



## The Role of Specific Nutritional Interventions For The First 1000 Days of Life Program In Stunting Prevention : A Literature Review

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### ABSTRACT

**Background:** Stunting has many negative impacts on the health and quality of children so it is necessary to prevent stunting. Prevention of stunting is carried out in accordance with the target of the Sustainable Development Goals, which is to eliminate all forms of malnutrition by 2030 by implementing specific nutrition interventions in the first 1000 days of life program.

**Purpose:** This study aims to determine the role of specific nutritional interventions in the first 1000 days of life in stunting prevention.

**Methods:** This type of research is a narrative literature review. This research was conducted from October 2021 to June 2022. The search for articles was accessed through the Pubmed, Science Direct, and Google Scholar databases. Articles were selected based on inclusion and exclusion criteria.

**Results:** The analysis was carried out on 16 research articles. It was found that every program in specific nutrition interventions can reduce the stunting with prevent stunting by preventing and treating the causes of stunting with the help of the government to create a program so that it can be implemented in more detail and specifically.

**Conclusion:** Specific nutrition has been proven to reduce stunting.

**Keywords:** *Specific nutrition intervention, stunting intervention, toddler, stunting*

## BACKGROUND

Problems in Indonesia regarding nutrition in modern times are still a complex issue. One of the nutritional problems in Indonesia is stunting. Stunting is a measure of chronic malnutrition and is measured using length or height based on age using a standard deviation score (z-score). Stunting is identified by assessing a child's length or height using a comparison with a set of accepted standard values. There is an international convention which states that children are stunted if their length/height is below 2 SD from the WHO child growth standard median for the same age and sex (De Onis et al., 2012; De Onis & Branca, 2016).

According to data from UNICEF 2020, stunting cases in the world reached 22% with a total of 149.2 million children. Countries with a very high prevalence of stunting are West and Central Africa 32.5 percent, East and South Africa 32.3%, and South Asia 31.8%. WHO requires 20% as a non-public health problem limit for stunting (Unicef, 2022). Nationally, in 2021, according to the SSGI, the stunting rate of children in Indonesia is 24.4% with the percentage of short children at 19.0% and very short children at 5.4%. West Sumatra has a stunting prevalence of 23.3% (Lestari, 2023). Data from the Padang City Health Office 2020, in the capital city of West Sumatra, Padang City, there are still 2,943 children suffering from stunting. Where the highest prevalence of stunting is in South Padang District, precisely in the working area of the Seberang Padang Health Center (Lestari, 2023).

Stunting also results in impaired physical development and has a long-term effect on cognitive development because stunting children will find it more difficult to master science and technology because of weaker analytical skills, stunting children will be more susceptible to degenerative diseases (diseases that appear with age) because they can experience problems with the development of the insulin and glucagon hormonal systems in the pancreas which regulate glucose balance and metabolism and waiting for the performance of economic productivity to mature (Dasman, n.d.; Prado & Dewey, 2014; Stewart et al., 2013). With the many impacts caused by stunting, it is necessary to prevent stunting by focusing on nutritional interventions in the first 1000 days of life, this is due to nutritional status in the first 1000 days of life will affect the quality of health, intellectual, and productivity in the future (Usaid, 2014).

The period of the first 1000 days of life (HPK) is a critical period at the beginning of the process of growth and development of a child, starting from the conception to the age of 2 years, namely consists of 270 days of gestation and 730 days in the baby's first life (Meihartati et al., 2018). This period is called the golden period, this period is a sensitive period because problems that arise during this period will be permanent and irreversible. The movement of the first 1000 days of life is a movement at this time, children's brains are developing rapidly, although the human brain will continue to develop and can undergo changes throughout life, at this time its development is the fastest (Tifada, 2021).

The the first days of life movement focuses on nutritional interventions from the time of conception to two years of age. The types of activities carried out in the first 1000 days of life are specific interventions and sensitive interventions. The the first days of life movement focuses on nutritional interventions from the time of conception to two years of age. About the role of specific nutrition interventions in the first 1000 days of life in stunting prevention is important, this is related to the dangers and many long term impacts caused by stunting and is also related to the target of the Sustainable Development Goals,

which is to eliminate all forms of malnutrition in children. in 2030 and researchers hope that this research can be used as a reference for improving the health of Indonesian children in order to improve the quality of human resources in Indonesia.

