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Burkina Faso, Factor 11: Malnutrition

Burkina Faso: Malnutrition in Burkina Faso

In today's society everyone is too enthralled in their own business to actually do something meaningful for others, or to even acknowledge that there are problems in this world that can be solved. The fortunate ones of this generation are all caught up in social media, the uprising of technology, and other distractions to utilize their potential to manifest change in the unfavorable. We are all capable of change for the better or worse. Malnutrition whether it's caused by not having enough food or not getting the right nutrients our bodies need is an international problem that can be solved and prevented, all we need to do is take action and commit. If we all worked together we could reduce and prevent malnourishment and food insecurity in developing countries.

Burkina Faso is a landlocked country that is slightly larger than Colorado and relies heavily on agricultural production with ninety percent of the population working in this sector, it is located in West Central Africa with a population of 18.9 million citizens who are all called Burkinabe (Central Intelligence Agency, 2016). Almost half of the population (46.7%) live below the poverty line with about twenty percent of the population being under the extreme poverty line. Most of the population lives on less than US $1.25 per day with the majority of people living in rural areas (Burkina Faso, 2016). The terrain is mostly flat and dry the climate is considered tropical with an average temperature of thirty-five degrees Celsius. Burkina Faso is faced with recurring droughts and desertification which degrade the soil and make agricultural activities like growing crops and harvesting food a very difficult challenge (Winterbottom et al., 2015)

A typical rural family depends solely on subsistence farming for their diet and income. the families usually consist of eight people, the mother, father and their children, sometimes three generations will live under the same roof which would include either the grandparents or other relatives (APA, n.d., *Burkina Faso*). Rice is a huge staple in a burkinabe diet along with sorghum, millet, maize, potatoes and mangoes although mangoes usually specialize as cash crops and are sold at nearby markets (APA, n.d., *Climate & Agriculture.*)

Education in Burkina Faso is compulsory for children whose age ranges from 6 to 16 although by law education is supposed to be free, but parents are obliged to pay for their child's supplies and most of the time communities are responsible for building their own schools (Central Intelligence Agency, 2016). Gender plays a big role in who gets the opportunity to attend school because boys generally have the upper hand over girls in who gets an education, the cause for this is girls will be pulled from school by their parents to either help take on some of the mother's duties or will be married off at a very young age.

Burkina Faso's percentage of school life expectancy and literacy rates are among the lowest in the world, with their literacy rate being only thirty-six percent of the population over the age of 15 who can read and write and a school life expectancy of eight years (Central Intelligence Agency, 2016). According to Unicef only 81% of students reach the fifth grade because either transportation becomes an issue, their family has a low income and cannot afford their child's education or they have to drop out and help out at home.

Access to Healthcare in Burkina Faso is not only difficult to obtain but is very expensive for the typical rural family, Burkina Faso is in a shortage of medical staff with only about 920 doctors which is only one physician per 10,000 people (APA. n.d., *Poverty & Healthcare*). There are three high quality care

hospitals, two in Ouagadougou which is the capital of Burkina Faso and one in Bobo-Dioulasso, the second largest city in Burkina. Healthcare being expensive is not just the only problem families face but transportation is another huge barrier, with the nearest hospital being miles and miles away.

Farming in Burkina Faso has its fair share of challenges with recurring droughts, desertification and degradation. This doesn't mean that farming is overall impossible although it does require more work and it forces the size of farms to be much smaller. The typical farmer is a woman who grows and tends the crops while the husband goes to the market and makes profit off of their harvest. Farmers in Burkina Faso are normally involved in some sort of subsistence farming and typically grow lots of cereals such as rice, millet, maize and sorghum with the occasional mangoes, cassavas and sweet potatoes with limited supplies and techniques (Aburawa, 2015, December 10). Over the years they've developed effective agricultural practices that enable them to grow foods in these harsh conditions.

One simple way farmers can grow food in the degraded land is by digging small holes called zaï's during the preseason to catch rainfall and in the zai's they put different types of organic matter that add vital nutrients to the soil and therefore the food can grow effectively(Aburawa, 2015, December 10). Another technique which is called contour bunds involve lines of stones that trap in water from the rain they get so the ground can soak it up, this helps slow down water runoff and prevent the erosion of good soil. These water harvesting methods have allowed farmers to completely restore degraded land into fertile places to grow food and raise livestock (Aburawa, 2015, December 10).

Major barriers that hinder agricultural activities all have to do with climate change because it's a very controversial, real thing with many ripple effects that have a huge impact on the land and population. Most of the ripple effects influence the way people are able to grow food with the land degrading, temperatures rising, deforestation and recurring droughts all becoming huge issues (Sauliere, 2011). But because of this families and farmers have little resources to effectively grow crops to feed their families and population. Ninety percent of the population in Burkina Faso work in the agriculture sector and the majority of these people are engaged in subsistence farming which means to grow enough food to feed your family and maybe make a small profit.

The average per capita for an urban Burkinabe is $1,800 as of 2015 and the wage for a rural farmer is not even half that (Central Intelligence Agency, 2016). The cause for such a low income for these people is due to their country still developing and their faulty economy. Accessing food and having a balanced nutritional diet is very hard if not impossible for the average family or person with food prices fluctuating because of the economy and the difficult struggle to grow crops in the face of climate change.

