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Stunting Management with Exclusive Breastfeeding, Early Breastfeeding Initiation Toddlers at Sei Panas Community Health Center

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Abstract
Indonesia continues to struggle with nutritional issues, which seriously affect the caliber of human resources (HR). The prevalence of stunting in children under the age of five is one of the nutritional issues that is currently of great concern. The goal is to analyze the reduction in stunting by promoting exclusive breastfeeding and Early Breastfeeding Initiation in toddlers. A case control study with 33 mothers of stunted toddlers and 33 mothers of non-stunted toddlers was done in the working area of the Sei Panas health center. Non-probability sampling is used for sampling, while the chi square test is used for data analysis. It was discovered that 18 (78.3%) of the 25 toddlers who did not get only breast milk stunted, with a p-value of 0.003 0.05; OR 4,286 (Lower 1,246 - Upper 14,735). meaning that the incidence of stunting and exclusive breastfeeding have a substantial link. In addition, 15 (65.2%) of the 22 children who did not initiate early breastfeeding had stunted growth, with a v-palue of 0.039 0.05; OR 8,229 (Lower 2,175- Upper 31,132). This indicates that the incidence of stunting and early breastfeeding initiation are significantly correlated. The following interventions are included in the framework for specific nutritional intervention activities typically carried out in the health sector and are aimed at breastfeeding mothers and children aged 0–6 months: 1) Encouraging early initiation of breastfeeding (giving breast milk/colostrum); Public health centers are advised to increase education about exclusive breastfeeding for babies 0–6 months in order to reduce the incidence of stunting in their working area.
Keywords: Stunting management, early breastfeeding, exclusive breastfeeding, breastfeeding initiation

Introduction

The quality of Indonesia's human resources (HR) is still seriously impacted by ongoing nutritional issues (Michońska et al., 2023). The frequency of stunting in children under five is one of the nutritional issues that is currently of great concern. Stunting, or failure to thrive, is a disorder that affects children under five and is brought on by chronic malnutrition,

particularly in the first 1,000 days of life (HPK). Brain development and growth are impacted by stunting. Children who have been stunted are also more likely to develop chronic illnesses as adults. In fact, according to estimates from the Ministry of National Development Planning and Bappenas (2018), stunting and malnutrition cause a yearly loss of 2-3% of GDP.

In comparison to other middle-income nations, Indonesia now has one of the higher rates of stunting. According to Robert & Brown (2017), if this issue is not resolved, it could have an impact on Indonesia's development performance in terms of economic growth, poverty, and inequality. According to UNICEF (2017), 37% of stunted children live in Africa and 56% of stunted children live in Asia (Nijjar & Stafford, 2019). Around 149 million children under the age of five were estimated to be stunted globally in 2018, or around 21.9%. After Timor Leste (50.5%), India (38.4%), and Indonesia (36.4%), according to WHO data on the prevalence of stunting rates in 2018, Indonesia was the third country with the highest prevalence of stunting rates (Vaivada et al., 2020), particularly in the South-East Asian Region. (Indonesian Ministry of Health, 2018)

Stunting is brought on by a variety of causes, not just the inadequate nutrition encountered by children and pregnant women. Therefore, the First 1,000 Days of Life (HPK) of children under five need to be the focus of the most significant intervention to lower the prevalence of stunting. Since 60% of infants aged 0 to 6 months do not exclusively receive breast milk (ASI), poor parenting practices are one of the many factors that contribute to stunting. (Indonesian Ministry of Health, 2021) Since there are many causes of stunting, as mentioned above, a comprehensive intervention strategy is required to lower the prevalence of stunting in Indonesia. (Robert & Brown, 2017)

WHO and UNICEF advice providing enough and safe supplemental foods beginning at the age of six months and continuing nursing for two years as the best feeding practices for kids (UNICEF,WHO, 2023). These include offering exclusive breastfeeding for the first six months. According to the World Health Organization (De Onis et al., 1993), exclusive breastfeeding is defined as providing a newborn with exclusively breast milk for the first six months of life, with the exception of oral rehydration solution, syrup containing vitamins, minerals, or medications. According to World Health Organization data from 2021, just 44% of infants between the ages of 0 and 6 months are exclusively breastfed. According to Riskesas data from 2018, 74.5% of young infants (ages 0–6) exclusively breastfeed (Health Research and Development Agency, 2018).