## **OBJECTIVE**

This study aims to determine the role of specific nutritional interventions in the first 1000 days of life in stunting prevention

## **METHODS**

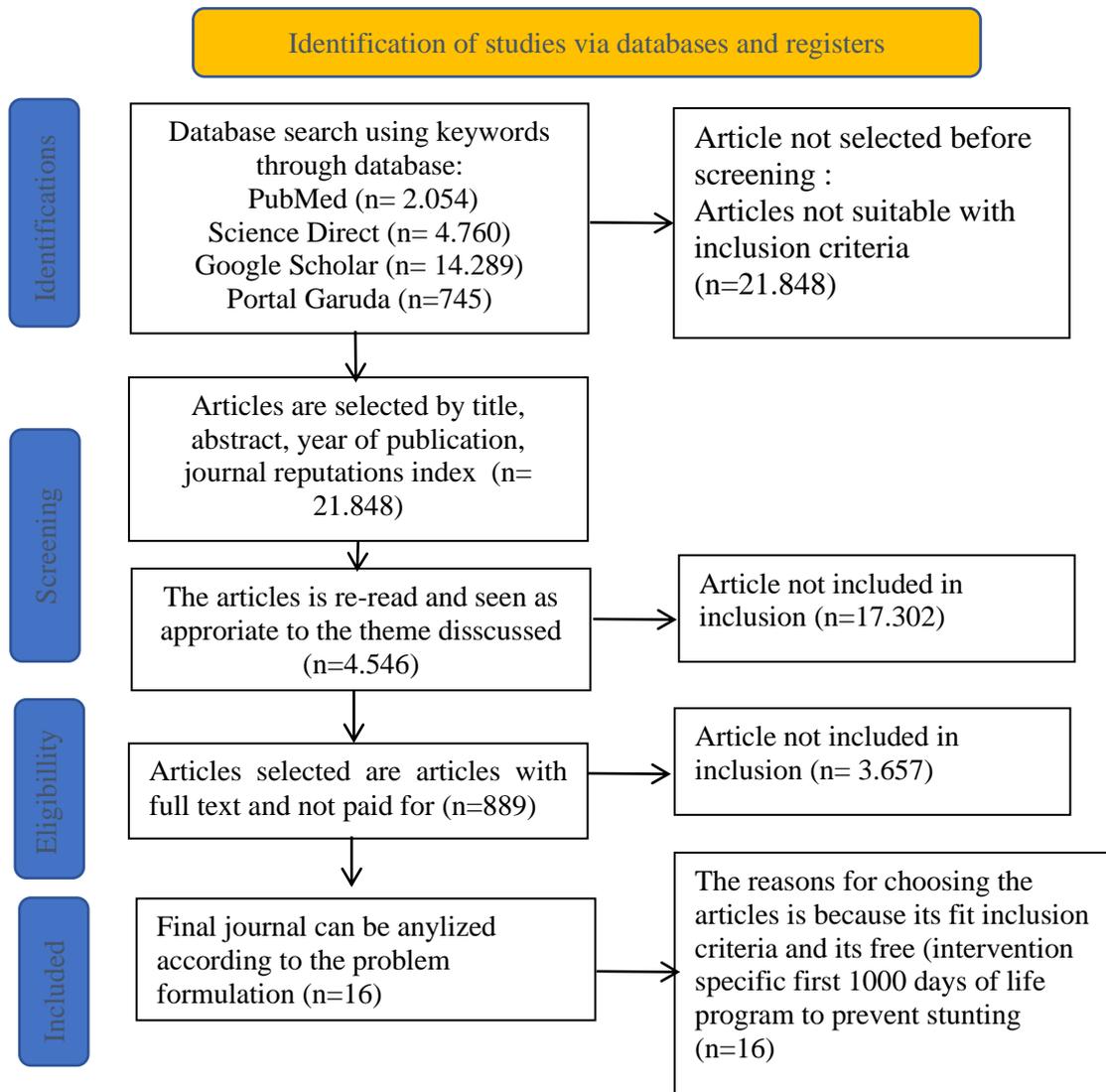
This type of writing is a literature review, conducted in October 2021-June 2022. Data were collected through digital libraries, namely: Sciedirect, PubMed, Garuda Portal, Google Scholar Electronic Repository, using inclusion and exclusion criteria. Journal search inclusion criteria were Full-Text or Free Full Text Journals, primary journals, Indonesian-language journals indexed by Sinta (minimum Sinta 4), journals with a minimum publication the last 5 years (2017, 2018, 2019, 2020, 2021, 2022), primary, a journal that discusses the role of specific nutrition interventions for the first 1000 days of life in stunting prevention. The exclusion criteria for journal searches were journals whose contents only contained abstracts and not Full-Text, secondary or tertiary journals, journals published under 2017, journals about the role of specific nutrition interventions in the first 1000 days of life in stunting prevention.

