

ORIGINAL RESEARCH

Picky Eating Behavior and Its Impact on Growth Among Pre-School Children Attending Outpatient Department of Tertiary Health Care Center: A Cross-Sectional Study

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ABSTRACT

Background: Preschoolers are picky eaters. Due to different assessment techniques and criteria, prevalence figures are mostly from wealthy countries and vary substantially. Mothers' finicky eating opinions may influence their intervention strategies. The purpose of the study is to ascertain how mothers perceive picky eating in preschool-aged kids as well as to calculate the incidence of picky eating in emerging nations. **Methods:** The JLNMC, Bhagalpur, Bihar children's outpatient clinics recruited 140 mother-child pairs that fit the study's requirements. An interviewer-based designed survey with study-specific items to characterize fussy eating was used to collect data in accordance with the goals of the study. Data were analyzed on SPSS using descriptive statistics, and the results were displayed as frequencies and percentages. **Results:** Using the study's criteria of fussy eating, 16.5% was estimated. For mothers of picky eaters, 35.4% believed 'picky eating is always abnormal for children at any age', 22.6% believed 'picky eating is always abnormal for children at any age and leads to poor weight gain', 2.6% believed 'picky eating is always abnormal, leads to poor weight gain and should be corrected by parents', 13.6% believed 'the child can learn picky eating from older children/siblings', and 20.8% believed 'picky eating leads to poor The mothers reported using coercion to eat (31.7%), rewards (20.8%), and self-prescribed drugs (26.3%). **Conclusion:** The prevalence of picky eating in this clime is comparable to rates in developed countries. Mothers' self-reported intervention tactics are influenced by their beliefs of fussy eating. **Recommendations:** The study emphasizes the necessity of parent education programs that dispel stereotypes and promote responsible feeding, with a preference for supportive methods, to address preschoolers' picky eating. It also emphasizes the need for more study in low-income nations to understand the causes and long-term impacts of finicky eating on child growth and development to establish effective solutions and support systems.

Keywords: Preschoolers, Picky eating, Mothers' perceptions, Prevalence, Interventions

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INTRODUCTION

Picky eating, often referred to as "fussy" or "choosy" eating, is a prevalent childhood behavior that can have significant implications for a child's nutrition and growth. It is characterized by a restricted intake of familiar foods, reluctance to try new foods, and strong food preferences. While picky eating is commonly observed in preschool children worldwide, there is no universally accepted definition, leading to varying

estimates of its prevalence in different studies and populations.

In the context of this study conducted in Nigeria, the estimated incidence of picky eating in preschool-aged children was found to be 17.5%. This prevalence rate is similar to rates reported in developed countries, suggesting that picky eating is not limited to specific regions but is a widespread phenomenon. This finding highlights the need to address picky eating as a

significant issue affecting child nutrition and well-being, even in developing countries like Nigeria. Mothers play a crucial role in managing and addressing picky eating behaviors in their children. The study revealed that maternal perceptions of picky eating influenced their intervention strategies. Some common strategies employed by mothers included coercion to eat, the use of rewards, and even self-prescribed medications. These strategies reflect the challenges parents face in managing picky eating and the need for effective interventions and support. Several factors contribute to the development of picky eating in children. Cultural background, parental feeding styles, and the geographical environment in which the child grows up all play essential roles. For instance, cultural influences can affect dietary preferences and habits, influencing the development of picky eating. In Nigeria, where cultural practices and dietary choices may be limited in variety and quality, exploring the impact of culture on picky eating is particularly relevant. It is worth noting that while there is extensive research on picky eating in developed countries, there is a lack of comprehensive studies in developing countries. This study sheds light on the prevalence of picky eating in a developing nation and the unique factors that contribute to it. More research in similar settings is needed to better understand and address the challenges associated with picky eating in diverse cultural and socioeconomic contexts. Therefore, the current study was carried out to ascertain mothers' perceptions of this behavior as well as the prevalence of picky eating in young children utilizing study-specific questions.

METHODOLOGY

Study Design

A cross-sectional study.

Study Settings

The study was conducted at JLN MCH, Bhagalpur, Bihar, India, during a period of 'March 2022 to March 2023'. The purpose of the study was to determine the prevalence of picky eating in preschool-aged children and to look into mothers' perspectives of it.

