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Burundi: Battling Malnutrition and Increasing Food Security

Burundi is a landlocked country located in East Africa with shared borders between Rwanda, Tanzania, and the Democratic Republic of Congo. This particular country is among the five poorest countries in the world. Burundi is primarily characterized by their political instability and violence due to world war. As of 2013, Burundi's food insecurity level was ranked the lowest in the Global Hunger Index ("Burundi Overview"). Due to such poor food security, malnutrition is an increasing issue in Burundi. As many people are malnourished, the death rate is very high; in fact, in recent years, the life expectancy of a Burundian is only 59 years of age ("New Agriculturist"). Over half of the population is malnourished, and when reproduction occurs, many infants are born underweight, which makes infant mortality rates very high. Currently in Burundi, the birth rate is extremely high; however, little to no population growth is detected partially due to infant mortality and because of mass killings as a result of civil war (Lemarchand and Eggers n.pag). In many cases, civil war taking place currently in Burundi has large effects on malnutrition trends, and civil war in this East African country has led to an increase in malnutrition. Currently in Burundi, suitable land for growing is scarce and the majority of the Burundian population relies heavily on crop production and agriculture ("Burundi – Agriculture"). There are many factors that heavily contribute to the increase malnutrition trends, such as, the typical makeup and composition of a family as well as the struggles of the typical rural family, barriers preventing families to obtain adequate nutrition, the effect malnutrition has on agricultural productivity, the severity of malnutrition, and the trends of malnutrition themselves. Many times, however, the population in the country needs to consider the following factors: the benefits of improving malnutrition; other issues, such as civil war; the country may face; and Burundi as a country; with the help from other food secure nations around the globe; need to determine and establish solutions and alternatives to the nutrition they lack currently; by establishing solutions, Burundi could increase their level of food security immensely and this alone could potentially allow people to live a longer and healthier life.

In Burundi, the majority of the families are farmers and live their everyday lives as farm families. Since the majority of the population does not receive adequate nutrition, their typical diet usually includes: red kidney beans, fish, and varieties of seasonings such as red chili powder, cumin, and turmeric. The diets of Burundians are generally very bold and flavorful, but they lack nutritional values, and food scarcity is a major issue; hence, many do not have access to these foods ("About the Food of Burundi"). Since many do not have access to food, which in turn causes death due to malnutrition, Burundian children must be educated and ready to fill their parents' position when they pass, which is usually at a very young age. In Burundi, education begins at six years of age; education, however, is not mandatory. Many children attend primary school; however, very few are admitted into secondary school. After secondary school, even fewer are admitted into university. University education is the most elite and prestigious form of education and only three universities are available. Attending a university is certainly not an option for all children in Burundi as only the most elite students are granted this option (Lemarchand and Eggers n.pag). Many Burundian children eliminate education from their everyday lives after primary school so they can learn to attend to crops and prepare meals for their families. Most children are left on their own once the parents reach about age fifty-nine because of either inadequate nutrition, civil war, or some form of STD. Medical care is very scarce and very difficult to find. The Burundian government created a trial to provide free medical access to children under five years of age and new mothers; however, this program failed due to lack of preparation. This trial was also put into place to attempt to relieve people living on less than a dollar per day. Due to limited healthcare access and poor service, many women consequently bear their children at home ("Burundi's Free Healthcare Struggle"). Before women begin to

produce offspring, many are married first. In Burundi, polygamist families are extremely common and many men's first wives are arranged for them. Burundian's live in individual houses for their individual families with one generation living in them; however, houses are generally compounded to include any extended family. Depending on which beliefs these families have depends on whether the set of parents live together or apart ("Burundi"). The majority of these family's farm; in fact, over ninety percent of the Burundian population farms. These families are considered rural families. Some of their major cash crops include; bananas, cassava, sweet potatoes, and beans. Farms are very small, as only about half of Burundi's land is considered cultivable. Since a small portion of their land is cultivable, farm sizes are extremely small, only about 1.24 acres. The small farm sizes have much to do with high population pressure, over cultivation, and erosion. Burundians currently use majorly outdated agricultural practices leading to soil erosion and deforestation ("Rural Poverty in Burundi"). Many Burundians now must look elsewhere for food meaning they must purchase food on their own. This alone is next to impossible for the typical rural Burundian family.