The keywords used in the digital database are intervention, stunting, specific interventions, stunting, specific nutrition, the first days of life movement, nutrition specific, stunting intervention, the first days of life, specific nutritional intervention by combining 2 or more of these keywords. In PubMed and Science Direct keywords are searched using English, in Google Scholar and Garuda Portal Indonesian and English keywords are used.

The technique used in collecting data is literature study. The literature study was carried out by searching relevant literature regarding theories from scientific works related to the role of specific nutritional interventions in the first 1000 days of life in preventing stunting, both published and unpublished in the form of online journals on an international and national scale. This literature technique is used to test the quality and correctness of the theories found from the results of research on the role of specific nutritional interventions in the first 1000 days of life in preventing stunting. Data collection is carried out in 3 steps, namely: editing in this step, the data obtained is re-examined to test the quality, especially whether the theory found regarding the role of specific nutritional interventions in preventing stunting is correct. After the data sources in the form of relevant journals are found, the sources will be selected using inclusion and exclusion criteria, then the author will analyze the data.

## **Literature Search Results**

Journal searches are carried out through databases by selecting journals based on inclusion and exclusion criteria.



**Figure 1. Prism diagram of journal selection steps**

## RESULTS

This scoping review found 2,054 articles from the PubMed database, 4,760 articles from Science Direct, 14,289 articles from Google Scholar and 745 articles from Garuda Portal. The next step is to obtain all 2,253 articles to find duplicate articles. After the duplicate articles were discarded, the article review was initiated by selecting the titles and reading the abstracts to find relevant articles for this research.

### *Selected articles*

This narrative review found 16 journals to be analyzed. Search articles using Science Direct, PubMed, Scopus, Google Scholar Electronic Repository. In the ScienceDirect database found 2 relevant articles, in the PubMed database were found as many as 10 articles, in the Scholar database found 3 articles and on the Garuda portal there were 1 articles. Relevant articles based on the inclusion criteria found in 26 research articles. Total of 6 journals discuss about stunting prevalensi, 3 journals regarding the criteria for indications and contraindications that women must pay attention to for

homebirth deliveries, 16 journals discuss effect of specific types of nutrition interventions in the first 1000 days of life on stunting prevention, especially midwives. in assisting homebirth deliveries, 3 journals discuss the factors affecting the success of implementation of specific nutrition interventions in the first 1000 days of life program, 3 journals discuss the implications of specific nutritional interventions in the first 1000 days of lifeprogram for the prevention of stunting penanggulangan stunting, and 4 journals discuss about the role of midwives in the first 1000 days of life program in stunting prevention. Then, the 16 articles were input into the charting data table. Articles are numbered A1-A16 to ease the finding of articles attached in Table 1.

**Table 1. Charting The Data**

No	Title/Author /Year	Country	Objective	Method	Result
A1	Correlation between immunization status and mother's height, and stunting in children 2-5 years in Indonesia (Fajariyah & Hidajah, 2020a)	Indonesia	To analyze the relationship between immunization status and stunting in children 2-5 years.	Cross sectional research design	The results of the study showed that there was a relationship between immunization status and maternal heightwithstunting in children aged 2-5 years
A2	Challenges in implementing convergence in stunting prevention programs in priority districts (Permanasari et al., 2020)	Indonesia	To analyze the challenges of implementing the convergence of stunting prevention programs by local governments in priority districts based on content, context, process.	Operational research	Shows that the challenge in implementing convergence is that socialization is still not optimal so that many people do not understand the stunting prevention program. The implementation of convergence is not yet optimal because it has not yet been achieved standard programm so the regions do not yet know the steps to carry out these activities
A3	Specific nutritional interventions to prevent stunting in Alita 24-59 months at the Suradadi district health center Tegal (Utami, 2022)	Indonesia	To evaluating nutritional intervention programs specifically preventing stunting in toddler 24-59 months at the community health center Suradadi	Cross Sectionals	Practice specific intervention programsStunting prevention has been implemented well. Details of the programs that have been implemented include vitamin A supplementation, zinc supplementation and mandatory basic immunization
A4	Analysis of specific integrative stunting nutritional intervention services in the working area of the Pademangan District Health Center, North Jakarta (Carolina & Ilyas, 2021)	Indonesia	To analyze specific integrative stunting nutritional intervention services in the working area of the Pademangan District Health Center, North Jakarta	Data collection methods using in-depth interviews, FGD and document review.	The results of the research show that planning and budgeting, cross-sectoral cooperation and division of authority in government are not yet optimal, which are obstacles to accelerating stunting reduction in Pademangan sub-district

