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A Systematic Review: Associated Factor and Intervention Strategy of Stunting in South Sulawesi Province

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Abstract: *South Sulawesi is a province with a high prevalence of stunting, which is around 30.5%. Various attempts have been made by the government to overcome the problem of stunting through various poli- cies and regulations as well as through a number of interventions. This paper aims to describe the policies and factors that cause the high incidence of stunting in the South Sulawesi region. The Pro- vincial Government of South Sulawesi has made efforts to formulate various regulations and pro- grams in the form of interventions, both specific and sensitive. Specific interventions are carried out by the health sector by focusing on the First 1000 Days of Life (HPK) program, while sensitive inter- ventions include providing access to clean water and sanitation. Apart from health, socio-economic factorsare also known to have an effect on stunting, such as problems with poverty, education levels, and family income. Stuntingprevention requires cross-sector cooperation and is carried out in an in- tegrated manner. The policies and regulations thatexist at the central level must also be followed up with follow-up actions at the local level up to the village level and involve not only the health sector but also other related sectors. Community-based response systems involving other stakeholders need to be improved, because the high awareness of the community on the importance of balanced nutri- tion, pre-marital education, parenting, sanitation and environmental hygiene are a series of efforts to reduce stunting ratesin South Sulawesi.*

Keywords: *Stunting, Toddler, Stakeholder, Strategy, South Sulawesi*

1. INTRODUCTION

Stunting is a physical growth disorder characterized by a decrease in growth rate and is a result of nutritional imbalances. Accord- ing to the World Health Organization (WHO) Child Growth Standard, stunting is based on the indexof body length for age (PB /U) or height for age (TB/U) with a limit (z-score) of less than -2 SD. Stunting is still a nutritional problem in Indonesia that has not been re- solved. Stunting will cause long-term impacts, namely disruption of physical, mental, intel- lectual, and cognitive development (Yafie, 2020). Children who are stunted until the age of 5 years will be difficult to repair so that it will continue in- to adulthood and can increase the risk of off- spring with low birth weight (LBW).

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According to WHO in 2016, the prev- alence of stunting of children under five in the world is 22.9% and the nutritional status of children under five is the cause of 2.2 million of all causes of under-five mortality world- wide. Nearlyhalf the mortality rates for children under five in Asia and Africa are caused by malnutrition. This results in the death of three million children per year.

Stunting is a nutritional status based on the PB /U or TB/U index where in anthropometric standards for assessing children's nutritional status, the measurement results are in the threshold (Z-Score) <-2 SD to -3 SD (short / stunted) and <-3 SD (very short /severely stunted). Stunting is a chronic mal- nutrition problem caused by insufficient nutritional intake for a long time due to feeding that is not in accordance with nutritional needs. Stunting can occur whenthe fetus is still in the womb and only appears when the child is two years old (Ministry of Health of the Republic of Indonesia, 2016).

Stunting that has occurred if it is not balanced with catch-up growth results in decreased growth, the problem of stunting is a public health problem associated with an increased risk of illness, death, and obstacles to both motor andmental growth. Stunting is formed by inadequate growth faltering and catcth-up growth which reflects the inability to achieve optimal growth, this reveals that a group of toddlers who are born with normal weight can experience stunting iftheir subse- quent needs are not met properly (Ministry of Rural Development and Disadvantaged Areas and Transmigration, 2017; Ministry of Health of the Republic of Indonesia, 2016).

Indonesia is a country with a high prevalence of undernutrition among children under five. The results of BasicHealth Re- search in 2010 and 2013, and monitoring of nutritional status in 2015 and 2017, show that the prevalence of stunting is still high and has not decreased to reach the WHO threshold. The prevalence of stunting reaches 3-11% of Gross Domestic Product (GDP) with a 2015 GDP value of IDR 11,000 trillion, economic losses due to stunting inIndonesia are esti- mated at IDR 300 trillion to IDR 1,210 trillion per year.

