



Specific Interventions for Stunting Management: Literature Review

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Abstract

Backgroundd : The prevalence of stunting in Indonesia has basically decreased every year, but the figure is still far above the limit set by WHO, which is below 20%. Based on the 2021 Indonesian Nutritional Status Study Indonesia's stunting prevalence rate is 24.4%. the purpose is to identify specific interventions for treating stunting Method: Study of literature from various electronic sources. **Results**: There are eleven specific interventions for treating stunting. **Conclusion**: The intervention includes four targets, starting with young women, pregnant women, toddlers and the community. These activities include screening for anemia, taking blood-boosting tablets, pregnancy checks antenatal care(ANC), consuming blood-boosting tablets for pregnant women, providing additional food for pregnant women with chronic energy deficiency monitoring toddler growth, exclusive breastfeeding, giving MP ASI rich animal protein for children under two, management of nutritional problems, increasing immunization coverage, education for pregnant women, adolescents and families including triggering open defecation.

Keywords: Intervention, Stunting, Toodlers

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**1. Introduction**

Stunting is a chronic malnutrition problem caused by insufficient nutritional intake over a long period of time, resulting in growth disorders in children, namely the child's height is lower or shorter (dwarfism) than the standard for their age. Factors that can cause stunting in children are a lack of nutritional food intake, infectious diseases, a dirty environment that facilitates the growth of bacteria that cause children to become sick easily, genetics, socioeconomic factors, the level of education and knowledge of the mother (Dewi et al., 2022).

The problem of stunting in Indonesia is a nutritional issue that requires special and immediate attention. Stunting prevention is one of the Ministry of Health's priority programs, as part of the government's efforts to achieve the target of reducing stunting rates to 14% by 2024. The prevalence of stunting in Indonesia has essentially decreased annually, but the figure remains far above the WHO limit of below 20%. Based on the 2021 Indonesian Nutritional Status Study (SSGI), the stunting prevalence in Indonesia was 24.4% (Rahayu et al. 2018). The government has designated stunting as a priority in the national development program. The policy and strategy directions of the 2020-2024 National Medium-Term Development Plan (RPJMN) address increasing access and quality of health services toward universal health coverage, with an emphasis on strengthening basic health services. (Primary Health Care) One way to achieve this is by accelerating improvements in community nutrition, specifically by reducing stunting rates (Latifah et al., 2024).

Stunting occurs due to chronic malnutrition, which begins with inadequate weight gain or weight loss that does not meet the minimum weight gain target. One factor that plays a role in weight gain is diet. Dietary patterns provide information about the type and quantity of food consumed in one day. Good eating habits influence optimal nutritional fulfillment. According to PERSAGI, based on their characteristics, toddlers are divided into toddlers (>1-3 years) and preschoolers (>3-5 years). At toddler age, children's eating patterns and habits begin to form, therefore, it is necessary to cultivate a regular and consistent eating pattern. During growth, children require protein and carbohydrate intake according to balanced nutrition recommendations, while continuing to introduce fruits and vegetables in recommended portions. The calorie requirement for children aged 1-3 years is 1,350 kcal/day to meet the minimum weight gain target of 8 grams per day or approximately 240 grams per month. The possibility of not achieving the minimum weight gain target in stunted children aged 1-3 years may be caused by insufficient daily calorie requirements due to suboptimal eating habits (Bappenas, 2019).

The Indonesian government plans to accelerate stunting management through two broad intervention frameworks: Specific Nutrition Interventions and Sensitive Interventions. Specific Nutrition Interventions are interventions aimed at children in the





first 1,000 days of life (HPK) and contribute to a 30 percent reduction in stunting. The specific nutrition intervention framework directly addresses factors such as food intake, infections, maternal nutritional status, infectious diseases, and environmental health. Therefore, these interventions are generally carried out in the health sector. These interventions are also long-term. short-term interventions where the results can be recorded in a relatively short time (Kusumawardani et al., 2020). Therefore, researchers want to conduct a literature study on specific interventions to prevent stunting.

2. Research Methods

This study is a literature review that explores current management strategies for reducing anxiety in labor through distraction and building maternal experience and understanding of labor using virtual reality. The sources used for this literature review included a systematic search of computerized databases (PubMed, BMC, Cochrane review, Google Scholar) in the form of research journals and review articles from the past 10 years. This scientific article is formatted using APA style 6 bibliography.th.