<b>A5</b>	Predictors of stunting with particular focus on complementary feeding practices: in the northern province of Rwanda (Uwiringiyimana et al., 2018)	Rwanda	To review the factors associated with stunting in the northern province of Rwanda	Cross-sectional study	Interventions focusing on optimal nutrition during the complementary feeding stage, exclusive breastfeeding, and the use of worm tablets have the potential to reduce stunting
<b>A6</b>	The effect of convergent action on reducing stunting prevalence in under-five children in Panggang District, Central Sulawesi, Indonesia (Gani et al., 2021)	Indonesia		a quasi experimental design and prospective investigation direction	When the mother is given perineal massage intervention, it will put pressure on the ligaments/muscles of the mother's perineum which will improve circulation in the perineal area thereby creating relaxation in the mother's perineal muscles.
<b>A7</b>	The influence of infant and child feeding according to the stages of toddler age 0-24 month in effort to reduce the risk of stunting in the first 1000 days of life in the integrated health center area of the kereng bangkirai Community Health Center (Damanik & Wanda, 2019)	Indonesia	To determine the effect of providing baby and young child food according to stages for toddlers aged 0 - 24 months in effort to reduce the risk of stunting in posyandu in the working area of the Kereng Bangkirai Community Health Center,	a Quasi-experimental	There is a significant increase in TB under five before and after providing PMB health education and completeness immunization, number of children, vitamin administration, birth weight, exclusive breastfeeding, complementary feeding menu, and parents' employment status with increasing tnb, and lila.
<b>A8</b>	Maternal nutrition Counseling is associated with reduced stunting prevalence and improved feeding practices in early childhood (Mistry et al., 2019)	Sydney	To determine the role of this intervention on the prevalence of stunting and feeding practices among children. Less than 5 years old	Cross-sectional survey,	The study revealed that the prevalence of stunting was significantly lower in areas where the intervention was provided compared to comparison areas (29% vs 37%, $p < 0.001$ )
<b>A9</b>	Analysis of the implementation of stunting prevention programs (Zulaikha et al., 2021)	Indonesia	To analyze implementation Stunting prevention program at Air Beliti Health Center, Musi Rawas Regency	A combination of quantitative methods with qualitative	The research results show factors related to success. The stunting program at Air Beliti Public Health Center, Musi Rawas Regency is a variable characteristic of agency structure, networks and communication, and community needs. Meanwhile, factors that are not related to the success of the stunting program are organizational culture and external networks.
<b>A10</b>	Upstream and downstream of stunting prevention in Indonesia	Indonesia	To see the upstream and downstream efforts to overcome stunting in Indonesia	Qualitative approach with	The research results show that, at the policy level there have been many government policies issued as an effort to accelerate stunting reduction, but in