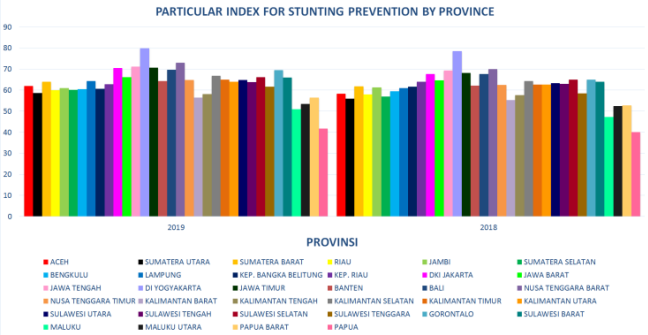

Figure 1. Particular Index for Stunting Prevention by Province, BPS 2018-2019.

The number of stunting cases in In- donesia per 2019 reached 27.67 percent. This should be of concern considering that this fig- ure is higher than the maximum tolerance for stunting set by the World Health Organiza- tion. (Health Minister Indonesia 2019, Tera- wan Agus Putranto). The incidence of stunt- ing is often found in children aged 12-36 months with a prevalence of 38.2- 41.5 per- cent (RISKESDAS, 2010). The period of growth and development atthis age is a peri- od that takes place quickly and will never be repeated, because it is often called the golden age, but at this time you will be prone to ex- periencing diseases that have an impact on your nutritional status in the future.

Stunting is still a public health prob- lem in Indonesia. Stunting in toddlers can cause a decrease in the productivity and quali- ty of Indonesia's human resources in the fu- ture. Growth retardation or stunting in chil- dren in Indonesia occurs as a result of chronic malnutrition and infectious diseases and af- fects 30% of children under five yearsof age.

Based on the 2015 South Sulawesi Nutritional Status Monitoring (PSG) data conducted in 24 districts / cities, itshows that the prevalence of stunting under five in 2014 was 34.5%. Decreased in 2015 to 34.1%. This figure shows thatthe position of South Sula- wesi in 2015 has not yet reached the MDGs target of 32%. One of these districts that has a fairly high prevalence of stunting is Enrekang district, which ranks 6th with a stunting prevalence of 39.6% (Public HealthOffice of South Sulawesi, 2015). The factors that cause stunting in children are the cumulative pro- cesses that occur during pregnancy, childhood and throughout the life cycle. Stunting occurs due to factors such as genetics, history of birth weight, history of infectious diseases, parental income, gender and nutritional status (Sandjojo and Majid, 2017).

According to the World Health Or- ganization, stunting can lead to sub-optimal cognitive or intelligence, motoric, and verbal development, increased risk of obesity and other degenerative diseases, increased health costs, and increased incidence of morbidity and mortality (Yafie, 2020). Children who have a level of intelligence that is not optimaldue to stunting can ultimately hinder economic growth, in- crease poverty, and widen inequality in a country. Cognitive development is an aspect that focuses on thinking skills, including learning, problem solving, rationality, and memory which greatly influence student suc- cess in school. Based on research by Solihin (2013) through a correlation test, it is known that the height of children under five for age (TB/U) is positively related to the level of cognitive development, which is 0.272 and the p-value is 0.020. This study states that higher toddlers have a higher level of cogni- tive development.

In the short term, stunting can lead to an increase in the incidence of morbidity and mortality, suboptimal cognitive development or intelligence, motor and verbal, and in- creased health costs. The long-term impact of stunting,namely posture that is not optimal as an adult, increased risk of obesity and other degenerative diseases, decreased reproductive health, not optimal learning capacity and per- formance during school, and not optimal productivity and work capacity. Children who have a level of intelligence that is not optimal due to stunting can ultimately hinder econom- ic growth, increase poverty, and widen ine- quality in a country. Stunting as a failure to achieve linear growth caused bynon-optimal health conditions or malnutrition. The high rate of stunting in children in developing countries is related to poor socioeconomic conditions, increased risk factors and expo- sure from an early age to disease, and im- proper parenting/feeding patterns (World Health Organization).

