



# EXPLORING MOTHERS' EXPERIENCES ON COMPLEMENTARY FEEDING PRACTICES REGARDING STUNTING PREVENTION

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## Abstract

Complementary feeding is a significant milestone to promote child's healthy growth and development and prevent chronic malnutrition such as stunting. The aim of this study is to explore the mothers' experience about complementary feeding practice regarding stunting prevention with children aged less than two years in Indonesia. A descriptive qualitative study was conducted from January to April 2023. This study was approved by Institutional Review Board (IRB) FIK UNAI. 22 mothers of children of 6-24 months of age were recruited by purposive technique from the mother who live in Cihanjuang Rahayu Village. Descriptive statistics were used to analyze the mothers' demographic characteristics and thematic analysis was used to describe mothers' experience about complementary feeding practices regarding stunting prevention. The study showed that the average age of the mothers was 24,40 (SD = 3,38) years, level education varied from elementary to senior high school. Through the findings, three main themes have been identified including knowledge of mothers regarding complementary feeding for stunting prevention. Mothers' current practice of providing complementary feeding and challenges in providing complementary feeding practices regarding stunting prevention. Findings from the study may provide information for the nurses in increasing the rate of complementary feeding practice to prevent stunting among mothers of children in Indonesia. Future study is needed to identify the factors influencing complementary feeding among the mothers of 6 - 24 months old children in Indonesia.

**Keywords:** mother's experiences, complementary feeding, practices, stunting prevention

## INTRODUCTION

Complementary feeding is the process of adding solid food to an infant's diet. It is a critical milestone with consequences for development, nutrition, and health<sup>(1)</sup>. The suggestion of the World Health Organization (WHO) is to introduce solid food after six months and continue breastfeeding exclusively for six months<sup>(2)</sup>. Breast milk alone can no longer satisfy a late baby's nutritional needs after six months.

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Better health and development of newborns are advised by promptly initiating age-appropriate, safe, nutritionally-adequate supplemental feeding at six months of age<sup>(3)</sup>. By gradually introducing new flavors and textures to them, complementary feeding helps babies develop healthy eating habits and control their appetite<sup>(4)</sup>.

In fact, stunting is a condition in which children are too short when compared to normal children at their age<sup>(5)</sup>. Globally, stunting has declined from 32,4 % (199,5 million children) in 2000 to 21,3 % (144 million children) in 2019. The greatest burden of stunting globally is in Africa (41 %) and Asia (53 %). The decrease in stunting prevalence is short of meeting the Global Nutrition Targets of 2025 and the Sustainable Development Goals of 2035<sup>(6)</sup>. The magnitude of the problem is quite similar in Indonesia. Although the stunting prevalence has declined from 30,8 to 24,4 % during the period 2018-2021 the country still has more work to achieve the national developmental goals, with the prevalence of stunting expected to reach 14 percent in 2024<sup>(7,8)</sup>. In some provinces, the prevalence of stunting exceeds national prevalence. West Java Province is one of the regions in Indonesia that experiences stunting. West Bandung Regency is the fifth (29,6%) with the highest prevalence of stunting in toddlers in West Java Province<sup>(9)</sup>.

Previous studies show that there are several variables that directly contribute to stunting. The study assessed the prevalence and associated factors of complementary feeding practices among mothers who have children aged 6 to 24 months old. The results show that the prevalence of optimum complementary feeding practice is low, where the factors associated were maternal education, daily laborer, number of family members, Ante Natal Care (ANC) follow-up and place of delivery<sup>(10,11)</sup>. There is also a relationship between some biological and socio-demographic factors and stunting. Stunting was discovered to be influenced by two biological factors: the child's age and sex. Stunting was more common in male children than in female children<sup>(12,13)</sup>. The prenatal visits throughout pregnancy, the history of bottle feeding, and mother education have all been related to stunting<sup>(14)</sup>. A study carried out in Indonesia revealed an association between household food security status and food feeding culture and the incidence of stunting in toddlers

aged 12-59 months<sup>(15)</sup>. Nonetheless, it is associated with illnesses like chronic gastroenteritis, anemia and parasite infection<sup>(16)</sup>.