3. Results And Discussions

Stunting is the failure to achieve growth targets, characterized by height-for-age standards that fall below the standard due to prolonged nutritional deficiencies and recurrent illnesses during infancy, which permanently impact physical and cognitive abilities (Tafesse et al., 2021). Stunting is a growth and development disorder caused by poor nutrition, repeated infections, and inadequate psychosocial stimulation. A child is considered stunted if their height for age is more than two standard deviations below the median of the WHO Child Growth Standards. Stunting is chronic malnutrition in children defined by a low height-for-age index; this condition is an indicator of poor environmental conditions.

Another definition states that short and very short are nutritional statuses based on the length-for-age (PB/U) or height-for-age (TB/U) index, which are equivalent to the terms stunted and severely stunted. Nutritional status categories based on the length-for-age (PB/U) or height-for-age (TB/U) index for children aged 0-60 months are divided into very short, short, normal, and tall). Based on the results of the 2022 Indonesian Nutritional Status Survey (SSGI), the government issued eleven specific interventions focused on the prenatal period and children aged 6-23 months. These interventions are summarized below : (Winda et al., 2024).

a. Target: Young Women

Two specific interventions are carried out for adolescent girls: anemia screening and iron supplementation. Anemia is a medical condition in which haemoglobin levels are below normal. Anemia in adolescent girls remains quite high; according to the World Health Organization, the global prevalence of anemia ranges from 40 to 88%. According to the WHO, the incidence of anemia in adolescent girls in developing





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countries is approximately 53.7% of all adolescent girls. Anemia often affects adolescent girls due to stress, menstruation, or delayed meals (Winda et al., 2024).

Anemia in adolescent girls is still quite high, according to the World Health Organization (WHO), the global prevalence of anemia ranges from 40-88%. According to WHO, the incidence of anemia in adolescent girls in developing countries is around 53.7% of all adolescent girls, anemia often attacks adolescent girls due to stress, menstruation, or late meals. The rate of iron deficiency anemia in Indonesia is 72.3%. Iron deficiency in adolescents causes paleness, weakness, fatigue, dizziness, and decreased concentration in learning. The causes include: parental education level, economic level, level of knowledge about anemia among adolescent girls, consumption of Fe, Vitamin C, and duration of menstruation. The number of adolescents (10-19 years) in Indonesia is 26.2% consisting of 50.9% boys and 49.1% girls⁴. Furthermore, based on the 2013 Basic Health Research (Riskesdas), the prevalence of anemia in Indonesia was 21.7%, with 26.4% of those aged 5-14 and 18.4% of those aged 15-24 having anemia (Siswati et al., 2022).

Anemia screening activities that can be carried out include blood tests. Hemoglobin (Hb) for junior high and high school students, anemia education for teenage girls, training. Anemia screening, training female students on measuring height (TB), weight (BB), upper arm circumference (MUAC) and clinical signs of anemia, distribution of iron supplement tablets (TTD) to be taken for 12 weeks (1 tablet/week).

b. Target Pregnant Women

For pregnant women, specific intervention activities are carried out with three activities, including: Pregnancy check-ups (ANC), Consumption of iron-boosting tablets for pregnant women, and provision of additional food for pregnant women with chronic energy deficiency.

(KEK). Antenatal Care (ANC) is a health service provided by health workers for mothers during their pregnancy and is implemented according to the service standards set out in the midwifery service standards, the problem is the lack of achievement of the specified targets of K1 98.9%, K4 91% with the Antenatal program policy determining the frequency of antenatal service visits can be monitored through new visits to pregnant women (K1), as well as access to health services for pregnant women according to the standard of at least 6 times (K6) with a distribution of 2x in the first trimester, namely 1 doctor's examination at the first trimester is for a comprehensive maternal health screening, including a limited ultrasound, once in the second trimester, and three times in the third trimester. This includes a single doctor's examination in the third trimester for labor screening, including a limited ultrasound (Sari et al., 2025).

K1 is the first contact of a pregnant woman with a health worker who has good





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clinical/obstetric and interpersonal competence, to receive integrated and comprehensive services according to standards. The first contact should be made as early as possible in the first trimester, preferably before week. The first contact can be divided into pure K1 and K1 access. Pure K1 is the first contact of a pregnant woman with a health worker during the first trimester of pregnancy. Meanwhile, K1 access is the first contact of a pregnant woman with a health worker at any gestational age. Pregnant women should carry out pure K1, so that any complications or risk factors can be detected and treated as early as possible. (Bappenas, 2019).

K4 is a contact between pregnant women and health workers who have clinical/obstetric competence to receive integrated and comprehensive antenatal care services according to standards during their pregnancy at least 4 times with the following time distribution: 1 time in the first trimester (0-12 weeks), 1 time in the second trimester (>12 weeks -24 weeks), and 2 times in the third trimester (>24 weeks until birth). Antenatal visits can be more than 4 times as needed (if there are complaints, illnesses or pregnancy disorders) (Bappenas, 2019).