	(Saputri & Tumangger, 2019)			descriptive analysis	reality the stunting reduction rate is still far from the target. Downstream, there are still many communities and program implementers at the grassroots level who do not have adequate knowledge regarding stunting, so there is still a need for massive socialization regarding stunting.
<b>A11</b>	The relationship between specific nutritional interventions in first 100 days of life movement program and the incidence of stunting in the working area of the Jatiluhur Purwakarta Community Health Center (Efendi et al., 2021)	Indonesia	To determine the relationship between specific nutritional interventions in program and the incidence of stunting in the working area of the Jatiluhur Purwakarta Community Health Center	Cross-sectional survey	Statistical test results of the relationship between history of exclusive breastfeeding, accuracy, consumption of vitamin A capsules and completeness of basic immunization showed a significant relationship with the incidence of stunting.
<b>A12</b>	Infant and young child feeding practices and stunting in two highland provinces in Ecuador/ (Roche et al., 2017a)	Ecuador	To understand nutritional status and influencing factors to design interventions	Cross-sectional survey	Factors that are significantly associated with stunting are: Parasite infestation, anemia, low body mass index, frequent gastroenteritis, parents' first cousins and the family's short stature.
<b>A13</b>	Effect of modified supplementary feeding on the nutritional status of toddlers (Iskandar, 2017)	Indonesia	To identify the effects of modification of additional foods on nutritional status of children under five years old	Quasi experiment	It shows that out of 22, 20 people and toddlers who previously had poor nutritional status after being given additional food became children with good nutritional status.
<b>A14</b>	Treatment efficacy and re-infection rates of soil-transmitted helminth following mebendazole treatment in school children, northwestern Ethiopia (Zelege et al., 2020)	Ethiopia	To see efficacy of mebendazole therapy against soil-borne helminths and determine the extent of infection Recurrent parasites among school children	Cross-sectional	It is known cure rate (cr) of mebendazole terhadap a. lumbricoides, hookworms, and Q. Trichiura was found to be 96.9%, 23.1%, and 28.6%, respectively. The egg reduction rate (err) of a. lumbricoides was found to be 99.6% whereas 49.6% and 56.3% were reported for worms and t. trichiura respectively.
<b>A15</b>	Albendazole and ivermectin for the control of soil transmitted helminths in an area with high prevalence of strongyloides stercoralis and hookworm in northwestern Argentina (Echazú et al., 2017)	Argentina	To assess the effectiveness of a community-based program with albendazole and ivermectin in the setting of high transmission for s. Stercoralis da hookworm.	Community-based pragmatic trial conducted	Hookworm infections are associated with anemia in the general population and nutritional problems. Disorders in children. S. Stercoralis is also associated with anemia. Community based Worm treatments with albendazole and ivermectin are effective in reducing the prevalence of STH morbidity in communities with a high prevalence of hookworms and s. Stercoralis.

<b>A16</b>	Independent and combined effects of improved water, sanitation, and hygiene, and improved complementary feeding, on stunting and anemia among hiv-exposed children in rural zimbabwe: A cluster-randomised controlled trial (Humphrey et al., 2019)	Zimbabwe	To test the effect of increasing infant and young child feeding and improving water, sanitation and cleanliness (wash) in children's facilities on growth and hemoglobin concentration	A cluster-randomised controlled trial	Infant and young child feeding intervention increased mean length for age z scores was 0.26 and the hemoglobin concentration was 2.9 g/l. 165 (50%) of 329 children in the non-pmba group experienced stunting, compared with 136 (40%) of 336 children in the pmba group and the prevalence of anemia was also lower in the infant and young child feeding group than the non-pmba group
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### *Theme analysis*

Total of 4 journals discuss about stunting prevalensi, articles (A1, A5, A12, A15), 8 journals discuss effect of specific types of nutrition interventions in the first 1000 days of life on stunting prevention, articles (A1, A3, A7, A8, A11, A13, A14, A16), 2 journals discuss the factors affecting the success of implementation of specific nutrition interventions in the first 1000 days of life program, articles (A9, A10). 2 journals discuss the implications of specific nutritional interventions in the first 1000 days of life program for the prevention of stunting articles (A2, A6) and 2 journals discuss about the role of midwives in the first 1000 days of life program in stunting prevention, articles (A3, A4, A4, A9).

Theme 1 : Research in the highlands of Ecuador by Marion et al 2017 found that the overall stunting prevalence was 56.2% (A12). Research conducted by Vestine et al 2018 in Rwanda found that 44% of children were stunted, of which 62% were moderately stunted and 38% were severely stunted (A5). Study by Risna et al in 2020, among 1,048 respondents aged 2-5 years, 171 (16.32%) were found to be stunted (A1).