Descriptive research on complementary feeding practices, factors influencing complementary feeding, mothers' perceptions of weaning, and mothers' awareness and use of complementary feeding among mothers and infants have been conducted in Indonesia<sup>(17,18)</sup>. Nonetheless, the majority of research is conducted using quantitative methods. Extensive study on mothers' experiences with supplemental feeding practices is scarce. The goal of qualitative research is to understand human behavior and culture from the perspective of the participants. It seeks to have a thorough grasp of the situation and the social behavior<sup>(19)</sup>. The flexible and iterative nature of qualitative research and methodologies allows for the modification of research topics as the study progresses. This adaptable strategy might lead to the discovery of surprisingly significant topics in Indonesia and therefore providing information for nurses in Indonesia. The aim of this study is to describe Indonesian mothers' experience about complementary feeding practice who have children less than five years in stunting prevention.

## **METHODS**

A descriptive qualitative study was conducted to explore the mothers experience of complementary feeding practice regarding stunting prevention. Qualitative research seeks to describe and analyze the behavior of humans from the participants point of view. The participants of this study were mothers who have children aged 6-24 months of children living in Cihanjuang Rahayu Village in West Bandung regency. Approximately twenty two (22) mothers were selected purposive who met the inclusion criteria. The inclusion criteria of the mothers were: mothers living in Cihanjuang Rahayu village, West Bandung, West Java Indonesia and having child aged 6-24 months (Table 1).

The researchers employed a semi-structured interview strategy to gather data. The demographic data questionnaire included items such as mothers age, educational level, occupation, family income, child's age, number of children, sources of information regarding complementary feeding, sex, body weight.

Interview questions were developed regarding complementary feeding. The interview guiding questions are as follows: 1) Could you explain about complementary feeding regarding stunting prevention?; 2) Could you explain the advantages of providing your child with complementary food?; 3) Could you describe the appropriate time to start complementary food? 4) What is your opinion about advantages and disadvantages of complementary food regarding stunting prevention; 5) Could you tell me what kind of complementary food you let to eat your child?; 6) Could you explain to me how you prepare your child's complementary foods?

After approval from the Institutional Review Board (IRB) of Faculty of Nursing Universitas Advent Indonesia, between February 2023 to April 2023, permission was taken from both the Community Health Center and community leader. The study's purpose and methodology were explained to the mothers. After introducing the study to the mothers, it was determined whether or not they would be willing to participate. The researcher used interview guide questions to guide in-depth interviews focused on complementary feeding for the prevention of stunting. The interviews were conducted in a mixed language environment of Sundanese and Indonesian. Before any data was collected, mothers signed an informed consent form. Participants were assured that their privacy and identity would be protected. Time duration of each mother's interview was around 55 to 60 minutes. The researcher used an audio recorder to collect information, and then they transcribed the recordings into textual form. When more explanation was required, particularly during an interview, the researcher questioned the subject in their native tongue. Finally, the researcher transcribed the data into English verbatim. In exchange for their time, each volunteer received a modest gift.

The in-depth interviews were transcribed verbatim in both Indonesian and Sundanese languages by the researcher and professional checked transcripts involving interpretation. Throughout the study process, ongoing analysis was conducted through the use of a research diary, notes, and reflections. Interview data was verified repeatedly by listening to the audio recorder which involved reading through the transcripts and field notes looking for emerging themes. During the

analysis, the notes including nonverbal cues and some meaningful motions of the participants like surprise, pauses, laughter, anger, discomfort were used to help to clarify and complete the record transcribing. The researcher then translated the transcriptions into English. Then coding categories were developed, and data were coded and sorted into code categories. The process of coding led to the creation of major constructions, themes, and categories. Words, phrases, and other data chunks made up the codes. After coding, exploration and selection of themes based on the study groups were completed for repeatedly data analyzing conducted to ensure consistency for final reporting.

## RESULTS AND DISCUSSION

The aim of the study was to describe the mothers' experience about complementary feeding practice regarding stunting prevention in Indonesia. The results of the present study are presented as described by mothers including their child's characteristics and thematic description of the mothers' experience about complementary feeding practice regarding stunting prevention. The finding of the study has identified three main themes included 1) Knowledge of mothers regarding complementary feeding for stunting prevention; 2) Mothers current practice of providing complementary feeding; and 3) Challenges in providing complementary feeding practices regarding stunting prevention.

### *Mothers and their children characteristics*

Table 1 shows that 22 mothers with a mean age of  $24,4 \pm 3,38$  years participated. The level of their education varied from elementary to senior high school, and all mothers had at least one child under the age of 2 years. All mothers identified as Islam, most of them were housewives and half of their average monthly family income was more than 1,5 million monthly. Majority of mothers lived in a private house. The mean age of the mothers during marriage was 15,2 (SD= 2,67) years. Half of the mothers completed 4 times their antenatal visits. Mothers received information of complementary feeding regarding stunting prevention from different sources including family, relatives, media, health care workers and others. Mothers

child's mean age was 20,13 (SD= 3,6) months. The gestational age of child was 9,15 (SD= 0,53) months and mean weight was 9,04 kg (SD= 1,87).

