STUDY ON STUNTING PREVENTION PROGRAM IN INDONESIA:
A LITERATURE REVIEW

Olivinia Qonita Putri¹, Deandra Qintana Arimbi², Hubaidiyah Diagusdin Fauzi¹

¹Occupational Health and Safety Department, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia
²Health Education and Promotion Department, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia

Corresponding author’s email: olivinia.qonita@ui.ac.id or oliviniaqp@gmail.com

Stunting is a malnutrition condition that caused by long-term insufficient nutrient intake. Globally in 2012, amongst children under five years, 162 million were stunted. In Indonesia, stunting becomes a national health issue with 37.2% occurrence which more than 50% happens in East Nusa Tenggara. As a major risk factor of having poor physical development and poor cognitive development to baby, stunting become one of the main focus of United Nation’s Sustainable Development Goals. The goal focus is to end all form of malnutrition and to achieve internationally agreed targets on stunting in children under 5 years of age. Objective of this paper is to conduct study on document of stunting prevention related program. The method used in this paper is literature review. Research in Sumatra shows that stunting is affected by birth weight, energy intake, protein intake, mother’s education, place and family economic status. Other studies in Bali, West Java and East Nusa Tenggara shows low birth weight, poor sanitation, paternal smoking, low level of maternal and paternal education, low income, and mother’s height less than 150 cm affected stunting on 0-23 months old children. In Indonesia, health program for stunting prevention focused in 1000 days of childhood which consist of 270 days of pregnancy and the next 730 days after birth. The program is focused on a specific nutrition intervention on pregnant women and post-partum mothers. However, a more comprehensive study shows that stunting prevention should target pre-conception adolescent girls with undernourished and anemic condition. There is a need for improving the program for stunting prevention in Indonesia with a focus on adolescent girl nutrition.

Keywords: Stunting, Adolescent Girl, Indonesia

1. INTRODUCTION

Sustainable Development Goals or SDGs is a set of goals conducted by countries of the world with the goals to end poverty, protect the planet, and ensure prosperity for all as part of the new sustainable development agenda. There are seventeen goals with its specific targets to be achieved over the next 15 years. Governments, private sectors, and civil society must take part in order for the goals to be reached.

SDGs goal number two: “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”, highlighting the fact that one in nine people in the world today are undernourished, and poor nutrition causes nearly half of deaths in children under five. Another appalling fact that one in four of the world’s children suffer stunted growth.
There is growing evidence of the connections between slow growth in height in early life and impaired health and educational and economic performance later in life. Childhood stunting were linked with short adult stature, reduced lean body mass, less schooling, diminished intellectual functioning, reduced earnings, and lower birth weight of infants born to women who themselves had been stunted as children. Maternal stunting can restrict uterine blood flow and growth of the uterus, placenta, and fetus. Intrauterine growth restriction (IUGR) is associated with many adverse fetal and neonatal outcomes. During pregnancy, IUGR may lead to chronic fetal distress or fetal death. If born alive, the growth-restricted infant is at higher risk for serious medical complications. Infants with IUGR often suffer from delayed neurological and intellectual development, and their deficit in height generally persists to adulthood. Thus why one of the target of SDGs Goal number two is to end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

Stated by Prof.DR.dr.Nila Farid Meoloek Sp.M(K), in her delivery speech on Nutritional Annual Congress, that in Indonesia there are approximately 8,8 million toddlers who suffer from stunting. This high number is caused by the high occurrence of malnutrition in Indonesia. Stunting can be prevented by fulfillment of nutrient intake on pregnant women, exclusive 6 months breastfeeding with complementary food addition after 6 months period of time, monitoring program on babies’ growth on local health care, and increase access on clean water and sanitation facility.

Indonesia’s government is committed to reduce the number of stunting occurrence by 5% on 2015. Internationally, Indonesia join the Scaling Up Nutrition (SUN) Movement, a global movement to with the purpose to give everyone their right of healthy and nutritious food. On September 2012, Indonesia launch the program called “Gerakan 1000 Hari Pertama Kehidupan” or First 1000 Days of Life or 1000 HPK. This movement aims to catalyst the increase of nutrition for a better future of Indonesian children. For this movement, government and stake holders agreed on several specific intervention regarding nutrition to prevent and to deal stunting, such as breastfeeding and complementary food after breastfeeding promotion, free zinc-folate tablet or multivitamin and mineral for pregnant and nursing women, free micronutrient additive to children, food fortification, and medical care of malaria for pregnant women, babies, and children. In addition, interventions also been done on other sectors such as clean and healthy lifestyle intervention.

2. METHODS

Method used in this paper is Literature Review. We use keyword “Stunting”, “Stunting Factor” and “Stunting Intervention” in online resources such as Science Direct, Proquest and other related website.

3. DISCUSSION

Stunting is being too short for one’s age. It defined as a height that is more than two standard deviations below the World Health Organization (WHO) child growth standard median (WHO 2016).

Stunting caused by many things according to WHO in WHA Global Nutrition Targets 2025. One of the main factors that contribute to stunted growth and development is maternal condition. Mothers suffering from poverty and malnutrition during pregnancy will cause unhealthy infant who may be suffering from an infection due to lack of proper nutrition they receive.

There are several factors that impinge stunting. First, stunting in children is directly caused by inadequate breast-feeding and deprivation of nutrients from the complementary food that they
consumed. Second, children who suffer from long term severe infectious disease have high probability to experience linear growth retardation, depends on the severity of the disease, duration of disease, the recurrence rate and the insufficient nutrients intake to the healing process. Lastly, stunting in children caused by the combination of household poverty, caregiver neglect, non-responsive feeding practices, inadequate child stimulation and food insecurity that all interact to impede growth and development.

