

Evolution of Pediatric Feeding Disorders

Kimberly Brown*

Kimberly Brown PhD, Psychological Services, PLLC, Rochester, NY, USA

ABSTRACT

Feeding difficulties have not been well defined over the last 50 years, causing lack of early identification, fragmented care, and difficulty obtaining services. Medical diagnoses have advanced from Failure to Thrive (FTT), Feeding Difficulties and Mismanagement, and most recently, Pediatric Feeding Disorders (PFD). Psychiatric diagnoses have evolved from Feeding Disorder of Infancy and Early Childhood (similar to FTT) and Avoidant Restrictive Food Intake Disorder (ARFID). Occupational therapists and Speech Language Pathologists use different diagnoses codes to treat Feeding Disorders (e.g., sensory integration disorder, dysphagia). It is important to increase consensus and understanding of these disorders, improve early identification, and accurate diagnosis. This paper describes diagnostic criteria and assessment questions for pediatricians and other professionals to more quickly identify PFD's and provide early intervention.

Keywords: Pediatric Feeding Disorders, Avoidant Restrictive Food Intake Disorder

INTRODUCTION

Pediatric Feeding Disorders cause significant stress for families and children of all ages and neurodevelopmental levels. In the last 10 years, we have made advancements in the diagnosis and treatment of feeding disorders, from Failure to Thrive (FTT), feeding difficulties and mismanagement, a psychological diagnosis (Avoidant Restrictive Food Intake Disorder (ARFID) [1], into a more formal feeding diagnosis (Pediatric Feeding Disorder PFD) [2]. With some suggesting that PFD has become just as prevalent as Autism Spectrum Disorders [3], It is important to review the history of these diagnoses to help us accurately provide interventions for children and families.

BACKGROUND

In the Twentieth Century, Failure to Thrive (FTT) was the most common feeding disorder addressed along with feeding skill delays in children with genetic syndromes (e.g., Down Syndrome, Cerebral Palsy). Failure to thrive, when divided into Organic vs Non-Organic categories, blamed parents for being unable to help their child grow. Hospital admissions for FTT often included removing the parents from mealtimes and having nursing staff feed the children. If children grew and gained weight when non-family members fed them, they were often placed in foster care. Even recent studies show that social work intervention for FTT continues [4].

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*Corresponding Author

Dr. Kimberly Brown, PhD

Psychological Services, PLLC, Rochester, NY, USA,

Phone: 585-210-2332,

Emails: mealtimerediscovered@gmail.com;

kim.gator92@gmail.com

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In 1993, Ramsey et al [5] conducted a study to address both parent and child characteristics associated with mealtimes to determine if parental interactions were causing feeding problems. They compared parent child dyads who were diagnosed with organic vs nonorganic FTT. They conducted questionnaires, interviews and mealtime observations. The authors looked at child temperament, parent child interactions, length of mealtimes, texture preferences, and food refusal to determine differences between the two groups. Results indicated that both groups of children displayed equal amounts of food refusal behavior, and parents in both groups displayed both positive and negative interactions during mealtimes. Thus there was no credible causal impact of parent behavior on the child's feeding. (This of course excludes purposeful withholding of food or lack of food in the home.) The difficulty for psychologists managing feeding difficulties during this time, was the psychological diagnosis for feeding difficulties was FTT. They could only treat children with faltering growth, even though many children with feeding difficulties have average weight.

Feeding difficulties and mismanagement is another broad medical diagnosis that can include multiple causes across medical issues like dependence on enteral feedings, poor oral intake, faltering growth, behavioral food refusal, and failure to move across the developmental food continuum. With no specific definitions in this diagnosis, there has been no consensus on appropriate criteria for this diagnosis. This ICD-9 diagnosis has been replaced by PFD in the ICD-10.

