

STUNTING PREVENTION THROUGH STRENGTHENING MOTHER'S KNOWLEDGE AND SELF-EFFICACY WITH HEALTH COACHING BASED ON FAMILY EMPOWERMENT

*Pencegahan Stunting melalui Penguatan Pengetahuan dan Efikasi Diri Ibu
dengan Pembinaan Kesehatan Berbasis Pemberdayaan Keluarga*

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ABSTRAK

Stunting merupakan masalah kesehatan serius di Indonesia, khususnya di Surakarta, Jawa Tengah, dengan angka 20,7% pada tahun 2023, seringkali disebabkan oleh kurangnya pengetahuan dan efikasi diri. Penelitian ini bertujuan untuk mengetahui peran pembinaan kesehatan berbasis pemberdayaan keluarga dalam meningkatkan pengetahuan dan efikasi diri ibu serta menggali persepsi ibu terhadap stunting. Penelitian dilakukan di wilayah kerja Puskesmas Gilingan Surakarta. Metode penelitian adalah mixed method, penelitian quasi eksperimental dan deskriptif kualitatif untuk menggali persepsi ibu terhadap stunting. Subyek penelitian kuasi eksperimen adalah 84 orang ibu yang memiliki balita usia 24-59 bulan yang ditentukan dengan menggunakan purposive sampling. Subjek mendapatkan intervensi penyuluhan tentang ruang lingkup stunting dan pentingnya dukungan keluarga dalam pengasuhan anak. Sedangkan penelitian kualitatif melibatkan dua orang ibu yang memiliki balita stunting, dua orang ibu yang memiliki balita non stunting, satu orang kader kesehatan masyarakat, dan satu orang koordinator program penanganan stunting. Instrumen yang digunakan adalah kuesioner pengetahuan mandiri dan efikasi diri. Data kualitatif diperoleh dengan cara wawancara mendalam dengan seluruh responden. Analisis data menggunakan uji Wilcoxon dan analisis tematik, memastikan pemeriksaan data yang teliti dan menyeluruh. Hasil penelitian menunjukkan bahwa pembinaan kesehatan berbasis pemberdayaan keluarga secara signifikan meningkatkan pengetahuan dan efikasi diri ibu ($p < 0,05$), serta terdapat hubungan yang kuat antara pembelajaran dengan efikasi diri dalam upaya pencegahan stunting, persepsi ibu terhadap faktor kerentanan, pola asuh, dan tantangan menghindari stunting. Pengetahuan dan efikasi diri yang baik terbukti berkontribusi signifikan dalam mencegah stunting. Diperlukan upaya pencegahan stunting berbasis pemberdayaan keluarga yang komprehensif dan kolaboratif untuk meningkatkan pengetahuan dan diri ibu.

Kata kunci: efikasi diri, ibu balita, pemberdayaan keluarga, pengetahuan, stunting

ABSTRACT

Stunting, a severe health problem in Indonesia, particularly in Surakarta, Central Java, with a rate of 20.7% in 2023, is often caused by a lack of knowledge and self-efficacy. This research aims to determine the role of family empowerment health based coaching in increasing mothers' knowledge and self-efficacy and to explore mothers' perceptions of stunting. The study was conducted in the working area of the Gilingan Community Health Center, Surakarta. The research was a mixed method, quasi-experimental, and qualitative descriptive study to explore mothers' perceptions of stunting. The quasi-experimental research subject were 84 mothers with toddlers aged 24-59 months, who

were determined using purposive sampling. Subjects received counseling interventions regarding the scope of stunting and the importance of family support in child care. The qualitative study involved two mothers with stunted toddlers, two mothers with non-stunting toddlers, one community health cadre, and one stunting management program coordinator. Instruments used on independent knowledge and self-efficacy questionnaire. Qualitative data was obtained by in-depth interviews with all respondents. Data analysis used Wilcoxon test and thematic analysis, ensuring rigorous and thorough examination of the data. The results showed that family empowerment-based health coaching significantly increases mothers' knowledge and self-efficacy ($p < 0.05$), and there was a strong correlation between learning and self-efficacy in efforts to prevent stunting. We obtained three themes: the mother's perception of vulnerability factors, parenting patterns, and challenges to avoid stunting. Good knowledge and self-efficacy have been proven to significantly contribute to preventing stunting. Comprehensive and collaborative family empowerment-based stunting prevention efforts are needed to increase mothers' knowledge and self-efficacy.