Worldwide, more than 300 million children younger than 5 years of age are estimated to be chronically undernourished. In Cambodia, prevalence of stunting is 50% in 2000 (Ikeda et al 2016). In Pakistan, eight percent of the children were stunted and 10% of them were thin. Prevalence of stunting significantly increased within age among both boys and girls (Mushtaq. et al, 2011). Stunting is more common in developing countries, including Indonesia.

In 2007 amounted to 36.6% children in Indonesia to experience stunting (Mulyati et al, 2011). As much as 31.1% in the group <6 months, 34.2% in the age group of 6 to 11 months, 40% in the age group of 12 to 23 months, and 38.2% in the age group of 24 to 59 months. In 2010, the number of stunting in Indonesia reached 42.38% (Mulyati et al, 2011). In 2013, the prevalence of stunting in Indonesia amounted to 37.2%. The highest occurrence come from East Nusa Tenggara with more than 50% of the children are stunted (Riskesdas, 2013).

Stunting can cause delayed brain development such as lack of mental ability, learning capacity and poor school performance, reduced hearing and can increase the risk of chronic disease in the future such as diabetes, hypertension and obesity (UNICEF, 2016).

3.1. Stunting Intervention Program

Several studies have been conducted to decrease the number of stunting. The urgency of intervention arises from economic benefit in eradicating stunting. Study by Qureshi, et al, 2013 found that stunting program have economic return more than offset the costs, means it is a positive net. Stunting has become world priority as it targeted in both MDGs and SDGs. In the current target, stunting need to be reduced 40% in 2025.

Excellent work shown by Brazil which successfully reduced the number of stunting among children aged 5 years from 37.1% in 1974 to 7.1% in 2007. Their key of success is improvement in purchasing power of families, rising rate of female education, improvement in maternal and child health services, expansion of water and sanitation program, improvement in quantity and quality of food by small family farm. (WHO, 2014)

Scaling Up Nutrition (SUN) is an initiative to promote multisector platform on nutrition problem such as reducing stunting and malnutrition. It consist of government, donor, civil society, business and UN system (SUN, 2012). Every sector has responsibilities in promoting nutrition.

Indonesia also takes action in stunting reduction program called First 1000 Days of Life. This program is an adoption from SUN movement. First 1000 Days of Life is an initiative to improve nutrition in Indonesia. Target of the program is to reduce stunting rate up to 40% in 2025 (Ministry of Social Welfare Republic of Indonesia, 2012).

Two kind of intervention used in this program is specific and sensitive intervention. Specific intervention focused on direct nutrition program for First 1000 Days. It has short term effect on reducing stunting. Specific intervention include program for pregnant woman (supplementation of Fe and Folate, supplement meal for underweight pregnant woman, medication for worm infection, free malaria tablet for positive pregnant woman), early six month baby (promote exclusive breastfeeding) and children from 7-23 months (breastfeeding, supplement meal, zinc
supplementation, zinc for diarrhea management, worm combat pharmacies, Fe fortification and insectisiced net for malaria prevention.

Meanwhile, sensitive intervention is program outside the health sector which target at general population. This kind of intervention provides more sustainable impact to the nutrition improvement. Sensitive intervention include water and sanitation, food sustainability, family planning, universal health coverage, birth assurance, food fortification, nutrition education, intervention for woman adolescent and poverty reduction.

In Indonesia, government plays as executor of First 1000 Days of Birth by Acceleration Improvement of Nutrition Movement. Another stakeholder included in this program is donor, civil society, privates sector and UN system.

The established program, however, did not cover health improvement in preconception stage. Anemics and underweights are two occurring condition on pregnant mother that can cause stunted growth and both included in Specific Intervention of First 1000 Days Program. These two factors could not be solved only by offering supplementation during pregnancy. Preconception anemia, particularly iron-deficiency anemia, was associates with reduced infant growth and increased risk of adverse pregnancy outcome in Chinese women (Ronnenberg, 2004). Vietnam also found association between Preconception Anemia and birth size (Cassanova, 2014). Intervention for anemia in adolescent however can not be done only by iron supplementation. This is due to iron balance at second and third trimesters depend more on adequate intakes of bioavailable iron than on the size of the iron stores at conception.. Furthermore, although supplementation will correct anemia and increase iron stores in girls, the positive effect on iron status will be temporary if their diets do not contain adequate bioavailable iron. Although iron status in early pregnancy may be improved if the period of supplementation continues up to the time of conception, supplementation before pregnancy should be viewed as an additional strategy to supplementation during the second and third trimesters. (Lynch, 2000)

These findings support the need for strategies and interventions to prevent and control anemia in women of reproductive age, both prior and during pregnancy, to improve birth outcomes. Study from China, shown that severely underweight was an important risk factor for reduced fetal growth (Ronnenberg, 2003).

**4. CONCLUSION**

Stunting as one of the target in SDGs must be placed at top priority of developing health program. Indonesia has implemented global movement called Scaling Up Nutrition (SUN) into local program called First 1000 Days of Life. This program implemented in windows of opportunity to scaling nutrition which range from pregnant woman until 23 months toddler. First 1000 Days include specific and sensitive intervention. However, anemic and underweight as two factors that contribute to stunting, need to be highlighted more even from preconception stage. First 1000 Days of Life Program need to be improved by including nutrition improvement at the preconception stage of adolescent girl.

**REFERENCES**


