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Ethiopia, Factor 11: Malnutrition

Ethiopia: Food Distribution to Alleviate Malnutrition in Ethiopia

Located in Eastern Africa and west of Somalia(Ethiopia) is one of the poorest countries in the world; Ethiopia(Nutrition Country Profiles: Ethiopia Summary). Ethiopia has an agriculture based economy(Ethiopia Cultural Profile), but only 13.19% of its 1million sq. km of total land area can be farmed. Despite this agriculture still makes up 46.2% of Ethiopia's total GPD (Gross Domestic Product). The rest is made up of industry, which makes up 10.6% of the GPD, and Services, which makes up 43.2% of the GPD. Ethiopia has a population of 93,877,025 as of July 2013. Ethiopia's capital is Addis Ababa. Ethiopia has a tropical monsoon climate with a large amount of topographic induced variation. With a high plateau terrain and a central mountain range that is divided by the Great Rift Valley Ethiopia is a land vast elevations. It's highest point is Ras Dejen, which is 4,533 m, and its lowest point is at Danakil Depression which is -125m. Ethiopia is a landlocked country(Ethiopia) in the horn of Africa(Ethiopia Cultural Profile), however there is a total area of water in Ethiopia of 104,300 sq. km. Ethiopia has a total area of 1,104,300 sq. km, which is equivalent to about slightly less than twice the size of Texas. Ethiopia has a variety of natural resources that include: small reserves of gold, platinum, copper, potash, as well as natural gas and hydropower. The freshwater draw in Ethiopia is divided into three separate categories; domestic which is 13%, industrial which is 1%, and agricultural which is 86%. The people of Ethiopian are referred to as Ethiopians. As of 2007 there were more than 12 different ethnic groups living in Ethiopia. Between all these different ethnic groups there is more than 13 different languages spoken in Ethiopia. English is an official language as well as the major foreign language taught in schools. Arabic is a second official language in Ethiopia. In addition there are a variety of official regional languages. Also there are over six different religions being practiced in Ethiopia(Ethiopia). Despite having an economy where almost half of the GPD is made up of agriculture, many people in Ethiopia still suffer from malnutrition and lack of food security.

Ethiopian families are often made up of one to six people. Strong family ties and households that include extended family members are common in Ethiopia. Women are lower in rank than their husbands; girls also tend to receive less education than boys(Ethiopia Cultural Profile). The school life expectancy for boys in Ethiopia is 10 years while in 2010 their female counterparts only had a school life expectancy of 8years. This gave an average school life expectancy for Ethiopia as a whole of 9 years. There is also a difference in the literacy rates of people in Ethiopia based on gender. The literacy rate for male's age 15 and older is 49.1%, but as of 2007 the literacy rate for their female counterparts was only 28.9%. This gave an average literacy rate for all people age 15 and older in Ethiopia of 39%(Ethiopia). The United States has a total literacy rate of 99% as of 2003(United States). Schools in Ethiopia have an average class size of 65 to 70 students(Schooling in Ethiopia).

Rural Families are at a disadvantage when it comes to having access to improved drinking water sources and sanitation facilities. Only 39.3% of the rural population has access to improved drinking water sources, while 96.6% of the urban population has access to improved drinking water sources. Out of Ethiopia total population only 49% have access to the improved drinking water sources. A much different story is told in the area of improved sanitation facilities. While a slightly smaller number of the rural population, which is 19.4%, has access to improved sanitation facilities only 27.3% of the urban population has access to improved sanitation facilities? This means only 20.7% of the total population in Ethiopia has access to improved sanitation facilities. Healthcare is another thing that is not highly available in Ethiopia. The physician density in Ethiopia is 0.03 physicians per 1000 population in 2009.(Ethiopia) In the United States there was a physician density of 2.42physicians per 1000 population

as of 2009(United States). In 2011 the hospital bed density in Ethiopia is 6.3 beds per 1000 population(Ethiopia).

