Body Mass Index, Growth Retardation, Hypothermia
Cardiovascular	Myocardial Atrophy, Mitral Valve Prolapse, Pericardial Effusion, Myocardial Fibrosis/Scar, Hypotension, Bradycardia, Increased PR Interval, First-Degree Heart Block, Long QT Syndrome, ST-T Wave Abnormalities in Electrocardiogram (EKG) Changes, Malignant Arrhythmia, Sudden Cardiac Death
Gynecological and Reproductive	Loss of Libido, Amenorrhea, Unplanned Pregnancy, Newborn Complications
Endocrine	Osteoporosis and Pathological Stress Fractures, Euthyroid Sick Syndrome, Hypercortisolism, Hypoglycemia, Neurogenic Diabetes Insipidus, Poor Diabetes Control
Gastrointestinal	Gastroparesis, Early Satiety, Gastric Distension, Gastric Perforation, Increased Colonic Transit Time, Constipation, Hepatitis, Superior Mesenteric Artery Syndrome, Diarrhea
Renal and Electrolyte	Glomerular Filtration Rate Reduction, Kidney Stones, Impaired Urine Concentration, Dehydration, Hypokalemia, Hypomagnesemia, Nephropathy
Pulmonary	Reduced lung capacity due to pulmonary muscle loss, respiratory failure, spontaneous pneumothorax and pneumomediastinum, peripheral lung unit expansion without alveolar septal damage, weakness of pharyngeal muscles, and coordination disorder leading to cough and aspiration pneumonia.
Hematologic	Anemia (Normocytic, Microcytic, Macrocytic), Leukopenia, Thrombocytopenia
Neurological	Cerebral Atrophy, Dilated Ventricles, Cognitive Impairment, Peripheral Neuropathy, Seizures
Dermatological	Xerosis (dry skin), lanugo hairs (fine, downy, dark-colored hairs), telogen effluvium (hair shedding), Acne, Carotenoderma (yellowing), Scars from self-harm behaviors (cuts and burns)
Muscular	Muscular atrophy, Pain in the muscles during activities such as climbing stairs, sitting and standing exercises, fatigue, slowing of movements, shortness of breath, and a decrease in muscle mass due to structural and functional changes in the muscles.
Vitamins and trace elements	Zinc, vitamin D, copper, selenium, vitamin B1, vitamin B12, vitamin B9 deficiency
Refeeding syndrome	It manifests with electrolyte imbalances, including hypophosphatemia (the most critical diagnostic marker), hypokalemia, hyponatremia, hypomagnesemia, fluid retention, vitamin deficiencies, and metabolic acidosis.

as growth impairment, failure to achieve expected weight gain, and the need for additional enteral feeding or oral nutritional supplementation, accompanied by disruptions in psychosocial functioning. Importantly, ARFID is not linked to a general medical condition or another psychiatric disorder, nor is it a consequence of food scarcity or culturally accepted practices (2). Given its recent delineation and diverse clinical manifestations, data on the prevalence, comorbidities, and trajectory of the disorder are limited. Nevertheless, it is noteworthy that ARFID exhibits a higher prevalence among males than females, distinguishing it from AN, bulimia nervosa, or binge eating disorder (36).

Etiology and Neurobiology: There is relatively limited information available regarding the underlying causes and neurobiology of ARFID. Gaining insight into the psychobiology of appetite and the role of food avoidance may offer understanding into its biological underpinnings (36). Unlike other eating disorders, the avoidance or restriction of food in ARFID is not driven by concerns related to weight or body shape. While individuals with AN typically avoid high-calorie, energy-dense foods due to fears of gaining weight, those with ARFID often display a preference of a restricted range of processed, calorie-dense, energy-dense foods. This preference leads to deficiencies in calorie and/or micronutrient intake, with the disorder being more severe than typical selective eating observed in children. Patients with ARFID often present as underweight, although the disorder can manifest at any

weight (37). Research indicates that individuals with ARFID commonly experience psychiatric comorbidities, such as anxiety disorders, panic disorder, attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder, mood disorders, and pica (36). Anxiety disorders are the most prevalent psychiatric comorbidities, with generalized anxiety disorder being the most commonly observed (37).