2. OBJECTIVES

There are three problems rising in this topic: First, what are the factors causing the increase in stunting in SouthSulawesi? Second, what about government intervention in efforts to tackle stunting cases in South Sulawesi? Third, what strategies need to be implemented to prevent and overcome stunting at the indi- vidual, household and community levels?

3. RESEARCH METHOD

This paper is the result of scientific thinking written using the desk study method, namely how to collect data and information through examination and analysis of data and infor- mation using secondary data, in the form of documents, related laws and regulations, re- ports, conference papers, national and interna- tional journal, books, etc. Theliterature search results were analyzed descriptively. We conducted a systematic review of pub- lished peer-reviewed and gray literature ana- lyzing the relation between changes in key de- terminants of child linear growth and contem- poraneous changes in linear growth outcomes over time in South Sulawesi.

4. RESULT AND DISCUSSION

The phenomenon of stunting is one of the main nutritional problems faced by South Sulawesi. Based on data from the South Su- lawesi Provincial Health Office (2020), there are 151,398 children in South Sulawesi who suffer fromstunting. In addition, the Central Bureau of Statistics and the Ministry of Health (Integration of SUSENAS on March 2019 and SSGBI 2019) recorded the percent- age of children under five with stunting in South Sulawesi at 30.59%. Thedevelopment of stunting cases from year to year tends to fluctuate, namely: 34.1% (2015); 35.7% (2016); 34.8% (2017); 35.6% (2018) and most recently in 2019 it fells 5.1%. From these re- sults, South Sulawesi Province is set to be in 11th from the previous position 4th for the highest stunting rate in Indonesia. However, this figure is still relatively high. Referring to the Decree of the Minister of National Devel- opment Planning/BAPPENAS Number Kep.42/M.PPN/HK / 04/2020 concerning the Determination of the Expansion of Dis- tricts/Cities where the Focus of Integrated Stunting Reduction Intervention is in 2021, the Districts/Cities of Locus in South Sulawe- si Province in 2018- 2020 are 11 districts that cover (Enrekang, Bone, Gowa, Takalar, Jeneponto, Sinjai, Selayar, Pangkep, Pinrang, Tana Toraja, and North Toraja) with the addi- tion of 6 districts/cities in 2021 (Makassar, Maros, Luwu, North Luwu, Wajo, and Bulukumba) so that the focus of intervention for reducing stunting will be 17 districts/cities in 2021.

Figure 2. Distribution of Villages as Focus Location for Stunt- ing Interventiins in

South Sulawesi 2021, Decree of the Minis- ter of National Development Planning/BAPPENAS Number Kep.42/M.PPN/HK / 04/2020

As stated by dr. Muhammad Ichsan as Head of the South Sulawesi Provincial Health Office in the Monitoring and Evaluation Meeting of the Implementation of Stunting Convergence (September 2020) stated that 205 villages and 22 sub-districts were desig- nated as priority focus locations for stunting interventions in 2021. This focus location consists of 30 villages in Pangkep, 15 villages in Tana Toraja, 18 villages in Sinjai, 20 vil- lages in Jeneponto, 15 villages in North Tora- ja, 10 villages in Takalar t, and 50 villages in Bone, 22 villages in Enrekang, 12 villages in Selayar, 2 villages in Pinrang, and 15 villages in Gowa. The highest prevalence of stunting is in Parepare, Tana Toraja, and Enrekang. Meanwhile, the lowest stunting potential was in Gowa, Makassar, and Bone.

Stunting Prevention Programs and Policies in South Sulawesi

In the Work Plan Matrix of South Su- lawesi 2018, the trend of Stunting Prevalence in South Sulawesi Province has increased from 2007 (29.1%) to increase in 2010 (36.8%) and has increased again in 2013 to 40.9% and is still used to assess the Preva- lence of Toddler Stunting in 2014 and has not reached the target set (34.5%). This figure al- so shows that the position of South Sulawesi in 2014 has not yet reached the MDGs target of 32%. The results of the PSG in South Su- lawesi Province in 2015 showed the Preva- lence of Toddler Stunting was 34.1%, the condition increased in 2016, namely to be 35.7% and had not yet reached the target (34.55%). The results of the district/city reca- pitulation show that there are 5 districts/cities with a very short and short percentage of chil- dren, namely Jeneponto 48%, Enrekang 46%, Tana Toraja 41%, Bantaeng 41% and Pinrang 41%. This nutritional status indicator based on the TB/U index provides information on indications of chronic nutritional problems as a result of long-standing conditions. For ex- ample: poverty, unhealthy life behavior, and poor parenting/feeding patterns from the time the child is born which results in the child be-coming short.

