



A Review on Malnutrition in Children Under 5 Years old among Indigenous People

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ABSTRACT

A Major public health concern among children living in Asia is malnutrition, in which indigenous and rural tribes in many Asian countries, especially Southeast Asia, are greatly affected. The Millennium development goal report of 2015 was largely successful across the globe – which focused mainly on malnutrition and mortality among children under 5 years of age. However, in the Philippines, studies showed that 95 children die from malnutrition every day, and 28 out of 1000 Filipino children do not reach the age of 5. The nutritional status of children among indigenous peoples is multifaceted, greatly influenced by many factors: sociodemographic, economic, environmental, and biological factors, with prevalence rates of malnutrition being higher among children living under unfavorable conditions. In the realm of nutrition of indigenous peoples, the prevalence of malnutrition points to poorer health status, as compared to non-indigenous peoples in the same regions. These economic and sociodemographic disparities indicate that children of indigenous peoples are among the most politically and socioeconomically marginalized segments of society, making them at highest risk of malnutrition. Although child malnutrition rates and their associated factors have been studied for the general non-indigenous population, limited previous studies have addressed the subject for children of indigenous peoples at the national scale. This study aimed to address this gap in knowledge on the children of Indigenous Peoples' nutrition and health status in the Philippines.

Keywords: Malnutrition, Children less than 5 years old, Indigenous people

INTRODUCTION

A study published by UNICEF stated that 95 children die from malnutrition in the Philippines every day, and 28 out of 1,000 Filipino children do not reach the age of 5. One-third of Filipino children are stunted, which could be permanent and even fatal when it occurs beyond 2 years of age (Reyna, 2014). According to the study, poor diet and inadequate food systems are the primary cause of malnutrition among Filipino children. In 2019, the rate of stunting among children under five years of age (28.8%) was only slightly lower than 32% in 2008 (Mbuya, N.V.N, et. al., 2021). Thus, the World Health Organization declared the stunting prevalence of children in the Philippines as a “very high” public health significance (World Bank, 2021).

In the Bicol Region, The “Operation Timbang” result generated by the National Nutrition Council (NNC) last 2020 revealed that 11.40% of children 0-71 months are underweight, 23.86% are stunted, and 7.86% are wasted. Among the provinces in the region, Camarines Sur ranked 3rd in undernutrition and stunting. It also has the highest magnitude of affected children, with 78,350 stunted and 33,987 underweight children in 2015 (Reario, A.R., 2020). There is, however, little documentation about the health and nutrition status of indigenous peoples (Ips). In the research conducted by Duante et. Al, who analyzed secondary data collected in the 8th National Nutrition Survey (NNS) 2013 and the 2015 Updating Survey of the Nutritional Status of Filipino Children and Other Population Groups, it was revealed that there is still a pervasive problem of undernutrition in the form of stunting and being underweight in the indigenous people. Results of their research further revealed that compared with the non-IP individuals and households, the IP population was poorer, had a significantly higher prevalence of undernutrition and iodine deficiency, and had lower adequacy of energy and other nutrient intakes. The Aetas are the most disadvantaged social group in the country, owing to their geographic location, nomadic lifestyle, lower educational and health literacy (Gu, A. 2021). This created barriers leading to inequity in healthcare services, nutrition, and sanitation resulting in severe malnutrition. The health of the Aetas remains on the margins of society, as they are the poorest and least educated, they die at a younger age, are more likely to commit suicide, and are generally in worse health than the rest of the Philippines population (Briosos, F., 2018). They are often excluded from available health programs, continuing to live in remote rural areas where access to health care services is poor. This led the researchers to choose this indigenous tribe to be the subject of their study.

METHODS

Upon identifying the research questions and objectives, the researchers explored extant literature in published journals and studies pivoting on malnutrition in children of indigenous peoples. The applicability of the literature gathered by the researchers was carefully evaluated and screened, putting emphasis on their relevance to the study. Finally, the researchers collated, summarized, and organized the extracted data from the included studies.

