

# Utilization of Local Wisdom to Overcome Malnutrition of Children in South Sorong Districts, West Papua Province, Indonesia

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## Abstract

**Introduction:** In South Sorong Districts in 2013 there were 47.6% cases of malnourished and underweight children under five; short and very short toddler cases (stunting) of 60.7%. In 2017 South Sorong Districts was one of the 100 districts that were the priority in handling stunting problems. Where the problem of stunting is chronic malnutrition in the period ranging from uterus to toddlers.

**Purpose:** this research aims to find the socio-cultural potential and local wisdom in overcoming nutritional problems in these children under five.

**Method:** this riset mix methods by looking for quantitative and qualitative data. Quantitative data with anthropometry and qualitative data conduct in-depth interviews and village community consultations in finding solutions that are appropriate to the conditions of the community.

**Result:** It was found as many as 49.41% of malnutrition, while stunting was 54.1%. Natural potential in the form of food ingredients, fish, sea shrimp, chicken, sago and various vegetables already exists in the community. The community made an agreement in dealing with the nutritional problems of these children with child care, nutrition, nutrition and sanitation.

**Conclusion:** that in handling nutritional problems of children there is involvement of the community, traditional leaders, religious leaders, support from the village head and the support of the regional government in the form of special team formation and additional budgets on children under five nutrition programs

**Keywords:** *malnutritions, children under five, local wisdom*

## Introduction

Preparing future generations who are resilient for the welfare of the Indonesian nation is common responsibility, and health care must be prioritized from pre-marriage phase, fetus to teenagers. Health problems are often specific local health problems related to local socio-culture that need to be explored in order to find out basic problems so that repairs can be made or empowered for a culture that has a positive impact on health. An understanding of the culture of the community related to health issues is very important to note as a determining factor towards the success of health programs aimed at improving the quality of life of individuals and

communities. The description can be used by health workers for knowing, learning, and understanding what applies in the community<sup>1,2</sup>.

Specific local health problems related to the local socio-culture need to be explored in order to find out the basic problems so that it needs to be improved or empowered for a culture that has a positive impact on health. Thus a good wealth of Indonesian culture can continue to be developed, conserved and utilized locally even if possible nationally. Health programs can be designed to improve the nutritional status of children under five according to specific local problems. In this process the cultural approach is one of the important

and cannot be ignored ways. Understanding the cultural potential and local wisdom is very important in solving the nutrition of children under five<sup>3,4</sup>. The existence of churches and religious leaders and community leaders is important in resolving these problems. In addition, the sustainability of the approach that is in accordance with the culture of the community and local wisdom can be maintained and improved, so that the community will be better and minimize health problems in the nutrition of children under five and increase the level of public health in general<sup>5</sup>.

The aim of this cultural-based research that will be carried out in South Sorong District is to make an interventional model by utilizing local wisdom involving community leaders, religious leaders, figures and health workers related to overcoming the problem of malnutrition in children under fifth by exploring all the potential that exists in the community to make models that are in accordance with regional culture in overcoming the nutritional problems of children under five in that area.

### Method

The research conducted was a mixed methods research which is the method combines two research methods at once, qualitative and quantitative in a research activity, so that more comprehensive, valid, reliable, and objective data will be obtained. Exploring the value system and community behavior related to health phenomena using ethnographic methods, researchers and stakeholders and the community conduct social construction to resolve existing health problems.

The researcher updated the nutritional status data for children under five in Konda and Wamargege villages, in South Sorong, West Papua Province Indonesia. The research team conducted discussions internally, then advocated the results of the research to the community, both in the church and village office.

