

Case Study

More than Picky Eating: Cause-Specific Interventions for Feeding Problems in Indian Children with Autism Spectrum Disorder

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ABSTRACT

Feeding difficulties are frequently observed in children with Autism Spectrum Disorder (ASD) and can severely impact their nutritional status, developmental progress, and family dynamics. Misinterpretation of such issues as mere picky eating often delays appropriate intervention. This paper explores the multifactorial causes of eating problems in autistic children and demonstrates how cause-specific interventions tailored to the child's underlying difficulties can lead to meaningful improvements. Through two Indian case studies, we illustrate how sensory sensitivities and food intolerances were addressed through occupational therapy and dietary management. A comprehensive literature review highlights both global and Indian findings on feeding problems in autism. The findings underscore the need for greater awareness and culturally informed therapeutic practices in India.

Keywords: *Autism Spectrum Disorder, Feeding Problems, Cause-Specific Interventions, Occupational Therapy, Sensory Processing, India*

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition characterized by persistent deficits in social communication and interaction, along with restricted, repetitive patterns of behavior, interests, or activities (American Psychiatric Association, 2013). Among the wide array of challenges faced by children with ASD, feeding difficulties are notably prevalent. These issues often extend beyond common picky eating and include severe food selectivity, texture or temperature aversion, refusal to eat, prolonged mealtime durations, and food-related anxiety (Kodak & Piazza, 2008; Matson & Fodstad, 2009). Such challenges are multidimensional in nature, rooted in a confluence of physiological, sensory, behavioral, and environmental influences (Sharp et al., 2013).

The global prevalence of feeding difficulties in children with ASD is estimated to range between 46% and 89%, depending on diagnostic criteria and methodological approaches (Ledford & Gast, 2006; Cermak et al., 2010). These rates are significantly higher than in typically developing children, where feeding issues are reported in approximately 25–35% of cases. Studies show that children with ASD are five times more likely to exhibit mealtime problems than their neurotypical peers (Bandini et al., 2010).

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In India, while large-scale epidemiological studies on feeding behaviors in autistic populations are lacking, clinical observations and case reports suggest similar or even higher prevalence due to diagnostic delays, cultural misinterpretations, and limited access to multidisciplinary services (Rudra et al., 2017; Chakrabarti, 2023). Feeding difficulties are often viewed through a behavioral or parenting lens, leading to oversimplification of the issue as "picky eating" or defiance, especially in rural and semi-urban contexts. Such misinterpretations impede timely intervention and can exacerbate nutritional deficiencies, parental stress, and negative feeding dynamics.

Further complicating the issue is the limited availability of culturally sensitive assessment tools tailored to the Indian context. Most feeding assessment frameworks are developed in Western settings and do not adequately reflect the diversity in dietary habits, family structures, or environmental conditions in India (Narayan et al., 2021). Moreover, paediatricians, therapists, and early childhood educators often lack specialized training in feeding disorders, resulting in missed opportunities for early support.

Given the heterogeneous etiology of feeding difficulties in children with ASD, a standardized intervention model is rarely effective. Effective management requires an individualized, cause-specific approach guided by comprehensive assessment and interdisciplinary collaboration (Cermak et al., 2010; Volkert & Vaz, 2010). This paper aims to contribute to the emerging discourse on feeding problems in autism by presenting two clinical case studies from India, each illustrating distinct underlying causes and successful intervention strategies tailored to those causes.

The intervention strategies explored in this paper are informed by two foundational frameworks: **Sensory Integration Theory** and **Applied Behavior Analysis (ABA)**. These perspectives offer complementary insights into the sensory-behavioral underpinnings of feeding difficulties in children with Autism Spectrum Disorder (ASD), guiding the development of individualized therapeutic approaches.

Sensory Integration Theory, developed by A. Jean Ayres (1972), proposes that the ability to process and integrate sensory information from the environment is critical to producing adaptive responses. When this sensory processing is disrupted—as is frequently observed in children with ASD—it can result in atypical responses, including food aversions related to texture, temperature, smell, or appearance (Cermak et al., 2010; Lane et al., 2014).

Interventions based on sensory integration emphasize **graded exposure and systematic desensitization**, allowing children to gradually tolerate non-preferred textures or flavors. Occupational therapists often integrate **oral-motor play, tactile exploration, and deep pressure stimulation** to improve sensory regulation and prepare children for food-related tasks (Baranek, 2002; Dunn, 2001).

Applied Behavior Analysis (ABA), on the other hand, derives from learning theory and focuses on the environmental factors that shape behavior. ABA-based feeding interventions are highly structured and data-driven, targeting the reinforcement mechanisms that maintain maladaptive mealtime behaviors. Techniques such as **escape extinction, differential reinforcement, positive reinforcement, shaping, and prompt fading** are commonly used (Volkert & Vaz, 2010; Kodak & Piazza, 2008)

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An **integrative model**, combining these frameworks, allows practitioners to address both the sensory barriers and behavioral patterns underlying feeding problems. For instance, a child who refuses to eat crunchy foods due to oral hypersensitivity may benefit from sensory-based desensitization, while also requiring ABA strategies to shape appropriate mealtime behaviors and generalize them across settings.

