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Haiti, Factor 10

Haiti: Increasing access to safe, potable water supplies and education on proper sanitation/ hygiene and food preparation techniques to reduce the transmission of food and water- borne disease.

No matter what country of the world you're in, people go without food every day. 750 million people in the world live in poverty (Burby 25). One country that is especially affected by hunger is Haiti. Haiti is a poor, third- world country that has faced a lot of distress, medical need, and disaster. This can come from a variety of different factors that affect the population daily. These lead to extreme poverty and un-sanitation which can also lead to illness. From there, the illness can affect people's work productivity and cause the community as a whole to suffer.

Poverty affects the people in a way that is hard to cure. Factors such as lack of clean water and food, famine, and malnutrition affect the population with disease and the inability to work. Some causes are water pollution, disaster destruction, and soil erosion. There can also be a lack of work force skills which can come from never having learned the skills or illness. When people are sick, they are unable to work and produce food or buy food for their families; therefore the community as a whole suffers due to nothing going into the economy. This is especially true during outbreaks that cause illness for large sums of people at the same time. The life expectancy in Haiti is only 52 years old, not a very long time compared to other countries (Civan). Having kids is even a struggle. Children are not usually named unless they live past the age of two so the parents do not become attached to kids who have a high possibility of dying. The infant mortality rate in 2002 was 79 per 1,000 live births. This does not include those who died before being born. How can we fix it so that there is enough food and water that do not spread disease in the country; giving longer, healthier, happier lives?

In an average Haitian urban family multiple generations live under one roof. It is mainly patriarchal because typically the men and boys lead the family and have a much higher social rank than the woman. Only about 56 percent of children are enrolled in primary or secondary school. (The literacy rate for the whole country is only at 45 percent.) Although the primary school's tuition is free, the students need to pay for uniforms and books so this makes it difficult for poor families to send their children to school. Sometimes they save their money for the boys to get an education so they can get a better job after schooling (Jacobson).

Agriculture is the main industry in Haiti although it has been declining since 1950 and continues to do so. Food is bought and sold at local markets run by civilians (Orton). The main food source in Haiti is something called "Miami" rice, imported from other nations. Their main export is mangos, corn, beans, and other tropical fruits. However, not enough are actually exported to balance with the cost of the imports. This is sometimes due to health issues that affect work productivity. They also lack the resources, such as topsoil, needed to produce agricultural product. Most of Haiti's topsoil is gone. It is eroded down to the bedrock which is not food producing. National Geographic reported: "From 1991 to 2002, food production per capita [actually] fell 30 percent" (Bourne Jr.). Much of the loss of soil is due to deforestation because most of the country's energy fuel comes from wood burning. Now, due to this, less than 2 percent of the country is tree- covered. The only thing they can do is try to farm on the eroded ground even though this is a very dangerous and not highly effective practice (Civan). An average farm size is one hectare, equivalent to about two acres.

There is only one physician per 4,000 residents and eleven nurses and one dentist per 100,000 in the population. This makes medical attention very difficult to receive and expensive. There is one hospital

per 10,000 people making it very hard for people to get appropriate health care (Haiti). According to the Office of the Special Envoy of Haiti, only 45 percent of the urban population has access to *improved* sanitation. This means that the sanitation is not up to what Americans would consider the “normal.” The improvement could only be that there is a sink installed in a town that the community has access to but not necessarily uses (OSEH).

Haiti also seems to get hit with a lot of disasters. This affected them in the past and will inevitably affect them in the future. Recently, there were two earthquakes along with a cholera outbreak. Both of the earthquakes were rated a 7.0 magnitude out of a possible 10.0. The earthquakes destroyed water, food, soil, shelter, and other natural resources. In 2008, Hurricane Gustav hit which also caused a lot of destruction. There were three meter floods that destroyed crops everywhere. With importing all their food and having nothing to export put Haiti in a bad situation because then they were making less money than what they were spending (OFDA). All of these disasters destroyed lives and resources. They don't have extra to spare when this happens so it takes them a much longer time to recover than America would if it was in the same situation. The people are not able to find shelter and cleaning up waste is a very large task that isn't easily accomplished. Afterward the water is highly contaminated with debris, waste, chemicals, and other things (Pottorff).

The largest factor of people's health crises is poverty. This means that they can't grow food or earn enough money to fund their basic necessities in life. In fact, there is enough food in Haiti for people to eat but all of it is imported and the locals do not sell enough of their own food to buy the imported food (Bourne Jr.). Most people who suffer from hunger spend 80 percent of their income on food to try and maintain a healthy diet. Most who are hungry are women and children because it is sometimes thought that the men and boys should eat first since they earn the income (Burby 25). Many poverty issues come from not having enough to eat or eating the wrong type of food. The main reason is due to food expenses. If more locally grown food was produced, they would make enough money to pay for their families to eat.