Table 1: Characteristics of the mothers and their children (N=22)

Participant Number	Categories	N	%	M (SD)
Mothers characteristics				
Age				24,40 (3,38)
Religion	Islam	22	100	
Education	Senior high school	13	59,1	
	Junior high school	6	27,2	
	Elementary	3	13,7	
Occupation	Housewife	20	90,9	
	Others	2	9,1	
Monthly family income	>1.5 million IDR	12	54,6	
	<1.5 million IDR	10	45,4	
Number of children	1-2	16	72,7	
	>2	6	27,3	
Housing	Rent	3	13,6	
	Non rent	19	86,4	
Age during marriage				15,32 (2,67)
Antenatal visits (times)	Less than 4	4	18,2	
	4 visits	12	54,5	
	More than 4 visit	6	27,3	
Sources of information	Family	22	100	
On complementary feeding regarding stunting prevention	Relative	19	86,4	
	Media	20	90,9	
	Health care worker	22	100	
	Others	15	68,2	
Child characteristics				
Age				20,13 (3,56)
Sex	Boys	10	45,5	
	Girls	12	54,5	
Gestational age of children				9,12 (0,53)
Body weight				9,04 (1,87)

### Theme 1: Knowledge of mothers regarding complementary feeding for stunting prevention

This theme consisted of experiences of mothers regarding complementary feeding for stunting prevention. In the interviews, mothers gave a summary of their knowledge including three sub-themes of time initiation and frequency of

complementary feeding, specific nutritional content of food and the source of knowledge about complementary feeding in regard to stunting prevention. Most of the mothers stated that the appropriate time to start complementary food of their children is after 6 months of age. Some mothers' knowledge regarding the frequency of complementary feeding depends on the child's intention and the time set by the mother. Meanwhile, several mothers' knowledge about the specific nutritional content of food regarding stunting prevention was found to be lacking. Mothers' source of knowledge about complementary food regarding stunting prevention came from various sources.

Example of excerpts of time initiation and frequency of complementary feeding are as follows:

*"The complementary feeding that I know is when the baby is 6 months old, as I also did."*(Participant No. 2)

*"Posyandu cadres state that complementary food should be provided until the child turns two years old, or until they are under five years old, whatever the child requests."* (Participant No. 5)

*"Since he was a baby, my son, a boy, has eaten a lot. I gave it to him when he was 6 months old and until now he enjoys snacks from the stall."* (Participant No. 18)

The statements regarding to little knowledge about specific nutritional content of food are given:

*"My child is now 7 months old, what can I give as complementary feeding?. I have been giving complementary food since last month, the packaged porridge that I bought at the shop near my house."* (Participant No. 7)

*"The meal categories that health workers have described to me are not very clear to me."* (Participant No. 3)

*"So... to prevent stunting my child, how and what should she eat? my child has difficulty eating."* (Participant No. 9)

*"My child is skinny, especially since she can walk. I am confused about what to feed my child, it is very difficult to feed her..."* (Participant No. 15)

Expressions given by the mothers in terms of source of knowledge about complementary food regarding stunting prevention:

*“My mother told me how to feed my child, she also helped me feed my child.”*

(Participant No. 2)

*“Usually in the afternoon, I have conversations with my neighbors about nutrition and how to prevent stunting.”* (Participant No. 4)

*“Counseling is often carried out by health workers from the community health center, midwives also like to teach me about stunting prevention, when I go to the midwife for treatment.”* (Participant No. 16)

## **Theme 2: Mothers current practice in complementary feeding regarding stunting prevention**

The three sub-themes were identified from the mothers current practice of complementary feeding regarding stunting prevention such as complementary feeding time including first feeding and frequency feeding the child, the type and source of complementary foods, and lastly the preparation of complementary feeding in regard to stunting prevention. Most mothers said that they start giving the first complementary feeding when the child is 6 months old and provide complementary feeding according to the child's demand. Some mothers provide a variety of complementary food, but there are also those who only provide it in the same form, because they are unable to prepare variety of complementary feeding. In addition, most mothers provide ready-to-eat food, snacks that are easy to get from stalls or food sold in packages.