In 2019, several activities were car- ried out to support the The First 1.000 Days Program, including Assistancein the Utiliza- tion of Nutrition Intervention Packages for Pregnant Women with Chronic Energy Defi- ciency (KEK) andAssistance in Utilizing Nutrition Intervention Packages for Thin Tod- dlers (Wasting). This activity was carried out to monitor the provision of nutrition interven- tion packages to children in 2 districts/cities (Bone District and Enrekang District). Efforts to manage malnutrition and stunting start from gestational age (fetal age 370 days in the womb) and toddlers 2 years (730 days after birth). The calculation of The First 1.000 Days is 370 days in the womb plus 730 days outside the womb after birth. The impact of this intervention has been able to reduce the stunting rate in South Sulawesi Province from 35.6% in 2018 to 30.09% in 2019.

The Maternal and Child Health Pro- motion Program in preventing stunting is carried out with Technical Guidance in Efforts to Prevent Stunting by Utilizing Pregnant Moth- er Classes, Monitoring and Evaluation of the Implementation of the Stunting Management Program in Districts / Cities (DAK), Cam- paign for Healthy Living Community Move- ment and National Issues (Stunting, TB) and Immunization), Socialization and Advocacy of Germas and National Issues (Stunting, TB and Immunization) through Media, Socializa- tion of Stunting Handling, Assistance of Community Health Workers in Villages in the context of Handling MMR, IMR and Stunting, Coordination Forum for MMR and IMR Handling and Handling 5 Regions Stunting Locus in South Sulawesi Province, Formula- tion of RegionalAction Plans (RAD) for Strategic Issues Assistance (Stunting, TB and Immunization) in South Sulawesi Collabora- tion with Hasanuddin University, and stunting intervention through monitoring the quality of drinking water in districts/cities(DAK).

The results of Basic Health Research (RISKESDAS) showed that the prevalence of stunting in South Sulawesi Province experi- enced a fluctuating trend. In 2010, it was 36.8%, increased to 40.9% in 2013 and the re- sults of Riskesdas2018 showed that the Prev- alence of Toddler Stunting had decreased sig- nificantly, namely 35.6%. Until the end of 2019, from the results of Nutrition Surveil- lance Monitoring (NSM) in South Sulawesi Province, the prevalence of children under five with stunting again decreased to 30.09%.

It is hoped that by the end of the Re- gional Medium Term Development Plan period, the prevalence of stuntingunder five in South Sulawesi can reach below 25%. In 2019, several activities were carried out to support the First 1.000Days Program, includ- ing Assistance in the Utilization of Nutrition Intervention Packages for Pregnant Women with Chronic Energy Deficiency (KEK) and Assistance in Utilizing Nutrition Intervention

Packages for Thin Toddlers (Wasting). This activity was carried out to monitor the provision of nutrition intervention packages to children in 2 districts/cities (Bone District and 26 Performance Reports (LKJ) of the South Sulawesi Provincial Health Office, 2019, Enrekang Regency). Efforts to manage malnutri- tion and stunting start from gestational age (fetal age 370 days in the womb) and 2 years old (730 days after birth). So the calculation of 1000 HPK is 370 days in the womb plus 730 days outside the womb after birth (Regional Apparatus Organization Performance Report 2019).

