Stella Murphy Central Academy Des Moines, IA Philippines, Factor 11: Malnutrition

## The Philippines: A Need for Agricultural Education and Infrastructure

Around the world millions of individuals are suffering from malnutrition. One in nine people on earth suffer because they do not eat enough food to function properly ("The State of Food Insecurity in the World 2015"). Malnutrition is defined as "faulty nutrition due to inadequate or unbalanced intake of nutrients or their impaired assimilation or utilization" (Merriam-Webster Dictionary). 68% of kids suffering from acute malnutrition (refers to a child who is too thin for his/her height, where the child is not getting enough calories from food and faces an immediate risk of death) live in Asia. Southeast Asia is home to more than half of children under the age of five suffering from acute malnutrition (UNICEF, World Malnutrition Trends). Malnutrition leads to a wide variety of different issues such as reduced work productivity and economic output, and lower scholastic achievement rates (Miura, Shoko, Osamu Kunii, and Susumu Wakai). It can also result in a number of different health hazards such as stunted growth, obesity, lower life expectancy or even death. Malnutrition is an issue that affects the entire world, but the Philippines is one country where it has become extremely prevalent.

The Philippines, a group of islands located in Southeast Asia, is home to approximately 101 million people. The average life expectancy is a staggeringly low 68.96 years. The average number of schooling years is approximately 11 years, at this point most kids drop out to help provide for their families, by working at a job or on the family's farm. With an average family size of 4-5 people, 30% of citizens work in the agricultural field, but agriculture only makes up 10.7% of the country's GDP (CIA World Factbook). This means that the majority of Filipino people work on subsistence farming, producing only enough for their village or their own family. The Filipino people as a whole lack diet diversification ("The Global Food Security Index"). A large majority of their diet consists of high-carb, high-fat foods; because it is much cheaper and easier to access than high protein foods. This leads to numerous complications such as cardiovascular issues, which ultimately results in a lower life expectancy. Two in every ten adults in the Philippines suffer from heart issues at an earlier than average age, in some cases even at twenty years old or younger ("Unhealthy Lifestyle of Filipinos Causes High Premature Deaths"). The health care system is fairly affordable and easy to access, especially in urban areas, but it can be quite difficult in rural areas ("Healthcare In the Philippines").

The typical subsistence farm in the Philippines consists of fairly small home gardens. On average 5-9 different crops are grown for a family of 4 or 5 (Miura, Shoko, Osamu Kunii, and Susumu Wakai). The major commercial crops of the Philippines are coconut oil, coconut, fruits, coffee, mangos, tobacco, and peanuts (CIA World Factbook). Farming is becoming less of a common profession, because it is thought to be unprofitable ("Farming in the Philippines"). This creates a problem, where not enough food is being produced, resulting in food insecurity. This is a major barrier to improving agricultural stability. Since the popular opinion in the Philippines is that farming is not profitable, this results in more people trying to get manufacturing jobs.

Malnutrition affects how a body functions. When someone is not getting the nutrients that they need, then that person has a lack of energy, and therefore negatively affects the ability of that person to work successfully. In addition to malnutrition, this makes the agricultural productivity of the country significantly lower. Families often are unable to produce enough food because of the poor agricultural infrastructure, which provides very low public expenditure on agriculture. In some cases, the land is not adequate for farming, or farmers have used too many chemicals in the past, which ruins the soil (Cuesta, Jose).

16.4 million Filipino people are considered underweight or malnourished- this is more than 16% of the entire population. These numbers are even worse in children. Over 20% of kids in the Philippines lack access to adequate food, which means 1 in every 5 kids in the Philippines is underweight (CIA World Factbook). This results in a weaker immune system, meaning there is a high risk of infectious diseases. Malnourishment often starts at a very young age as lactating mothers do not have access to enough food. The nursing babies are then prone to stunted growth, and health complications. (Jaymalin, Mayen). A major issue resulting in malnutrition is iron and vitamin A deficiency (Miura, Shoko, Osamu Kunii, and Susumu Wakai). These deficiencies cause a significant number health issues such as extreme fatigue, weakness, shortness of breath, and it weakens the immune system, which makes it easy to catch diseases ("Iron Deficiency Anemia").

One issue causing malnutrition is the barrier to accessing food markets and adequate nutrition. The Philippines lack grocery stores in most rural areas, making it so only 18.6% of the country has access to quality protein. This makes it very difficult for Filipino people to have access to food, so they end up eating a lot of starchy foods that have little to no real nutritional value. However, if people had access to grocery stores, they still might not be able to afford to buy healthy food. 41.7% of the population lives under the global poverty line of \$2 per day (The Global Food Security Index). This means that almost one-half of Filipino people struggle to provide for themselves on a daily basis. The average daily protein intake in the world is 58.1 g, and the average Filipino only has 41g per day (The Global Food Security Index). As urban areas continue to grow and expand, farmers are losing land to resorts, new residential areas, and golf courses (Jaymalin, Mayen). This results in less land available to farm on, less food is able to be produced, and thus creating a decrease in agricultural output.