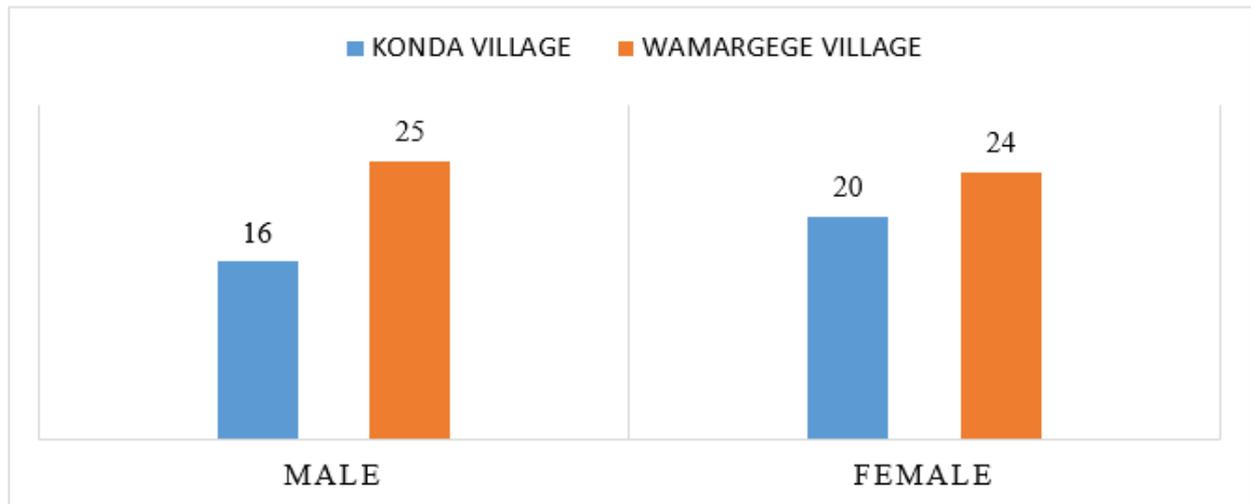
The ethical approval was taken from Health Research and Development Agency (Balitbangkes) of Ministry of Health Indonesia (No: LB.02.01/2/KE.237/2018). This research was funded by Health Research and Development Agency (Balitbangkes) of Ministry of Health Indonesia.

### Result

Konda and Wamargege villages are part of the Konda Sub-District in South Sorong District. It is located about 35 km from the capital city of Teminabuan, South Sorong District. The transportation to reach the area uses land vehicles with a travel time of around 2 hours, while if using a river lane it takes about 45 minutes. On the outline, these two villages 3 major tribes namely the Yaben tribe, the Tehit tribe and the Nakma tribe. In these two villages, the three tribes have intermingled, both in residential and inter-tribal marriages. Most people's lives are fishermen and farmers or gardening. The location of the village of Konda and Wamargege is close to the beach which is flowed by the Teminabuan river and adjacent to the sea estuary<sup>6,7</sup>.

The existence of children under fifth in Konda and Wamargege is pretty much. In the village of Konda there are around 90 children under five, while in the village of Wamargege there are more than 150 children. The research team saw many children under fifth in these two villages, and at first glance the children were small (short) and thin. According to some of their experiences there are those who weigh weight and some who don't. There is even a tendency for children over 2 years not to go to the posyandu. Every family has many children, on average they have 5 to 7 children. There are also in one family having more than one children under fifth, some even have 3 children under fifth<sup>8</sup>. The existence of schools in this village has elementary and junior high schools, but there are still many children who are not in school and the reasons are unclear. This is very important to reduce illiteracy rates in the community with obligate all school children up to 9 years of study/school (to graduate from elementary and junior high school)<sup>9,10</sup>.

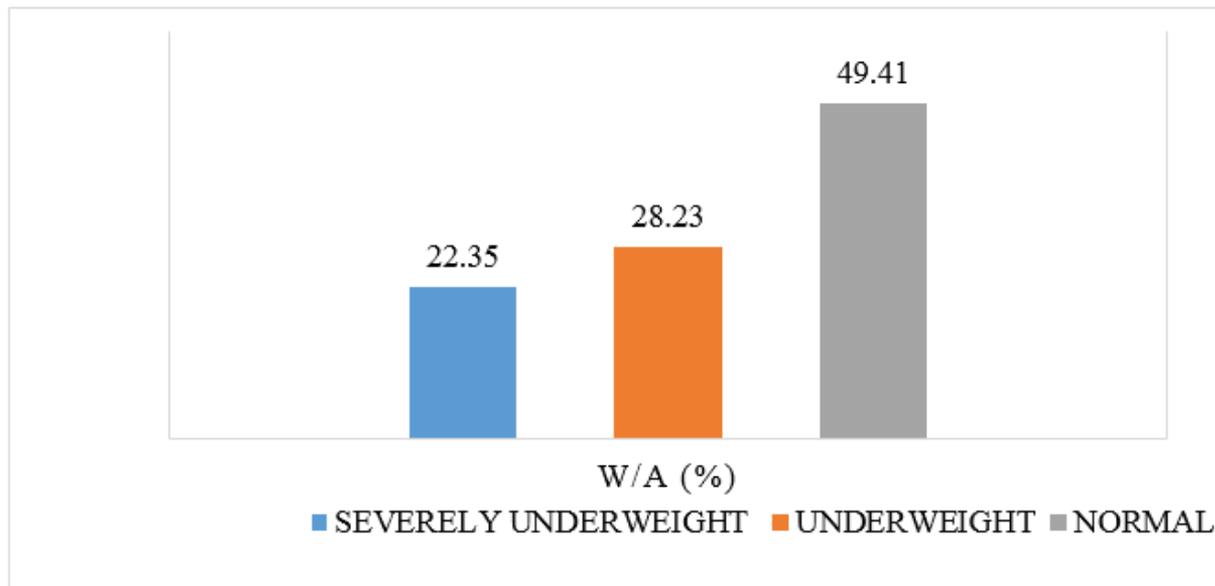
Measurement of the nutritional status of children under five in Konda and Wamargege villages by measuring height and weight, and age of children under five. The number of children under five is 85 children consisting of 36 children under fifth from Konda village and 49 children under fifth from Wamargege village. Data is seen in the diagram below.