Keywords: family empowerment, knowledge, mothers of toddlers, self-efficacy, stunting

INTRODUCTION

Stunting is a serious health problem for children worldwide, including in Indonesia [1], [2]. Even though stunting has decreased over the last few decades, World Health Organization (WHO) estimates that globally, 22.3% of children under five will experience stunting in 2022 [3]. It is still a challenge to achieve the second Sustainable Development Goal (SDGs) target, namely eliminating hunger and all forms of malnutrition by 2030 [4], [5]. Healthcare providers are essential in identifying and managing stunting, a type of growth failure among children driven by chronic malnutrition. Particularly in the first 1000 days of life, a period from conception to the child's second birthday, children grow shorter than their age group. According to the World Health Organization's (WHO) Child Growth Standards, toddlers with a body length/height ratio for Age whose z-score value is less than -2 standard deviations (SD) are stunted [6], [7].

The long-term consequences of stunting are grave and include decreased survival rates, impaired motor and cognitive development, reduced economic productivity, and an increased likelihood of experiencing poverty as an adult [8]. Low birth weight (LBW), non-exclusive breastfeeding, premature solid food introduction, and low economic considerations can all result in stunting. Other factors are low maternal education, maternal employment, number of family members, maternal Body Mass Index (BMI) < 18.5 , and incomplete immunization [9]. A child's nutritional status is largely determined by food intake, exposure to disease (health condition), and treatment. It is related to several personal, family, and community factors directly related to the mother's or caregiver's parenting patterns [10]–[12].

According to Indonesian Health Survei (2023), the stunting rate for toddlers in Indonesia was 21.5%, decreased compared to previous years [13]. However, following the limits set by WHO for developing countries, stunting will become a public health problem if the prevalence reaches ~20% [1], [14]. The prevalence of stunting in Central Java Province based on Indonesian Nutrition Status Survey and Indonesian Health Survey data was still below the national stunting prevalence in 2023 (20.7%). However, the reduction is not yet significant. It does not align with the target until 2024 (14%).

Surakarta is part of the Central Java province consisting of five sub-districts: Laweyan District, Serengan District, Pasar Kliwon District, Jebres District, and Banjarsari District. In February 2024, there were 1,050 cases of stunting in Surakarta City, with 22 sub-districts where stunting is located. The subdistrict with the highest number of families is Banjarsari Subdistrict, namely 31.32%, with 12,393 children under five (in 2023). More than 50% of children under five in Gilingan Village, Banjarsari, are at risk of stunting in

2022, with details of families at risk of stunting being families that do not have a proper primary water source, inadequate latrines, wives who are too young (less than 20 years old), wife aged 35 – 40 years, birth of children too close, and/or too many children. According to Gilingan Community Health Center data (2023), the incidence of stunting in the Gilingan Community Health Center working area was high enough. It has caused the Gilingan sub-district to become one of the locus of the Surakarta City government for the joint movement to prevent stunting or "Gerbak Stunting."

In 2017, more than two million children under the age of five died from stunting caused by poor feeding practices and recurrent infections [6], [14]. Good maternal behavior and parenting are the main factors determining children's health status in their families. Therefore, one of the efforts to prevent and overcome stunting is to increase mothers' knowledge [2], [15]. Mothers must have good knowledge and the ability to apply nutritional knowledge in selecting and processing food. It is hoped that children's food intake will be more secure and can help improve their nutritional status until they reach growth maturity. Good knowledge about the mother will influence the mother's self-efficacy in making decisions and caring for the child [7], [15].

Good knowledge and self-efficacy have significantly contributed to overcoming and preventing stunting. Research conducted by Arini et al. (2022) found that the level of self-efficacy in mothers plays a crucial role in their ability to provide adequate care for their children. This underscores the importance of maternal self-efficacy in child care, keeping us informed and aware of its impact on stunting prevention. Mothers desire healthy nutrition and physical activity for their children. With increased self-efficacy, a mother's self-confidence in caring for and nurturing her child can be significantly enhanced, offering hope for positive change in stunting prevention [16], [17].

A healthy and prosperous life for children can be promoted by family empowerment, which can also help lower child mortality and morbidity [18], [19]. Many people, particularly mothers living in the home, must participate in efforts to lower the prevalence of stunting [20]–[22]. According to research, mothers can help prevent nutritional issues, such as stunting in children because they are essential family members [23], [24]. In light of these issues, the authors would examine family empowerment to lower toddler stunting. A scoping review research concluded that mothers' decision-making is deep in household, education, and environment are considered essential for empowering families whose outcomes are expected to build change and increase mothers' knowledge and skills in fulfillment of children's nutritional needs to reduce stunting [1].

Providing education using a health coaching method based on family empowerment is a patient-centered method for determining goals related to their health by maximizing family empowerment in achieving their goals. This method has been proven to increase self-efficacy, offering hope and optimism for the future. Health coaching provides support to individuals in increasing knowledge and changing behavior. Behavioral changes will encourage the formation of disease prevention actions and build self-efficacy through self-management and healthy behavior, both for oneself and the people around them [23]. In the context of this research, it is children under five years (toddlers). Based on this background, this research aims to determine the role of health coaching based on family empowerment in increasing the knowledge and self-efficacy of mothers with toddlers and exploring the mothers' perceptions of stunting in depth.