Understanding the Causes of Feeding Difficulties in Autism

Feeding problems in children with ASD arise from a spectrum of underlying causes. These can be broadly categorized into physiological, sensory, behavioral, and environmental domains.

Medical and Physiological Causes

- Gastrointestinal disorders (e.g., GERD, constipation) can make eating painful (Buie et al., 2010).
- Food intolerances (e.g., lactose intolerance) and allergies can create negative associations with eating (Herndon et al., 2009).
- Nutrient deficiencies or side effects of medications may reduce appetite or increase aversion (Patel & Feldman, 2011).

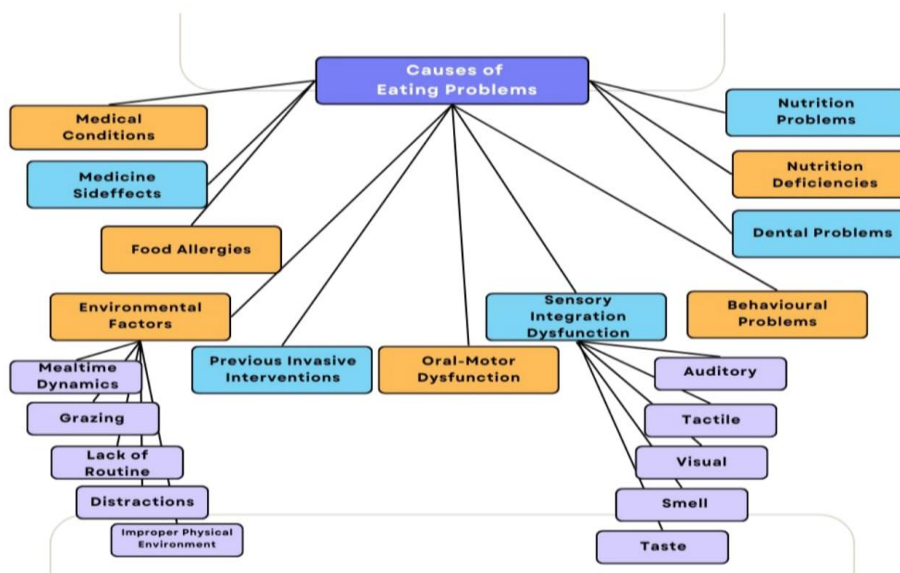
Sensory and Oral-Motor Factors

- Children may reject foods due to sensory sensitivities (Cermak et al., 2010).
- Oral-motor dysfunction may interfere with chewing and swallowing (Benjasuwantep et al., 2013).

Behavioral and Environmental Factors

- Poor mealtime structure, distraction, and caregiver responses may reinforce feeding issues (Volkert & Vaz, 2010).
- Learned behaviors like food refusal or tantrums may persist even when the original issue has resolved.

Figure-1: A sketch diagram showing the causes of Eating Problem in Autism



CASE STUDIES

Case 1: Viraj (pseudonym)

- Viraj is a 4-year 9-month-old child assessed in November 2023. He presented with moderate autism, with a score of 120 on the Indian Scale for Autism Assessment, and scores below 60 on both the Developmental Screening Test and Vineland Social Maturity Scale. His sensory profile showed severe oral sensitivity.
- Viraj was a premature baby with speech regression and was primarily on a liquid or semi-solid diet. Sensory profile assessment identified oral sensitivity as the main cause of his eating problems. Interventions included exposure to different textures through food play and sensory activities such as sand and playdough.
- By January 2024, he began drinking plain milk and interacting with biscuits. By May 2024, he was eating a variety of foods, including milk, oats porridge (daliya), rajma, dal, rice, idli, and sambar. His progress highlighted the importance of sensory desensitization and gradual exposure.

Case 2: Sam (pseudonym)

- Sam is a 4-year 2-month-old child assessed in April 2023. He presented with a high autism score (125) and low social maturity scores. Sam had limited speech and was lactose intolerant.
- Initially dependent on formula milk and sporadically eating snacks, he was diagnosed with picky eating. Occupational therapy and speech therapy interventions focused on food desensitization.
- By October 2023, he was eating popcorn, makhana (fox nuts), bread, and parathas. He transitioned from formula to buffalo milk by December 2023. Despite setbacks in February 2024, gradual reintroduction of foods helped him resume eating, although soft and sticky foods remained challenging.