**Chart 1: Children under Fifth Who Measured Weight and Height**

**Measurement Of Weight/Age On Children Underfifth**

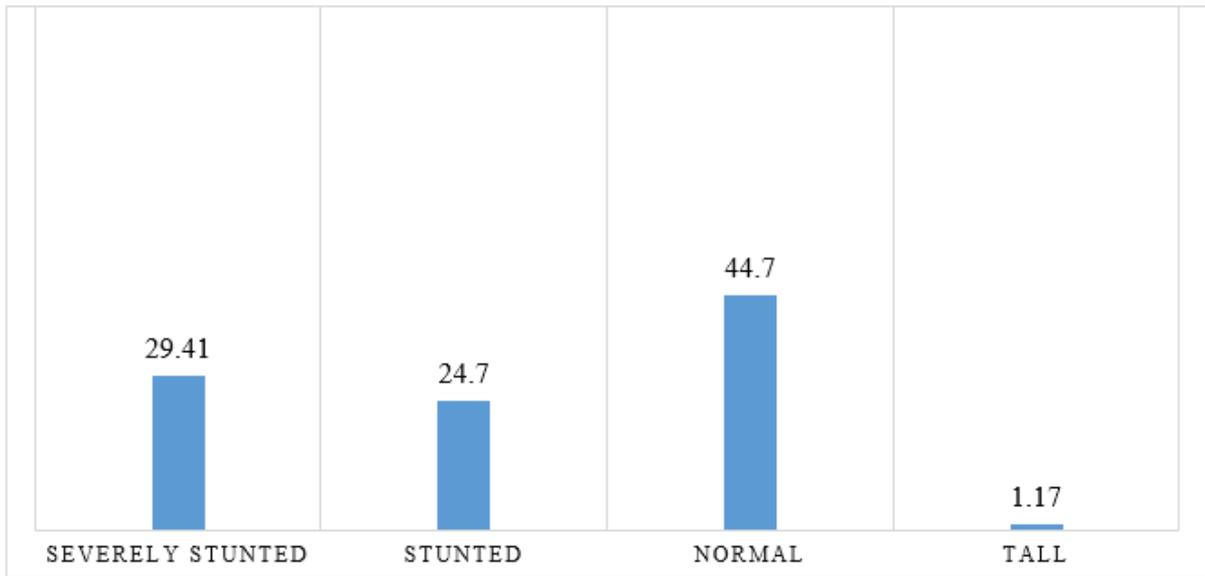
From 85 children under fifth who have measured body weight per age, it was found that there were 49.1 percent of good nutritional status, there were 28.23 percent of malnutrition status and there were 23.35 percent with poor nutritional status. Data can be seen in the following diagram.



**Graph 2: Nutritional Status Children Under Fifth Weight/Age**

**Measurement Body Height/ Age on Children Under Fifth**

Stunting conditions for Children under fifth were 54.1% (sum of stunting and severely stunting), the normal was 44.7% and tall was 1.2%.



