

## PAEDIATRIC EATING DISORDERS: UNDERSTANDING AND ADDRESSING THE CHALLENGES

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### ABSTRACT

**Paediatric eating disorders are a complex and alarming phenomenon that can have severe consequences on a child's physical, emotional, and social well-being. These disorders encompass a range of conditions characterised by disturbed eating patterns and a distorted perception of body weight and shape. It is crucial to recognise and address paediatric eating disorders promptly to ensure early intervention, proper treatment, and long-term recovery. We will review various types of paediatric eating disorders, their causes, potential complications, and the importance of a comprehensive approach to their management.**

**Keywords: Eating Disorders, Diagnosis, Management, Complications**

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### INTRODUCTION

Eating Disorders (EDs) are psychological disorders characterised by persistent and often severe disturbances in eating behaviours. They can potentially affect an individual's physical, psychological, and social wellbeing. People with EDs can develop an unhealthy obsession with food, body shape, weight, or size. The onset of these disorders typically happens during the period of adolescence, which is the age between 10 and 19 years. This is a very critical period in a person's development, when a good number of biological growth and major social role transitions take place. This is the period of transition from childhood to adulthood. During this period, the body undergoes numerous physical changes due to pubertal hormonal influences. Adolescents experience tremendous amounts of academic, emotional, and social stress due to these rapid changes. Certain psychological factors like low self-esteem, feelings of helplessness, and intense body dissatisfaction may predispose adolescents to development of EDs.

Several studies have shown the rising prevalence of EDs in the United States and Western Europe, but some recent studies indicate that EDs are also increasing in Asia. Over the past three decades, EDs have steadily increased across Asian countries.<sup>4</sup>

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### TYPES OF EATING DISORDERS

The DSM-5 (Diagnostic & Statistical Manual of Mental Disorders, Fifth Edition) lists eating disorders (EDs) under the category of "Feeding & Eating Disorders".<sup>1</sup> The types listed include eight feeding and eating disorders with specific criteria and symptoms.

- 1. Anorexia Nervosa (AN):** This disorder is characterised by an intense fear of gaining weight or becoming fat, leading to severe food restriction and extreme weight loss. Children with anorexia nervosa often have a distorted body image, perceiving themselves as overweight even when they are underweight. AN is the most commonly diagnosed ED in paediatric patients coming to hospital for treatment in Singapore.<sup>2</sup>
- 2. Bulimia Nervosa (BN):** BN involves recurrent episodes of binge eating followed by compensatory behaviours such as self-induced vomiting, excessive exercise, or the misuse of laxatives. Children with BN typically maintain a relatively normal weight, which may make it more challenging to identify the disorder.
- 3. Avoidant/Restrictive Food Intake Disorder (ARFID):** ARFID is characterised by an avoidance or restriction of food intake that results in inadequate nutrition and weight loss. Children with ARFID often exhibit extreme selectivity in food choices based on sensory characteristics, fear of aversive consequences, or a lack of interest in eating. These children do not have distorted body image.
- 4. Binge Eating Disorder (BED):** This disorder involves recurrent episodes of consuming large amounts of food within a discrete period, accompanied by a sense of loss of control. Unlike BN, there are no compensatory behaviours to counteract the excessive intake of food. BED is probably the most common eating disorder in the community and an important cause of obesity.
- 5. Rumination Disorder:** This condition involves regular regurgitation of food and the regurgitated food may be re-chewed, re-swallowed, or spit out.
- 6. Pica:** This disorder involves an individual eating one or more non-nutritive, non-food substance on a persistent basis. Eating non-nutritive, non-food substances must be inappropriate to the developmental level of the individual and not part of a culturally supported or socially normative practice.
- 7. Other Specified Feeding or Eating Disorders (OSFED):** This refers to situations where a person has clinically significant feeding and eating disorder symptoms but does not meet the full criteria for another diagnostic category.

## 8. Unspecified Feeding or Eating Disorders (UFED):

These are often diagnosed when the symptoms presented do not meet the specific criteria for a known disorder.