Burundi's typical family faces and rarely overcomes the many barriers life throws their way. Many families struggle obtaining access to land due to overpopulation, scarce cultivable land, and the inability to reclaim land after returning from their fled from civil war. In Burundi, as a result of civil war, Burundians struggled with crop theft, along with drought periods, periods of heavy rain, pests, or poor soil conditions; these have no correlation to civil war ("Towards Greater Food Security"). In the African country, many Burundians are left jobless and the unemployment rates are extraordinarily high. The typical family typically earns no more than minimum wage. Minimum wage in Burundi currently sits at around nine cents per day, meaning they only make around thirty-two to thirty-three dollars every year ("Minimum Wages in Burundi - Frequently Asked Questions"). Burundi's access to food markets have heavily decreased while food prices increase; because of this, the number of people able to buy food in Burundi has severely decreased ("Famine Early Warning Systems Network"). Since people are quite literally unable to buy food in this country, access to nutritional foods is next to impossible. Because of this inability, fifty-eight percent of the country is chronically malnourished and only twenty-eight percent of the population can consider themselves food secure. Of the chronically malnourished, they generally only have access to about 1472 kilocalories per day, on average, a person should be getting a minimum of 2100 kilocalories per day ("Burundi"). The malnutrition levels are getting to be uncontrollable and this epidemic could slowly wipe out the entire nation.

Malnutrition in Burundi really has no positive or negative effect on agricultural production; however, agricultural production has much to do with malnutrition to a certain extent. The majority of Burundians rely on agriculture, and when agriculture fails, the malnutrition rates in Burundi increase. Many citizens living in Burundi are not fortunate enough to make enough money to buy food from food markets, rather, they must grow their own food, and when this fails, they go hungry ("Malnutrition in Burundi"). Burundi struggles to diversify their crops because of expense reasons and many cannot afford to even grow; therefore, many children and women suffer a lack of micronutrients. Some of the micronutrients lacking in their diets include: iron, vitamin A, iodine, and zinc. Many times the lack of iron in an individual's diet will lead to severe and sometimes fatal anemia ("Malnutrition in Burundi"). Anemia, by far is the largest deficiency issue due to the failure to diversify crops. As a result of this, the malnutrition in Burundi continues to increase and crop diversification decreases.

Burundi's food insecurity is the leading factor of malnutrition in the country. Currently in Burundi, malnutrition is among the most severe issues the country faces today. About fifty-eight percent of the population in this East African nation is chronically malnourished; the level of malnutrition cannot push beyond chronic and many of those diagnosed with chronic malnutrition die within a short amount of time after ("Burundi"). Since malnutrition causes high death rates at a young age, over fifty percent of the population is under fifteen years of age, and one in every two of them are malnourished. Malnourishment at such a young age can lead to early death. In fact, many women are malnourished when they are

carrying their children, leading to a high infant fatality rate and even higher mortality rates in children under the age of five. Malnutrition in children can also lead into severe stunted growth and most children in this developing country will never reach their full potential as an individual, a citizen, or an adult (Lemarchand and Eggers n.pag). Although malnutrition has its severe effects on the individuals and the population of Burundi, it causes no harm at all to the environment, the only harm it does is to the people suffering and the families grieving the losses of their loved ones. Both men and women are affected by this disease; however, it plays its greatest toll on women causing them to lack nutrients like iron, vitamin A, iodine, and zinc. Developing countries as a whole also struggle greatly with malnutrition and much of their population dies because of it. Some of the main factors causing developing countries to struggle include limited to no access to modern farming techniques, over population, and easily spreading diseases, such as, HIV and AIDs. Malnutrition affects the population diagnosed regardless of their subsistence; the majority of these people have limited access to adequate nutrients and severe anemia is developed in most of these people ("Malnutrition in Burundi"). This epidemic is a nationwide issue and is in dire need of attention.

Simply put, malnutrition is a problem in Burundi that shows no signs of getting better soon. Malnutrition is measured and diagnosed by a variety of easy testing, for example, a variety of body measurements such as weight to height, weight to age, low birth weight, body mass index, mid-upper arm circumference, anemia, and hemoglobin levels in blood. Many are also tested for day-blindness and night-blindness where they cannot see throughout certain points of the day because their bodies have used the nutrients used for eyesight for other necessary functions in the body. The trends for malnutrition are based upon the number of diagnoses and any additional indicators ("Unite for Sight"). Depending on which side of the scale change falls on obviously depends on whether or not the change will be beneficial to families. If malnutrition changes positively, the family is benefited as less people are malnourished and there are more able and healthy people. If the change falls to the negative side of the scale, the change is extremely detrimental to the families as mortality rates increase, more people are malnourished, and more people are in extreme need for food. Currently in Burundi, malnutrition is a worsening outbreak as the population is increasing and the country is running out of supplies to meet the demand of their increasing population.