ARFID was added to the Diagnostic and Statistical Manual 5 [6] in 2013 (updated to DSM – 5-TR in 2022) to replace Feeding Disorder of Infancy and Childhood [7]. It is a primarily psychosocial diagnosis but includes several medical/nutritional indices, and only requires one to result in the diagnosis:

1. Significant weight loss or faltering growth (only criteria that remains from the DSM IV)
2. Significant nutritional deficiencies (added)
3. Dependence on enteral supplements (added)
4. Marked interference with psychosocial functioning (added)

It looks at three behavioral characteristics of ARFID:

1. Lack of interest in food or eating
2. Avoidance based on sensory characteristics of food
3. Concerns about aversive consequences of eating

Exclusionary criteria include:

1. Children diagnosed with eating disorders.

2. Feeding difficulties resulting from lack of food or cultural practices
3. Feeding difficulties resulting primarily from another mental health disorder
4. Medical conditions responsible for feeding difficulties, unless feeding issues surpass what is typically associated with that medical condition.

This is a substantial improvement for psychologists who work with children with PFD, moving away from a diagnosis primarily related to weight loss/faltering growth to address the specific behaviors seen in children with ARFID. These behaviors include food selectivity, food refusal, and difficulty sitting. There have been some concerns cited by others with this diagnosis in relation to exclusionary criteria. First, ARFID was placed in the DSM 5 (and 5-TR) in the same chapter as eating disorders. This has led some to assume that ARFID is an eating disorder. Psychologists, psychiatrists and other professionals in Adolescent Medicine are now addressing ARFID using typical eating disorder treatments [8], which may or may not be applicable to ARFID. Second, some have argued that ARFID completely excludes any children with feeding difficulties who have co-occurring medical issues, because there is not wide enough evidence as to what is typical for any medical issue related to feeding difficulties (e.g., reflux, eosinophilic esophagitis) [9, 10]. The DSM 5-TR [1] does allow for some medical conditions to occur as long as the feeding difficulty exceeds what is typically seen for that medical disorder. Best practices in PFD/ARFID dictate that all medical issues be addressed and/or ruled out prior to behavioral intervention. Often, children with reflux or constipation are treated medically but continue to display severe feeding issues. In this situation, ARFID could be diagnosed as long as the above diagnostic criteria are met. However, children in this situation should also be assessed for PFD for accurate diagnosis.

Pediatric Feeding Disorders are complex and often require collaborative care across multiple disciplines. However, ARFID can only be provided by psychologists and medical providers experienced with PFD. Advancing to a formal diagnosis of PFD was a major achievement. Pediatric Feeding Disorders were introduced into the ICD 10 in 2021, replacing "Feeding Difficulties – R63.9." The consensus paper by Goday et al [2] provided more information to adequately group and define PFD. The diagnostic criteria include:

- A. A disturbance in oral intake of nutrients, inappropriate for age, lasting at least 2 weeks and association with 1 or more of the following: medical, nutritional, feeding skills, and/or psychosocial dysfunction

B. Absence of the cognitive processes consistent with eating disorders, and the pattern of oral intake is not due to a lack of food or congruent with cultural norms.

It recognizes four categories of feeding difficulties: medical, nutritional, feeding skill delays/deficits, and psychosocial factors. The inclusion of feeding skill delays/deficits (e.g., delayed oral motor skills) is a major improvement, as it was not included in the ARFID diagnosis and feeding difficulties was a very broad diagnosis. It is important to note that children with oral motor delays may also show signs of ARFID. If the child's only issues are improving oral motor skills, and there are no psychosocial issues, food refusal, or other behavioral concerns, ARFID is likely not the best diagnosis. ARFID is considered a PFD, but PFD's are not necessarily ARFID.

METHODOLOGY

Understanding the difference between the two as feeding disorders, apart from typical "picky eating" can help lead to earlier identification and intervention. Many parents with children who have PFD's report that their early requests for help went unnoticed or were brushed aside. Things they were told include:

"They will grow out of it."

"Their weight is fine/average."

"Feed them what you feed the family. They will get hungry enough to eat."

This may be the case for children who are "picky," but not for children with diagnosable feeding disorders. It is important for primary care physicians to look for certain early warning signs that feeding problems may be more worrisome than typical picky eating. Looking for these warning signs and asking specific questions can help with early identification and intervention.