**Graph 3: Nutritional Status Children Under Fifth Height/Age**

### Discussion

Based on environmental health science, good community potential that can be developed as a source of family nutrition intake, especially the nutrition of children under five among them is the location of the village by the sea. This makes the main work of the community in both villages is fishermen. The captured seafood such as fish, shrimp, crabs are types of foods that contain high protein nutrition which are very good for toddlers to consume. However, sea products so far have always been sold, the results of which are to meet the daily needs of life. For the sake of fulfilling the nutrition of children under five, it is necessary for each family to allocate family income to buy the nutritional needs of children under five such as milk, chicken eggs, chicken, and vegetables<sup>11</sup>.

Related to the availability of garden land for each family. The garden land owned by each family is very broad, but it is still not well taken care of. The garden is still full of grass and perennials, such as durian, rambutan, coconut and sago palm (Fa or sago), but there are no kitchen plants. The main nutrient consumption of the family from these hard plants is sago, because sago is a typical food type of Papua, which is generally processed into a staple food called papeda. The existing sago, which is still limited to papeda, has not been

processed well with various variations to adjust the fulfillment of toddlers' meals<sup>12</sup>

The existence of Posyandu in the village is also a potential village that is useful to help provide health services for toddlers and pregnant women. But the use of posyandu is still not maximized. Posyandu has not yet played a role in the transfer of knowledge<sup>13</sup>This can be seen when weighing toddlers, mothers who come do not carry cards to health (KMS) or MCH books, so babies are weighed only as notes in cadre books. There is no explanation of the results of weighing up or down if it goes up how and if it goes down what should be done by the mother. Posyandu in both villages is also used for supplementary feeding (PMT) by PKK mothers which is held every month in the first week<sup>14,15</sup>.

Broadly speaking, the potential of the community in Kampung Konda and Wamargege are as follows:

1. The community has a social structure, namely the Village Chief Konda and Wamargege, the Chairperson of the Village Representative Body Konda and Wamargege, religious leaders, the administration of village administrators, community leaders, traditional leaders
2. The existence of customary law that is obeyed, for example regarding marriage, which must be obeyed

by all the ringal communities in Kampung Konda and Wamargege.

3. Community compliance with religious leaders, village administration, community, and traditional leaders.

4. The wife's obedience to her husband, given the customary marriage process that requires her husband to buy or dowry around 10 million or even more and as much as 200 bunches of cloth. After the traditional marriage, the church marriage continues.

5. Occupations of residents in Wamargege are generally fishermen and in the village of Konda they generally do farming, raising livestock

6. Most of the fishermen's products are shrimp, and are sold to middlemen who have been subscribed to fishermen in Kampung Konda and Wamargege. Some fish are sold to local people, and eaten by fishermen themselves.

7. The results of gardening are generally sago, cassava, banana, spinach.

8. Livestock: chickens raised by the local community do not have special pens. The chickens are wild and find food in their home pages or in their neighbors. For pigs, there are wild animals and there are cages near the house.

9. Hunting results: Deer, wild boar, birds, forest rats and others.

10. There is a helper health center 1, Puđu Konda, consisting of 4 nurses, 3 midwives and also there is a monthly attendance at the local health center staff for posyandu activities.

11. There are two Posyandu, one in Kampung Konda and one in Kampung Wamargege. Elderly Posyandu only 1 piece.

The implementation of the research during 2018 was carried out with the preparation stage, continued at the data collection stage and made the intervention plan that was most appropriate to the conditions of the Konda and Wamargege Village communities. First data collection by measuring height or length of body and weight of children under five. It was found that children under fifth who were malnourished were

49.4% while those who were stunting (short and very short) were 54.1%. Furthermore, a clinical examination by a health center doctor was found that there were acute respiratory infections, pneumonia, diarrhea and suspected pulmonary tuberculosis<sup>16,17</sup>.

From the field findings, the research team carried out awareness and advocacy for people on Sunday church services, in Kampung Konda to have a dialogue with the community in overcoming the problem of malnutrition children under fifth in Konda and Wamargege Village. The results obtained, from the village meeting were community agreement in overcoming the problem of malnutrition and lack of these are as follows: (1) the mother or wife who has children less than 2 years old, are not permitted to join the husband go to the sea (2) Nutrition House, where there is a special place for cooking and gathering menus with local raw materials, then the results of the cooking are given to children under five who are malnourished and lacking in Konda and Wamargege Village, and (3) Nutrition Reef, where every house has plants that are eaten as a source of vitamins from food ingredients<sup>18,19</sup>.

## Conclusion

The average family has more than 2 children, in fact most families have children 6 to 8 children. Interventions and recommendations for overcoming the problem of malnutrition in South Sorong Regency are the use of natural resources and local wisdom. in addition, community participation and collaboration with local community leaders can be used as a step to overcome the problem of malnutrition in children.

