

Negative Correlation between the scoring prevention policy with stunting prevalence in South Sulawesi: Cross-Sectional Study

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ABSTRACT

Currently, the most serious nutritional problem in Indonesia is stunting. The prevalence of stunting nationally is 36% and South Sulawesi reaches 30.8%. Stunting prevention starts from the pre-conception period until the child is two years old. Objectives of this study was to investigate policy brief the government South Sulawesi to stunting prevention. The method of this study was observational with a policy evaluation approach, based on secondary and primary resources in the 2015-2020 policy period. Data sources from nutrition Big data, Food Security Big data and other sources related any legal aspect and article. Methods of collecting data with documentation and interviews. Data analysis with content analysis and statistical analysis with Pearson correlation test. The unit of analysis is the district. Result of the research was that in general, the stunting problem in South Sulawesi is in the moderate category (10-20%). The components of stunting prevention policies are convergence, food security, legislative support, education base, village base, innovation, involving women's organizations, local food, appropriate technology, therapy feeding centres, and monitoring program evaluation. The proposed intervention program is food security, promotion of growth monitoring and integrated management of sick toddlers. The Conclusion that stunting prevention policies in South Sulawesi can be carried out with an integrated approach from the province to the village.

Keywords: *Prevention Policy, Stunting, Integration.*

INTRODUCTION

The prevalence of stunting nationally is 36% and South Sulawesi reaches 30.8%, Stunting has an impact on academic potential, high risk of non-communicable diseases and high cost of health services.^{1,2,3} The root of the problems experienced by policymakers is a lack of measurable scientific evidence about the efficacy of an ongoing and ongoing stunting prevention program. A comprehensive policy review is urgently needed that combines empirical evidence and theoretical studies, so that scientifically and logically it can be accepted by all parties.^{4,5,6}

The stunting prevention policy in South Sulawesi is very much needed as a track record of policy academic texts that protect the lives of many people, especially the golden generation. Based on the above considerations, the researcher

proposes a proposal for the analysis of stunting prevention and rehabilitation policies in Sulawesi.^{7,8,9}

The specific purpose of this study is to analyze the correlation of policies with the extent and magnitude of the stunting problem in South Sulawesi.

METHOD

This study is a realist evaluation using the Realist And Meta-narrative Evidence Syntheses: Evolving Standards (RAMESES) II model. The design of this study is based on its simplicity and ability to find the point of failure of health service implementation programs that have been and have been running. The setting of this research community is to explore evidence of policy documents at the community level in the form of quality and quantity of services perceived by families. Two district located and focus (locus) were

selected, namely Bone District and Enrekang District, South Sulawesi.

Participants

The manager of the South Sulawesi Provincial Health Office's nutrition improvement program was a participant in this study. At the Enrekang District Health Office, the person in charge of the stunting prevention program. The locus Village Health Center's nutrition program is being implemented. The Gammarana South Sulawesi 2020 initiative is accompanied by nutrition workers. In locus Village, the 2020 South Sulawesi Gammarana program's target families are stunting.

Data collection

Data used documented from officials department (secondary data) and also observation in villages locus.

Data analysis

The Policy Brief on Prevention of Stunting in South Sulawesi is an analysis of the stunting prevention program. Data analysis was carried out using Emic, Ethics, Concepts and Prepositions methods. The theoretical program is refined based on the gap between policy documents and evidence of the effectiveness of the 2020 field test.

Research Ethics

Research ethics were obtained from the Makassar Health Polytechnic Research Ethics Commission, in addition to research permits from the Provincial Government of South Sulawesi, Enrekang District and Bone District.

RESULT AND DICUSSION

The Policy of South Sulawesi to stunting prevention

Results of a search for stunting prevention policy documents in South Sulawesi, Indonesia, through online media and official document sources from 2018 to 2021, could be describe on the following narrative. The Government of South Sulawesi has a strong political commitment to prevent stunting. The main concept is stunting prevention with a collaborative approach of all related sectors. Evidence of implementation at the provincial level, always involves multi-sectoral co-ordination. South Sulawesi is ranked 11 highest order stunting in Indonesia. Monitoring and evaluating the implementation of convergence is one of the pillars of stunting prevention efforts. Empirical evidence of the implementation policy is that it has been carried out following the national strategy.