METHODS

This study was a mixed-method research study consisting of two stages. The first stage was quantitative research with a quasi-experimental pre and post-test design that was carried out from June to September 2024. The minimum sample size was calculated using the Slovin formula (Precision value or significance value of 95%= 0.05), obtained 84 mothers with toddlers aged 24-59 months in the Gilingan Community Health Center

working area as the subjects. The number of respondents was selected using probability sampling techniques with a simple random sampling type. The criteria for respondents selected were mothers with aged 24-59 months, toddlers who lived and settled in that location and agreed to sign informed consent as respondents.

All subjects received health coaching intervention using a family empowerment approach to increase mothers' knowledge and self-efficacy. This intervention takes the form of providing education in the form of two days half day parenting seminars about knowledge of stunting, child rearing patterns and modification of child eating patterns, child growth and development, and the importance of family support in maintaining children's health. The mothers were invited to a parenting seminar in the Gilingan Village hall to receive education from the researcher. The researcher also provided leaflets on parenting patterns for mothers to study at home. Follow-up was conducted one month later during the integrated health post (Posyandu). The instrument at this stage is a knowledge and self-efficacy questionnaire, which is filled out before and after the parenting seminar. The validity and reliability test of the instrument with the calculation results $r > 0.361$ (r table) and ensure that it is reliable (Cronbach's $\alpha = 0.76 \geq 0.6$). Validity and reliability tests were conducted on 72 mothers who were not research subjects.

Data analysis carried out in this research used the Kolmogorov-Smirnov Test as a normality test ($\text{Sig.} p > 0.05$) where both variables have a value of 0.001, so the data is not normally distributed [25]. Data analysis used a Wilcoxon test to determine the effect of providing education using a family empowerment-based health coaching model on increasing mothers' knowledge, self-efficacy, and behavior regarding stunting. A Rank-Spearman study to determine the correlation between mothers' knowledge, self-efficacy, and behaviour in efforts to prevent stunting in toddlers. The scoring classification of study variables for 1) mother's knowledge: High, if the score obtained between 80-100; Moderate, if the score obtained between 60-79; and Low, if the score obtained less than 60; 2) Self-efficacy: High, if the score obtained between 30-40; Moderate, if the score obtained between 20-29; and Low, if the score obtained 10-19; 3) Maternal behavior regarding stunting prevention: Good, if the score obtained between 80-100; Moderate if the score obtained between 50-79; and Poor, if the score obtained less than 50.

The second study stage was qualitative descriptive research to explore perceptions of mothers (4 persons), health cadres (1 person), and regional midwives (1 person) regarding stunting and identify factors that constitute obstacles and challenges to stunting prevention and management programs in Surakarta City, especially in the Gilingan Banjarsari area. The sampling of respondents used a purposive sampling technique with a criterion-based selection approach. Researchers used a maximum variation sampling strategy. These variations include the child's gender and stunting status, the mother's age, and occupation. Researchers obtained respondents who were willing and cooperative to become respondents based on direction from the cadres. The other informants are community health cadres, and regional midwives. The data tracking technique used in this research is one-to-one in-depth interviews. Triangulation methods, sources, and techniques are used to ensure the validity of the qualitative data that has been collected. Research triangulation is carried out by involving experts in analyzing data to avoid bias in research results. This qualitative descriptive research data analysis uses thematic analysis techniques. Ethical Clearance was published by the Health Research Ethics Committee of Dr. Moewardi General Hospital, with letter number 1.207/V/HREC/2024. The subjects were asked to complete and sign an informed consent.

RESULT

Study Phase 1

This first phase of the study involved 86 mothers who had toddlers in the working area of the Gilingan Community Health Center, Banjarsari, Surakarta City, Central Jawa. The characteristics of the subjects including age, education, job, family form, gender of the toddlers, mother's ages at pregnancy, current number of children, current history of breastfeeding the child, and history of monitoring the development of child under five at the integrated service center ("Posyandu"). The study showed the median age of the mother is 29.00 years, and the mean age of the mother is 28.96 ± 5.53 years. The majority of the occupations were private employees (46.4%). Gilingan Subdistrict is an urban area, where there are many business centers and offices. The average age at birth is between 20 and 34 years (81.0%). Fifty-five people (65.5%) have a nuclear family form of family. Of the 84 mothers, 43 (51.2%) had a history of exclusive breastfeeding, with 46 (54.8%) having a history of having their children checked regularly at the posyandu. The sociodemographic characteristics of the respondents are presented in Table 1 below:

Table 1. Sociodemographic Characteristics of the Respondents (n=84)