K6 is a contact between pregnant women and health workers who have clinical/obstetric competence to obtain integrated and comprehensive antenatal care services according to standards during their pregnancy at least 6 times during their pregnancy with a time distribution: 2 times in the first trimester (0-12 weeks), 1 time in the second trimester (>12 weeks - 24 weeks), and 3 times in the third trimester (>24 weeks until birth), where at least 2 times pregnant women must contact a doctor (1 time in the 1st trimester and 1 time in the 3rd trimester). Antenatal visits can be more than 6 (six) times as needed and if there are complaints, illnesses or pregnancy disorders. If the pregnancy has reached 40 weeks, then a referral must be made to decide on termination of the pregnancy. Doctor examinations on pregnant women are carried out at: Visit 1 in the 1st trimester (one) with a gestational age of less than 12 weeks or from the first contact. The doctor screens for possible pregnancy risk factors or comorbidities in pregnant women including an Ultrasonography (USG) examination. If during K1 the pregnant woman comes to the midwife, the midwife still carries out ANC according to standards, then refers to a doctor. At visit 5 in the third trimester, the doctor will plan the birth, screen for risk factors, and conduct an ultrasound examination. Planned referrals, if necessary, will be made (Bappenas, 2019).

Throughout pregnancy, a mother requires an additional 1,000 mg of iron. If this requirement is not met from reserves, supplementation is necessary. A person who is not anemic does not necessarily not experience iron deficiency, as the prevalence of iron deficiency is approximately 2.5 times greater than that of iron deficiency anemia. Given the high prevalence of anemia among women of childbearing age and pregnant women in Indonesia, it is estimated that most women of childbearing age and pregnant





women suffer from iron deficiency, so the additional 1,000 mg required during pregnancy needs to be met through supplementation. Pregnant women with anemia are at risk of miscarriage, premature birth, low birth weight, and bleeding before, during, and after delivery. In moderate and severe anemia, bleeding can be more severe, increasing the risk of maternal and infant mortality. Impact on children born to anemic mothers this causes babies to be born with very little iron in their bodies, putting them at risk of developing anemia at an early age, which can result in impaired/impaired growth and development in children, both in brain cells and in other body cells, resulting in children not being able to reach optimal height and being less intelligent (Idris & Sari, 2023).

Iron supplementation for pregnant women is necessary to meet iron intake, to prepare for a healthy pregnancy and delivery, and to prevent anemia. A minimum of 90 tablets are given during pregnancy. Efforts to prevent iron deficiency anemia in pregnant women are carried out by giving one iron supplement daily during pregnancy (at least 90 tablets), starting as early as possible and continuing until the postpartum period. Daily iron supplementation during pregnancy can reduce the risk of maternal anemia by 70% and iron deficiency by 57% (Idris & Sari, 2023).

Chronic Energy Deficiency (CED) in pregnant women is a condition experienced by pregnant women due to an imbalance in energy and protein nutritional intake, resulting in insufficient intake of the body's required substances. Lack of nutritional intake in pregnant women, besides endangering the mother's health, will also impact the delayed growth and development of the fetus. Adequate nutritional intake in pregnant women is seen from the nutritional status of pregnant women, one of which can be described by the measurement of the upper arm circumference (MUAC). The risk of CED can be prevented by maintaining the nutritional status of pregnant women with a MUAC of no less than 23.5 cm. The occurrence of CED in pregnant women carries the risk of abortion, bleeding, prolonged labor, infection, low birth weight, premature birth, birth defects, and indirect causes of maternal death. The occurrence of CED in pregnant women can be prevented by providing supplementary food (PMT). PMT is intended to be based on local food ingredients with regional specialties adapted to local conditions. PMT given to pregnant women in this case is only as an additional food or snack, when pregnant women have no appetite, PMT becomes an alternative to fulfill the nutrition of pregnant women, in the first trimester the PMT consumed is 2 pieces/day, while in the second and third trimesters the PMT consumed is 3 pieces/day (Puspitasari et al., 2021).

c. Target Toddlers

For pregnant women, specific intervention activities are carried out with five specific activities, namely monitoring toddler growth, exclusive breastfeeding,





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providing MP ASIII rich in animal protein for toddlers, managing nutritional problems, increasing immunization coverage. Growth monitoring activities are the main activity for early detection of nutritional problems in the community that is integrated with other health efforts at the Integrated Health Post (Posyandu). The opening days and implementation of Posyandu activities follow regional policies. Approval from the village/sub-district government is carried out every time the Posyandu will be implemented based on the results of consultations with the Community Health Center, growth monitoring activities must continue to be carried out, namely through independent monitoring at home and services by appointment either through home visits by cadres/health workers or visits to health facilities. In addition, optimizing the use of communication and information technology is prioritized for communicating Posyandu opening days, consultations and appointments with officers/ cadres (Aprilio et al., 2024).

