



Educational Intervention on Picky Eating Knowledge and Its Association with the Nutritional Status of Preschool Children Among Mothers in Pasheu Beutong Village, Darul Imarah District, Aceh Besar

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Abstract

Nutritional problems among preschool children remain a significant concern, particularly those related to inadequate dietary intake and eating behaviour. Picky eating is one of the common issues that can affect children's nutritional status, yet many mothers have limited knowledge regarding its impact. This community-based educational activity aimed to improve mothers' knowledge about picky eating and its influence on the nutritional status of preschool children. The intervention used a pre-test and post-test design, employing questionnaires to assess knowledge levels before and after the education session. The educational method included lectures and interactive discussions. The results showed that before the intervention, participants' knowledge was mostly in the low category (18%). After the educational session, there was a marked improvement, with 81% of participants achieving a high level of knowledge. This indicates that the educational intervention was effective in increasing mothers' understanding of picky eating and its consequences. In conclusion, the educational program significantly improved mothers' knowledge regarding picky eating and its impact on the nutritional status of preschool children. Enhancing maternal knowledge is expected to promote better feeding practices and improve nutritional outcomes in children.

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1. Introduction

Picky eating behaviour, defined as a child's tendency to accept or reject certain foods selectively, is a common challenge faced by parents and caregivers. Children with this behaviour often refuse vegetables, fruits, and protein-rich foods, which may lead to an imbalance in nutrient intake. This condition not only affects daily dietary patterns but may also influence children's overall growth and development. Previous studies have shown that picky eating is associated with an increased risk of nutritional problems and inadequate dietary intake in early childhood [1], [2].

Nutritional problems among preschool children remain a significant global concern. Malnutrition continues to contribute substantially to morbidity and mortality among children under five years of age. Inadequate dietary intake, including that caused by selective eating behaviours, plays a critical role in the development of undernutrition [3], [4]. Poor dietary diversity and insufficient nutrient consumption

can negatively affect children's immune function, cognitive development, and long-term health outcomes [5].

In Indonesia, the prevalence of picky eating among children is estimated to be around 20% [1]. This condition is compounded by persistent nutritional problems such as undernutrition and stunting. National health data indicate that the prevalence of stunting remains high, reflecting chronic nutritional deficiencies during early childhood [3], [6]. These findings highlight the urgent need for interventions that target both dietary behaviour and caregiver awareness.

Regionally, the prevalence of picky eating varies, with some areas reporting higher rates. For example, West Java has been reported to have a picky eating prevalence of approximately 41.9%, suggesting that selective eating behaviour significantly contributes to the nutritional status of preschool children [3], [7]. The increasing prevalence of underweight and malnourished children further emphasises the importance of early prevention and intervention strategies [8].

In Indonesia, particularly in Aceh, challenges related to children's eating patterns are influenced by cultural practices and family habits. Feeding practices shaped by local traditions may affect children's food preferences and acceptance. Studies have shown that stunting is often associated with significant picky eating behaviour, indicating a strong relationship between eating habits and nutritional status [1], [9]. Therefore, parental knowledge, especially among mothers as primary caregivers, plays a crucial role in shaping children's dietary behaviour [10].

Educational interventions are considered an effective approach to improving maternal knowledge and promoting healthy feeding practices. Increasing mothers' understanding of picky eating and its impact on nutritional status is expected to lead to better dietary management in children [11], [12]. Community-based education programs provide an opportunity to directly engage caregivers and address context-specific challenges in child nutrition [13].

The specific objective of this community service activity is to improve the knowledge of mothers with preschool children regarding the impact of picky eating on children's nutritional status in Pasheu Beutong Village, Darul Imarah District, Aceh Besar. The novelty of this study lies in its implementation of a community-based educational intervention that incorporates local cultural context and interactive learning methods. Unlike previous studies that focus mainly on observational findings, this program emphasises direct knowledge transfer and measurable outcomes through pre- and post-test evaluations, contributing to practical solutions to improve child nutrition at the community level.