Characteristics of Respondent in First Phase Study (n=84)		
Characteristics	n	Percentage (%)
Mother's Age (years)		
Under 20	4	4.8
20-29	41	48.8
30-39	36	42.9
≥ 40	3	3.6
Mother's Job		
Housewife	12	14.3
Privat employees	39	46.4
Government employees	14	16.7
Others	19	22.6
Education		
Elementary School	1	1.2
Junior High School	11	13.1
Senior High School	29	34.5
Vocational School	14	16.7
Diploma or Academy	14	16.7
University (Bachelor/ Master/ Doctoral)	15	17.9
Family Form		
Nuclear family	55	65.5
Extended family	29	34.5
Gender of the Child		
Female	48	57.1
Male	36	42.9
Mother's Age at Pregnancy (years)		
Under 20	8	9.5
20 – 34	68	81.0
≥ 35	8	9.5
Current number of children (person)		
Just one	16	19.0
2 – 3	39	46.4
≥ 4	25	34.6
Current History of Breastfeeding for the child under five		
Exclusive breastfeeding	43	51.2
Non-exclusive breastfeeding	41	48.8
History of Child Monitoring at "Posyandu"		
Check regularly	46	54.8
Do not Check regularly	38	45.2

The frequency distribution of mothers' levels of knowledge, self-efficacy, and behavior regarding stunting is depicted in the following Table 2:

Table 2. Frequency Distribution of Study Variables

Study Variables	Distribution of Measurement Results			
	Pre-test	%	Post-test	%
Mother's level of knowledge				
High	37	44.05	72	85.74
Moderate	43	51.19	12	14.26
Low	4	4.76	0	0.0
Self-efficacy				
High	32	38.09	58	69.05
Moderate	33	39.29	25	29.76
Low	19	22.62	1	1.19
Maternal behavior regarding stunting prevention				
Good	28	33.33	55	65.48
Moderate	41	48.81	29	34.52
Poor	15	17.86	0	0.0

The mother's level of knowledge before being given the intervention was primarily moderate (51.19%) with a mean assessment score of 65.35 ± 13.56 . After being given the intervention, the mean score increased to 82.51 ± 11.09 , with the highest distribution being high knowledge, 85.74%. Most mothers' self-efficacy before intervention was moderate (39.29%), with a mean assessment score of 66.76 ± 12.73 . After being given intervention, the mean score increased to 80.33 ± 10.78 , with a significant increase in high self-efficacy, now at 69.05% after post-test. The mother's behavior assessment shows that before the intervention was given, the majority was moderate (48.81%) with a mean assessment score of 67.63 ± 11.68 . After being given the intervention, the mean score increased to 77.90 ± 9.76 with the most extensive distribution being behavior regarding stunting which was high, namely as much as 65.48%.

The normality test using Kolmogorov-Smirnov showed that all data was not normally distributed ($p < 0.05$), so the bivariate statistical test to see the difference in pretest and post-test results for each variable used the alternative Wilcoxon test, which is shown in the following table 3:

Table 3. The Results of Analysis Test

Variable	Minumum	Maximum	Mean	Wilcoxon test p-value
Knowledge				
Pre-test	45	90	72.44±11.15	<0.001
Post-test	65	100	88.51±9.37	
Pre and post-test				
Self-efficacy				
Pre-test	12	37	26.86±8.02	<0.001
Post-test	18	40	32.68±5.68	
Pre and post-test				
Behaviour				
Pre-test	28	89	69.02±17.37	<0.001
Post-test	56	99	81.79±11.67	
Pre and post-test				

Based on the table 3, the results show a significant difference between maternal knowledge before and after the intervention, an essential difference between maternal self-efficacy before and after the intervention, and a substantial difference between

maternal behavior regarding stunting prevention before and after the intervention. The correlation between knowledge, self-efficacy, and behavior in preventing stunting was tested using Spearman's Rho correlation.

Table 4. The Correlation between Knowledge, Self-Efficacy, and Behaviour in Preventing Stunting of The Mother

		Knowledge	Self-efficacy	Behaviour
Knowledge	Correlation coefficient		0.882	0.875
	Sig. (2-tailed)		0.001	0.001
Self-efficacy	Correlation coefficient	0.882		0.890
	Sig. (2-tailed)	0.001		0.001
Behaviour	Correlation coefficient	0.875	0.890	
	Sig. (2-tailed)	0.001	0.001	0.001

Based on the table above, it is known that the p -value < 0.001 means that there is a correlation between knowledge and self-efficacy and behavior in preventing stunting. The results of the correlation coefficient between knowledge and self-efficacy were 0.882, the correlation coefficient between knowledge and behavior was 0.875, and the correlation coefficient between self-efficacy and behavior was 0.890. All of three are included in the strong category with a positive correlation direction, which means the higher the mother's knowledge and self-efficacy, the better the mother's behavior in preventing stunting.