DISCUSSION

Feeding challenges in children with Autism Spectrum Disorder (ASD) are inherently multifactorial, often requiring careful and individualized analysis before initiating interventions. The two case studies presented—Viraj and Sam—highlight the importance of differentiating between sensory-based and physiologically rooted feeding difficulties. Viraj’s case underscores how sensory hypersensitivities, particularly oral aversion, can significantly limit food acceptance. Through targeted occupational therapy and structured sensory exposure, he was gradually desensitized to various food textures, illustrating how sensory integration strategies can lead to substantial dietary improvements.

In contrast, Sam’s feeding difficulties stemmed from lactose intolerance, compounded by behavioral food refusal. His intervention involved a multi-pronged strategy including dietary substitution, ABA-based reinforcement techniques, and structured caregiver involvement. This case reinforces that even when physiological issues are addressed, behavioral components may persist and require separate intervention strategies. Sam’s case also demonstrates how progress is non-linear—setbacks such as illness or regression in behavior require ongoing monitoring and flexibility in therapeutic goals.

These findings collectively affirm that feeding challenges in ASD should not be simplistically labeled as “picky eating.” Instead, they should be interpreted through a biopsychosocial lens that encompasses medical, sensory, behavioral, and environmental

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factors. Additionally, the success of both interventions depended heavily on caregiver engagement. Parental responsiveness to therapist guidance, home-based practice of therapeutic strategies, and patience during setbacks were pivotal for long-term improvements. This aligns with evidence suggesting that parent-mediated interventions are associated with more sustained feeding gains (Sharp et al., 2013).

In the Indian context, these insights are particularly valuable. Due to systemic challenges such as limited awareness, lack of interdisciplinary collaboration, and inadequate access to specialized care in many parts of the country, feeding disorders in autistic children are frequently misinterpreted or overlooked. Moreover, dietary diversity, cultural beliefs about feeding, and regional food practices influence both the presentation of feeding issues and the feasibility of proposed interventions. Thus, culturally tailored assessment tools and context-sensitive intervention models are urgently needed.

Furthermore, these case studies advocate for a more integrated approach to training pediatricians, speech therapists, occupational therapists, and educators in early identification and intervention for feeding issues in ASD. Multidisciplinary teamwork, along with structured communication among stakeholders, ensures that both the sensory-affective and behavioral dimensions of feeding are comprehensively addressed.

In conclusion, these case studies emphasize that effective feeding interventions in children with ASD require more than symptom-focused strategies—they demand cause-specific, theory-driven, and family-inclusive approaches. Greater investment in awareness, professional training, and culturally competent care models will be essential in addressing this underrecognized but critical domain of autistic children's health and well-being.

The two case studies reflect distinct feeding difficulties—sensory versus physiological-behavioral—and demonstrate how targeted interventions can lead to progress. Viraj benefited primarily from sensory integration therapy, while Sam required dietary modification coupled with behavior shaping. Both cases support the integration of sensory and behavioral frameworks in therapy, alongside active parental participation.

These findings emphasize the necessity for cause-specific interventions, particularly in Indian contexts where feeding issues are often misunderstood. Collaborative, interdisciplinary approaches that include occupational therapists, nutritionists, psychologists, and parents are crucial for meaningful progress.

CONCLUSION

Feeding problems in children with Autism Spectrum Disorder (ASD) are multifaceted and deeply embedded in a mix of sensory sensitivities, behavioral responses, medical conditions, and environmental factors. The two case studies presented in this paper—Viraj and Sam—underscore how vastly different etiologies can underlie seemingly similar feeding behaviors. As such, this paper advocates for a departure from generalized or symptom-focused approaches toward a more nuanced, individualized strategy grounded in a biopsychosocial framework.

The findings demonstrate that both Sensory Integration Theory and Applied Behavior Analysis (ABA) offer powerful, evidence-based foundations for designing and delivering targeted interventions. Sensory-based therapy can effectively reduce oral aversion, while

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behavioral reinforcement can reshape mealtime dynamics. Importantly, the integration of these approaches—with an emphasis on parent engagement—yields the most sustainable outcomes.

This work also highlights a pressing need for improved diagnostic clarity, interdisciplinary collaboration, and caregiver education in India. Many families continue to face barriers to access, stigma, and insufficient support systems. Strengthening the capacity of occupational therapists, pediatricians, and educators to identify and address feeding issues can create a ripple effect—enhancing not only nutritional outcomes but also family well-being and the child's long-term development.

In sum, feeding difficulties in children with ASD are not just clinical symptoms but indicators of deeper individual and contextual realities. Effective management hinges on identifying the specific roots of each child's challenge and building a coordinated, culturally sensitive, and evidence-informed support system. The future of autism care in India must include structured pathways for recognizing and managing feeding problems as a core component of developmental health care.

Ethical Considerations

The case studies presented in this paper have been anonymized to protect participant confidentiality. Written informed consent was obtained from the guardians of the children for the use of anonymized clinical information for educational and publication purposes.

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Conflict of Interest

The author(s) declared no conflict of interest.

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