**Orthorexia Nervosa** is not formally in the DSM-5 classification of EDs due to lack of a validated standardised diagnostic criteria. It is characterised by habits such as extreme exercise and obsession with eating what is perceived to be “healthy” foods. People with Orthorexia Nervosa reject any food that is perceived as unhealthy such as food with oil, butter, carbohydrates, etc. The severe restrictive nature of Orthorexia Nervosa has the potential to transform into Anorexia Nervosa over time.

### CAUSES AND RISK FACTORS

Paediatric eating disorders arise from a combination of genetic, environmental, psychological, and socio-cultural factors. EDs are about 10 times more common in girls than in boys. While the exact causes are not fully understood, the following risk factors may contribute to their development:

#### Genetics

A family history of EDs or mental health conditions can increase the likelihood of a child developing an eating disorder. There is a 56 percent chance of developing EDs genetically if family members have the disorder. Studies have shown that individuals whose parents or siblings have AN have a twelvefold higher risk of developing AN when compared to those without a family history.

#### Psychological Factors

A close association has been established between depression, anxiety, and stress with disordered eating habits. Low self-esteem, perfectionism, and a preoccupation with body image can contribute to the development of paediatric eating disorders.

#### Socio-cultural Influences

Societal pressure, media portrayal of unrealistic body ideals, and a focus on thinness as a measure of beauty can significantly impact a child's body image perception and self-worth. Success and worth are often equated with slimness. Society is constantly bombarded with images of thinness, which some teenagers find irresistible, though it is unattainable, unrealistic, and unhealthy. This produces a feeling of body dissatisfaction, which later leads to EDs.<sup>3</sup> The emergence of EDs in Asia over the past three decades illuminates the complex interplay between social and cultural factors.<sup>4</sup>

#### Traumatic Experiences

Children who have experienced trauma, such as bullying, sexual abuse, parental divorce, or stressful events such as death in the family may be at a higher risk of developing eating disorders as a coping mechanism. Sometimes even

an unintended comment by someone about the person's appearance may trigger this disorder. Bullying can lead to social isolation, poor body image, and low self-esteem, and has also been shown to be an important factor in the development of EDs in children.<sup>5</sup>

Certain personality traits make some people more susceptible to EDs.<sup>6</sup> Perfectionistic traits are known associations seen in individuals with EDs. People with these traits usually set unrealistically high expectations for themselves. EDs are commonly seen in students who are high achievers and are academically very focused.

### COMPLICATIONS AND CONSEQUENCES

Paediatric eating disorders can have severe consequences on a child's physical and emotional well-being, as well as their social functioning. Some potential complications include:

#### Malnutrition and Growth Impairment

Inadequate intake of calories and essential nutrients can lead to stunted growth, delayed sexual development, and compromised organ function. Almost every organ system in the body can get affected due to malnutrition.

#### Medical Complications

EDs can cause cardiovascular complications like bradycardia and hypotension. Other problems are electrolyte imbalances, osteoporosis, digestive problems, and hormonal disturbances. Most of these complications resolve with nutritional rehabilitation and weight restoration. Some of them may sometimes become irreversible, e.g., growth retardation, structural brain changes, and low bone density.

#### Psychiatric Comorbidities

Children with EDs are at a higher risk of developing other mental health conditions such as depression, anxiety, and obsessive-compulsive disorder. About 50 percent of the paediatric patients with EDs will have an associated psychiatric disorder. While patients with AN commonly have associated depression, OCD, and mood/bipolar disorders, patients with BN are more likely to have substance abuse and suicide ideations. A small but important minority will have comorbid autism spectrum disorder, especially the patients with ARFID.

#### Impaired Cognitive Function

Malnutrition and inadequate nutrient intake can negatively impact a child's cognitive abilities, memory, concentration, and overall academic performance.

Patients with EDs have the highest mortality rates of any psychiatric disorder. The risk of premature death is 6-12 times higher in AN as compared to the general population, adjusting for age. Medical complications related to malnutrition and refeeding syndrome are the leading cause of death among patients with EDs; suicide is the other important cause.