Study Phase 2

In the second study stage, descriptive qualitative research, researchers recruited two mothers with stunted toddlers, two mothers with non-stunting toddlers, one health cadre, and one regional midwife. The following is a description of the characteristics of mother informants:

Table 5. Characteristics of Qualitative Research Mother Informants

Identity Code	Status	Age (year)	Education	Occupation	Child's Age (month)	Child's Gender	Family Form
IS-1	Mother of a stunted child	40	Elementary School	Housewife	36	Male	Nuclear family
IS-2	Mother of a stunted child	21	High School	Privat employee	26	Female	Extended family
I-1	Mother of a child who is not stunted	28	High School	Housewife	34	Male	Nuclear family
I-2	Mother of a child who is not stunted	32	Diploma	Privat employee	40	Female	Extended family

Other informants were the community health care (KD), a 41-year-old housewife who has been active in health care for more than two years and regularly carries out posyandu activities in her village, and the regional midwife (BW), was 36 years old and had been on duty for more than five years. We conducted in-depth interviews with each informant with an interview duration of around 30 – 60 minutes and explored perceptions about stunting. We have obtained saturated data from all respondents so we continued with the analysis. The mothers often heard the term stunting from social media and outreach activities carried out by health cadres, family empowerment and welfare leaders, and health center health workers. However, all informants gave different perceptions about stunting, the causes of stunting, and the challenges in preventing stunting.

The map mapping concept of the themes found in the qualitative research (study phase 2) presented in the following scheme (Figure 1)

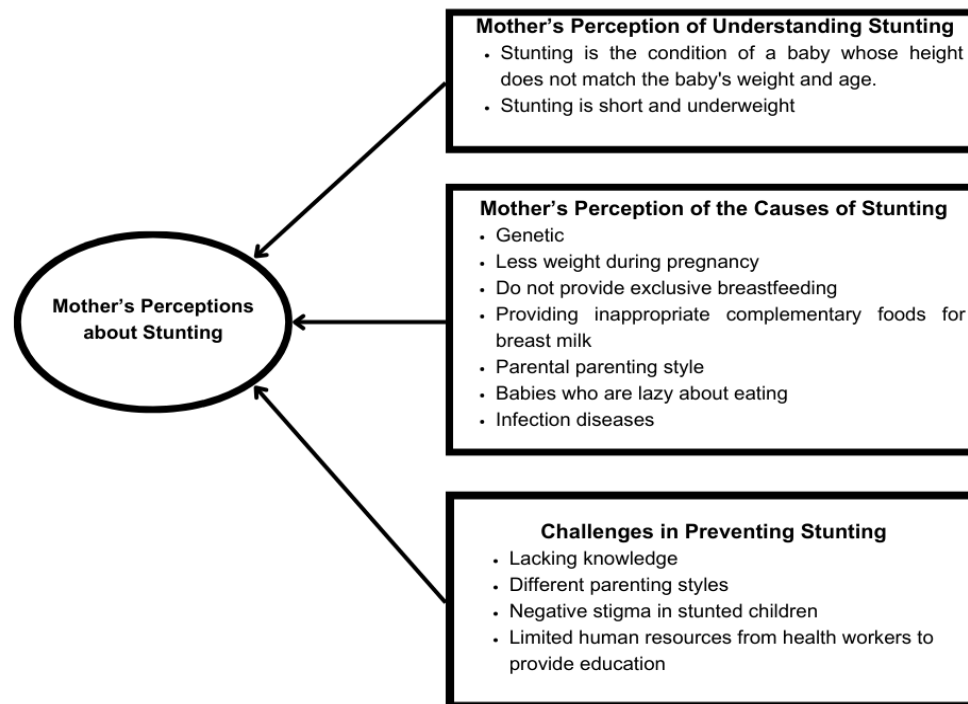


Figure 1. Map Mapping Concept of The Themes Found in The Qualitative Research

The explanation of each theme that the researchers obtained is as follows:

1. Mother's Perception of Understanding Stunting

Ordinary people, including informants, widely know the term stunting. Informants perceive stunting as a child who is small, malnourished, and has slow growth, with the characteristics of a short body, thin, and weak.

- Stunting is the condition of a baby whose height does not match the baby's weight and Age.

According to informant I-1, stunting is not a strange thing. Stunting is the condition of a baby whose height does not match the baby's weight and age. Stunting is not only based on the baby's height but also the baby's development, such as being on time when walking and talking and other signs of development appropriate to the child's age.