Other major issues in the country also have a negative influence on malnutrition. Natural disasters continue to be one barrier to accessing food, and a threat to the Filipino people. Over the past twenty years 274 natural disasters have struck the nation. This makes the Philippines the fourth most disaster-prone nation in the world. In 2013 Typhoon Yolanda devastated the Philippines. Over 1 million homes were destroyed, and 648 cities were damaged (The Human Cost of Weather Related Disasters). A disaster of this size means that not only are lives taken and houses destroyed, but crops, land, and factories are demolished. This severely affects the food supply, and leads to increased malnutrition, while also creating a barrier to accessing food.

Pollution also has a very negative effect on malnutrition in the Philippines. If the soil and water is polluted, then it becomes increasingly difficult to grow food, and be successful in doing so. This would make the situation even worse, and therefore create more malnutrition. The Philippines is a lesser developed country, and its population is increasing by 1.54% every year ("Philippines Population"). This is making the malnutrition situation worse, because the population is increasing, but the food supply is not increasing with it, resulting in food insecurity and malnutrition becoming more widespread.

Rural areas are at a great disadvantage. In rural areas it is much harder to get access to education due to a lack of quality roads, which makes it hard to get to and from schools, and makes it hard to transport food. 55.6% of the population lives in rural areas, so this is a very large problem for a large majority of the population ("The Global Food Security Index"). Another issue with farming in rural areas is that 29.2% of the population does not have access to adequate sanitation facilities and there is a lack of efficient irrigation systems, making farming increasingly difficult.

Although Malnutrition is a huge issue for Filipino people, the conditions seem to be improving within the last few years, although slowly. Improving malnutrition in the Philippines would change the lifestyle for millions of people. This would result in: the country being able to produce more goods, a higher life expectancy, a lower infant mortality rate, and an overall better quality of life in the Philippines.

It is impossible to remove malnutrition one hundred percent from the whole world, but it is however, very possible to dramatically reduce the undernourished population in the Philippines. People need to be educated about agriculture. Right now many Filipino citizens have false ideas about farming, and their farming techniques are not as efficient as they could be. Programs should be set up to educate citizens about advanced agricultural practices, and teach about nutrition in food. It is important to learn about nutrition, so that people know what is going into their bodies. People tend to eat what is the cheapest, which is often the least healthy, and has the least amount of nutrients. Once more people begin to produce healthier foods, then the price of the nutrient rich food will decrease, making it more readily available, and allowing a larger number of people to have access to it.

Another way to ensure that people are eating healthy is to create a higher tax on foods high in fat and simple carbs. If people knew which foods were healthier, and they were cheaper than unhealthy foods, then malnutrition in the Philippines would become a much smaller issue. The money collected from this tax can then be used to set up community gardens, the idea being if you work in the garden, you also reap the benefits, and would get to take some food home. The rest of the food would then be used to create a stronger healthy school lunch program. The school lunch program would have many benefits, to keep kids in school, and keep them eating healthy. If children get educated, they have a much higher probability of getting a job and since they are educated, they would be able to find better jobs and therefore reduce the malnutrition rate, and create a healthier society.

The Filipino government has recognized that malnutrition is an issue, and they have some food assistance programs in existence, but they do not meet the needs of the country. The Philippine Food Assistance Program reaches around 2.75 million, and helps provide them with supplementary feeding (Florentino, Rodolfo F., and Regina A. Pedro). The World Food Programme also provides assistance to the Philippines, by helping prepare for natural disasters, emergency relief, and helping to provide school lunches for kids (approximately 65,000 kids per school year). This program is not very big, and although it provides assistance, it does not provide enough assistance to the country ("Philippines" World Food Programme). We need to create a stronger government-led program like this to enable more access healthy food.

The Government of the Philippines should create a free/reduced healthy lunch program, in order to provide both an incentive to attend school, and at the same time, providing healthy, protein rich foods. If kids learn how to eat healthy at an early age, then it allows them to get in the routine of being healthy throughout the rest of their life. One example of an effective school lunch program would be the Iowa free and reduced lunch program. In the 2015-2016 school year 166,350 kids received free lunches, and another 34,310 had reduced lunches. This means 41.8% of students in Iowa had some form of school lunch assistance (2015-16 Iowa Public School K-12 Students Eligible for Free and Reduced-Price Lunch by District). A program like this, if enacted in the Philippines would save lives, and create a considerably healthier population.

Families can help with this issue, by taking jobs in the agricultural field, and using organic chemicals, which help keep the soil in good condition, so that farming can successfully continue. The community can also help to improve conditions by creating community gardens, and helping to grow healthy foods, which would help get Filipino people get a more diverse diet. Ordinary citizens can help by working in the gardens, and continuing to learn new agricultural techniques.

Malnutrition is detrimental to the health of the Philippines. Men, women, and children are dying every day because they lack the nutrients that they need to survive. Malnutrition is causing many health complications to the Filipino people, resulting in a staggering low life expectancy rate. Protein is an essential element in living a healthy life, and without it, the productivity of the country decreases significantly. Malnutrition is a life-threatening issue, but it is a solvable one. If everyone works together

then we can conquer this problem. The government in the Philippines is not working hard enough to solve this affair. They need to teach the Filipino population about nutrition and eating healthy, and they can do so by creating a stronger healthy lunch program, to encourage healthy eating. They also should create a tax on unhealthy food, in order to motivate citizens to buy the more nutritional foods, and to fund the school lunch program. If more people are involved in agricultural practices, then the price of the healthy food will lower, and help to provide a solution to this tremendous issue.

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