The statements expressed by mothers regarding to first feeding and frequency feeding the child are as follow:

*“When my child was six months old, I started giving him complementary foods to breast milk.”* (Participant No. 18)

*“I simply offer my child anything he requests when he asks for food; he usually prefers snacks.”* (Participant No. 20)

*“When I first gave complementary feeding, when my child was 6 to 1 year old, I was still easy to feed.”* (Participant No. 22)

The example of comments given related the type and source of complementary foods are as follow:



*“Ready-to-eat porridge, I buy the packaged one at the shop, I brew it with hot water, sometimes I cook it for a while then after it cools down I feed my child.”* (Participant No. 1)

*“I rarely give beef, only once in a while, because I rarely cook food from beef, once in a while I cook chicken.”* (Participant No. 7)

*“My child doesn't like eating vegetables, I cut vegetables into small pieces like carrots, but my child doesn't like it.”* (Participant No. 4)

*“The best fruit for my child is banana, that too only sometimes. my child prefers to eat snacks from stalls.”* (Participant No.10)

The comments given to illuminate the preparation of complementary feeding in regard to stunting prevention as follow:

*“How about it... I've been told... by the officers from community health center workers about healthy food to prevent stunting, but I'm confused about how to make it.”* (Participant No. 8)

*“Hee...when it comes to cooking food, it's a hassle and takes a long time, even though there's still a lot of other housework. It's true...cadres like to remind you that Posyandu is a way to make healthy food to prevent stunting.”* (Participant No. 6)

*“making varied food takes time and energy and money..heee. mostly fried eggs, fried tofu, fried tempe.”* (Participant No. 13).

### **Theme 3. Challenges in providing complementary feeding practices regarding stunting prevention**

The study's participants face various challenges in providing complementary practices regarding stunting prevention. The sub-themes emerged including insufficient financial resources, children's preferences and mother's preferences. Majority of participants acknowledge the obstacles in providing complementary foods related to limited finances. In addition, they also witnessing children prefer snacks sold in stalls around the house. On the other hand, the mother also admitted that she preferred to buy food sold at the stall near the house.

The example of comments given related to insufficient financial resources are given:

*"It's not enough ma'am...sometimes before the month is over, the money is gone. Sometimes I have to buy something on debt."* (Participant No. 2)

*"My husband is only a flower garden laborer, ma'am...so I can only make minimal food for the family."*(Participant No. 4)

*"like meat... it's expensive, ma'am. That's the amount of money from my husband for food and other stuff, so I just spend that amount."* (Participant No. 15)

Excerpts example expressed by the mothers related to children preferences on complementary feeding practice in stunting prevention are as follow:

*"My child is now 2 years old, always asking for snacks at the stall, there are lots of foods he likes."* (Participant No. 19)

*"My child prefers the food I buy than the food I cook. Once I cooked green beans, he preferred to eat packaged food from the stall. cry ma'am...if I don't give you money to buy snacks."* (Participant No. 20)

Representative statements of mother's preferences related to mothers preferences on complementary feeding practice in stunting prevention are as follow:

*"I prefer to buy packaged food from the stall, ma'am... because you just need to brew it, so it's more practical."* (Participant No. 21)

*"There is still lots of other housework, such as washing, cleaning the house, etc., cooking food as recommended by the cadres to prevent stunting, I don't have time to cook..."* (Participant No. 22)

One of the most important measures to enhance children's nutritional status is complementary feeding, which aims to promote healthy growth and development<sup>(20)</sup>. An infant's nutritional and energy needs go beyond what can be met by drinking breast milk when they are about six months old. Weaning involves a gradual shift for babies from nursing exclusively to eating semi-solid, solid, or soft common family foods, referred to as complementary foods, to meet these additional energy and nutrient needs<sup>(6)</sup>. This time frame, known as the complementary feeding period, usually spans from six to twenty-four months of age. In order to satisfy the infants' nutritional demands, complementary foods must

be given in a timely, sufficient, safe, and appropriate manner; otherwise, growth arrest may result<sup>(2)</sup>. Child stunting refers to a child who is too short for his or her age and it occurs when brought on by chronic or persistent malnutrition which leads to child mortality. Therefore child stunting is one of the World Health Assembly's nutrition target indicators<sup>(21)</sup>.