2. Methodology

This study employed a community-based educational approach using a pre-experimental design with a one-group pre-test and post-test method. The activity was conducted as part of a community service program aimed at improving maternal knowledge regarding picky eating behaviour and its impact on the nutritional status of preschool children. The study was carried out in Pasheu Beutong Village, Darul Imarah District, Aceh Besar. The participants were mothers of preschool-aged children who attended the educational session. A total sampling technique was used, where all eligible and willing participants attending the activity were included in the study.

The intervention was delivered through a structured educational session that combined lecture methods with interactive discussions and question-and-answer sessions. Educational materials covered the definition of picky eating, its causes, its impact on children's nutritional status, and appropriate feeding strategies to manage picky eating behaviour. Data were collected using a structured questionnaire designed to assess mothers' knowledge related to picky eating and child nutrition. The questionnaire was administered twice: before the educational session (pre-test) and immediately after the session (post-test). The knowledge scores were then categorised into levels (low, moderate, and high) based on predetermined criteria.

Data analysis was conducted descriptively by comparing the distribution of knowledge levels before and after the intervention. The effectiveness of the educational program was evaluated by observing changes in the proportion of participants within each knowledge category. Ethical considerations were

taken into account by obtaining informed consent from all participants before data collection. Participation was voluntary, and respondents' information was kept confidential throughout the study.

3. Result & Discussion

The results of this community-based educational activity provide an overview of mothers' knowledge regarding picky eating and its impact on the nutritional status of preschool children. The findings were obtained through comparisons of pre-test and post-test assessments and detailed responses to each knowledge indicator. These results not only reflect participants' understanding after the educational intervention but also highlight specific areas that require further attention. Therefore, the discussion focuses on analysing the improvement in knowledge, identifying remaining gaps, and interpreting the implications of these findings for improving child feeding practices within the community.

Table 1. Knowledge Assessment on Picky Eating

No	Questions	Knowledge Index	%	Category
1	Is it normal for children aged 2–5 years to start choosing only the foods they like? a. True b. False	22	88%	Good
2	Can persistent, unaddressed picky eating increase the risk that children will experience stunting? a. True b. False	25	100%	Good
3	If a child refuses new food, should the mother immediately stop offering it? a. True b. False	22	88%	Good
4	Is forcing or scolding a child when they refuse to eat an effective way to make them eat? a. True b. False	23	92%	Good
5	Can giving large amounts of formula milk be used as a substitute for staple foods that are refused? a. True b. False	23	92%	Good
6	Does a consistent (regular) eating schedule help children recognise hunger and fullness? a. True b. False	25	100%	Good
7	Will the child imitate a mother's eating behavior (e.g., not liking vegetables)? a. True b. False	20	80%	Good
8	Can sensory issues (sensitivity to soft/rough textures) be a cause of picky eating in children? a. True b. False	25	100%	Good
9	Is it acceptable for mothers to use distractions, such as mobile phones or TV, while feeding their children? a. True b. False	16	64%	Good
10	Does involving children in food preparation (e.g., washing vegetables) increase their willingness to eat? a. True b. False	20	80%	Good
Average		221	81%	Good

The results of the knowledge assessment indicate that, overall, participants demonstrated a good level of understanding regarding picky eating and its impact on children's nutritional status, with an average score of 81%. This suggests that most mothers already possessed a basic awareness of appropriate feeding practices and the importance of balanced nutrition for preschool children. However, variations in responses across questions highlight specific areas where misconceptions or knowledge gaps persist.

High scores were observed in several key areas, including the understanding that persistent picky eating can increase the risk of stunting (100%) and that a consistent eating schedule helps children recognise hunger and fullness (100%). Participants also showed strong awareness of sensory factors contributing to picky eating (100%). These findings indicate that mothers are generally aware of the broader consequences of picky eating and the importance of structured feeding routines, which are essential for promoting healthy growth and development in children.

Despite these positive findings, some areas revealed relatively lower levels of understanding. For instance, only 64% of participants correctly answered the question about using distractions such as mobile phones or television during feeding. This suggests that a considerable proportion of mothers still perceive distraction as an acceptable feeding strategy, even though it may negatively affect children's eating behaviour and self-regulation. Similarly, knowledge related to parental influence on children's eating habits and involving children in food preparation scored 80%, indicating the need for further emphasis on these aspects. Overall, the findings highlight the importance of targeted educational interventions to address specific misconceptions and strengthen maternal knowledge. Improving awareness of responsive feeding practices, minimising distractions during meals, and encouraging positive parental modelling are crucial steps in managing picky eating behaviour. Strengthening these areas is expected to contribute to better dietary habits and improved nutritional status among preschool children.