Research by Risna et al 2020 the proportion of boys who were stunted was higher than girls (A1) research conducted by Vestine et al 2018 in Rwanda where data from stunting cases were 54% male and 46% female affected by stunting where males were found to be shorter (56.3%) and females (43.8%) (A5). According to Risna et al 2020, the proportion of stunted children is higher in urban areas (21.65%) than in rural areas. The proportion of children living in Java and stunting is greater (20.12%) than children living in non Javanese areas (A1). Nationally in 2021, according to SSGI, the stunting rate of children in Indonesia is 24.4%. The regions with the highest proportion of stunting are East Nusa Southeast with 23.8%, then West Sulawesi 33.8% with a proportion of 37.8% and last Aceh 33.2%.

Theme 2 : There are 8 programs that include to specific nutritional interventions in the first 1000 days of life program for the prevention of stunting are : exclusive breastfeeding promotion and counselling that there was a relationship between exclusive breastfeeding and the incidence of stunting in children under five, children who did not receive exclusive breastfeeding were greater (60.8%) than normal children who received exclusive breastfeeding. Babies who did not receive exclusive breastfeeding had a 5,314 higher risk of stunting (A11), than promotion and counseling on infant and child feeding for children aged 0-59 months there are significant influence before and before health

education (A7). Counseling related to feeding practices will be effective in reducing stunting rates (A8). infant and child feeding for children intervention significantly increased the length for the Z score by 0.26 also reduce the number of stunting children by around 20% (A16), next is provision of additional recovery food for malnourished children aged 0-59 months there are changes in z-score with final Z-Score was -2.49 SD with poor nutritional status (A13).

Than provision of vitamin A supplementation for children aged 0-59 months, vitamin A can form essential macronutrients when the body experiences infections that cause growth and development problems in children associated with bone health and decreased immune function (A3), provision of nutritional powder supplementation such as taburia for children aged 0-59 months the effect of giving taburia supplements on the number of short children was decrease, height from the start of treatment to the fifth month increased by 1.43 cm. immunization for children aged 0-59 month was related to stunting children aged 2-5 years where if toddlers who did not receive complete immunizations had a 3.850 times greater risk of experiencing stunting than toddlers who received complete immunizations (A1), provision of zinc supplementation for the treatment of diarrhea for children aged 0-59 months, deworming prevention for children aged 0-59 months treatment using an anthelmintic mebendazole 500 mg in 130 children infected with STH and there was a decrease in the number of infected children after being given the drug. This means that mebendazole is the most effective for treating *A lumbricoides* infection (A14).

Theme 3 : Factors affecting the success of implementation of specific nutrition interventions in the first 1000 days of life program are government, Community and Families. The role of government with this cross-sectoral collaboration, it is hoped that it can reduce the stunting rate in Indonesia (A10). The government's efforts to reduce stunting rates are one of them by issuing stunting intervention policies and regulations. The role of family and community are the health office through the public health center in their respective working areas can involve the community in specific nutrition intervention activities. The Regency, through the regent's circular letter and the health office, the community and involve them in activities related to stunting interventions (A9).

Themes 4 : implications of specific nutritional interventions in the first 1000 days of life program for the prevention of stunting are convergence is one of the main pillars in the national strategy to accelerate the prevention and reduction of stunting (A2). Prevalence of stunting in children under five was 41.1% to 38.9%. Cumulatively, the prevalence of stunting decreased by about 2.18% during one year of intervention. The decrease in stunting occurred in almost all age groups, except the 48-59 month age group. The highest decrease occurred in the 0–5 month age group or around 8.6%; This shows that there is a decrease in the prevalence of stunting in newborns (A6).

Themes 5 : The Role of Midwives in the First 1000 Days of Life Program in Stunting Prevention are spearheading stunting alleviation, especially in promotive and preventive efforts (A4). Village midwives are monitoring pregnant women from the first trimester until the baby is 24 months old, health center does is provide information to the community through to the types of food for pregnant women or after giving birth that must be consumed and socialize nutritious food to children (A9).

## **DISCUSSION**

### **Stunting Prevalensi**

Research in the highlands of Ecuador by Marion et al 2017 found that the overall stunting prevalence was 56.2% (Roche et al., 2017b). Research conducted by Vestine et al 2018 in Rwanda found that 44% of children were stunted, of which 62% were moderately stunted and 38% were severely stunted (Uwiringiyimana et al., 2019). In a study conducted by Risna et al in 2020, among 1,048 respondents aged 2-5 years, 171 (16.32%) were found to be stunted. Research in one area in Indonesia in 2021 by Yenny et al revealed that the prevalence of stunting in Nangapanda District was 40.2% (Djuardi et al., 2021).