As Burundi progresses as a country, a necessity to allow the country to move forward is to improve the malnutrition trends. If Burundi is able to improve malnutrition, more able bodies will be readily available to farm and help out with other household and family chores. With more able bodies in the country, there will be more income for the families to buy food with and they'll also be able to produce and feed their families adequately nutritional meals. If malnutrition is reduced, more affordable filler foods will be available; however, agricultural changes must be made to enhance the quality of the food to increase the nutritional adequacy ("Malnutrition in Burundi"). Elimination of malnutrition will allow growth in both the amount of food grown and the economy. If food production increases, the economy will flourish. The country will also have the ability to grow and sell more food, hence, creating more jobs and lowering the unemployment rate. If the country can grow and produce more food and make a profit, the minimum wage for workers and families will likely increase allowing families to obtain access to nutritious food choices. If malnutrition is eliminated, poverty rates would decrease as families would be able to sell goods, in turn, providing for their families. Malnutrition elimination would also be extremely helpful to women as fewer would die post child birth, anemia rates would be reduced, and children would be born healthily and live a longer healthier life. The elimination of this outbreak would also be extremely beneficial for farmers as they could have more help because people would have the adequate nutrition necessary to work and help out. In turn, these farmers would have the ability to create jobs and grow much more nutritious food choices.

Currently, in Burundi, civil war outbreaks are common and this alone has a major impact on malnutrition and the trends it sets. Many Burundians, as we already know, do not have access to adequate nutrition. This is primarily caused by civil war and the result of that is decrease agricultural production. Cultivable

land is also scarce and this factor does not help the situation for the farmers as they have no place to plant and grow their crops. Of the cultivable land, much of it is consumed due to overpopulation and erosion.

After viewing all the problems and nutrition barriers this country faces, I have come up with a few possible solutions, and how we can carry them out. One of the solutions I came up with was to study the natural plants in the country and determine if they have any nutritional value and possibly incorporate them into meals or anything Burundian's consume on a day to day basis. Scientists or local Burundians should also consider investigating what natural minerals are in their soil that could be of benefit to the citizens in the country. I suggest they should study the soil and determine what could be beneficial to the people and what could help them to overcome malnutrition issues. Another factor that could be studied is erosion and determine how they as a country could eliminate or reduce soil erosion in farms to create more cultivable land. I also feel education could be strongly scaled up in this country and teachers in Burundi could educate their students about soil and plant nutrients and how they could incorporate that into their diets. On an international scale, international research agencies could be of great help to Burundi as they could use advanced technologies to help decode the Burundian soil to determine what could be of use to them. In the country itself, rural farm families need to begin looking for solutions within what they have and determine what they could use to help make the dream of eliminating malnutrition become a reality.

Malnutrition today has become a world-wide issue and does not only have an impact on third-world and developing countries. Malnutrition, although not commonly found, is happening in the United States and many citizens are unaware of the issue. This epidemic is not something we cannot help; if everyone had a hand in the nutrition adequacy of others world-wide, the solution to this problem is something that is possible to be solved. Burundian's struggle heavily with not only the malnutrition battle, but also the battle civil war puts on their shoulders. The nation of Burundi is also growing uncontrollably as many people continue having children who only live for a short time in many cases; however, the country itself is running out of space and resources to feed and nourish their country. This is a major factor to consider when looking at their malnutrition issues as the country is not able to feed its people; hence, many are malnourished and many do not have proper access to food sources. In Burundi today, there are not many job opportunities as the country, again, cannot support its employees. In fact, the majority of Burundians farm their own farms, but due to many climate issues; such as; drought periods and floods, many are not able to produce nutritional food, nor are they able to produce enough food to feed their families over an extended period of time. With only three universities in the country, many children are not able to extend their learning abilities and learn the ways to increase production. Since education is not mandatory, many children do not know and cannot learn certain skills that can be beneficial to them while they grow up into adults. Many times; however, the population in the country needs to consider the following factors: the benefits of improving malnutrition, other issues; such as civil war; the country may face, and Burundi as a country; with the help from other food secure nations around the globe; need to determine and establish solutions and alternatives to the nutrition they lack currently; by establishing solutions, Burundi could increase their level of food security immensely and this alone could potentially allow people to live a longer and healthier life. Someday within the near future, I sincerely hope Burundi can create a permanent and long lasting solution to allow the people of Burundi to live hunger free and to make malnutrition elimination a reality.

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