According to stunting management (Prasetyo et al., 2023), it was discovered that exclusive breastfeeding had an impact on the incidence of stunting. From the findings of UNICEF research from 2016 to 2020, it was discovered that 32% of Indonesian babies received exclusive breastfeeding for the first 6 months and 50% of children aged 23 months who were given exclusive breastfeeding. However, this percentage is still low compared to other developing countries such as the Philippines and Nigeria. In the Riau Islands, the prevalence of stunting dropped from 6% in 2021 to 4.2% in 2022 (Kepri, 2022). With 1441 instances throughout 21 health centers, the issue of stunting was also discovered in the city of Batam, with 138 cases in the Sei Panas health center operating area being the third-highest number of cases. (Batam Health Office, 2022)

In order to meet the goal of 50%, WHO has set the 2025 Global Nutrition Target (WHO, 2014) for exclusive breastfeeding during the first six months? In reality, only 38% of infants

aged 0 to 6 months receive solely breast milk internationally. According to the most recent data, non-exclusive breastfeeding causes death in 11.6% of children under the age of five. In Indonesia, 35.73% of mothers exclusively breastfeed their infants until they are six months old, falling short of the WHO objective. Providing just breast milk for six months can raise the risk of stunting by 22.2%, or roughly 105,800,000 children, saving 804,000 children from death (WHO, 2018).

A global movement called Scaling-Up Nutrition (SUN) was started in 2010 with the fundamental tenet that every citizen has a right to receive sufficient and nourishing meals (Coile et al., 2021). By creating two significant Stunting Intervention frameworks in 2012, the Indonesian government joined the movement (Kemenkes RI, 2021). Specific nutrition interventions and sensitive nutrition interventions are the two categories under which the Indonesian government's stunting intervention framework is separated. From the mother's pregnancy period until the birth of the toddler, activities that are idealy carried out to implement specific nutritional interventions (Tarantino et al., 2022) can be divided into several main interventions. One of these interventions is the encouragement of early initiation of breastfeeding/IMD, particularly through the administration of plain breast milk/colostrum and the promotion of exclusive breastfeeding in children aged 0 to 6 months (Kemenkes RI., 2021).

According to a research finding (Werdani et al., 2022), early breastfeeding initiation has a significant link with exclusive breastfeeding (p = 0.035; OR 2.161: CI 95% 1.108-4.213). According to the research findings (Sunartiningsih et al., 2021) the majority of toddlers were introduced to breastfeeding at a young age, with 47 toddlers making up this figure (70.1%), and the majority of toddlers did not experience stunting, with 45 toddlers making up this figure (67.2%). The H1 hypothesis is accepted, and the degree of closeness of the relationship is moderate (r=0.558). According to the findings of this study, there is a connection between early breastfeeding initiation and the prevalence of stunting in toddlers between the ages of 12 and 24 months. According to the study's findings, exclusive breastfeeding (EBF) should be encouraged in order to improve health and development (Al-Ghannami et al., 2022). Other factors that are linked to stunting include low maternal weight, a lack of maternal education, severe food insecurity, a lack of access to healthy nutrition, non-exclusive breastfeeding, diarrhea brought on by pathogens, and low weight and height at birth. Based on this, the goal of this study is to ascertain how IMD and the prevalence of stunting in toddlers in the Sei Panas Health Center Working Area relate to each other.

Literature Review

When a person's height is less than the average for their age group, this condition is known as stunting. Stunting is brought on by a variety of causes, not just the inadequate nutrition encountered by children and pregnant women. Therefore, the First 1,000 Days of Life (HPK) of children under five need to be the focus of the most significant intervention to lower the prevalence of stunting. Poor parenting is one of the many factors that contribute to stunting; according to existing data and statistics, 60% of infants between the ages of 0 and 6 months do not receive breast milk (ASI) exclusively (Ministry of Health of the Republic of Indonesia, 2021). A thorough intervention strategy is required to lower the prevalence of stunting in

Indonesia as a result of the several causes of stunting that have been previously discussed. 2017 (Robert & Brown)

Stunting is brought on by a variety of variables. The 1,000 HPK (First 1000 Days of Life) intervention that had the most impact. Stunting treatment is carried out by using sensitive and specific interventions that are focused on a child's first 1,000 days of life up until age 6. Specific Nutrition Intervention This intervention reduces stunting by 30% and is targeted at kids in the First 1,000 Days of Life (HPK). In the health industry, the framework for certain nutrition intervention actions is typically implemented.