Research by Sahdani et al 2017 in Surabaya of 141 respondents found 54.60% experienced stunting (Sahdani et al., 2021). Nationally in 2021, according to SSGI, the stunting rate of children in Indonesia is 24.4% with a prevalence of short children of 19.0% and very short children of 5.4%. Data from the Padang City Health Office 2020, in the capital of West Sumatra, Padang City, there are still 2,943 children suffering from stunting. Where the highest prevalence of stunting is in South Padang District, precisely in the working area of Public Health Center Seberang Padang which is 16.4%, out of 815 toddlers measured by height, there are 134 toddlers suffering from stunting (Padang Health Service, 2021).

### **Effect of Specific Types of Nutrition Interventions in the First 1000 Days of Life on Stunting Prevention**

#### **Exclusive breastfeeding promotion and counseling.**

Research by Fahmi et al 2021 It was found that breastfeeding has a significant relationship with stunting and severe stunting at the age of 2 years and 3 years. Research conducted in disaster areas, namely Palu, Central Sulawesi, conducted by Fahmi et al 2021, the only specific intervention behavior in statistically significant prevention of stunting is breastfeeding for up to 2 years (Hafid et al., 2021).

#### **Promotion and counseling on infant and child feeding for children (PMBA) aged 0-59 months**

The results of Desi et al's 2019 research showed a significant influence before and before health education regarding the provision of infant and child feeding in toddlers aged 0-24 months (Kumala & Sianipar, 2019). Based on Mistry's research Counseling related to feeding practices will be effective in reducing stunting rates. The practice of offering food is a key factor that significantly affects the effectiveness of local food in providing adequate nutrition for vulnerable infants and young children (Mistry et al., 2019). In Andrew et al's 2019 infant and child feeding intervention significantly increased the length for the Z score by 0.26. infant and child feeding intervention can also reduce the number of stunting children by around 20% (Prendergast et al., 2019).

#### **Provision of additional recovery food for malnourished children aged 0-59 months**

The biscuits made from flour, protein isolate, milk, non-hydrogenated vegetable fat, sucrose, enriched with vitamins and minerals, with or without the addition of food additives in accordance with applicable regulations

#### **Provision of vitamin A supplementation for children aged 0-59 months**

Research Venny et al 2022 vitamin A can form essential macronutrients when the body experiences infections that cause growth and development problems in children

associated with bone health and decreased immune function cm (Utami, 2022). The results of Nadya et al's 2021 research show that there is a close relationship between vitamin A consumption and the incidence of stunting, where children who do not consume vitamin A have a 7.020 times greater risk of experiencing stunting (Efendi et al., 2021).

#### **Provision of nutritional powder supplementation such as Taburia for children aged 0-59 months**

Research by Venny et al 2022, toddlers who received taburia supplementation experienced growth in height with range of 1.43 cm (Utami, 2022). Umami study 2019 found the effect of giving taburia supplements on the number of short children where at first the number of short children was 271 then in the fifth month it became 207 people if the percentage from the beginning until the fifth month that is 40.% to 43.9%. Height from the start of treatment to the fifth month increased by 1.43 cm (Budiana et al., 2016).

#### **Immunization for children aged 0-59 months**

Immunization aims to increase the child's immune system against infection (Gani et al., 2021). Based on research by Risna et al 2020, it was found that immunization status was related to stunting children aged 2-5 years where if toddlers who did not receive complete immunizations had a 3.850 times greater risk of experiencing stunting than toddlers who received complete immunizations (Fajariyah & Hidajah, 2020b).

#### **Provision of zinc supplementation for the treatment of diarrhea for children aged 0-59 months**

In the study of (Stewart et al., 2013) oral zinc supplementation in reducing the duration of diarrhea and improving stool consistency in children with acute diarrhea where on the first day of zinc administration is 56% of children with watery diarrhea on day 1, only 14% of children with watery diarrhea on day 3 in the zinc group. Based on the research by Malla et al 2019 it was found that children who were given zinc treatment were discharged faster than children who were not given zinc as treatment (Malla et al., 2019).

