Improving Human Resources as Local Food Processors to Accelerate Stunting Prevention to realize the SDGs: Case Study in Asmat, Papua

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Abstract. Asmat is a district with poor nutrition that causes stunting. In 2020 the percentage of stunting in Asmat is 19.54%, in 2021 it will increase to 28.5%. Unir Sirau Subdistrict has the highest percentage reaching 73.37%. The purpose of the study was to analyze human resource factors and local food management to accelerate stunting prevention in Asmat. This research is qualitative with descriptive method. The sampling method is purposive sampling. Data collection was done by interview according to online interview. Results of the interviews state that the high incidence of stunting in Asmat are the influence of people's habits who still sell their catches and gardening, such as fish, vegetables, corn, etc., to buy less nutritious foodstuffs. Mothers don’t know prepare healthy food for children, often diarrhea due their habit of not washing hands and not having clean water. People are unmotivated to take part in posyandu activities and health education. People come to health services only when the child's bad condition. Conclusion that stunting can be reduced give education is interesting and direct counseling to monitor people's lives, provide financial assistance and healthy food is done on a regular basis until the bad habits of the community disappear.

1. Introduction
The quality of Human Resources is of a particular concern for a healthier and smarter future for Indonesia [1]. Problems regarding malnutrition are still high in Indonesia, resulting in many cases of anemia and chronic disease in pregnancy which is the initial cause of the problem of stunting. Malnutrition is related to food security which causes stunting [2]. Food security is a paradox and more of an invention of the modern world. Food security must take into consideration of availability, distribution, and consumption [3]. The problem is how people can process local food sources [4]. Stunting can occur as a result of malnutrition, especially during the First 1000 Days of Life [5]. Stunting is dominated by ignorance or lack of literacy about nutrition and health by the family. [6].

Eliminating stunting has become a global agenda. Reduction of stunting in children is the first of 6 goals in the 2025. [7]. Stunting reflects chronic malnutrition and can have long-term impacts, including stunted growth, decreased cognitive and mental abilities, susceptibility to disease, low economic productivity, and low quality of reproductive output. [8]. Indonesia is ranked the 4th highest in the world for stunting rates [9]. The prevalence of stunting in Indonesia has remained high over the last decade.
The percentage of children under the age of 2 years reached 29.9% while those under the age of 5 years reached 37%. The stunting rate varies significantly between regions. The highest prevalence of stunting is in the western and eastern regions of Indonesia and is more widespread in rural areas than urban areas. The prevalence of stunting under the age of 5 years in Papua reaches 30-40% [10]. Stunting incidence in Asmat is influenced by human resources, access, demographic location and the Asmat community who are not interested in participating in posyandu or community education [11]. Survey conducted by UGM in 2018 at 5 posyandu's in one of the Asmat revealed that the number of stunting in toddlers reached 33 out of the 372 children examined [12]. In 2020 the percentage of stunting in Asmat was 19.54%, in 2021 it will increase to 28.5%. Unir Sirau district, in Asmat had the highest percentage of several other districts, reaching 73.37% [13]. This is influenced by poor knowledge of human resources so that the government has difficulty providing nutrition services and health facilities [14]. The problem of malnutrition is an alarm for all stakeholders in Papua which must also be solved together. The case in Papua that is still hotly discussed is the presence of malnutrition in Asmat, territorially. Asmat is the result of the division from Merauke, [15]. Community empowerment is a complex, non-stop and long-term process. The steps taken in community empowerment are not sequential [16]. The government's commitment in efforts to accelerate nutrition improvement has been stated in the Presidential Decree No. 42 of 2013 concerning the national movement to accelerate nutrition improvement and the 1945 Constitution as a basic component to realize quality human resources [17].

The author interested in researching this particular subject considering the importance of this research; because the incidence of stunting greatly affects the growth and development of children and reduces the cognitive development ability of the child's brain and affects weak immune systems so that they are easy to get sick. The more the children who are stunted, it can be ascertained that the more the people who are of low quality of life. This will worsen the situation and habits of the people in Asmat Regency. As a matter of fact, currently Asmat Regency is a district that is rich in food sources, but its people do not know how to process food into nutritious food.