I. Interventions aimed at expecting mothers:

1. To address chronic protein and energy shortages, give pregnant women more meals.
2. Overcoming deficits in folic acid and iron.
3. Overcoming a lack of iodine.
4. Treating pregnant women who have worms.
5. Prevents malaria for expectant mothers.

II. Interventions aimed at breastfeeding moms and infants from birth to six months

1. Encourage early breastfeeding by providing colostrum or plain breast milk.
2. Prompt mothers to exclusively breastfeed.

The province of residency, caregiver education level, child's gender, low birth weight, and duration of exclusive breastfeeding (6 months) are risk factors for severe stunting in children aged 0-36 years, according to research (Jiang et al., 2015). According to studies (Rakotomanana et al., 2017), young children (0-23 months) and children between the ages of 8 and 10 have various risk factors for stunting. For each age group, nutritional interventions must be tailored. When developing nutritional programs and actions that target stunting reduction, consideration of these aspects is crucial since fundamental and underlying causes have a significant impact on a child's nutritional condition.

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Research Method

The research design, data collection tools, participants/sample, data gathering process, and data analysis are all covered in this section. The case control research design used in this study is observational analysis. Mothers of toddlers who had stunting as cases according to the PB/U indication with a cut off of -2 SD z-score served as the research subjects, whereas mothers of toddlers who did not have stunting according to the PB/U indicator served as the control group. 33 moms of toddlers with stunting and 33 mothers of toddlers without stunting participated in the study as subjects. Non-probability sampling is used in the sampling technique, while the chi-square test is used in the data analysis. In this study, the data collecting tool is an instrument in the form of a questionnaire, also known as a questionnaire. Data collection starts with the development of a questionnaire based on the theory of each variable, which is utilized as a data collection tool.

Results

1. Univariate Analysis

Table1: Distribution Of Toddlers By Gender, Practices, Early Breastfeeding Initiation, Exclusive Breastfeeding, And Parental Income

Variable	Fersentation
Parental Income (case)	
< 4,500,000,-	15 (65.2%)
≥ 4,500,000,-	8 (34.8 %)
People's income (control)	
< 4,500,000,-	9 (39.1%)
≥ 4,500,000,-	14 (60.9 %)
Breastfeeding history (case)	
Not exclusive breastfeeding	18 (78.3 %)
Exclusive breastfeeding	5 (21.7 %)
Breastfeeding History (control)	
Not exclusive breastfeeding	7 (30.4 %)
Variabel	
Exclusive breastfeeding	16 (69.6 %)
Early Initiation of Breastfeeding (IMD) cases	
No	15 (65.2%)
yes	8 (34.8%)
Early Initiation of Breastfeeding (IMD) control	
No	7 (30.4%)
yes	16 (69.6%)
Stunting incidents (cases)	23 (50 %)
Not Stunting (control)	23 (50%)

Table 1 The parent's income was found to be low from 4,500,000,- in cases in 65.2% of the cases, and low from 4,500,000,- in 9 (39.1%) of the 23 controls in Table 1's findings of univariate tests. %); the majority of controls were exclusively breastfed, 16 (69.6%), while 18 (78.3% of cases had a history of breastfeeding that was not exclusively breastfed; and, based on early breastfeeding practices, 15 (65.2%) of cases had little to no evidence of early breastfeeding initiation, compared to 16 (69.6%) of controls.

2. Bivariate Analysis

Table 2: Relationship between practices and the incidence of stunting

Variable	STUNTING		Total	p-value (CI 95%)	OR (Lower-Upper)
IMD Practice	Case	Control			
No	15 (65.2 %)	7 (30.4 %)	22 (47.8 %)	0.039	8.23 (2,175 – 31,132)
Yes	8 (34.8 %)	16 (69.6 %)	24 (53.2 %)		
Total	23	23			

Table 2 With a P-value of 0.039 < 0.05, Table 2 indicates that 15 (65.2%) of the 22 children under five who did not receive early breastfeeding initiation practices were stunners, indicating a significant association between early breastfeeding initiation practices and the incidence of stunners and a lower OR of 8.23. If a toddler receives an IMD at birth, then there are 8.23 times the prevention of stunting (2.175 and Upper 31.132).