One thing that highly affects the Haitian people is their inability to receive food and water that is not infected with parasites and infection source. Hepatitis A outbreaks occur when the water is infected by feces. These outbreaks can affect a lot of people in just a short time because of the number of people who need to use the same water. Those who are infected do not die but instead are taken out of work due to having dehydration and diarrhea. Then those who weren't infected end up being affected anyway due to economic merchandise not being produced. Usually this merchandise is vital for the survival of the population. Families rely on the men and boys of the house to get the food for the family. Woman and girls cook and travel to get water for the families to drink even though it is contaminated (Pottorff).

A sub-factor of poverty that greatly affects the Haitian people is their inability to use sanitary food and water sources. Over 50 percent of all Haitian food is brought in by other places to be eaten by the people. In October of 2010, a huge cholera epidemic broke out. Cholera is picked up when the food or water a person consumes is contaminated. It affects a person's small intestine, ability to hold down food, and causes muscle cramps (Como 247). It's ironic how the people who can hardly afford to pay for their food get a disease from it that causes them to vomit it back up. During the initial outbreak about 1,500 people were hospitalized and over 150 people died. In 2012, this epidemic has not fully died down. Still many people have yet to receive the vaccine that can only be brought to them from outside areas. Since then, food prices have gone up in value. Of course, this doesn't help the underlying issue of national hunger. In addition, the people have to pay for medication as well as food they could not afford in the first place. In more urban places they use an average of 70 percent of their income on food for them and their family (WFP/ Poulsen). Some people who can't afford food make mud cookies which are just dried mud chunks with little amount of sugar added into them. This is highly un-nutritional and can be a huge threat if there are dangerous pathogens in the dirt (Bourne Jr.).

Haiti is considered to be one of the few countries that are at risk of famine. Famine is a form of hunger which is the scarcity of food that puts large portions of a country's population in danger of death by starvation (Burby 18). Starvation is the extreme form of malnutrition. It occurs when the body begins to devour its own vital tissues. When this occurs the organs such as the brain and liver break down until they are no longer functional. This condition is classified as death by starvation (Burby 28).

A major concern dealing with hunger is malnutrition. In Mosby's Dictionary: Medical, Nursing, & Allied Health 3rd Edition, their definition of malnutrition is as follows: "any disorder concerning nutrition. It may result from an unbalanced, insufficient, or excessive diet or to the impaired absorption, assimilation, or use of foods" (Como 721). There are different intensities and forms of malnutrition but none are good for the person who is facing them. Malnutrition is responsible for more than half the deaths in the country (Haiti). In Haiti, people definitely face a problem with malnutrition. In 2008, 57 percent of people were undernourished. That is 5.5 million out of 9.7 million people (Hussain, Herens).

Two deficiencies that go hand in hand with malnutrition are iron and iodine deficiencies. The most common nutrient shortage in the world is iron. It is necessary in the body organs for the formation and destruction of blood cells. The shortage of iron slows brain function and makes mental and physical activity much slower. It also obstructs substances in the body needed for killing bacteria. This can cause disease in the body and inability to work. Although only a teaspoon of iodine is needed in a person's lifetime, many people go without it. Without it movement, speech, and hearing are damaged and growth is usually stunted. It also causes the swelling of the thyroid gland in the neck, miscarriages, stillbirths, and infant death, along with a condition called cretinism where infants are born with immature brains and poorly formed skeletal structures (Burby 31, 32). Many women and children suffer from a lack of micronutrient deficiencies. Because of this, 59 percent of children under the age of five face chronic malnutrition which can lead to anemia, a deficiency of red blood cells. It is stressed that a person facing anemia should maintain an adequate diet, consisting of at least 1800 calories for most people. They should also get an adequate amount of sleep. Usually, a person facing these conditions would need blood transfusions but in Haiti, it's not very likely they'd receive it (Como 63).

Obesity is very rare in Haiti but can still be an issue. When there is an abnormal increase in fat cells especially under the skin and in the abdominal region a person is considered obese (Como 830). Only an estimated 7.9 percent of people are at risk overall of being obese in Haiti. Men's estimate falls around 7.7 percent and women 8.1 percent. It is very unlikely due to so many food shortages. However, an insufficient amount of calories can also result in weight gain. This happens when a person eats well for a consecutive period of time, and then suddenly goes into food shortage. The body slows down its natural processes to conserve fat for survival. Therefore a person has the potential of being obese if this cycle plays through multiple times (Cespedes). Also, having some extra weight is not bad in Haiti. Most Haitian people even believe that a healthy person is a fat one. Having a little extra weight would make them look like they're well-off, not unhealthy (Jacobson). Unfortunately, having extra weight also slows a person down and makes their job harder to accomplish.

How can we help this suffering country? We need to send educational resources as well as agricultural and health experts to the Haitian people to help them learn and be healthier every day. They don't understand what people of America see as 'everyday' routines. The trick to getting as much help to them as possible is sending over small things which can help them develop these healthier routines.