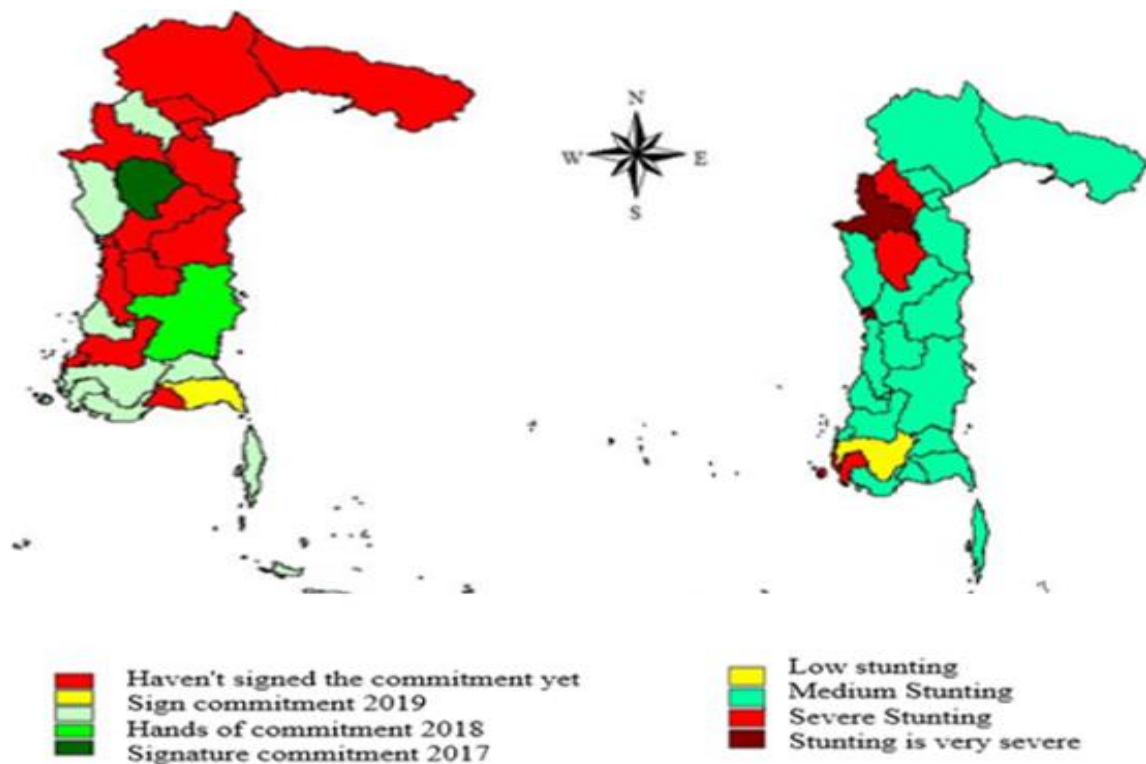


Figure 1. Political Commitment and Stunting in South Sulawesi

The government of South Sulawesi has allocated a budget for stunting prevention and focused on 11 districts. The concept of a limited budget distribution is with a regional focus. Evidence of its implementation is starting with intervention in the districts with the highest stunting magnitude, namely Enrekang and Bone. South Sulawesi government conducted an assessment of stunting prevention by opening a cross-sectoral dialogue. Family Planning Department is the leading sector as directed by the National Stunting Prevention Policy. The region has adopted the multi-sector principle to expand political commitment and budget support for various sectors. South Sulawesi's stunting prevention policy has the principle of cross-sectoral integration in the located and focus (locus) district set for 17 districts in 2021.

The policy concept is to concentrate intervention activities in locus districts and

gradually increase them from year to year. This is equivalent to 45% of districts that have been made into focus areas. Food Security and Nutrition Intervention. The concept of stunting prevention policy in South Sulawesi focuses on two direct variables, namely consumption and infectious diseases. Stunting was established as the mainstream of national development in 2014. A 6-pillar-based community nutrition improvement program, developed continuously following national policies and directions.

Legal Aspects and Legislative Support. The concept of stunting prevention policy in South Sulawesi is based on the concept of strengthening child feeding practices (breastfeeding). The most important legal aspect is related to The article of Breastfeeding No. 6 of 2010, followed by strengthening of the network of Governor's Regulation No. 68 of 2011. The stunting prevention policy in South Sulawesi is a model for sharing

resources between regions. It involves Human Development Cadres and members of the legislature. The concept is strengthening legislative support for all activities that lead to improved nutrition, especially stunting prevention.