Table 3: Association between the prevalence of stunting and exclusive breastfeeding

Variable	STUNTING		Total	p-value (CI 95%)	OR (Lower-Upper)
EXCLUSIVE ASI	Case	Control			
No	18 (78.3 %)	7 (30.4 %)	25 (54.3 %)	0.003	4,286 (1,246-14,735)
Yes	5 (21.7%)	16 (69.6 %)	21 (45.7 %)		
Total	23	23			

Table 3: With a p-value of 0.003< 0.05, Table 3 indicates a significant relationship between exclusive breastfeeding and the incidence of stunting, and OR 4.286 lower 1.246 and Upper 14,735, which indicates that if toddlers receive exclusive breastfeeding when the baby is 0 - 6 months old, it can prevent stunting 4.

Discussion

The majority of parents of stunted children in the Sei Panas health center's operating region were small from Rp, according to the findings of a univariate study of parental income, history of breastfeeding, and early commencement of nursing practices. 4,500,000, or up to 65.2%; This condition is brought on by the fact that 69.6% of infants aged 0 to 6 years do not receive exclusive breastfeeding and that 65.2% do not receive practices for early breastfeeding. This situation is in line with the community budget for dealing with stunting. Stunting is brought on by a variety of circumstances. The 1,000 HPK (First 1000 Days of Life) intervention that had the most impact. Poor parenting techniques, such as not providing a baby with breast milk exclusively between the ages of 0 and 6 months, are one of the reasons of stunting. The government has decided that addressing stunting is done by sensitive and specific interventions that target a child's first 1,000 days of life up until age 6. (Ministry of Villages, Development of Disadvantaged Regions & Indonesia, 2017) One of the specific nutritional interventions is through interventions targeting breastfeeding mothers and children aged 0–6 months: by encouraging early initiation of breastfeeding (feeding jolong/colostrum breast milk) and exclusive breastfeeding.

The study's findings were evaluated using chi square tests, which revealed a significant relationship between IMD practices and the incidence of stunting (p-value 0.039 0.05). The odds ratio (OR) was 8.23, lower 2.175 and upper 31.132, which meant that if a toddler receives IMD at birth, stunting is prevented by an amount that is 8.23 times greater. These findings are consistent with study that found a modest degree of closeness (r=0.558) link between early breastfeeding initiation and the incidence of stunting in children aged 12 to 24 months. Children

who exclusively breastfeed (EBF) experience a number of important health advantages. Mothers, however, could find it challenging to continue EBF for six months. The study's intervention (Haque et al., 2022) demonstrated the connection between stunting and Suchana's EBF intervention. In the intervention area, the prevalence of EBF increased from 64% at baseline to 85% at endpoint, and the intervention group also saw an increase. In comparison to the control group, the probabilities of EBF were 2.25 times higher. In the intervention group, the prevalence of stunting decreased from 28% to 24% at baseline, but after adjusting for covariates, there was no correlation between stunting and intervention. However, interaction analysis revealed that both the intervention and control areas significantly reduced the frequency of stunting in EBF children. EBF was discovered as a key factor related with stunting and Suchana's intervention had a favorable influence on EBF behaviors among rural children in Bangladesh's vulnerable areas. (Werdani et al., 2022). If the mother and child make skin-to-skin contact within one hour of delivery, human babies can breastfeed. The breast crawl or crawling in search of the breast is the term used to describe how infants begin early breastfeeding (Sholikah, 2018).

Conclusion

Stunting treatment is carried out by using sensitive and specific interventions that are focused on a child's first 1,000 days of life up until age 6. Specific Nutrition Intervention This intervention reduces stunting by 30% and is targeted at kids in the First 1,000 Days of Life (HPK). The Ministry of Villages, Development of Disadvantaged Regions & Indonesia (2017) provides the framework for specific nutritional intervention activities generally carried out in the health sector, which include interventions targeting breastfeeding mothers and children aged 0–6 months: 1) Encouraging early initiation of breastfeeding (giving breast milk/colostrum); 2) Encourage exclusive breastfeeding. This theory is supported by this study, where the results show that there is a significant relationship between the two variables. With a p-value of 0.003 0.05 and an OR of 4.286, lower 1.246, and upper 14.735, the study's findings further demonstrate that exclusively breastfeeding infants between the ages of 0 and 6 months is significantly related to the incidence of stunting. This means that stunting can be avoided 4.3 times if toddlers receive exclusive breast milk during this period.

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