Paediatric AN usually has a protracted course. Twenty percent of patients might have a chronic eating disorder, whereas 65 percent might achieve full recovery and the remainder have partial recovery.<sup>7</sup> Early diagnosis and treatment of comorbid conditions is important for a better outcome. Earlier age of onset, shorter duration of illness, and better parent-child relationship make the prognosis better. Purging behaviour, physical hyperactivity, significant weight loss and disease chronicity make the prognosis poor.

## COMPREHENSIVE APPROACH TO MANAGEMENT

Addressing paediatric eating disorders requires a multi-disciplinary and holistic approach involving healthcare professionals, mental health specialists, and the child's family. Key aspects of management include:

### Early Intervention

Timely recognition and intervention are crucial for successful treatment outcomes. Healthcare providers, educators, and parents should be educated about the early warning signs and symptoms of eating disorders to facilitate early detection.

### Medical Stabilisation

Medically unstable patients will require inpatient stabilisation. Initial treatment focuses on stabilising the child's physical health through nutritional rehabilitation, weight restoration, and monitoring of vital signs and laboratory parameters. Refeeding syndrome is a potentially fatal condition that can develop during nutritional rehabilitation. The most important biochemical change is hypophosphatemia. Identifying refeeding syndrome and appropriate management is very important during initial weight restoration. Targets for weekly weight gain are generally 0.5-1 kg in the inpatient setting and 0.5 kg in outpatient setting.

### Pharmacotherapy

Numerous medications are being used off-label for treating symptoms of EDs and their co-morbid psychiatric conditions, particularly SSRIs and atypical anti-psychotics. Medications are generally useful for patients with BN and BED. Fluoxetine at a dose of 60 mg daily may be useful in reducing bingeing and purging episodes.<sup>8</sup>

### Psychotherapy

Psychotherapy, such as Cognitive-Behavioural Therapy (CBT), can help children address the underlying psychological factors contributing to their eating disorder, challenge distorted thoughts, and develop healthier coping mechanisms. Family Based Therapy (FBT) has emerged as the first-line treatment for paediatric patients with Anorexia Nervosa.<sup>9</sup> A study from Singapore has shown that FBT improved patient outcomes in AN by inducing faster remission.<sup>10</sup>

## Nutritional Counselling

Dietitians trained in treating patients with EDs play a vital role in developing a structured and balanced meal plan that meets the child's nutritional needs while addressing their specific eating disorder.

## Family Involvement

Involving the child's family in treatment can enhance understanding and support, and facilitate long-term recovery. Family-based treatment approaches empower parents to assist in their child's meal planning and offer emotional support.

## CONCLUSION

Paediatric eating disorders are complex conditions that require a comprehensive approach to management. Early recognition, intervention, and a multi-disciplinary treatment plan involving healthcare professionals such as a psychiatrist, adolescent physician, dietitian, psychologist, etc and the patient's family members are crucial for optimal outcomes. By addressing the physical, psychological, and social aspects of these disorders, we can help children regain their health, well-being, and a positive relationship with food and their bodies. Controlled exposure to social media, promoting healthy eating habits, fostering self-esteem, providing family support, and detecting early features of EDs are helpful in mitigating the rising trends of EDs in our population. It is imperative to create awareness, promote prevention strategies, and support affected children and their families to foster a society that prioritises the well-being of our younger generation.

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**LEARNING POINTS**

- **Eating disorders are complex psychiatric conditions and can affect a child's physical, emotional, and social well-being. Children should be diagnosed and managed early to reduce medical and psychological complications. Early intervention leads to faster remission.**
  - **Primary care physicians should screen all adolescents for early signs of eating disorders and suspected patients should be sent for assessment by multi-disciplinary teams. Medically unstable patients may need hospitalisation.**
  - **Preventive efforts such as advocating for a healthy body image and lifestyle are more helpful than blanket advice about weight loss in overweight children and adolescents. Establishing family involvement and support for the child is crucial for ensuring better outcomes.**
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