#### **Deworming prevention for children aged 0-59 months**

Mebendazole is the most effective for treating *A. lumbricoides* infection. A study by Zeleke (2020) conducted treatment using an anthelmintic mebendazole 500 mg in 130 children infected with STH the number of children infected with *A. lumbricoides* was initially 64 people after being given deworming medicine, 62 children were declared cured, then the number of children infected with hookworm was 52, 12 children recovered and 14 were infected with *T. trichiura* after the children were given deworming medicine. The children who recovered were as many as 4 people

#### **Factors Affecting the Success of Implementation of Specific Nutrition Interventions in the First 1000 Days of Life Program**

1. The Role of Government in Specific Nutrition Interventions for the First 1000 Days of Life according to research by Prado & Dewey (2014) the head of the Health Service as the leading sector in the first 1000 days of life movement can act as a promoter for the formation of regulations and raising commitments. Monitor and evaluate activities on a regular basis. Carry out program activities that have not reached the target and the Head of the relevant Office to be able to request manpower according to needs and

fulfill infrastructure (Prado & Dewey, 2014). The results of the research by Rini Archda et al 2019 show that, currently, the government has launched an integrated stunting prevention intervention program that involves cross-ministerial and institutional. In 2018, 100 districts in 34 provinces were designated as locations for stunting reduction (Saputri & Tumangger, 2019).

## 2. The Role of Community and Families in Specific Nutrition Interventions for the First 1000 Days of Life.

Based on research by Zulaikha (2021), the community is invited to support the government, namely specific nutrition interventions. Stunting prevention can be done by empowering the community to support activities in the specific nutrition intervention program by holding a coordination meeting with the stunting Working Group and the Head of Division. The Regency, through the regent's circular letter and the health office, conveyed to the sub-district and nagari parties to mobilize (Zelege et al., 2020). community leaders, the community and involve them in activities related to stunting interventions (Zulaikha et al., 2021).

### **Implications of Specific Nutritional Interventions in the First 1000 Days of Life Program for the Prevention of Stunting Penanggulangan Stunting**

For this reason, convergence is one of the main pillars in the national strategy to accelerate the prevention and reduction of stunting (Permanasari et al., 2020). Based on research from Elisaria (2021), there was a decrease in the percentage of stunted children from 35.9% at the beginning to 26.8% at the end (Elisaria et al., 2021). In line with the research conducted by Gani et al. 2021. This study showed the prevalence of stunting in children under five was 41.1% to 38.9%. The highest decrease occurred in the 0–5 month age group or around 8.6%; This shows that there is a decrease in the prevalence of stunting in newborns (Gani et al., 2021). Permanasari (2020) research on total convergence that was actually carried out did promise a change in the number and management of stunting cases (Permanasari et al., 2020).

### **The Role of Midwives in the First 1000 Days of Life Program in Stunting Prevention**

Research conducted by Carolina Ilyas (2021) Public Health Centers play the role of spearheading stunting alleviation, especially in promotive and preventive efforts (Carolina & Ilyas, 2021). Based on research by Zulaikha (2021) information was obtained that the role of midwives stated that the the first days of life movement was carried out by the public health center in collaboration with village midwives. Village midwives are monitoring pregnant women from the first trimester until the baby is 24 months old (Zulaikha et al., 2021).

According to research by Venny et al 2022, the role of midwives in specific nutrition interventions is to provide guidance and provide detailed explanations about the importance of immunization and also to carry out an integrated management approach for sick toddlers carried out when providing examination services to toddlers by the public health center and midwives (Utami, 2022). Based on research by Gina et al 2019 health workers also play a role in posyandu activities to monitor the growth and development of toddlers so that when babies are 4-6 months old they fail to grow (growth faltering) they can be followed up immediately (Hafid et al., 2021).

## CONCLUSION

The prevalence of stunting is still very high, there are still many countries including Indonesia with stunting rates exceeding the stunting tolerance threshold according to WHO, which is more than 20%. Types of specific nutrition interventions in program 1000 consist of exclusive breastfeeding, provision of PMBA, additional food for malnourished children, vitamin A supplementation, additional food for pregnant women with SEZ, taburia supplementation, immunization, zinc supplementation for the treatment of diarrhea, and helminthiasis prevention where specific nutritional interventions are effective in preventing stunting. Specific nutrition intervention programs in Indonesia have been able to reduce stunting rates, although they have not been able to completely solve the stunting problem. Midwives play a role as one of the actors in the the first days of life program, especially promotive and preventive efforts. And midwives play a role in monitoring the growth of children.

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