2. Method

This research is qualitative in nature using descriptive method. Key informants are selected by purposive sampling [18]. In this study, in-depth interviews were conducted according to the interview guidelines. The samples in this study were the Head of the Asmat Hospital, Head of the Asmat Health Office, Head of the Ayam’s District Health Center, health workers, Papua’s Regional House of Representatives with electoral district in Asmat, Head of the Asmat Finance Office, families affected by stunting and accompanied by the head of Atsj District Health Center who was willing to become a respondent and becomes the main/key informant. The triangulation informant in this study was Agency for the Regio of Papua (The head of the special autonomy sector). Informants were selected in accordance with the objectives of this study to obtain information from the perspective of government, medics and community.

3. Results and discussion

Table 1 shows the following was quoted from the Head of the Asmat Hospital when the researcher asked about whether the Asmat was often given education about how to maintain health and a good diet: "All harvesting or gardening results should not be sold but also used for family meals, money should not be spent on coffee, sugar or cigarettes but also to buy basic family needs such as milk, rice, eggs. Do not eat instant noodles because the long-term effects are not good for the intestines and stomach. Children should not be given coffee, energy drinks or soft drinks. Do not smoke while carrying children and keep pregnant women at distance". i1 to 7 are the direct subjects (actors) of the development of the Asmat stated: “It should be realized that the impact of the current development has not yet created independence/self-reliance among Papua in general, as well as in the health and nutrition sector.” The explanation from the head of the hospital (i8) was as follows: "People make a living for the family through fishing, harvesting sago, planting, selling in the market, taking care of, and looking after their children, some work in offices while vending in the market in their spare time."
Table 1. Informants table

| No. | Position                                                                 | Code | Role                                                                 |
|-----|--------------------------------------------------------------------------|------|----------------------------------------------------------------------|
| 1.  | Head of the Asmat Hospital                                               | i1   | Community health and nutrition services                               |
| 2.  | Head of the Asmat Health Office                                         | i2   | Government policies in the health sector                              |
| 3.  | Head of the Ayam’s District Health Center                               | i3   | Health and nutrition services at the district (village) level        |
| 4.  | Health workers (Head of Hospital PGI Cikini 2019-2021)                   | i4   | Health workers                                                        |
| 5.  | Papua’s Regional House of Representatives with Asmat electoral district  | i5   | People’s representatives at the provincial level who understands the community and the constituency of Asmat |
| 6.  | Head of the Asmat Finance Office,                                        | i6   | Local officials who know the budget in the field of public health    |
| 7.  | Families affected by stunting                                            | i7   | Society as research target subject                                    |
| 8.  | Development Planning Agency (Head of the special autonomy sector)        | i8   | Development policies in the health and food security sector at the provincial level |

The livelihood of most of the women of the Asmat population is fishermen.” i2, i3, i4, i5, i6 and i7 also gave the same explanation as the previous participants. Informant 8th found that the role of women was not wholly as the breadwinner of the family, but women played a role as economic support so that women had sufficient time to pay attention to children. Women who vend in the market and in the village have sufficient time to look after and care for their children. This is his response: “Women in Asmat are very hard workers.” (i8): "The understanding of the importance of nutritious food is still lacking, the important thing is that there is food that can be eaten every day. The availability of nutritious food in 224 villages is still lacking. This is also due to natural factors. In swampy areas tides are high so that not all villages have the availability of local materials”. (i1): “This is a social problem which understanding needs to be carried out continuously, structurally, and massively”. The explanation of i7: “The situation here is caused by the culture, and the pattern of life/behavior. For example, sometimes health workers give food to children, parents have to share it with brothers and sisters” Explanation of i8 is as follows: “There are many food raw materials. There are rice, sago, tubers, corn, fish, meat, vegetables, and others. The main problem is how to mix/cook the food itself”. To get a complete picture of the answers, from i1 to i6 which have the same narrative, it can be seen in their following statement: “Local governments through the Health Office (Puskesmas) and other local government organizations routinely carry out socialization and efforts to improve child nutrition to prevent stunting as well as cross-village through village fund program interventions” (i1). "In this case, the Health Office always provides education to the community in the form of counseling on how to reduce stunting rates” (i2). "The role of the government is as follows: Equitable distribution of health facilities in each district in Puskesmas, 1000 First Day of Life (HPK) Program, Health Center Program related to Stunting and Monitoring of Nutritional Status, Pregnant Women Program, although often the availability of nutrients and intake needed for mothers during non-continuous pregnancy period is only available at the Puskesmas for example, for the prevention of anemia during pregnancy, the availability of blood booster tablets fluctuates depending on the available stock.” (i3, i4, i5, i6 and i7) also gave the same explanation as the previous participants. Prevention of malnutrition cannot be separated from health services in general. The answers from i8 was as follows:"There is 1 RSUD even though it is only type D, and the government provides as many as 20 units of Puskesmas with a distribution of medical personnel.” The solutions offered by Puskesmas and doctors in Asmat district are as follows: “Outpatient, Mobile Health Center Program, monthly monitoring of Nutrition Status, Pregnant Women Program, although often the availability of nutrients and intake needed for mothers during non-continuous pregnancy period is only available at the Puskesmas for example, for the prevention of anemia during pregnancy, the availability of blood booster tablets fluctuates depending on the available stock.” (i3). “The local government must work hard and be able to
change people's behavior. Utilizing the resources of nature is more professional, modern. And know the cultural, religious, structural approach"(i4).