The National Population and Family Planning Board (BKKBN) seeks to reduce the stunting rate with a numberof programs such as Bina Keluarga Balita (BKB), family planning to maintain pregnancy distance as well as Youth Family Development (BKR) activities, and the Youth/Student Counseling In- formation Center (PIK-RM). In the Stunting Prevention Focus Group Discussion (FGD) activity held by representatives of the South Sulawesi Provincial BKKBN which was at- tended by approximately 30 participants consisting of elements of the PKK Driving Team (TP PKK), the Office of Women's Empowerment for Child Protection and Population Control Family Planning (DP3APPKB)) Province, Population Control and Family Planning Service (DPPKB) of Makassar City, Social Service, Education Office, Health Service, Village Community Empowerment Service (DPMD), Quality Assurance, Chairper- son of the Association of Family Planning Counselors (IpeKB) of South Sulawesi Prov- ince and Chairman of the Association Family Planning Extension (IPeKB) Makassar City.

The South Sulawesi Provincial Health Office launched a program from the Governor of South Sulawesi, namelyGAMMARA'NA (Community Movement to Prevent Stunting) and there are also programs carried out by the Food Security Service such as planting food plant seeds in stunting focus areas, as well as several other programs. The Community Movement Preventing Stunting which stands for GAMMARA'NA is an innovative program for the South Sulawesi Provincial Govern- ment to reduce stunting by presenting nutri- tion assistance in local areas. South Sulawesi Governor, Nurdin Abdullah's flagship pro- gram in accelerating the reduction of stunting was by presenting 70 nutritionassistants and stunting counselors who were assigned to lo- cal villages in Enrekang and Bone who had direct contact with the community. The spe- cific program to reduce stunting by giving Moringa leaf capsules, multivitamin supple- ments for pregnant women, PMT for toddlers, PMT for pregnant women and Multivitamin Taburia for The First 1.000 Days. The Gam- mara'na program succeeded in reducing stunt- ing rates (Head of the Public Health Division of the SouthSulawesi Health Office, Husni Thamrin). Data

on the percentage of stunting in Bone in 40 locus villages, namely 13.30 percent to 10.77 percent in October. Likewise, the progress of intervention in Enrekang, namely 22.67 percent of stuntingin 30 locus villages, decreased to 21.70 percent.

Socio-Economic Factors Affecting Stunting Cases

Stunting is caused by multi- dimensional factors and not only due to poor nutrition experienced by pregnant women and children under five. The most decisive inter- vention to reduce the prevalence of stunting is therefore necessary for the first 1,000 days of life (HPK) of children under five. Some of the factors that cause stunting include: 1. Poor parenting practices, including a lack of knowledge of mothers about health and nutri- tion before and during pregnancy, as well as after delivery. Some facts and information show that 60% of children aged 0-6 months do not receive breastmilk exclusively, and 2 out of 3 children aged 0-24 months do not receive complementary foods with breastmilk (MP-ASI). MP-ASI is given/ introduced when toddlers are over 6 months old. In addition to serving to introduce new types of food to ba- bies, complementary foods can also meet the nutritional needs of the baby's body that breast milk can no longer support, as well as form the immune system and the development of the child's immunological systemto food and drink. 2. Limited health services includ- ing ANC-Ante Natal Care (health services for mothers during pregnancy) Post Natal Care and quality early learning. Information gath- ered from the Ministry of Health and World Bank publications states that the attendance rate of children at Posyandu has decreased from 79% in 2007 to 64% in 2013and that children do not have adequate access to im- munization services. Another fact is that 2 out of 3 pregnant womenhave not consumed ad- equate iron supplements and there is still lim- ited access to quality early learning services (only 1 in 3 children aged 3-6 years have not been registered with PAUD/Early Childhood Education Services). 3. Lack of house- hold/family access to nutritious food. This is because the price of nutritious food in Indone- sia is still relatively expensive.