The diet of people in Ethiopia is primarily composed of two foods; engera and wot. Wot is stew that is made from spices meat and pulses, and is eaten with engera. Engera is a flat and sour like fermented pancake(Ethiopian Cultural Profile), that is often used in place of utensils to pick up food(Ethiopia General Diet/Summary), and is made from the main cereal in Ethiopia teff(Ethiopian Cultural Profile). In order to better understand the Ethiopian diet we must first understand the main cereal grain teff. After analyzing teffs nutritional content I have found that while cooked teff is overly abundant in manganese it lacks vitamins A, C, and B12, as well as folic acid, cholesterol, and retinol(Teff, Cooked). All of these nutrients play an important role in the body. Vitamin A is important for proper organ function, normal vision, the immune system, and reproduction. There are 2 types of vitamin A. Type one can be found in meat, fish, poultry, and dairy products. Type 2 can be found in fruits, vegetables and other plant based products(Vitamin A). Vitamin C is important for normal growth and development, an important protein used to make skin tendons, ligaments, and blood vessels, heal wounds, form scar tissue, and repair and maintain cartilage, bones, and teeth. Vitamin C can be found in fruits and vegetables(Vitamin C). Vitamin B12 is important in keeping the body's nerves and blood cells health and helps make DNA. Vitamin B12 is found in many animal products like meat, poultry, eggs, and milk. The only time vitamin B12 is found in plant based materials is when those materials have been fortified(Vitamin B12). Folic acid is very important for pregnant woman because it can prevent birth defects. Despite this folic acid is important for people who are not pregnant as well. Folic acid can be found in vitamins and foods such as breakfast cereals(Get Enough Folic Acid). Retinol is a form of vitamin A(Vitamin A(Retinol)). Now that we know what is lacking in the main staple food in the Ethiopian diet we now know what foods need to be added to the Ethiopian diet.

Agriculture is a large part of the Ethiopian economy(Ethiopia). The average farm size in Ethiopia is 0.96ha this is equivalent to 2.37 acres (Headey, Derek, Mekdim Dereje, Jacob Ricker-Gilbert, Anna Josephson, and Alemayehu S. Taffesse.) A variety of crops are grown on these farms. Some are used for food and some are known as cash crops. Some of the crops used mainly for food are teff the main grain in Ethiopia, barley, wheat, maize, sorghum, linseed, chickpeas, sesame, field peas, horse beans, haricot beans, and various fruit and vegetable crops. The following are some of the major cash crops in Ethiopia; sugar cane, coffee, chat and cotton(Taffesse, Alemayehu S., Paul Dorosh, and Sinafikeh Asrat). An article written in 2012 for feed the future.gov says that 90% of crop production is still dependent on animal draft power(Giving Livestock Feed a Boost in Ethiopia).

Malnutrition in Ethiopia is caused by a variety of factors. Some of these include an undiverse diet, unavailability to micronutrients, lack of quality in protein, and poor nutritional standards. According to the Food Security Index Ethiopia is below the average in the following areas 51.7% below in diet diversity, 24.4% in micronutrient availability, 31.9% in protein quality, and 20.2% in nutritional standards(Economist Intelligence Unit). In Ethiopia 40.2% of people are undernourished(Hunger Map). While this may not seem like a lot of undernourishment Ethiopia has a population of 93,877,025 as of July 2013. This boils down to approximately 37,550,810 people who are undernourished. In addition to this in 2011 29.2% of children under the age of 5 in Ethiopia were underweight(Ethiopia). Malnutrition in Ethiopia is slowly getting better. According to a graph on trading economics the prevalence of children under 5 who are under weight in Ethiopia has been steadily decreasing from 2000 to 2012(Malnutrition Prevalence - Weight for Age (% of Children under 5) in Ethiopia). Resolving the problems related to malnutrition in Ethiopia will help Ethiopians in many ways including a decrease in the percentage of people who are undernourished. As well as a decrease in the percentage of children in Ethiopia who are underweight and the number of children who suffer from health problems related to malnutrition and being underweight.