The authors obtained the information about Improving Human Resources as Local Food Processors to Accelerate Stunting Prevention in Asmat, Papua through direct interviews with experienced and reliable informants and policy makers. This is a new practice and has never been used by researchers in previous research to collect data. There are many information that is not yet known and read by authors from other journals about the people living in Asmat Regency, such as that they only wait for rainwater to get clean water, that there are plenty of food but also a lot of cases of poor nutrition, women making a living, their lack of knowledge on how to process nutritious food, etc. These factors can be developed to find solutions to reduce the incidence of stunting in Asmat Regency. Stunting can occur from the time the fetus is in the womb and begins to grow, from the age of two years and if it is not balanced with catch-up growth. It results in decreased growth [19]. Human resource management theory is a science and art that regulates the process of utilizing human resources and other resources effectively and efficiently to achieve a certain goal. According to Levely and Loomba (1973), it is defined as any effort that is carried out alone or together in an organization to maintain and improve health, prevent disease and cure and restore the health of individuals, families, groups and communities.

Community participation is very important to help accelerate stunting prevention. Researchers conducted interviews to examine the determinants associated with stunting in the Asmat. In the author's analysis, the factor that causes stunting is that the people in Asmat do not know about the processing of healthy and nutritious local food. Asmat Regency lacks clean water, they only use rivers and rain water, as well as the culture or habits of the Asmat people which are still difficult to change. The authors' analysis is in line with the research conducted by (Akombi et al) showing that low maternal weight, lack of maternal education, severe food insecurity, lack of access to appropriate nutrition, non-exclusive breastfeeding, pathogen-specific diarrhea, and weight and height low birth rates are associated with early childhood stunting in Bangladesh, in line with the research conducted in Indonesia. Common causes of child stunting are identified in the wider literature: maternal height and education, premature birth and long birth, exclusive breastfeeding for 6 months, and household socioeconomic status. Not surprisingly, clean drinking water is very important for households with inadequate latrines However, this is in contrast to research that says drinking water quality is not significantly related [20]. The acceleration of stunting prevention does not only require the role of the community itself but also the role of the government to provide regular socialization to the community, especially mothers, so that they take care of children from the womb, starting from 1000 HPK. Although based on the interviews conducted, it is known that government programs have been executed but very few people care and want to implement it [21]. The solutions provided from several sources further suggested to improve education and supervise family activities in the Asmat Regency area, then increase the intake of healthy food to be distributed to the community on a regular basis and provide examples on how to manage healthy and nutritious local food ingredients. The limitations of the research carried out in this study include: the authors were unable to conduct face-to-face interviews because of the long distance, making it difficult for researchers to communicate and because of the difference in accents and languages, questions were quite difficult to understand so they had to be asked many times.

4. Conclusion

The conclusion of this research is the real picture that happened in Asmat. Many families find that they do not process food and drinks properly, a bad habit of people who prefer to eat noodles and drinks that are not good for health. Unboiled water often leads to chronic infections. Women who earn a living and pay less attention to child development do not know how to process nutritious food. Public knowledge to maintain health is poor. This needs to be changed through assistance from various sectors to facilitate local livelihoods and food processing. The role of the government is very important to supervise, educate and provide assistance in the form of food, drinks and other basic needs, because Asmat Regency is an area rich in food sources. Cooperation between the government and the community can make Asmat healthy, prosperous and free from stunting and malnutrition.
References

[1] Hotner T 2016 Human Resource Management Strategy and Its Role in the Development of Competitive Advantage (Strategi Manajemen Sumber Daya Manusia Dan Perannya Dalam Pengembangan Keunggulan Bersaing). Volume 1. Papas Sinar Sinanti.