The knowledge deficits about complementary feeding in stunting prevention may have negative consequences as mothers may too early and may also stop continued breastfeeding before the recommended period which may not augur well for the growth and development of the child<sup>(22,23)</sup>. A misguided knowledge about when to initiate breastfeeding results in the untimely start of complementary feeding. It could be related to the information source about complementary and breast feeding practices for children, as well as the timing of these practices' introduction. The information source could be a health facility, the media, or some other source, and it might not have the same effect on the mother's perspective. One possible explanation for this could be that mothers have an incorrect belief that breastfeeding is insufficient for a developing child, and in order to deal with the limited supply, they may occasionally introduce complementary foods<sup>(24)</sup>. Opinion about when to start breast feeding may also have an impact on the opinion about when to start complementary feeding. Mothers who have an inappropriate perception of the early initiation of breastfeeding, those who do not believe in immediate initiation or at a baby's birth may also begin complementary feeding earlier than women who have an appropriate perception of the early initiation of breastfeeding<sup>(25)</sup>. Mothers' decisions about complementary feeding are influenced by their salient beliefs about the benefits and drawbacks of introducing it, as well as the importance of what other people have to say about it. This is consistent with a study that found mothers' decisions were influenced by their neighbors, relatives, health professionals, and their perception of the benefits of complementary feeding<sup>(26)</sup>. Moreover, peer-to-peer groups factor also influence over behavior intention and subsequent behavior of complementary feeding practices. Peers who had recently or were currently parenting young babies were seen as a valuable source of information and knowledge<sup>(18)</sup>. Mothers frequently mentioned that they

saw their child as "falling behind" if they did not fit the group norm or saw the "good results." In the broader literature, it has been demonstrated that group norms can affect women's behavioral intentions in relation to various elements of infant nutrition and breastfeeding continuation<sup>(17)</sup>. Appropriate complementary feeding practices were substantially correlated with maternal education. Compared to mothers who attended elementary, secondary, and higher education, women without a formal education had lower probabilities of using suitable supplemental feeding practices<sup>(21)</sup>. Mothers who completed formal education may be more exposed to media and services related to maternal and child health. In order to incorporate the knowledge they have learned from media and from visiting medical facilities, students need to be well-versed in the proper complementary eating habits<sup>(27)</sup>. Additionally, mothers who have completed elementary school or above are likely to find employment. This will raise the household's income level, which may give them the confidence and ability to improve the way they feed their infants and children<sup>(28)</sup>.

The level of family income is another effective factor in food security. A mother's knowledge will rise with household affluence, as seen by her increased purchasing power, her access to material and financial resources (such as food), and her ability to further her education<sup>(27)</sup>. On the other hand, mothers from medium-income households had higher odds of using suitable complementary feeding methods than mothers from low-income homes<sup>(17)</sup>. Because food availability in households is greatly influenced by the income level of the household. Mothers from low-income homes are unable to afford to provide their newborns and early children with defined dietary groups on a regular basis<sup>(28)</sup>.

Mothers' preferences have a significant correlation toward the choice of complementary feeding. One study conducted to better understand mother preferences for consistency of complementary foods and to determine if and how maternal preference varied according to the age and health status of the child<sup>(29)</sup>. The study found that because the mothers believed that thicker foods better fitted the stomachs of larger, older children, they opted to serve their older children heavier foods. Food constancy was not a big deal when a child was healthy. But

when a child was sick, mothers had strong beliefs about the kind of food that should be consumed<sup>(4)</sup>. In addition, mothers consistently favored giving thinner foods to their children when they had a cough or fever. Some mothers chose to provide thin foods to restore the lost water when their infant had diarrhea, while others wanted to give thicker foods to firm the stool or stop up the child<sup>(25)</sup>.

## **CONCLUSION**

Many factors affect different aspects of complementary feeding practices in regard to stunting prevention. The current study found that almost all mothers have adequate knowledge about the complementary feeding practice but they do not practice it in an appropriate complementary feeding. Mothers provide the food in the same form because they are unable to prepare a variety of complementary and also provide ready-to-eat food and snacks that are easy to get from stalls or food sold in packages. Challenges found are insufficient financial resources, children's preferences and mother's preferences. Future study is needed to identify the factors influencing complementary feeding among the mothers of 6-24 months old children in Indonesia. Findings from the study may provide information for the nurses in increasing the rate of complementary feeding practice to prevent stunting among mothers of children in Indonesia.

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## **ETHICAL CLEARANCE**

This study was approved by the Ethics Committee Faculty of Nursing Science Universitas Advent Indonesia, Bandung Indonesia (code: (314/KEPK-  
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