Medical Complications: Individuals with ARFID who have low weight are susceptible to medical complications associated with malnutrition, akin to those observed in individuals with AN. These complications may include cardiac, endocrine, and gastrointestinal issues (38). Such condition can result in impediments in growth and development, vomiting, and significant electrolyte imbalances.

Binge Eating Disorder (BED)

As per the diagnostic criteria outlined in the DSM-5, BED should be considered when there are recurrent episodes of excessive eating within a specific timeframe (e.g., 2 hours). These episodes entail consuming a larger quantity of food than is typical for most individuals under comparable circumstances within a similar timeframe, accompanied by a sense of loss of control over eating. The diagnosis of BED may be established when at least three of the following conditions are met during these episodes: eating more rapidly than usual, eating until uncomfortably full, consuming large amounts of food when not physically hungry, eating alone due to embarrassment over the amount consumed, and experiencing feelings of disgust,

depression, or guilt after overeating. Binge eating episodes in BED occur, on average, at least once a week for a duration of 3 months, with the severity of the disorder determined by the frequency of weekly binge eating episodes (Mild: 1–3 times, Moderate: 4–7 times, Severe: 8–13 times, Extreme: more than 14 episodes per week). Unlike AN and bulimia nervosa, BED typically does not involve compensatory behaviors such as purging, fasting, or excessive exercise (2).

Epidemiology: BED is more prevalent in females, with rates two to three times higher than in males (23,39). The lifetime prevalence of BED stands at 2.8% among women and 1% among men (5). Recent studies examining the lifetime prevalence of eating disorders among adolescents found BED to occur in 0.6%–6.1% of females and 0.3%–0.7% of males (6). While the prevalence of BED is typically highest in obese individuals, it can also manifest in those with normal weight. Rates of BED are notably elevated in individuals classified with Class III obesity (BMI ≥ 40 kg/m²), being approximately ten times higher compared to those with Class I obesity (BMI = 30–34.9 kg/m²) (39).

Etiology and Neurobiology: Genetic factors contribute to the development of BED, with twin studies estimating that genetic factors account for 39%–45% of the phenotypic variation (27). Alongside genetic influences, childhood maltreatment and abuse, which are linked to psychiatric problems, can contribute to the onset of BED. Neuroimaging studies utilizing cranial MRI in individuals with BED have identified structural and functional alterations in the brain (40).

Medical Complications: Individuals diagnosed with BED often experience psychosocial impairment, characterized by symptoms such as anger, dysphoria, difficulties in emotion regulation, and heightened impulsivity (41). Moreover, those with BED frequently report comorbid conditions such as unipolar major depression (66%), any anxiety disorder (59%), any personality or behavior disorder (56%), alcohol use disorder (52%), and post-traumatic stress disorder (32%), with frequencies surpassing those observed in the general population for each comorbid condition (42). Additionally, individuals with BED commonly encounter general medical issues such as musculoskeletal disorders, asthma and other respiratory ailments, chronic pain, and hypertension, which cannot be fully accounted for by comorbid obesity or psychiatric comorbidity (42).

Bulimia Nervosa

As per the diagnostic criteria outlined in the DSM-5, bulimia nervosa is characterized by recurrent episodes of binge eating and subsequent inappropriate compensatory behaviors aimed at preventing weight gain, occurring at least once a week over a span of 3 months (2). Binge eating involves consuming a larger quantity of food than is typical for most individuals within a similar timeframe and under similar circumstances. During these episodes, individuals experience a sense of loss of control over eating, an inability to halt consumption, and/or an inability to regulate the amount ingested. Inappropriate compensatory behaviors encompass self-induced vomiting, fasting, excessive exercise, and the misuse of laxatives, diuretics, enemas, or other medications to stave off weight gain. These inappropriate compensatory behaviors must occur, on

average, at least once a week for a duration of three months. The severity of the disorder is gauged based on the frequency of inappropriate compensatory behaviors:

Mild: 1–3 times per week on average

Moderate: 4–7 times per week on average

Severe: 8–13 times per week on average

Extreme: 14 or more times per week on average

However, the severity level may be adjusted in consideration of other symptoms and the extent of functional impairment (2).