The children who live in Haiti need to be taught how to eat healthy from the start by preventing food and water-borne diseases. When children learn things, they usually go home and share what they've learned with their family. Of course, there are some barriers that make getting kids able to attend school harder. First of all, they need uniforms and books in order to attend school which are expensive and very hard to afford. Plus, the tuition is too high for some families to pay. It is also difficult to get some of the

materials needed to practice hygiene and water purification due to the women being only able to carry so much of it when they go to get water. It's hard to attain food to practice with as well since the ground is so eroded making food hard to grow and the price of boughten food so high. When disasters hit the area, obviously school is not an option. Also, when children have a disease they cannot attend school. However, even if only one child is attending school, hopefully the others will pick up on what their siblings learned, likewise with their parents and maybe even neighbors. When someone is empowered to do something, they do it and if kids learn something and they think would be a good idea to do home they will make sure it happens. The people need to have self-motivation and a willingness to learn. There are many things that should be included in their program of 'healthy living'.

First of all, they need to know how to wash their hands. It is the simplest way to greatly decrease the spread in bacteria and other illness causing factors. Hand washing should occur before preparing and eating food, and taking care of injuries and illness. It also needs to take place after preparing food (especially meat and proteins), using the bathroom, touching any animals or animal belongings, coughing or sneezing, caring for sick and injured persons, and handling anything that could be contaminated. A person should wash their hands for at least the amount of time it takes to sing their ABC's using soap and water and dry their hands off thoroughly with a clean dry towel (Mayo Clinic Staff).

Second, they need to be taught how to properly use water. The most basic thing they need to learn is to not drink water or do laundry downstream from where there might be human waste in the water. They need to understand how germs, viruses and bacteria spread just by drinking contaminated water. This can be solved by boiling the water or treating it to get rid of the bacteria. However, these things are not always available to the people of Haiti who do not have a stove or the money to buy treatment for their water. One thing that would greatly help the people is to have something like the SODIS program. SODIS stands for Solar water Disinfection. It is currently not active in Haiti but they would greatly benefit from something like this. It's very easy and highly effective in helping reduce diarrhea which is a leading cause of death in many countries. All they do is put water from their streams- preferably not located near their 'outhouses'- into plastic bottles that are clear and set them out in the sun for at least 6 hours. It really helps to reduce bacterial infection, however not viral infection. Communities who have participated in this program saw a reduction of 80- 90 percent of diarrhea infection. This helps to send more people back to work and more children back to school to learn what can help them gain even healthier lives (Pottorff) (SODIS).

The same goes for food as well. Contaminated water can pollute the crops and cause them to die. Foods with an outer skin should be washed and eaten as often as possible because they are more likely to be protected from insects and germs. The skin also has vitamins in it which can help the person eating it. If at all possible, a person should also boil the foods to make sure it's sanitary. Avoiding eating mud would greatly help the people also. Dirt contains parasites that, if consumed, can kill a person by starving them even more (Pottorff). They should also learn that if missionaries come over, they should not binge eat. The food will most likely be too much for their stomachs to handle and they will vomit it back up. If they do manage to hold it in, it will just be part of the obesity cycle and will slow their metabolism. They should eat with as much consistency as possible in order to stay healthy.

There should also be programs to help teach children things that they can use when they grow up as a career such as how to farm, cook, sew, and buy and sell merchandise. These can help them to be more self- sufficient and able to earn money for themselves and potentially a family to survive. As Amanda S. Pottorff -CHES MPH MHA- said in an interview: "...I stayed at an orphanage that taught eight to ten year old boys how to farm. Without the orphanage and this education, these boys would grow up homeless and without any type of skills to contribute to the community" (Pottorff). Learning is the key to success, and the only way to accomplish this is by giving them information to learn. Also, sharing books and not having a dress code would raise the availability for children to go to school due to not as many

expenses. These kids still have the potential to make a difference for themselves and their community if they are shown how to.

People can travel to Haiti and teach them these skills for everyday life in order to educate them on healthy living. If there was something as simple as pamphlets with information on how to live healthy sent to the schools, it will make a difference. Just being aware of what the actual circumstances are could turn someone's life around for the better. The people just need help to be able to solve their problems within their own communities with a little jump- start. The goal is to help improve their education to help them gain more food and avoid illnesses before seeking help from a doctor.

Through education of what is healthy and helpful to their overall health, the people can learn to make better decisions about what is right to eat and drink. They can boil their water or leave it in a plastic bottle for some time to reduce the contamination. Children can also learn to wash their hands correctly and effectively in order to prevent the spread of bacteria. Food should be washed and eaten only if not contaminated and preferably with an outer skin. Lastly, they need to learn vital skills that can help them to raise a family and have a career. Sometimes the little things such as teaching, plastic bottles, and pamphlets can make all the difference in a community so far in despair. They have the potential to rise up and help themselves; all they need is a little boost of hope to get them started.

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