Exclusive breastfeeding is defined as providing breast milk without any food or drink supplementation other than medication. After 6 months, breast milk cannot meet the needs for minerals such as iron and zinc, so to meet these needs These needs must be met with iron-rich complementary foods (MP ASI). Premature babies, low birth weight babies, and babies with hematological disorders who do not have adequate iron reserves at birth generally require iron supplementation before 6 months of age, which can be given alongside exclusive breastfeeding. It's important to understand that breast milk production varies from day to day; it ranges from 450 to 1200 ml per day. Therefore, if you feel your milk production is decreasing for one day, it doesn't necessarily mean it will continue to be this way. In fact, one or two days later, the amount will exceed the average, cumulatively meeting the baby's needs (Puspitasari et al., 2021).

Breast milk, the fluid produced by the mammary glands, is often called "white blood" because its composition is similar to placental blood. Like blood, breast milk can transport nutrients, boost immunity, destroy pathogens, and influence the human body's biochemical systems. For example, in babies who are exclusively breastfed, the thymus gland is twice as large at four months of age as in babies who are only formula-fed. Breast milk is produced in the milk-producing cells and then flows to the nipple through the milk ducts. These ducts then empty into the main duct that carries the milk to the nipple. This duct is located inside the breast, under the areola. Breast milk is not actually stored; when not breastfeeding, it does not flow but "sits" in the milk ducts. Sometimes, milk can drip from the nipple even when not breastfeeding, because there is too much milk in the ducts, and when the mother thinks about the baby, muscle cells automatically push the milk to flow toward the nipple. (Puspitasari et al., 2021).

The provision of complementary foods or MP-ASI is linked to inadequate and





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premature provision of MP-ASI is one of the contributing factors to stunting. The age of MP-ASI provision for toddlers in the Maron Community Health Center, Probolinggo Regency, both more and less than 6 months, does not correspond to the age at which MP-ASI was first introduced, which is 6 months. This does not correspond to the age at which MP-ASI is introduced. According to WHO (2010), MP-ASI is introduced at exactly 6 months of age. The correct frequency of MP-ASI provision, in accordance with a child's development and growth, can reduce the incidence of stunting. The frequency of MP-ASI provision that does not meet standards is significantly related to the incidence of stunting (Yuningsih, 2019).

Other studies also state that there is a significant relationship between the frequency of MP-ASI provision and children's nutritional status. Based on (Yuningsih, 2019), the age at which MP-ASI is introduced is related to the incidence of stunting. The age of giving complementary feeding according to age has a 1.6 times chance of not stunting compared to toddlers who are given inappropriate complementary feeding. Giving complementary feeding at too early an age can increase the risk of stunting in toddlers. Giving complementary feeding too early (age 4 months) is associated with increased gastrointestinal disorders that result in growth disorders, micronutrient deficiencies, and susceptibility to infectious diseases in the first two years of life. Inadequate intake of macro and micro nutrients can disrupt the growth and development of toddlers and result in stunting. One macro nutrient that plays an important role in preventing stunting is protein. Protein plays a role in the growth and maintenance of body tissues and replaces damaged cells. If protein intake is inadequate during the toddler's growth period, the toddler's growth and development process can be delayed and nutritional problems can occur. Stunting can occur. Adequate protein intake is associated with stunting (Amalia et al., 2022).

4. Conclusion

Based on the results of the 2022 Indonesian Nutritional Status Survey (SSGI), the government issued eleven specific interventions focused on the prenatal period and children aged 6-23 months. These interventions cover four targets: adolescent girls, pregnant women, toddlers, and the community. These activities include anemia screening, iron supplementation, antenatal care (ANC), iron supplementation for pregnant women, supplementary feeding for pregnant women with chronic energy deficiency (CED), toddler growth monitoring, exclusive breastfeeding, provision of animal protein-rich complementary foods for toddlers, nutritional management, increased immunization coverage, education for pregnant women, adolescents, and families, including the promotion of open defecation (BABS) prevention.

5. Compliance with ethical standards

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Disclosure of conflict of interest

There is no conflict of interest.

Statement of informed consent

Every action we take as authors is a mutual agreement or consent.

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