Epidemiology: Research indicates that the lifetime prevalence of bulimia nervosa is notably higher in females than males, with estimates suggesting at least a threefold difference (5, 23, 39). In a global study examining the lifetime prevalence of eating disorders among adolescents, bulimia nervosa was identified in 0.8%–2.6% of females and 0.1%–0.2% of males (6).

Etiology and Neurobiology: The etiology of bulimia nervosa involves contributions from both genetic and environmental factors. Twin studies have revealed that genetic factors account for a phenotypic variation rate ranging from 28% to 83% (27). Sociocultural pressures promoting thinness, heightened concerns regarding body image and weight, engagement in diet and exercise, and a family history of eating and weight control behaviors are recognized as risk factors for bulimia nervosa (28). Moreover, childhood maltreatment and abuse, linked with psychiatric conditions, can also contribute to the development of bulimia nervosa. MRI studies have identified changes in brain structure and function in individuals with bulimia nervosa (43). These studies have highlighted changes in brain structure, particularly in frontal and temporoparietal areas, among individuals with bulimia nervosa. Additionally, alterations in hormones and neuropeptides such as ghrelin, leptin, and agouti-related peptide, are believed to play a role in the pathogenesis of the disorder (30).

Medical Complications: Individuals diagnosed with bulimia nervosa should undergo evaluation for various medical complications resulting from inappropriate compensatory behaviors. These complications encompass dehydration, hypokalemia, electrocardiogram abnormalities, menstrual irregularities, esophagitis, Mallory-Weiss syndrome, gastric dilation, ipeca-induced cardiomyopathy, other myopathic disorders, mitral valve prolapse, cardiac conduction abnormalities, swelling of salivary glands, and the risk of enamel erosion on teeth (44).

Pica

Pica is a feeding disorder characterized by the repetitive consumption of non-nutritive, non-food substances, such as cloth, dirt, gum, hair, metal, paint, paper, or soap persisting for at least 1 month. This eating behavior is deemed inappropriate for the individual's developmental stage, lacks cultural support, and is socially abnormal. It is essential to distinguish pica from non-suicidal self-injury behaviors, where potentially harmful objects like batteries, knives, or needles are ingested (2).

Etiology and Neurobiology: Factors such as neglect, developmental delays, heightened stress levels, and varying levels of anxiety contribute to the onset of pica (45).

Medical Complications: Pica is linked with a heightened prevalence of eating disorder pathology, encompassing body dissatisfaction, fear of weight gain, food restriction, and behaviors like excessive eating or purging. Moreover, individuals exhibiting pronounced pica symptoms are more prone to displaying symptoms associated with ARFID (46).

Rumination Disorder

Rumination disorder is a functional condition characterized by the involuntary regurgitation of recently ingested food following most meals. The regurgitated material is either expelled or swallowed again. This disorder involves the effortless and repetitive expulsion of recently eaten food, which may be chewed again, re-swallowed, or expelled. It persists for a minimum of one month and is not associated with regurgitation stemming from gastroesophageal reflux, postviral gastroparesis, or any other medical condition (2).

Epidemiology: The precise prevalence and incidence rates of rumination disorder remain uncertain (47). In an examination utilizing the Eating Disturbances in Youth Questionnaire (EDY-Q) to evaluate eating disorders in adolescents, rumination disorder's prevalence was reported at 9.7%, while pica disorder was observed in 10%, and the co-occurrence of rumination and pica disorders was noted at 3.1%. With a cutoff score of 4, isolated cases of rumination disorder were detected in 1.7%, isolated pica disorder in 3.8%, and concurrent rumination and pica disorders in 1.1%. Symptoms indicative of ARFID were also found among individuals with rumination disorder and pica disorder (46).