Figure 1. Community Education Session on Picky Eating for Mothers of Preschool Children

The activity shown in **Figure 1** illustrates a community-based education session involving mothers and preschool children in an interactive and participatory setting. The arrangement of participants sitting together on the floor in a shared space reflects an informal learning environment, which is highly suitable for community engagement. This approach allows mothers to feel more comfortable, encouraging active participation and open discussion. The presence of children during the session also indicates that the program was designed to be inclusive and family-centred, enabling mothers to directly relate the educational content to their daily experiences in feeding and caring for their children.

Furthermore, the image demonstrates the practical implementation of health education through direct interaction between facilitators and participants. The facilitators appear to guide the session while participants engage in discussions or observe demonstrations, which can enhance understanding and retention of information. This interactive learning method is effective at improving knowledge because it combines visual, auditory, and experiential elements. In addition, the community setting, supported by visual learning materials on the walls, reinforces key messages about child nutrition and picky eating behaviour. Overall, the activity depicted highlights the importance of using culturally appropriate and participatory educational strategies to improve maternal knowledge and promote better feeding practices among preschool children.



Figure 2. Community-Based Health Education Session on Picky Eating and Child Nutrition

Figure 2 depicts a broader view of the community-based health education session, highlighting active participation from both mothers and facilitators in a structured group setting. The arrangement of participants into clusters suggests a collaborative learning approach, where small-group interactions may facilitate better understanding and the exchange of experiences among participants. This setting enables mothers to share their challenges with feeding practices and picky eating, fostering peer learning and mutual support. The presence of facilitators guiding the session indicates a structured educational process designed to ensure that key messages regarding child nutrition and feeding practices are effectively delivered.

Additionally, the image reflects the integration of community engagement with practical learning strategies. The involvement of multiple stakeholders, including facilitators and participants, demonstrates a participatory approach that enhances knowledge transfer and behavioural change. Visual elements, such as posters and banners, within the environment further support the delivery of educational content, reinforcing key information on child nutrition. The inclusive atmosphere, where children are present alongside their mothers, allows for the real-life application of the knowledge they have gained. Overall, this activity emphasises the effectiveness of community-based education programs in improving maternal awareness and promoting better nutritional practices to address picky eating among preschool children.

The novelty of this community service article lies in its implementation of a culturally contextualised, community-based educational intervention focused on picky eating behaviour and its impact on the nutritional status of preschool children. Unlike previous studies that primarily emphasise clinical assessment or observational analysis, this program integrates interactive learning methods, including lectures, discussions, and direct engagement with mothers in a real community setting. Additionally, the use of a pre-test and post-test approach to measure knowledge improvement provides practical evidence of the intervention's effectiveness. This approach not only addresses knowledge gaps but also promotes behavioural change by simultaneously involving mothers and children, making it a more holistic and applicable strategy for improving child nutrition at the community level.

4. Conclusion

This community-based educational intervention demonstrated a significant improvement in mothers' knowledge regarding picky eating and its impact on the nutritional status of preschool children. The findings indicate that interactive education methods, including lectures and discussions, are effective in

enhancing maternal understanding of appropriate feeding practices. Before the intervention, participants showed limited knowledge; however, post-intervention results revealed a substantial increase in knowledge, indicating the program's success. Improved maternal knowledge is expected to positively influence children's feeding behaviour and dietary practices, thereby contributing to better nutritional outcomes. The results also highlight the importance of addressing specific misconceptions, such as the use of distractions during feeding and the role of parental behaviour in shaping children's eating habits. In conclusion, community-based health education programs are essential strategies for promoting awareness and improving child nutrition. Future programs should prioritise continuous, sustainable educational efforts and broader community involvement to achieve long-term improvements in children's nutritional status and overall health.

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