"Stunting is the condition of a baby whose height does not match the baby's weight and Age... My child is not stunted because he chatters and walks quickly. Around the Age of 1 year, he can walk and run. So, I do not think my child is stunted." (I-1)

"Stunting is when the baby is short, slow to speak and understand, and not fast enough to walk. My child could only walk when he was more than 17 months old. I wondered why my child was also so slow at speaking. That is why I then went to the health center for a check-up. This is my third child; his older siblings also took a long time to walk, but not as slow as his younger sibling" (IS-1).

This statement was also confirmed by health cadres, regional midwives, and program holders. He added that chronic infections usually cause stunting.

- Stunting is short and underweight.

Another informant said that stunting means a short child. However, even if the child is short and weighs less, if his development, such as his speaking ability, is fluent, then the child is not stunted.

"Stunting is short, and the scales are lacking. Even if it is short, if you speak fluently, it means they are not stunting. Stunting is different from malnutrition. If they are malnourished, they will have a bloated stomach." (I-2)

Information from informants showed that the mother's perception of the meaning and characteristics of stunting tends to be based on the child's visible physical signs.

According to regional midwives, the characteristics of stunted children that are most often found in their work area are shortness, and the child's intelligence level is not optimal. Usually, people see that stunting is only short, but from the level of intelligence, we have to look at it from there.

"So, if there is a child we suspect is stunting, then we assess his intelligence abilities according to his age, and it turns out that they are lacking... That will further strengthen our suspicions that this child needs help with growth and development stimulation..." (BW)

2. Mother's Perception of the Causes of Stunting

a. Genetics

"Yeah... it looks like it is hereditary... because my family is short... my husband's family is too..." (I-2)

b. Less weight during pregnancy

The informant stated that stunting was caused by chronic underweight during pregnancy.

"My child is stunted because when I was pregnant, it was declared Chronic Energi Deficiency with a Mid-Upper-Arm-Circumference of less than 23.5 cm until I was 8 months pregnant. When I was pregnant, I could only eat rice and fish, but only a little. There was no other food I could eat except rice and fish. My condition at that time was very weak. "That is also the reason why my child was born prematurely due to malnutrition." (IS-1).

c. Lack of exclusive breastfeeding

According to IS-1, her child is stunted because she has only been given breast milk for up to 8 months.

"I only gave him breast milk until my child was 8 months old because my breast milk was gone. At that time, my first child was sick, so I went back and forth to the hospital. Every day, I go to the hospital to see my child's condition. I think it is very stressful, So that could be the cause of the loss of breast milk." (IS-1)

d. Improper provision of complementary foods with breast milk

The informant said that one of the causes of stunting is a lack of breastfeeding. According to the informant (IS-2), stunting is because she gives inappropriate complementary food for breastfeeding even though she has given exclusive breast milk to her baby.

"My breast milk is smooth. I gave him breast milk until he was 6 months old. The first time I gave him instant porridge was when he was over 6 months old. I did not have time to make porridge, so I bought instant porridge at the shop." (IS-2)

e. Parenting Style

According to the informant, stunting is caused by malnutrition due to parents' parenting patterns in feeding their children. As explained by the informant,

"Stunting is due to lack of food and nutrition. So stunting depends on how parents feed their children." (IS-1)

f. Babies who are lazy about eating

The informant also mentioned another cause of stunting; The cause of stunting was because children were lazy about eating.

"Stunting is caused by babies being lazy about eating and not wanting to eat fish." (IS-1).

"Stunting is caused by babies being lazy about eating vegetables and fruit." (I-1)

g. Infectious disease

The cause of stunting in babies is due to infectious diseases suffered by babies. According to the informant, the baby had experienced pneumonia at about eight months of age. Pneumonia in babies is caused by several family members who often smoke around the baby. The following is an excerpt from an interview with the informant:

"When my baby was 8 months old, his grandmother took care of him because my first child was also sick. His grandfather also often smoked near the children. Maybe that is the reason why my baby often gets sick and has fever and convulsions. Since then, his weight has not increased" (IS-2)

3. Challenges in preventing stunting

a. Mother's lack of knowledge

There are still many mothers who do not know what stunting is. They have only heard the term, but many people do not understand the meaning, causes, and what should be done to prevent children from getting stunted. It takes extraordinary efforts for us to increase the knowledge of mothers here about stunting.

"Yes... When we were first given directions by the sub-district or health department, we, as cadres, had to know first... Only after that did we have the courage to convey the information we got to residents in our area. Because if you make a mistake from the start, it could be dangerous. Many mothers do not know precisely what stunting is..." (KD)

b. Different parenting styles

Understanding the impact of different parenting styles, even within the same family, on a child's nutritional status is crucial.