1. Difficulty with feeding in the first 6 months of life: Infants who display trouble latching, frequent vomiting (beyond typical spit up), need for multiple formula changes, faltering growth, and lack of interest in eating.
2. Child appears uncomfortable during feeding, arching back, crying, rejecting breast or bottle
3. Difficulty with feeding between 6-12 months of life: There is a critical/sensitive period [11] for learning oral motor skills between 6-12 months of life. Smooth purees should be started at 6 months (as recommended by the American Academy of Pediatrics), shortly after the tongue thrust reflex has decreased (typically around 4-6 months). Finely chopped soft foods and meltable solids should be given and accepted by 12 months of age.

a. Hypersensitive gag reflex: Some children display a hypersensitive gag reflex when chunky or soft solids are introduced. Parents may delay onset of solids due to the gag or refusal from the child when the solids are introduced. When the critical/sensitive period for learning to chew is missed, these children have a harder time moving forward with solids. When these texture preferences for purees and refusal for any higher textures remain past 18-24 months, feeding disorders should be considered.

b. Eosinophilic Esophagitis (EoE): It is also becoming more likely that children who stay on purees and/or liquids past 3 years of age, may be restricting by texture due to difficulties with swallowing [12]. This has been seen more frequently in children with Autism Spectrum Disorders (ASD). This has often been viewed as a characteristic of feeding disorders related to ASD and missed as a medical diagnosis. A thorough parent interview, mealtime observation and a GI/Allergy evaluation (including endoscopy with multiple biopsies) is the best way to determine if EoE is the cause of the failure to move across the developmental food continuum.

1. Premature Infants: Most preterm infants have delays in feeding, due to need for enteral feeding early on. Starting feeding according to typical developmental milestones may need to be corrected to account for number of weeks of prematurity. These infants can make progress, but close monitoring of their feeding and development is critical to acquisition of oral motor skills.
2. Medical concerns: Children who display any difficulties with dysphagia, aspiration, gastroesophageal reflux disease, food allergies, esophageal atresia, laryngeal clefts, and other ENT disorders. We always evaluate any medical concerns first before doing any behavioral feeding therapy.
3. Strong feeding preferences: Some children show early signs of extreme specificity that should be monitored. Only feeding from one bottle of a specific shape and color, and only one nipple (or not allowing for a new nipple). Only wanting specific brands, colors, or types of foods are indicators that a feeding disorder may be present.
4. High levels of food refusal: Food refusal may result from a variety of factors, including medical, sensory, behavioral, temperament, and parent-child interactions. While some toddlers eat one good meal a day [13] their energy intake often evens out across the day. However, frequent food refusal is very disruptive at mealtimes and stressful for families.

5. Strong sensory reactions: Interacting with food is a high sensory activity, including all our senses. Children who display strong reactions to look, smell, and tactile interactions with food are prevalent in children with feeding disorders. These children also show strong reactions to other situations, like clothing, grass and water.

DISCUSSION

When these issues are reviewed we can more accurately define feeding disorders and provide families with earlier intervention for these issues. We now know that many things interfere with a child's ability to feed normally, including prematurity, reflux, constipation, allergies, gagging, delayed onset of solids, and child temperament, just to name a few. Having both diagnoses of ARFID and PFD has provided professionals with more accurate criteria to make early identification of feeding issues. Individuals are working on developing a short screening method for pediatricians [14], though widespread distribution has not been made. In addition, professionals remain in silos across disciplines and there is no formal educational pathway for professionals to learn about all four domains of PFD. At the recent International Pediatric Feeding Disorders Conference, sponsored by Feeding Matters, these issues were discussed and consensus groups are being formed to address these concerns.

CONCLUSION

Pediatric Feeding Disorders are becoming more recognized and an improved consensus diagnosis has been made. With the complexity of PFD, multiple disciplines must work together to identify children at risk at younger ages to provide more comprehensive interventions. Pediatricians are on the front line and often see these children before specialists do. Better screening will lead to improved outcomes, and the field is working on making this information more widely known. More work needs to be done, including larger scale research studies, so coordinated care can be provided to children with PFD, as seen in other medical disorders (e.g., diabetes, asthma).

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CONFLICT OF INTEREST

I have no financial conflicts of interest to disclose.

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