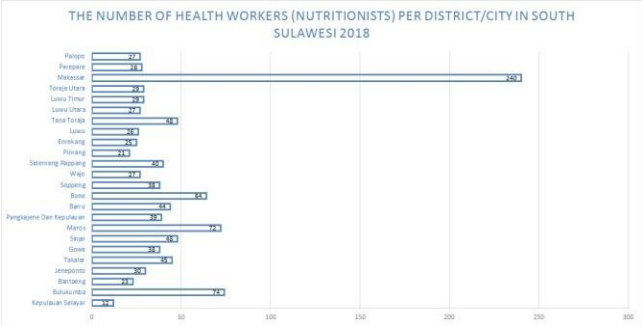

Figure 3. The Number of Health Woker (Nutritionists) per Dis- trict/City in South Sulawesi, BPS 2018

According to several sources (RISK- ESDAS 2013, SDKI 2012, SUSENAS), food commodities in Jakarta are 94% more expen- sive than in New Delhi, India. The price of fruit and vegetables in Indonesia is higher than in Singapore.Limited access to nutri- tious food in Indonesia is also noted to have contributed to 1 in 3 pregnant women experi- encing anemia. 4. Lack of access to clean wa- ter and sanitation. Data obtained in the field shows that 1 in 5 households in Indonesia still defecate in an open space, and 1 in 3 house- holds do not have access to clean drinking water. (Ministry ofHealth (Kemenkes) and (World Bank publications on stunting in 2017).

The state of stunting is not only de- termined by the status factor of exclusive breastfeeding but also by other factors such as Low Birth Weight and Immunization. There is no relationship between exclusive breast- feeding and theincidence of stunting in chil- dren under five in the working area of the Buntu Batu Health Center, Enrekang Regency with a p-value of 0.060 (p> 0.05). While the research from (Windasari et al, 2019) entitled factors related to the incidenceof stunting in the work area of the Puskesmas Tamalate, Makassar City, where in this study there was a relationship between exclusive breastfeed- ing and the incidence of stunting in the work area of Puskemas Tamalate with a value of ρ= 0.01. Research (Nizkiniaz 2009) in Iran says that the nutritional intake of nursing mothers is related to the compositionof breastfeeding.

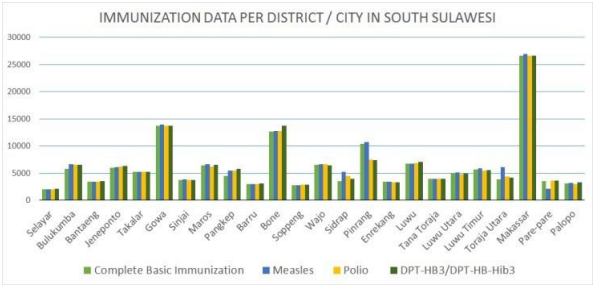

Figure 4. Immunization Data Per District/City in South Sula- wesi, BPS 2018

In line with global standards, the Government of Indonesia, WHO and UNICEF recommend exclusive breastfeeding for the first six months of life, followed by complementary feeding and continued breast- feeding until thechild is two years old or old- er. Breast milk provides children with all the nutrition they need safely, while feeding too early can lead to nutritional deficits and infec- tions (UNICEF, 2020). Research by Yesenia et al., (2017) states that thereis a significant relationship between the history of breastfeed- ing and the incidence of stunting in toddlers aged 6-24 months, toddlers who are not ex- clusively breastfed have a 3.7 times greater risk of getting stunted than toddlers who arebreastfed exclusive. Apart from that, there are also other factors that need to be considered, namely a history of recurrentinfections such as diarrhea, upper respiratory tract infections, and other infections affecting the height growth of childrenunder five, whereas during the critical windows period, it is a period of brain development or intelligence and rapid body growth in children. Birth weight has a large impact on subsequent child development, birth weight in particular is strongly associatedwith fetal, neonatal and post-neonatal mortality; infant and child morbidity; and long-term growth and development. Infants with Low Birth Weight (LBW) are defined by WHO as a birth weight of less than 2500 grams. LBW can be caused by the duration of pregnancy and fetal growth rate. Therefore, a baby with a birth weight of less than 2500 gramscould be be- cause he was born prematurely or because of growth retardation. (Ministry of Health, 2016).