RESULTS AND DISCUSSION

Malnutrition

The major public health challenge among South Asian countries is Malnutrition (Akhtar, S., 2013). The double burden of malnutrition consists of both undernutrition and overnutrition, as well as diet-related non-communicable diseases. Most countries in the Pacific ring of fire have a great impact on malnutrition among children, this is because of natural disasters that cause an inadequate supply of food and damaged infrastructure which can cut access to local markets resulting in undernutrition among children (Capazana, Mario., et.al. Archives of Public Health 2018).

According to the World Health Organization, undernutrition manifests in four broad forms: wasting, stunting, underweight, and micronutrient deficiencies. Wasting is defined as low weight for height. It often indicates recent and severe weight loss, although it can also persist for a long time. It usually occurs when a person has not had food of adequate quality and quantity and/or they have had frequent or prolonged illnesses. Wasting in children is associated with a higher risk of death if not treated properly. Stunting is defined as low height-for-age. It is the result of chronic or recurrent undernutrition, usually associated with poverty, poor maternal health and nutrition, frequent illness and/or inappropriate feeding and care in early life. Stunting prevents children from reaching their physical and cognitive potential. Underweight is defined as low weight for age. A child who is underweight may be stunted, wasted or both.

According to Manual of Operations on Severe Acute Malnutrition issued by the Department of Health last 2015, Acute malnutrition (or wasting and/or edema) occurs when an individual suffers from current, severe nutritional restrictions, a recent bout of illness, inappropriate childcare practices, or a combination of these factors. The result is sudden weight loss or the development of bilateral pitting edema, which can be reversed with appropriate treatment. Acute malnutrition is diagnosed by assessing the child to be of inadequate weight relative to height compared to the WHO reference population and/or by identifying muscle wasting using Mid Upper Arm circumference (MUAC) and/or bilateral pitting edema. Acute malnutrition may be classified as moderate (MAM) or severe (SAM) according to the degree of wasting in comparison to specific cut-off points or reference standards. Bilateral pitting edema is always classified as severe (DOH: Manual of Operations).

International evidence has revealed that malnutrition has no single cause and can be driven by a wide variety of factors acting together. For instance, the conceptual framework of the United Nations Children's Fund (UNICEF) conjectures that childhood malnutrition is an outcome of immediate, underlying, and basic causes (Ersado, T. 2022). At the immediate level, nutritional status is identified by the availability of nutrients to meet the body's requirements; the underlying causes are related to food security (access, availability, and use of food), maternal and child care practices, water and sanitation, and personal hygiene. These determinants are heavily influenced by the social status of women and an array of constraints: institutional (structural), political, ideological, economic, and environmental. In addition, man-made disasters, such as conflicts and wars, exacerbate the situation, as do natural disasters, such as recurrent floods and droughts.

Global Status of Malnutrition

A United Nations report published last July 06, 2022 stated that world hunger rose to as many as 828 million in 2021 following a sharp uptick in 2020 in the midst of the COVID-19 pandemic. Severe food insecurity became more prevalent with 11.7% of the global population facing food insecurity at severe levels (State of Food and Nutrition 2022). The number of people unable to afford a healthy diet around the world also rose by 112 million – to almost 3.1 billion, providing additional evidence that more people were not able to access safe, nutritious, and sufficient food. The report also noted that global trends in child undernutrition – including stunting and wasting, deficiencies in essential micronutrients, and overweight and obesity in children, continue to be of great concern. UNICEF had stated that an estimated 45 million children under five years of age suffer from wasting, 149 million have stunted growth and development due to a chronic lack of nutritious food in their diets and 39 million are overweight.

Local Malnutrition Status

The Philippines is among the top ten countries with the highest number of stunted children globally (Noorani, S., 2020). Even before the COVID-19 pandemic started, around 30 percent of children under five years old were stunted or not tall enough for their age. About one million Filipino children suffer from acute malnutrition (Acayan, E., 2021).

In the midst of the pandemic last July 2020, UNICEF Philippines called on the government, policymakers, and the public to work together towards robust health and nutrition services for children in the Philippines. The themes "Batang Pinoy, Sana Tall... Iwas Stunting, Sama All!" and "Iwas ALL din sa COVID-19" raised awareness improving resilience against COVID-19 while minimizing the long-term effects of malnutrition. At a time when stringent lockdown rules are being implemented, households living in poverty have had to rely largely on food aid in the form of food packs distributed by local

governments and private donors (Ong, M.M., et. al., 2020). An evaluation of the commonly distributed food items revealed a diet that addressed acute hunger but does not contain sufficient nutrients to promote and maintain health.