"For instance, a child raised by their mother, grandmother, or other relatives may experience varying opinions about their diet. This knowledge empowers us to make informed decisions about our child's nutrition." (BW)

"Sometimes, because I have to work, I entrust my child to his grandmother. So, I asked what side dishes to prepare for the meal later. If my child does not want to eat, his grandmother will give him other types of food which may be less nutritious, but the important thing is that my child eats... In such situations, it is important to communicate with the caregiver about the child's dietary needs and preferences and to provide healthy alternatives for the child to choose from." (IS-2)

c. Negative stigma in stunted children

Especially in Indonesia, negative stigma about health problems is quite a problem, including stunting. Opinions from the surrounding environment greatly influence a person's and their family's behavior, including choosing appropriate actions to overcome their health problems.

"There are mothers who do not accept that their children are said to be short. As a result, the mother no longer wanted to come to the health center to have her child checked. He was embarrassed by his neighbors, considered unable to care for children" (BW)

"Yes... to be honest, I am embarrassed... I was this old when I gave birth to my little child... then the neighbors said, this is because I am too old to be pregnant..." (IS-1).

- d. Limited human resources from health workers to provide education

"It is indeed a challenge to implement this program. With a fairly large area, our human resources are also limited because we still have many other activities to do, so it could be said that this educational activity is not optimal or does not meet expectations. Therefore, we are very dependent on the participation of cadres in our area to help carry out screening, especially at posyandu..." (BW)

DISCUSSION

Most mothers had Senior High School and Vocational School education (equal level of education), 43 people (51.2%). This research is in line with Olsa, Sulastri, and Anas (2018), who stated that the majority of mothers' education was in the appropriate category, high school graduates/equivalent, with the number of mothers being 130 people (56%) [26]. This research also aligns with Basuki & Uminingsih (2019) that most respondents have a high school education, namely 45 mothers (60%) [27]. The mother's education level will influence the child's health and welfare, affecting the child's nutritional status. Mothers with a higher level of education will more readily absorb information when compared to mothers with little or no education, so with an adequate level of education; It is hoped that a mother will be willing and able to behave well to improve her child's nutritional condition [8], [23]. The higher the mother's education level, the better the mother's knowledge. Education influences a person's ability to receive and process information so that good behavior will be reflected in efforts to prevent stunting. Implementing reasonable preventive measures will affect the nutritional status of children [15], [28].

This study found that the majority of mothers are private employees. The mother's professional status significantly influences her attitude when providing nutrition to her children. Mothers who do not work only serve as housewives and spend much time at home without being tied to working outside the house. Working mothers are dynamic women with abilities and advantages in carrying out various responsibilities, such as being mothers, wives, and teachers [6], [16]. Mothers who do not work have more time to care for their children, so mothers become more sensitive in paying attention to nutritional problems and their children's growth and development. While working mothers have less time to interact with their children, children will be cared for by nannies and other people, so mothers need to be made aware of nutritional issues and their children's development and growth [16], [24].

The number of girls is 57.1%, more than boys. The child's gender must be one of the mother's considerations when providing appropriate nutritional intake. Girls have more fat tissue than muscle tissue, in contrast to boys. Metabolically, muscle is more active than fat, which causes strength to require more energy. This problem causes the body composition of boys and girls to be different, so they have different nutritional needs. Girls have different physical and motor development than boys. Girls' body proportions tend to be smaller, and girls' activity patterns are lighter than boys [29], [30]. This reason is in line with Rufaida, Raharjo, and Handoko's (2020) research, which states that boys are at 0.456 times the risk of stunting compared to girls. Girls are different from boys in

terms of physical and motor skills. Boys are more active in activity patterns than girls, so boys spend more energy than their energy intake [31]. Different children's body composition also affects the amount of nutrition that must be met. Children's different nutritional needs must be considered to overcome the risk of stunting. Mothers who make preventive efforts by meeting nutritional needs and providing additional food to their children can prevent stunting [24], [28].

Researchers found that mothers' perceptions regarding the causes of stunting focused on factors that directly cause stunting, such as nutritional problems, lack of immunization, worms, premature birth, and genetics. Not a single informant stated that environmental factors such as clean water and sanitation were indirect causes of stunting in children. Perception will determine how a person will select, collect, arrange, and give meaning, influencing the behavior (response) that will emerge from within a person. Perception will affect the mother's parenting style, namely the care provided by the mother to the child in the form of the mother's attitudes and behavior; the source of information received influences perceptions, the mother's knowledge and educational background, and beliefs [32].

A person's knowledge about something has positive and negative meanings. These two aspects influence a person's behavior. The more positive aspects and objects a person has, the more positive attitudes a person has towards the object [33]. This study explains that most mothers' knowledge about stunting is moderate, with most mothers' education level being high school or equivalent. Knowledge is influenced by education. How mothers receive information depends on the education received and how they process it. Maternal knowledge will affect how mothers prevent stunting in children. The better the mother's knowledge, the better the mother's behavior in preventing stunting. Research conducted by Wulandari, Budiastutik, and Alamsyah (2016) states that mothers with poor knowledge have a 1,644 times risk of stunting in toddlers compared to mothers with good knowledge [34]. The mother's level of expertise in household processing is very influential, influencing the mother's attitude in choosing the ingredients to consume. Mothers with good nutritional knowledge will understand the importance of good nutritional status for their health and well-being [16], [35].