Study size

A total of 140 mother-child dyads were included in the study to achieve the research objectives.

Inclusion and Exclusion Criteria

Enrollment of biological or adoptive mothers with children between the ages of one and five years old was required for inclusion; mothers whose children had long-term conditions that might affect how they

fed their children—such as cancer, HIV/AIDS, chronic kidney disease, or acquired immunodeficiency syndrome—were not eligible for enrollment.

Data Collection and Analysis

An interviewer-administered structured questionnaire covering demographics of mothers and children as well as inquiries on finicky eating was used to gather data. Based on answers to questions concerning lack of appetite, food rejection, and food phobia, picky eating was characterized. The study used a structured questionnaire and a quantitative research methodology to gather information from moms about their preschool-aged children's finicky eating habits. To gather pertinent data, the study tool had both closed- and open-ended questions.

Bias

The study employed an interviewer-administered questionnaire to guarantee uniform data collection and reduce bias. Furthermore, individuals were chosen according to precise inclusion and exclusion standards in order to minimize the possibility of confounding variables.

Variables

The study's primary factors included the demographics of the mother and child, the mother's judgements of picky eating, and the mother's self-reported intervention strategies for picky eating.

Statistical Analysis

Utilizing SPSS software, statistical analysis was performed on the combined data from the three study centers. To compile and display the gathered data, descriptive statistics were used, such as frequencies and percentages.

Ethical Considerations

The study received ethical approval from the ethical committee. All participating mothers provided informed consent, guaranteeing adherence to moral principles and the defense of their rights.

RESULTS

The Mother-Child Dyad Demographic:

Table 1 shows that a sizable percentage of the moms who were enrolled were between the ages of 25 and 30 (36.5%) and 30-35 (27.3%). A significant portion of these moms worked for themselves (36.1%) and had postsecondary degrees (64.8%). 68.4% of the mother-child pairings had young children, ages 1-3, and the male-to-female ratio was almost 1.3/1.

Table 1: Demographics of study population

Characteristics	Percentage (%)
<i>Age group of the mothers (years)</i>	
15–20	0.3

20–25	12.3
25–30	36.5
30–35	27.3
35–40	6.1
40–45	9.8
45–50	1.2
50–55	1.2
<i>Number of living children</i>	
1–4	88.4
5–8	8.6
<i>Educational attainment</i>	
No formal education	1.5
Primary education	1.2
Secondary education	24.8
Post-secondary education	3.6
Tertiary education	64.8
<i>Occupation</i>	
Full-time housewife	24.4
Civil servant	32.8
Private-sector employed	2.8
Self-employed	36.1
<i>Children's age range (years)</i>	
1-3	68.4
3-5	28.6
<i>Gender</i>	
Male	56.5
Female	41.5
<i>School grade</i>	
Not schooling yet	12.3

Maternal Perceptions and the Estimated Prevalence Rate of Picky Eating

Proxy-reported traits, such as low appetite (ranked as 1), food neophobia (constantly=3), and food rejection (constantly=3), were used to describe selective eating in children. Forty-five of the kids met at least one of these fussy eating requirements, with lackluster appetite being the most common. There have been reports of food refusal in 22 children and food neophobia in 29 youngsters. When all three criteria

were met, the estimated prevalence of fussy eating was 16.5% (Table 2). Notably, fussy eating was linked to poor weight increase by 22.6% of mothers and was viewed by 35.4% of mothers as unusual for children of any age. Just 2.6% of respondents said parents' ought to correct it, while other respondents thought sibling influence was a factor. Furthermore, 20.8% of mothers thought that children who were fussy eaters would not grow enough weight.

Table 2: Parents mentioned that their kids had picky eaters.