Education Base. The concept adopted by the government in preventing stunting in South Sulawesi is one of the only campaigns of prevention of stunting. Stunting prevention policy in South Sulawesi is hierarchically starting from the national level Jakarta to the regions. Village base priority scale. Stunting prevention policy is a tiered collaboration according to the level of government and respective policies.

Innovative Programs. The provincial government of South Sulawesi, has pioneered a stunting prevention roadmap by establishing 2 districts, (Bone and Enrekang). Based on the contents of the document, it is known that Gammarana is supported by funding from the Provincial Government 2020. Women & Religious Organizations. One of the ways for the South Sulawesi provincial government to increase the involvement of the women % religious organization driving team is a stunting prevention video competition. The policy has the support of religious organizations such as Nahdatul Ulama, which focuses on food supplementation for children under five and pregnant women.

Local Food Potential. The stunting prevention policy in South Sulawesi is to provide reinforcement for the use of evidence-based local food potential to prevent stunting. Based on the document, it is known that the policy is based on animal side dishes (fish), especially in Makassar City.

Appropriate technology. One of the stunting prevention policies in South Sulawesi is to strengthen the production sector of the Nutri Zinc Rice Variety, which has been tested on 15 hectares of rice fields in Bone District. The concept is to empower farming communities as potential food sources to prevent stunting.

Theraupetic Feeding Center. Stunting prevention policies need to be supported by an integrated nutrition service and initiated by Bantaeng District. One of the concepts of stunting prevention in South Sulawesi is to establish an integrated care unit for child nutrition services.

Monitoring and Evaluation. The South Sulawesi provincial government views that monitoring and evaluating the implementation of convergence is one of the pillars of stunting prevention efforts. The most inspiring districts are Bone and Takalar, the most replicative districts are Sinjai and the most innovative districts are Pinrang. The districts in Quadrant 2 are Parapare, Enrekang, Selaya, Takalar, Tator, Lutra, Pangkep, Torut, Jeneponto and Luwu. Districts in Q3 are Barru, Palopo, Pinrang, Sidrap, Bulukumba, Makassar, Wajo, Bone, Gowa and Lutim (Figure 2)

The South Sulawesi provincial government has an exponential number of policies in 2020 compared to the previous year. 16 districts contributed 50% of the percentage figure at 11.58 points. If we want to reduce stunting by half the prevalence in 2020, the policy focus will be on the cities. Convergence is a multi-sector integration concept in stunting prevention efforts. Several key point in policy brief of South Sulawesi government to reducing stunting; food security, legal aspect, education base, village focus,

innovation, women empower, local food, innovation, simply technology, therapeutic feeding centers, monitoring and evaluation.

Food security in South Sulawesi provides enormous support to meet the energy needs of the population per capita. Regions with agricultural production and food security index are quite good in almost all districts, proving that in terms of food supply at the regional

South Sulawesi. The policy of feeding children is following WHO/Unicef feeding standards where breast milk and complementary foods are one of the strengths to fight malnutrition in children under five.^{13, 14}

Education has been integrated into growth monitoring activities at the *Posyandu*. The COVID-19 pandemic conditions in 2020, caused face-to-face activities to be limited^{15, 16, 17}. The