The incidence of stunting in children aged 24– 60 months in Barang Lompo Island, Makassar City, South Sulawesi Province, where there is a relationship between stunting and LBW with a p-value = 0,000. This study is also inline with research conducted by (Nasution, 2014) which shows that there is a relationship between LBW and the incidence of stunting in children aged 6-24 months, namely 5.6 times higher risk of stunting in children with a history of LBW compared to children who born with normal weight. (Ilham Syam et al, 2019).

The risk factors for stunting at age 6- 23 months in Bontoramba, Jeneponto Regency, showed that there was arelationship be- tween basic immunization and the incidence of stunting with a value of p = 0.003 (p<0.05). Basically, immunization in children has an important goal, namely reducing the risk of morbidity (illness) and mortality (death) of children due to diseases that can be prevented by immunization.

Anemia is a condition in which the number of red blood cells, or the capacity of the blood to carry oxygen, is not sufficient to meet the body's needs. Anemia is usually caused by a lack of iron, and it is one of the most common nutritional disorders in the world. Iron deficiency and anemia can lead to health problems, premature death and loss of income. Among pregnant women, anemia is associated with a risk of developing pregnan- cy complications, including preterm birth, low birth weight, and an increased risk of maternal death. All of these complications also lead to an increased risk of malnutrition in children. cause an increased risk of malnutrition in children. Nationally, 37 percent of pregnant women experienced anemia in 2013, whilethe same case occurred in 23 percent of wom- en of childbearing age,and there was no dif- ference between those living in urban and ru- ral areas. There is no disaggregated data based on wealth quintile, educational background or employment status, especially for pregnant women.

There is an increasing trend of anemia among pregnant women: in 2007, it was estimated that about a quarter of pregnant women had anemia. If this is true, then targeted action is needed to change this trend and bring Indo- nesia toremain on track in efforts to reduce anemia in pregnant women. If a mother expe- riences anemia during pregnancy, the nutri- tion and nutrition of the baby she is carrying will be impaired. Therefore, it is very im- portant to know the prevalence of anemia in women of childbearing age. Twenty-three percent of women of childbearing age over 15 years of age have anemia, and there is no sig- nificant difference between those living in ru- ral areas and those in urban areas. Empower- ment and support for young women to delay pregnancy is an important strategy to reduce malnutrition in children. Early pregnancy among adolescents is one of the risk factors for low birth weight. Low Birth Weight (also known as Fetal Growth Restriction) signifi- cantly increases the chances of a child being stunted (UNICEF Indonesia, 2020).

Research conducted by Sulastri (2012) mentioning that there is a relationship between levels education with nutritional sta- tus, where the prevalence of children stunting is more common in mothers less educated compared to mothers highly educated, this can happen because of the mother with higher ed- ucation have more opportunities and access to information related to nutrition compared to mothers with low education or uneducated.

Research this too showsthat stunting is more common in mothers who do not work (84%), mothers with knowledge low (66%) and most- ly fromthe economy low (51%). Par'i, and Utami (2017) mention that knowledge of mother nutrition, knowledge of giving eating,and personal hygiene knowledge has an effect towards improving nutritional status, where improvement community nutrition has the po- tential to reduce numbers stunting.

Based on the Joint Monitoring Re- view from WHO and UNICEF, more than 150,000 children, especially toddlers, die eve- ry year due to diarrhea, pneumonia and poor sanitation. The stunting rate is 30 percent in Indonesia. This is closely related to the availability of clean water. The impact of water pollution due to sanitation is quite dangerous.One of them is the threat of stunting. Nine million, or 30% of Indonesian children under five are stunted, which is stunted by body and brain growth. The main cause is polluted wa- ter.