Picky eating	Percentage (%)
<i>1. Appetite</i>	
Poor	21.9
Good	62.3
Excessive	12.8
<i>2. Food Neophobia</i>	
Never	33.2
Sometimes	48.6
Always	15.3
<i>3. Food rejection</i>	
Never	33.6
Sometimes	52.1
Always	12.3

Mothers' Self-Reported Intervention Techniques for Handling Picky Eating in Children

The most common intervention strategy reported by mothers of finicky eaters ($n = 45$) was coercion to eat (pressure feeding), which was followed by self-prescribed drugs (multivitamins and appetite stimulants) (26.3%) and the reward approach (bribery, included in 20.8%). Nine moms, or 17.2%, did not name any intervention measures. In addition, the rationales for mothers' usage of self-prescribed medications, which may include individual choices, family counsel, suggestions from previous medical professionals, chemists, or nurses, or a combination of these.

DISCUSSION

In this study, the estimated prevalence rate of picky eating among children was 16.5%. This figure aligns with rates reported in other countries, such as 17% in China [5], 15.6% in the USA [6], as well as in 14-17% in Canada [7], all of which focused on similar age groups. Conversely, lower rates were found in the Netherlands (5.6%) [8], Denmark (7.3%) [9], and the UK (8.3%) [10] among under-fives. The wide variation in prevalence rates is attributed to factors like differing assessment methods, age at assessment, and cultural influences, making comparisons challenging. Additionally, the current study utilized study-specific questions, offering flexibility but potentially making analysis more complex. Moreover, the relatively high prevalence in this study may be influenced by the age distribution of the child population, with many falling in the 1–3-year-old range [9, 10, 11].

The frequency of picky eating varies globally due to diverse definitions and assessment methods. The influence of cultural factors on picky eating is evident, with some cultures fostering a more accepting attitude toward certain picky eating behaviors [8, 12]. In the study region, cultural practices promote good appetite as a sign of child health, potentially reducing the prevalence of pickiness, despite urbanization and Westernization trends. However, the monotony in dietary patterns, skewed toward carbohydrate-rich foods, might encourage picky eating. It's essential to consider cultural backgrounds and other variables when studying picky eating [13].

Similar to the study findings, other studies have reported varying prevalence rates of picky eating among children. The age of assessment plays a crucial role, with picky eating often peaking around the age of 2 years, likely due to food neophobia [14]. Cultural influences, parenting styles, and available foods contribute to differences in prevalence rates. Some cultures may accept certain picky eating behaviors as normal, while others emphasize strong parental control [15]. The coping strategies/interventions employed by mothers also vary, with some using coercive measures, while others adopt more positive approaches like modifying food texture or consulting

healthcare professionals. These disparities in coping strategies reflect different food-related parenting styles, such as authoritarian and permissive approaches [16]. Future research should further explore the effectiveness of treatment strategies for picky eating, aiming for long-term solutions rather than short-term fixes.

CONSLUSION

The occurrence of picky eating in this region is similar to rates found in developed countries. Mothers' beliefs about picky eating play a significant role in shaping their self-reported intervention strategies. These perceptions can serve as a foundation for developing guidelines to help mothers choose appropriate interventions. It is imperative to address misunderstandings regarding picky eating and discourage unhealthy coping mechanisms, such as self-medication.

LIMITATIONS

This study has a number of limitations to take into account. First off, the results may not be as broadly applicable to the larger population in this area due to the limited sample size. Secondly, the assessment of picky eating in preschool children relied on proxy reporting and rating by mothers, introducing potential recall bias. Additionally, the definition of picky eating was not based on established validated questionnaires. Lastly, the random sampling method led to a gender bias, with more male child-mother pairs, and a predominance of highly educated mothers. Furthermore, the study did not investigate the potential influence of birth order in our analysis.

RECOMMENDATIONS

In light of the study's findings, it is crucial to focus on raising awareness about picky eating in preschool-aged children. Educational initiatives should be developed to inform parents, with an emphasis on mothers, about the nature of picky eating and its prevalence. These programs should aim to dispel misconceptions and provide parents with accurate information to make informed decisions regarding their children's eating habits. Furthermore, healthcare professionals should promote positive and supportive feeding strategies rather than coercive or punitive approaches. Parenting classes and workshops can help equip parents with effective skills to manage picky eating in a nurturing manner. Lastly, there is a clear need for further research on picky eating in developing countries, exploring factors contributing to this behavior and its long-term effects on child growth and development, to inform tailored interventions and support systems.

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