About 795 million people worldwide don't have enough food to live a healthy active lifestyle and the majority of hungry or malnourished people live in developing countries (APA, n.d., *Hunger Statistics*). Malnutrition and food insecurity rates are chronologically high in Burkina Faso because of the low level of development and changing climate which inevitably leads to severe problems like hunger and undernourishment. In Burkina Faso's case, malnourishment among the population is caused by two major factors one of which is people are not eating enough because they are not producing enough food due to the environment and scarce resources. The other factor is the Burkinabe are deficient in vital nutrients and minerals because the food they do eat is not nutrient dense, so while they may be getting full they are still undernourished.

People who are malnourished will get sicker and have a higher chance of contracting diseases than people who aren't because of their low immune system. Malnourishment affects agricultural productivity and education because when farmers or students lack certain nutrients they become very weak or sick and are unable to work to the best of their ability. Children are most affected by this factor because they are most vulnerable to health problems like muscle deterioration, respiratory failure and developmental delays such

as stunted growth, loss of vision, hearing and many more complications. Parents work hard every day to try and provide nutritious meals but fall short due to many difficulties. Currently there are twenty-seven programs working in Burkina Faso that all have the same intent of reducing poverty and food insecurity whether it's by training farmers, educating children and adults on agriculture or providing food (NGO Aid Map 2016).

Burkina Faso ranked 65th out of 78 countries on the global hunger index, in 2014 a quarter of the population were undernourished and about two thirds of the children who were suffering from malnourishment did not receive medical attention while an unpleasant 40.1% of infant deaths were connected to undernutrition (World Food Programme 2015, June 23). This issue will only begin to expand each year with the population rising by three percent annually; they will not have enough food or resources to support their growing population in the future (Central Intelligence Agency, 2016). The chronic malnutrition rate is thirty-four percent and is slowly but surely going up each year, the statistics show that this problem will not only progress but will cause major problems in the times ahead.

Improving the problem of malnourishment and food insecurity in Burkina Faso would absolutely help this country or any country for that matter, because having adequate nutrition and plentiful food is a moral right as said by Norman Borlaug who is often referred to as "the father of the Green Revolution" and is the only person credited with saving one billion lives. If undernourishment and hunger were no longer a problem in the world I think everything as we know it would be different and there would be a lot more peace and enjoyment of life. Parents would not have to worry if their children had enough to eat, there would be less ill children due to stronger immune systems, and more pupils would be able to attend school setting them up for a brighter future. Burkina Faso would be a much stronger nation with tons of successful people, I also think their economy would flourish into something substantial if they had the chance.

There are numerous solutions that could help improve malnutrition in Burkina Faso some are simple, inexpensive and effective while others would just not work because they would be too pricey or would only work for a limited amount of time. Programs and organizations that feed and provide food to the people of Burkina Faso are great for the aftermath of disasters like when major droughts hit or food is scarce. These generous acts of charity are not long term solutions but rather short term solutions that help alleviate the situation. The solutions that should be focused on and implemented are the kinds that teach people new and improved agricultural methods and how to utilize them, these types of solutions could be of great use now and also for later generations.

The organization Freedom from Hunger is aiming at assembling resilience in Burkina Faso, this program intends to address insufficient nutrition, agriculture and financial problems by informing the Burkinabe people on these things. This project was established in 2012 and will end in November 2017, this program had a budget of $2,500,000 (NGO Aid Map, 2014). The activities they are exercising are all knowledge based like strengthening their understanding of disaster prevention and preparedness, food and nutrition utilization and financial savings. This is one of the twenty-seven projects in Burkina Faso that is doing great work, Freedom from Hunger still has lots to accomplish and I think they are definitely scaling up.

Biofortification is the concept of adding vitamins and minerals to increase the nutritional value of a crop by means of genetic engineering or selective breeding. Biofortification differs from regular fortification in the way they get their nutritional value, fortification is the addition of nutrients to the food itself when it's being processed so it's sort of like a supplement while biofortified crops obtain their nutritional value whilst growing (Wikipedia, 2016). I can see biofortification as a long term solution to reducing nutrient deficiencies and malnutrition in the population because unlike providing fortified foods year after year which can become spendy this solution is cost effective and could be executed once or twice with results that would benefit future generations. I think if farmers in Burkina Faso were to adopt and utilize these

kind of crops it would have very positive ripple effects, after a while the population's nutrient deficiency rates would go down considerably, children would be able to perform better in school and other great things would happen.

The government of Burkina Faso would be able to tackle this task with help from outside forces like international organizations that aim at ending food insecurity and poverty. In order for Biofortification to be possible Burkina Faso would need to use biotechnology such as genetic modification or acquire plant breeders that would crossbreed the crops by selecting different varieties of contradicting yields and nutritional value to produce a seed with a significantly higher nutritional value. Technologies like Biofortification have been used by a small number of organizations in African countries like Uganda and Mali, in these two countries malnutrition and micronutrient deficiency rates have gone down and it's all due to the access to biofortified crops.

Of course the typical rural farmer and family would have to accept and utilize the biofortified crops in order for this solution to work, I think if the Burkinabe people were informed and knew what biofortification was they would grow to accept the concept and really appreciate it. The agricultural techniques such as zai's and contour bunds could absolutely be used with this solution and would really help the growth of the crops by keeping the ground fertile. Introducing these technologies could be done first by letting the Burkinabe people sample the product and then be sold in community markets to make access easier for farmers.

The problem of food insecurity and malnutrition is still a wide range epidemic that can be solved and prevented, all we need to do as a society is shine light upon it and encourage the young ones of this generation to take action. I truly believe with all of the good and intelligent people in the world we can abolish hunger and poverty.

Resources

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