The country's exceedingly high levels of stunting have been further exacerbated by the COVID-19 pandemic, which disrupted the supply of nutritious foods, access to essential health and nutrition services, and the livelihoods of wage-earning and subsistence farming households alike (Huaxia, 2022). Health and nutrition programs and services were being implemented in the Philippines that relied on inter-agency coordination with the National Nutrition Council and its local counterparts. These interventions include regular anthropometric assessment, vitamin and micronutrient supplementation, IYCF, and early initiation of breastfeeding in tertiary hospitals, lying-in clinics, and facilities offering care to pregnant mothers. Other programs are designed to meet specific needs among the general population, such as the Food Fortification Program as well as nutrition in emergencies and disasters. Unfortunately, these programs often lack sufficiently trained, adequately equipped, and updated staff to deliver nutrition services at the community level and have limited facilitative supervision. Updated surveillance of the status and coverage of programs is needed, not just for assessing impact at the national level, but also for guiding operations at the local level. Logistical constraints, such as poor supply chain practices, also delay the timely delivery of products and services, such as vitamin supplementation and food fortification. Other gaps to consider include follow-up care, especially after the first year of life, as well as prevailing attitudes regarding the feeding of infants and young children, food supplementation, and micronutrient supplementation. The COVID-19 pandemic has exacerbated these gaps in surveillance and service delivery, as a consequence of quarantine restrictions.

Nutrition of Children in Indigenous Community

The indigenous people of the Philippines are characterized by a rich diversity of cultures, religions, traditions, languages, and histories. The Indigenous people are characterized as among the poorest and the most disadvantaged social group in the country – evidenced by illiteracy, unemployment, and the incidence of poverty is much higher among them than the rest of the population (de Vera, D. E., 2007). Currently, there is a scarcity of data defining the state of nutrition and health of indigenous people in particular. Their settlements are remote; have no access to basic services; and have a high incidence of morbidity, mortality, and malnutrition, indicating a marginalized population group. They are also poorer, are less-educated, have short life spans, and generally have worse health status than the rest of the population.

Studies centered on nutritional assessment and the health status of Indigenous communities in the Philippines are limited. Persistent health and nutrition problems, lack of information on nutritional status across the indigenous groups, and disproportionate data exists across the groups (Duante, et. al., 2022). Shortage of data persists on the nutrition and health status of Indigenous people in the Philippines, more specifically on the Aetas of the Ilian Tribe in Iriga City.

The Covid pandemic caused the community of Aetas in Ilian, Iriga City in Camarines Sur to be at risk of malnutrition. The Aetas of this community were cut off from their primary sources of aid and livelihood, because of quarantine restrictions. During the lockdown, community workers were unable to deliver goods and supplies to their intended beneficiaries. Furthermore, the Aetas were unable to sell their root crops, and other sources of livelihood, since they couldn't bring their goods to market. This caused them to lose their opportunity to earn their income, which severely limits their ability to cover the other costs of their day-to-day living. Without access to aid and stable income, food has become very scarce for the Aetas, who were forced to struggle through the challenges of hunger, starvation and malnutrition. Thus, malnutrition has led to serious detrimental effects on the physical and mental development of the Aeta children.

CONCLUSION

The presented literature recognizes that good nutrition is essential, and serves as the foundation for the child's health, development and learning. Nutrition serves a huge impact on the productivity of the child and his/her contribution to the nation in the future. Thus, the researchers reiterate the need to further invest in studies that focus on determining the causes of malnutrition and ways on how to address the determined causes. The commitment to improve nutrition must be taken seriously at national and local levels, and good and efficient coordination must be strengthened.

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CONFLICT OF INTEREST

The researchers confirm that we have no personal or business interest in, or potential for personal gain from the research undertaken. We also affirm that all disclosed information is correct and that no other situation of real, potential or apparent conflict of interest is intentional. We undertake to inform the administration of St. Bernadette of Lourdes College of any potential conflict of which we will become aware of. We also undertake to inform the administration of any change in these circumstances, including – if an issue arises – during the course of our research.

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