In order to solve the problems of an undiverse diet, a lack of availability of micronutrients, lack of quality in protein, poor nutritional standards as well as contribute to reaching the millennium development goal of eradicating extreme poverty and hunger(United Nations Millennium Development Goals) I propose the start of a food redistribution program. This program would be available to all the citizens of Ethiopia. The idea behind the program would be to allow people to provide a healthy diet for their families without having to pay for it. Rural families can take part in the program by donating 1% of their total crop yields for every member of their household whom they wish to receive food for. The crops would then be brought to a building that is designed to hold the food and then package and redistribute it to the people who participate in the program. Urban families who wish to take part in the program can do so by working at the buildings for the centers packaging food or delivering food to rural families. The families who participate in the program can pickup or have grain and other non-perishables dropped off at their homes once a month. Then once a week they can have fresh fruits and vegetables dropped off or they can pick them up. The amount and type of food that is distributed will be selected based upon the nutritional needs of the families that are taking part in the program. The selected foods will help to fill the nutritional needs that are not provided in the Ethiopian's current diet that was discussed above such as making sure people in the program are supplied with meat to fill the need for vitamin B12 and A, or that fresh fruits and vegetables are provided to meet the need for vitamin A and C, and making sure that homes with pregnant women especially are supplied with foods with folic acid. Any food that is not being supplied by the rural families that are taking part in the program should be bought from the indigenous farmers in Ethiopia, and any food that is not grown in Ethiopia should be bought from surrounding countries. It is important to first support the local economy and then the economies of the countries around you. Food should be packaged in reusable cloth bags that can be made by the people in the Ethiopia. There will be four bags per family. Each week one of the bags used for fruits and vegetables will be returned to the center and a new one with food given to the family. The same will happen once a month with the bags for grain and other non-perishables. In addition to distributing food the centers should be used to teach the general public the importance of a balanced diet. School age children should have at least two classes a month at the centers. These classes should teach school age what is needed for a balanced diet, the importance of micronutrients, and how to incorporate fruits, vegetables and other foods important to a balanced diet into their meals. These children who participate in these classes will be able to start a chain reaction by educating their children in the future all they have learned about having a balanced diet.

In order to make the food redistribution program a success everyone will have a part to play. The Ethiopian government will need to provide adequate funds for a variety of things related to the program. This includes money to buy materials for the construction of the buildings to be used for the program, money to pay the people who are constructing, money to buy food that is needed for the program, as well as money to pay any people who work for the center. Outside organizations such as the World Health Organization should help with the educational programs, as well as overseeing the process of packaging food, deciding what food will be used to ensure the nutritional needs of everyone receiving food packages are met, and managing the program centers. Farmers in Ethiopia who are not participating in the program will need to create a symbiotic relationship with the centers to help make sure that the program has enough of the foods that are needed. In return the centers will use money given to them by the government to purchase food to buy crops from these farmers at a fair price. Urban people who are not participating in the program can gain employment by delivering food to rural families unable to make the trip to the centers to pick up their food packages, making reusable bags for the food packages, or assisting in the management of the centers. The people participating in the program also have jobs that will contribute to the success of this program. Rural families will pay for their food through the donation of crops, while urban families will pay for their food through working at the centers. All of these jobs are important and will play a large part in determining the success or failure of this program.

Due to the large number of people needed to make this project a success there are bound to be problems along the way. While I do not see any push back from international organizations I do think that push

back from the government may be possible. One form of that push back is a possible reluctance to help from the Ethiopian Government. As with any country if the government does not see fighting malnutrition as a priority this program could fall through very easily. One way to solve this problem should it arise is to simply show the Ethiopian government how important fighting malnutrition is and how it would be beneficial to the people of Ethiopia. Another problem when you have many different large groups working together as a team to solve a problem is conflicting ideas or values. If arguments arise between international groups it is important to not just shove the problem away, but instead come together and reach a compromise that respects everyone's ideas and values as much as possible.

Too often people choose to dwell on the problem not the solution, but dwelling on the problem will not help anyone. By creating a voluntary food distribution program where the food and manpower comes partly from the people who are taking part in the program people will be able to receive food in a way that is not like receiving charity. While this program will help decrease the prevalence of malnutrition it alone cannot eradicate it. For that we must educate the youth in Ethiopia on healthy diets and the importance of micronutrients. Children are the key to eradicating malnutrition not only in Ethiopia, but also all over the world. This can be accomplished by making nutritional education a mandatory part of the curriculum. After the distribution program is started and we have trained some of the permanent employees they can travel to different schools once a week to teach children about good nutrition. By educating children they can then educate their children who can then educate their children and generations of people will have the skills and the knowledge they need. The program can also educate parents as well by creating a mandatory class for people when they first join the program. Before people receive their first food package they can come to the center and learn about good nutrition. They can then use that knowledge to eat healthier diets, which in turn can lead to the creation of generation after generation of healthy families in Ethiopia. So let us take action and help eradicate malnutrition in Ethiopia.

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