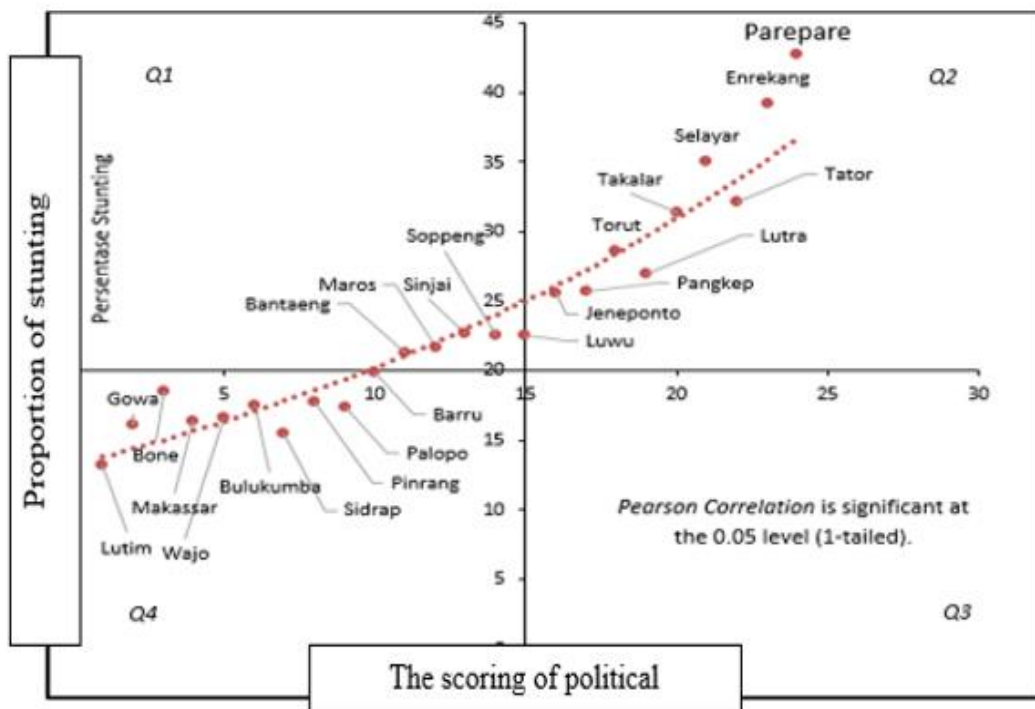


Figure 2. Quadrant Policy Stunting Intervention

level, the province of South Sulawesi is considered capable of meeting nutritional needs. Stunting prevention efforts based on regional food can reinforce stunting prevention policies in South Sulawesi.^{10, 11, 12} Legislative support has started to emerge since 2016 since the regulation of breastfeeding in South Sulawesi. This regional regulation then became the basis for policies to market child feeding counselling activities in

Gammarana program is an example based on 70 villages in Bone and Enrekang districts. Initiative innovation competition is a feature of several districts in South Sulawesi to overcome stunting. Involving women's organizations is also one of the characteristics of stunting prevention policies. Women's organizations have an advantage because of their role as housewives and potential caregivers.¹⁸

Local food has the advantage because there is a guarantee of consistency. Local food-based interventions are very easy to do, because in terms of food availability this has met the requirements. So the requirements that still have to be developed are the quality assurance of safety and eligibility for children under five and groups vulnerable to nutrition. It takes local food product innovation to increase its popularity so that it naturally becomes the strongest base and is definitely adopted by the wider community. The South Sulawesi provincial government has a policy element that optimizes local food.^{19,20,21}

Appropriate technology, in South Sulawesi, especially in Bone District, zinc enriched rice has been planted. Farmers' groups in Bontocani Sub-district were given incentives to be pilots of Zn-fortified rice. This micronutrient element can be scientifically proven to increase height status. The government's efforts to pioneer this technology are very useful for efforts to meet the needs of Zn as an essential micronutrient²².

Therapeutic feeding centres, in South Sulawesi in early 2020, have been inaugurated in Bantaeng District. The Therapeutic Feeding Centers (TFC) pattern was adopted and given special authority to prevent and rehabilitate cases of malnutrition in Bantaeng District. The first year of its opening is still being worked out on the management side and will continue to be a concern for the Bantaeng District government to prevent stunting in its area. The TFC pattern is also a recommended pattern for accelerating stunting reduction as long as it is based on a preventive approach

CONCLUSION

Stunting in South Sulawesi based on severity is known to be 75% as a moderate public health problem (prevalence 10-20%). The potential policy framework for accelerating stunting reduction is to focus on 16 districts. Specific intervention components are child feeding, vitamin A supplementation, folic acid and prevention of infectious diseases. In 2022, investigations assessing the efficacy of an integrative stunting prevention paradigm are required in South Sulawesi. This efficacy is tested on a small scale of 10 intervention villages and 10 control villages in the stunting locus district, with a minimum requirement of 800 children aged 0-23 months in each group.

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References

1. Beal T, Tumilowicz A, Sutrisna A, Izwardy D, Neufeld LM. A review of child stunting determinants in Indonesia. *Matern Child Nutr.* 2018;14(4):1-10.
2. Kemenkes. Basic Health Research Report of Indonesia Year 2018. *Riskesdas 2018.* 2018. p. 182-3.
3. Titaley CR, Ariawan I, Hapsari D, Muasyaroh A, Dibley MJ. Determinants of the stunting of children under two years old in Indonesia: A multilevel analysis of the 2013 Indonesia basic health survey. *Nutrients.* 2019;11(5).
4. Subramanian S V., Mejía-Guevara I, Krishna A. Rethinking policy