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**Conflict of Interest:** There is no conflict of interest.

## References

1. Makka S, Hapsari Y. A Review on the Community Periodontal Index Treatment Needs In the Population of Saifi District, South Sorong Region, West Papua. 2019;
2. Baransano MA, Putri EIK, Achsani NA, Kolopaking LM. Analysis of Factors Affecting Regional Development Disparity in the Province of West Papua. *J Econ Dev Stud.* 2016;4(2):115–28.

3. Hipgrave DB, Laksmono LH, Koemarasakti GM, Nandy R, Setiawan B, Hermawan L, et al. District team problem solving as an approach to district health programme planning: a review, and survey of its status in selected districts in Indonesia. *Health Policy Plan.* 2018;33(4):555–63.
4. Nishimura Y. Sago starch: transformation of extraction and consumption processes in traditional Indonesian societies. In: *Sago Palm.* Springer, Singapore; 2018. p. 221–9.
5. Ananta A, Utami DRWW, Handayani NB. Statistics on ethnic diversity in the land of Papua, Indonesia. *Asia Pacific Policy Stud.* 2016;3(3):458–74.
6. ABINAWANTO A, HAMIDAH H, BOWOLAKSONO A, EPRILURAHMAN R. Biometric of freshwater crayfish (*Cherax spp.*) from Papua and West Papua, Indonesia. *Biodiversitas J Biol Divers.* 2018;19(2):489–95.
7. YATER T, TUBUR HW, MELIALA C, ABBAS B. A comparative study of phenotypes and starch production in sago palm (*Metroxylon sago*) growing naturally in temporarily inundated and non inundated areas of South Sorong, Indonesia. *Biodiversitas J Biol Divers.* 2019;20(4):1121–6.
8. Stroffolini T, Bianco E, Szklo A, Bernacchia R, Bove C, Colucci M, et al. Factors affecting the compliance of the antenatal hepatitis B screening programme in Italy. *Vaccine.* 2003;21(11–12):1246–9.
9. Bisht IS, Mehta PS, Negi KS, Verma SK, Tyagi RK, Garkoti SC. Farmers' rights, local food systems, and sustainable household dietary diversification: A case of Uttarakhand Himalaya in north-western India. *Agroecol Sustain food Syst.* 2018;42(1):77–113.
10. Dlamini TS, Chelule PD. The level of knowledge, perception and usage of fermented foods for feeding young children in Heilbron, Free State Province. Sefako Makgatho Health Sciences University; 2016.
11. Harmayani E, Lestari LA, Sari PM, Gardjito M. Local Food Diversification and Its (Sustainability) Challenges. *Sustain Challenges Agrofood Sect.* 2017;119–49.
12. Isanaka S, Barnhart DA, McDonald CM, Ackatia-Armah RS, Kupka R, Doumbia S, et al. Cost-effectiveness of community-based screening and treatment of moderate acute malnutrition in Mali. *BMJ Glob Heal.* 2019;4(2):e001227.
13. Kent G. *Fish, Food, and Hunger: The potential of fisheries for alleviating malnutrition.* Routledge; 2019.
14. Kemenkes RI. *Indeks Pembangunan Kesehatan Masyarakat.* Badan Penelitian dan Pengembangan Kesehatan. Jakarta; 2014.
15. Kemenkes RI. *Laporan Nasional Riset Kesehatan Dasar 2013.* Badan Penelit dan Perkemb Kesehat Kementerian Kesehat Republik Indones. 2013;
16. Flassy M. *Local Knowledge, Disease and Healing in a Papua Community.* Georg-August-Universität Göttingen; 2018.
17. Van Den Broek T. *Social Aspects in Papua.* Econ Soc Cult Rights West Papua A Study Soc Real Polit Perspect. 2005;133–214.
18. Pertiwiningrum A, Agus C, Supriadi S, Supriyanta S, Agus A, Napitupulu RP, et al. Development of Masterplan and Initial Program for Food Security in Papua Region, Indonesia. *J Wil dan Lingkung.* 2018;6(2).
19. Yuwono N, Husada D, Basuki S. Prevalence of Soil-Transmitted Helminthiasis among Elementary Children in Sorong District, West Papua. *Indones J Trop Infect Dis.* 2019;7(4):86–91.