Based on the results of the univariate analysis, the incidence of diarrhea was found at people in Barrang Lompo Island amounted to 65.0%. The basic sanitation conditions of the community, namely provision of clean water, ownership of healthy latrines, SPAL, waste management, and Hand Washing With Soap (WWWS) did not meet the require- ments.Found bacteria, including the cause of diarrhea namely Enterobacter hafniae and Staphylococcus aereus. Based on the clean water supply facilities, there were 7 respond- ents (23.3%) who provided clean water which is not good in Kodingareng Lompo Island. For latrine facilities, there are 12 respondents (40%) with no latrine facilities qualify. Waste disposal facilities, all respondents (100%) do not have the means waste disposal. Sewerage sewer (SPAL), there are 35 respondents (59.3%) who has no SPAL. Food sanitation, there are 13 respondents (43.3%) with food sanitation not good.Handwashing with soap behavior (CTPS), there were 28 respondents (93.3%) with the behavior of washing hands with soap is not good.

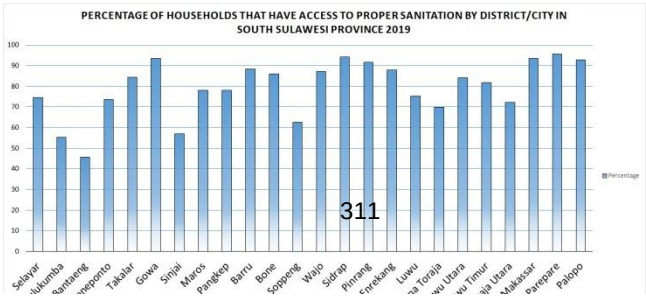

Figure 5. Percentage of Households That Have Access to Proper Sanitation by District/City in South Sulawesi Province 2019

5. CONCLUSION

Based on the explanation and literature re- view, it can be concluded that South Sulawesi Province is still classified as a province with a high prevalence of stunting, which is around 30.5% in 2020. On the other hand, the region-al government of South Sulawesi Province has a number of policies and regulations re- lated to problem solving stunting, where ef- forts include specific interventions carried out by the health sector, and sensitive interven- tions carried out by cross-sectors outside of health which are summarized in the Gam- mara'na program. Socio-economic factors that affect stunting, including the problem of pov- erty, parental education levels and low family income, sanitation and access to clean water, parental education, early marriage, geographic differences, and food security.

6. RECOMMENDATION

A community-based approach is needed throughout the life cycle (services for couples of childbearing age and women of childbearing age, childbirth, postpartum, neo- natal, as well as services for mothers and tod- dlers). Regulations that exist at the central level must be lobbied to the regional and even village levels by involving various sectors and involving many parties and are binding among the community, government, academ- ia, private sector, media, and other stakehold- ers. Empowering mothers with the Household Financial Management and Planning Program (Smart Mother for Financial Management) which is implemented in villages, especially those classified as stunting intervention areas. This program can be handled by the village government in collaboration with inclusive fi- nancial institutions. Higher Education Institu- tions need to intensify community service programs and real work lectures at stunting intervention locations in Enrekang, Bone, Pinrang, Gowa, Pankajene Islands (Pangkep), Tana Toraja, Sinjai, Jeneponto, North Toraja, Takalar, and Selayar Islands and particularly in the districts of Enrekang and Bone, which are included in the high stunting category. Da- ta from the Health Office of South Sulawesi stated that the stunting potential in South Su- lawesi, namely in Enrekang Regency 45.8 percent, and Bone 40.1 percent.

Conducting a Stunting Awareness Movement by providing education to the community based on Smart Parenting, Smart Nutrition, and Smart Cooking through pro- cessing nutritious food based on local re- sources. Conduct periodic coaching for tod- dlers and youth families by empowering po- syandu cadres and peer counselors in each district/city. Launched the "Pojok Siap Nikah" program to help the bride and groom prepare for family life by empowering IpeKB exten- sion workers and counselors. Local govern-

ments hold consensus to all districts with stunting interventions in terms of knowing the conditions of community housing (proper or unfit), clean water and sanitation, and food security. Preventing early marriage which is rife in South Sulawesi. Children should be given a diploma certificate, not a marriage book. South Sulawesi Governor Instruction Number 1 of 2018 concerning Stop Child Marriage in South Sulawesi and the implementation of the campaign for the Non- Playground Banquet Movement need to be optimized down to villagelines. If necessary, make village regulations to prevent child marriage.

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