- perspectives on childhood stunting: Time to formulate a structural and multifactorial strategy. *Matern Child Nutr.* 2016;12:219-36.
5. Huybregts L, Becquey E, Zongrone A, Port A Le, Khassanova R, Coulibaly L, et al. The impact of integrated prevention and treatment on child malnutrition and health : the PROMIS project , a randomized control trial in Burkina Faso and Mali. 2017;1-11.
 6. Nur Cahyadi I, Hanna R, Olken BA, Adi Prima R, Satriawan E, Syamsulhakim NBER E, et al. Cumulative Impacts of Conditional Cash Transfer Programs: Experimental Evidence from Indonesia. *NBER Work Pap Ser* [Internet]. 2018; Valabil la: <http://www.nber.org/papers/w24670.pdf>
 7. Sirajuddin, Sirajuddin S, Hadju V, Sudargo T, Hartono R, Ipa A, et al. Complementary feeding practices influences of stunting children in Buginese ethnicity. *Indian J Forensic Med Toxicol.* 2020;14(3):1227-33.
 8. Sirajuddin, Saifuddin Sirajuddin, A Razak Thaha, Amran Razak, Ansariadi RMT. Evaluation Context And Mechanisms Of Stunting Intervention In Locus Area : A Systematic Review. In: *The 1st International Collaboration For Safety and Public Health.* Makassar: Hasanuddin University; 2020.
 9. Sirajuddin, Nursalim AT. Breastfeeding practices can potential to prevent stunting for poor family □. *Enfermería Clínica* [Internet]. 2020;30:13-7. Valabil la: <https://doi.org/10.1016/j.enfcli.2020.02.007>
 10. Motbainor A, Worku A, Kumie A. Stunting is associated with food diversity while wasting with food insecurity among underfive children in East and West Gojjam Zones of Amhara Region, Ethiopia. *PLoS One.* 2015;10(8):1-14.
 11. Diansari P, Nanseki T. Perceived food security status – a case study of households in North Luwu, Indonesia. *Nutr Food Sci* [Internet]. 2015;45(1):83-96. Valabil la: <http://www.emeraldinsight.com/doi/abs/10.1108/NFS-01-2014-0007>
 12. Hadiprayitno II. Food security and human rights in Indonesia. *Dev Pract.* 2010;20(1):122-30.
 13. Eneli IU, Tylka TL, Watowicz RP, Hummel J, Ritter J, Lumeng JC. Targeting Feeding and Eating Behaviors: Development of the Feeding Dynamic Intervention for Caregivers of 2- to 5-Year-Old Children. *J Obes.* 2015;2015.
 14. WHO. The importance of infant and young child feeding and recommended practices. In: *Infant and young child feeding.* Switzerland; 2004.
 15. Setiati S, Azwar MK. COVID-19 and Indonesia. *Acta Med Indones.* 2020;52(1):84-9.
 16. Tosepu R, Gunawan J, Savitri D, Ode L, Imran A, Lestari H. Correlation between weather and COVID-19 pandemic in Jakarta Indonesia. 2020;(January).
 17. Pérez-Escamilla R, Cunningham K, Moran VH. COVID-19 and maternal and child food and nutrition insecurity: a complex syndemic. *Matern Child Nutr.* 2020;16(3):8-11.
 18. Razak A, Harpina, Adrianto R. Political Commitment of Local Government in Handling Stunting During the Covid-19 Pandemic: A Case Study of Enrekang District. *Medico-Legal Updat.* 2020;20(4):2173-81.
 19. Schnell SM. Food miles, local eating, and community supported agriculture: putting local food in its place. *Agric Human Values* [Internet]. 2013;30(4):615-28.

- Valabil la: <http://link.springer.com/10.1007/s10460-013-9436-8>
20. Buchan R, Cloutier D, Freidman A, Ostry A. Local food system planning: the problem, conceptual issues, and policy tools for local government planners. *Can J Urban Res* [Internet]. 2015; 24(1):1. Valabil la: <http://www.lib.umich.edu/articles/details/FETCH-LOGICAL>
21. Trivette SA. How local is local? Determining the boundaries of local food in practice. *Agric Human Values* [Internet]. 2014;32(3):475-90. Valabil la: <http://dx.doi.org/10.1007/s10460-014-9566-7>
22. Doherty CP, Crofton PM, Sarkar MAK, Shakur MS, Wade JC, Kelnar CJH, et al. Malnutrition, zinc supplementation and catch-up growth: Changes in insulin-like growth factor I, its binding proteins, bone formation and collagen turnover. *Clin Endocrinol (Oxf)*. 2002;57(3):391-9.