Etiology and Neurobiology: Although the precise cause remains unclear, rumination disorder is thought to stem from an unconsciously acquired behavioral issue involving deliberate diaphragmatic relaxation (47).

Complications: Rumination disorder may lead to complications such as esophagitis or weight loss and can also result in distress and functional impairment (47).

Other Specified Feeding or Eating Disorder

The diagnosis of other specified feeding or eating disorder (OSFED) is applied to individuals exhibiting symptoms of an eating disorder that lead to significant distress or impairment in psychosocial functioning but do not fulfill criteria for a specific eating disorder (2). Silen et al. identified instances of OSFED among adolescents, with prevalence rates ranging from 0.6% to 11.5% in females and 0.2% to 0.3% in males (6).

Atypical Anorexia Nervosa: Atypical AN are mirrors all criteria for AN except for a BMI falling between 18.5 kg/m² and <25 kg/m². In a randomized study employing meal-based treatment for weight restoration in hospitalized patients, it was observed that individuals with atypical anorexia nervosa displayed higher levels of eating disorder psychopathology compared to those with AN. Additionally, they exhibited lower heart rates, more

substantial weight loss, and lower serum phosphate levels. Medical risk in both atypical AN and AN was associated with recent rates of weight loss and the duration of loss (48).

Low-Frequency and/or Limited Duration bulimia nervosa: This classification applies when there are occurrences of binge eating and inappropriate compensatory behaviors characteristic of bulimia nervosa, but these episodes happen less frequently than once a week and/or persist for fewer than 3 months (2).

Low-Frequency and/or Limited Duration BED: This designation is assigned when an individual meets all criteria for BED except for the frequency, which happens less often than once a week and/or continues for less than 3 months (2).

Purging Disorder: Purging disorder is diagnosed when there is no binge eating, but inappropriate compensatory behaviors like self-induced vomiting, misuse of laxatives, enemas, or diuretics are employed to alter body weight and shape (2).

Night Eating Syndrome: Night eating syndrome is identified when episodes of eating occur after waking from sleep or involve excessive eating after the evening meal, and these cannot be accounted for by changes in the sleep-wake cycle, medication effects, other eating disorders, substance use disorders, or general medical conditions (2).

Unspecified Feeding or Eating Disorder

The diagnosis of unspecified feeding or eating disorder (UFED) applies to individuals exhibiting symptoms of an eating disorder that result in significant distress or impairment in psychosocial functioning but do not fulfill all the criteria for a specific eating disorder (2). This diagnosis utilized when there is insufficient information to specify the reasons for not meeting all criteria for a particular eating disorder, particularly in situations such as emergency settings where there may be inadequate information for a definitive diagnosis. Silen et al. identified instances of UFED among adolescents, with prevalence rates ranging from 0.2% to 4.7% in females and from 0% to 1.6% in males (6).

CONCLUSION AND RECOMMENDATIONS

Eating disorders encompass a range of mental health conditions that pose significant risks to physical health and disrupt psychosocial functioning. Recent research indicates a doubling in the prevalence of these disorders. Disordered eating patterns during adolescence heighten the likelihood of developing eating disorders that persist into adulthood. Healthcare providers' lack of awareness about eating disorders, coupled with individuals' tendency to conceal symptoms due to shame or stigma, can result in inadequate diagnosis through screening tests and hinder effective treatment. Factors contributing to the development of eating disorders include societal pressures regarding body image, experiences of childhood maltreatment and abuse, heightened sensitivity to weight concerns, familial attitudes toward eating and weight control behaviors, dietary restrictions, and exercise practices. Raising awareness about these risk factors is crucial. Adopting

an epidemiological approach is essential for understanding the scope and distribution of eating disorders among at-risk populations, enabling the implementation of targeted interventions. Furthermore, conducting annual evaluations of adolescents, including assessments of eating habits, body image perceptions, exercise routines, and measurements of weight, height, and BMI during psychosocial and physical examinations, is vital for early detection and intervention in eating disorders.

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