

Feeding and swallowing difficulties in infants and toddlers: A single centre study.

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Abstract

A challenge with feeding and swallowing is not observed in high-risk group alone, but also in healthy cohorts. This study focuses to determine the prevalence and characteristics of swallowing difficulties associated with this population. At an Indian tertiary hospital, 101 parents of typically developing infants and toddlers (aged zero to three) were recruited. The infant and child feeding questionnaire was employed to identify feeding and swallowing concerns. Results revealed a 22.77% prevalence rate (23 out of 100) of feeding and swallowing issues. Infants aged 0 to 6 months experienced issues like coughing, crying, and vomiting, while transitioning infants faced food refusal. Toddlers, aged 24 to 36 months, encountered severe food refusal, trouble with specific textures, and inadequate weight gain. These challenging characteristics are considered to be multi-factorial in nature. Hence, it is crucial for professionals to be perceptive in identifying and addressing the feeding and swallowing issues.

Keywords: Prevalence, Pediatric feeding and swallowing, Infant and child feeding questionnaire, Food refusal, Weight gain.

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Introduction

Parents of young children often encounter concerns with their child's weight loss or inadequate weight gain, but pinpointing and addressing the root cause can be challenging. More than half of the parents report feeding behaviours such as limited food variety, a preference for liquids, refusal to eat or vomiting [1]. These issues might stem from non-organic reasons like oral motor coordination issues, sensory processing difficulties, behavioral factors or even certain environmental influences. Studies indicate that such feeding problems affect around 18% to 25% of children aged one to four years [2]. Consequently, comprehending the prevalence and nature of these non-organic feeding challenges in typically developing children holds significant importance.

Material and Methods

This study involved 101 parents of children aged between 0 to 3 years, conducted at our hospital's pediatric out-patient clinic from February 2022 to August 2022. Children visiting for immunization or consultation were included based on specific criteria: typical development, passing Trivandrum developmental screening chart [3] and language evaluation scale Trivandrum [4]. Exclusion comprised children with delayed milestones, structural anomalies, or neurodevelopmental disorders. A speech-language pathologist conducted screening and data

collection. The infant and child feeding questionnaire [5] designed for children aged 0 to 4, was utilized to detect feeding and swallowing difficulties. The questionnaire consists of 12 items and relies on parental input. Most questions require a dichotomous response, except for item 5, which pertains to mealtime. Item 11 serves as an embedded behavioral checklist aiding the requirement for clinical feeding evaluation.

Results

Of the 101 children between the ages of 0 to 3 years, 22.77% (23/101) indicated feeding and swallowing difficulties as depicted in Figure 1a. The notable characteristics of evident feeding problems reported from the questionnaire are illustrated in Figure 1b. Mother's had great concerns towards their baby's weight, forcing them to feed more frequently in infants and force-feeding in toddlers group. Additionally, choking, coughing, vomiting, arching the body backward, the baby turning blue while feeding or post-feeding, vomiting, crying during feeding, refusal to eat, turning away from the breast, bottle or cup, and both quick or prolonged feeding duration were also reported. 0 to 6 months infants reported with gagging, choking, vomiting. 6 to 12 months exhibited food refusal. Food refusal and difficulties eating certain textured foods in 12 to 18 months group. Difficulty accepting certain textures was the main issue in 24 to 36 months.

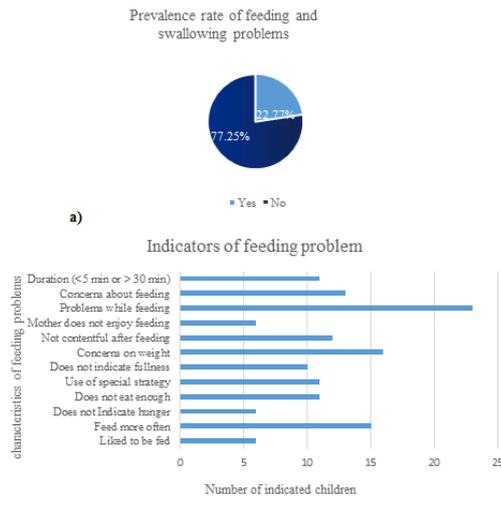


Figure 1. (a): Prevalence rate of feeding and swallowing difficulties in children, and (b): Characteristics of feeding problems reported from the questionnaire. **Note:** Yes: (■); No: (■).

Discussion

In our study encompassing typically developing children aged between 0 to 3 years, we aimed to identify the prevalence and the characteristics of feeding and swallowing difficulties. Our findings revealed a substantial prevalence rate of 22.77%. Previous studies have also reported a range of prevalence rates spinning from 18% to as high as 60% [1,2]. Additionally, an Indian study conducted on healthy population suggested a prevalence rate of 26.9% [6].

The feeding and swallowing challenges encompasses various aspects including the child's preferences in being fed, not indicating hunger, inadequate intake of food or drink, affected mealtime duration, utilization of specialized feeding devices, no signs of fullness or contentment after eating, refusal to eat, occurrences of choking or vomiting during or after feeding, parental concerns regarding the child's weight etc.

These aspects collectively contributed to identifying and understanding the scope of feeding and swallowing difficulties in this cohort of children at a primary level. The analysis also sheds light on the progression of feeding challenges observed in children across 0 to 3 year age range. In infants between 0 to 6 months, frequent occurrences of choking and vomiting were prevalent, highlighting parental concerns about insufficient milk intake and the baby's weight.

Infants at the transition phase (0 to 6 months) are expected to have adequate oral motor development and appropriate sensitivity in the oral structures in order to manipulate and accept different types of food [6]. The current study observed features of food refusal, a major concern that needs to be monitored closely. Children aged between 12 to 36 months face severe food refusal, struggles with certain food textures and underweight problems. This might be a continuum from the infantile phase, which suggests for further longitudinal study.

The feeding difficulties in healthy cohorts with non-organic background may be believed to stem from oral sensory motor dysfunction, likely may or may not be associated with mild neurological issues with ranging degrees from mild and transient to severe and chronic form that are challenging to identify [7]. Furthermore, dynamic identification and early management of feeding and swallowing difficulties are imperative.

Conclusion

Extending support and awareness for addressing feeding and swallowing issues in typically developing children beyond high-risk baby clinics is pivotal in pediatric practice. This proactive approach helps prevent the development of more complex feeding problems in future. Sensitizing parents regarding such issues during pediatric clinic visits and initiating early interventions could significantly impact a child's long-term development and well-being.

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Participants who consented for the study.

Authors contributions

PP: Data collection, analysis, and interpretation of data and drafted the manuscript; KS: Study design, manuscript revision, SS: Substantial contribution during data collection, manuscript revision.

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