[2] Stunting. Warta KESMAS 2018 Kementerian Kesehatan.

[3] Fadzila D N, Tertiyus E P 2019 Household Food Security of Stunting Children Age 6-23 Months in Wilangan, Nganjuk Regency. (Ketahanan Pangan Rumah Tangga Anak Stunting Usia 6-23 Bulan di Wilangan, Kabupaten Nganjuk. Amerta Nutrition 18-23

[4] Food security (Ketahanan Pangan) Bulog 2021 Jakarta Selatan

[5] Merom D, Renzaho A, Akombi B, Agho K, Hall 2017 Stunting, Wasting and Underweight in Sub-Saharan Africa

[6] Atikah R, Fahrim Y, Andini O, Lia A 2018 Study Guide – Stunting and its Prevention Efforts for Public Health Students (Stunting Dan Upaya Pencegahannya Bagi Mahasiswa Kesehatan Masyarakat. Study Guide

[7] Beal T, Tumilowicz A, Sutrisna A, Izwardy D, Neufeld L 2018 A review of child stunting determinants in Indonesia

[8] Menkes RI 2008 Regulation of the Minister of Health of the Republic of Indonesia Number 1995/MENKES/SK/XII/2010 concerning Child Anthropometry Standards (Peraturan Menteri Kesehatan RI Nomor 1995/MENKES/SK/XII/2010 tentang Standar Antropometri Anak)

[9] Solin H, Hasana O 2019 The Relationship between the Incidence of Infectious Diseases and the Incidence of Stunting in Toddlers 1-4 Years: Hubungan Kejadian Penyakit Infeksi Terhadap Kejadian Stunting Pada Balita 1-4 Tahun. Vol 6

[10] Sirojuddin A, Widajianti I, Akhmad T F, Ana R T 2020 Strategic Overview of Food and Nutrition Security in Indonesia Latest Information 2019-2020 Tinjauan Strategis Ketahanan Pangan dan Gizi di Indonesia Informasi Terkini 2019-2020. World Food Programme

[11] Unicef Indonesia 2020 The Situation of Children in Indonesia: Situasi Anak Di Indonesia

[12] Dinas Kesehatan Kabupaten Asmat 2021 Government Response to Overcome Outbreaks of Measles and Malnutrition in Asmat: Respon Pemerintah Atasi KLB Campak dan Gizi Buruk di Asmat

[13] Stunting Data (Data Stunting.) 2020 Dinas Kesehatan Kabupaten Asmat

[14] Peraturan Presiden Republik Indonesia No 42 Tahun 2013 Presidential Regulation of the Republic of Indonesia No. 42 of 2013 concerning the National Movement for the Acceleration of Nutrition Improvement (Gerakan Nasional Percepatan Perbaikan Gizi

[15] Rossa Vania, Halidi Risna 2018 This Causes Malnutrition In Asmat Some Time ago”: Ini Penyebab Gizi Buruk Di Asmat Beberapa Waktu Lalu

[16] Stefanie C 2018 Asmat Regent Calls Relocation Not a Solution for Malnutrition” Bupati Asmat Sebut Relokasi Bukan Solusi untuk Gizi Buruk

[17] Kementerian Pemberdayaan Perempuan Dan Perlindungan Anak Republik Indonesia. 2020. Prevent Stunting, Maximize Exclusive Breastfeeding: Cegah Stunting, Maksimalkan Pemberian Asi Ekslusif

[18] Maria F P, Hanggoro T, Josephin D, Monica G, Fadli K. 2018 Survey on Nutritional Status of Children under Five in Agats, Asmat, Papua: Analysis of the Situation after the Extraordinary Occurrence of Malnutrition (Survei status gizi balita di Agats, Asmat, Papua: Analisis situasi pascakejadian luar biasa gizi buruk) 2 10-23

[19] Kementerian Pendidikan dan Kebudayaan. 2017 Children During the "Golden Age Period" (Anak pada Masa Emas)

[20] Bangladesh Bureau of Statistics 2018 Report on Bangladesh sample vital statistics 2017. Reproduction, Documentation & Publication Section (RDP), Bangladesh Bureau of Statistics (BBS)

[21] Beal, T. , Tumilowicz, A. , Sutrisna, A. , Izwardy, D. , & Neufeld, L. M. 2018 A review of child stunting determinants in Indonesia. Maternal & Child Nutrition, 14(4), e12617.