It was found that most mothers had moderate stunting prevention efforts, as many as 41 mothers (48.81%) during the pretest, and this increased to high stunting prevention efforts, 55 people (65.48%) during the pretest-posttest. This aligns with research by Simamora (2021), which states that prevention of stunting in toddlers is mainly in the outstanding category [36]. According to Goudet et al (2019), management is needed to avoid or minimize the risk of stunting by providing adequate nutrition, both macronutrients and micronutrients. The quality and quantity of good complementary foods are essential in the diet because they contain macro and micronutrients that play a role in linear growth. Feeding foods high in protein, calcium, vitamin A, and zinc can increase a child's height. Providing adequate nutritional intake influences standard growth patterns so that babies who are already stunted can have their nutritional status optimally improved. At the same time, healthy children can be prevented from falling into stunting [8], [36], [37].

Parental awareness will shape health patterns or behavior, especially in preventing stunting, such as fulfilling nutrition for pregnant women, child nutrition, maintaining a good home environment and sanitation, and clean and healthy living behavior [38]–[40]. Maternal knowledge is related to maternal efforts to prevent stunting. Mothers with good knowledge about stunting will influence the mother's efforts to prevent stunting in her children. Mothers will behave well in meeting nutritional needs and paying attention to their child's growth and development [2], [7]. Self-efficacy is an individual's confidence in organizing and taking action to achieve specific goals [41]. Self-efficacy is an essential factor in shaping maternal behavior in supporting children's nutrition and is related to

competence in building a family consumption environment to prevent stunting [16], [17]. Good self-efficacy will support the formation of maternal behavior, and this ability can support high self-efficacy. Someone with high self-efficacy tends to be able to make behavioral decisions, mainly to prevent stunting [16], [17].

Parenting patterns in feeding children are fundamental and greatly influence the child's growth [12]. They provide a comfortable atmosphere for the child when eating, knowing that the child has a good appetite and being patient and attentive when breastfeeding can form a close relationship between the two so that the child is expected to be able to finish the food given. Although mothers understand several appropriate feeding methods, not all understand responsive feeding completely, so not all are done well [32]. The mother's perception of the child also influences the mother's response to breastfeeding. Individually, poor feeding practices in Indonesia are related to a lack of knowledge and trust among mothers/ caregivers and misunderstandings about good feeding practices for children [6], [10], [32]. A mother's lack of understanding can also determine a toddler's nutritional status because it determines the mother's attitude or behavior in choosing food to be consumed by the toddler and eating patterns related to the amount, type, and frequency that will influence the baby's food intake [2], [15], [16]. From the description of the results, it can be interpreted that mothers need sufficient resources first to fulfill best practices. The implications of this research show that optimizing health coaching efforts with a family empowerment approach in preventing stunting has great potential to increase the knowledge and self-efficacy of parents, especially mothers who have children under five, regarding stunting and its prevention efforts. The advantage of this research was that there is intervention that provides relevant and comprehensive information and applies a participatory approach that actively involves mothers in every stage of the intervention, and the qualitative approach can describe the characteristics of respondents in more depth. The weakness was that the frequency of counseling is limited and the follow-up carried out once cannot assess improvements in the child's quality of life.

CONCLUSION

The efforts to prevent stunting can be improved by mothers' perceptions about stunting, family parenting patterns, and challenges in efforts to prevent stunting. Comprehensive and collaborative family empowerment-based stunting prevention efforts are needed to increase mothers' knowledge and self-efficacy. This is important to ensure that the material presented is in accordance with the needs and characteristics of cultural customs, as well as encouraging the independence and involvement of mothers with children under five in overcoming and preventing stunting in children. These findings also underline the importance of program sustainability and support from various stakeholders, including parents, health workers and the community, to achieve optimal and sustainable results in reducing the risk of stunting in children under five. Health practitioners, and educators can use these findings to develop and implement health coaching programs with a more effective family empowerment approach. The program designed based on the findings of this research will be more appropriate to the needs of parents and families and will be able to provide accurate and relevant information about stunting prevention efforts. Users of research results are also expected to carry out regular evaluations to continue to improve the quality of interventions. Researchers are further advised to continue research with a focus on more innovative methods and approaches to help strengthen literacy about stunting and its prevention efforts. Further research could explore the impact of digital technology and social media in supporting mentoring programs, as well as examine the effectiveness of programs in the long term. In addition, further research can be conducted to identify factors that influence program success in various other cultural and social contexts, with a larger range of respondents.

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