

Danielle Marvin
Central-DeWitt High School
DeWitt, IA
Nigeria, Factor 11: Malnutrition

Providing for Future Generations by Overcoming Nigerian Malnutrition

The country of Nigeria displays an impressive array of diversity in almost every aspect of its being. Obafemi Awolowo wrote in *Path to Nigerian Freedom*, "Nigeria is not a nation. It is a mere geographical expression. There are no 'Nigerians' in the same sense as there are 'English,' 'Welsh,' or 'French.' The word 'Nigerian' is merely a distinctive appellation to distinguish those who live within the boundaries of Nigeria and those who do not." ("17 Famous Nigerian Quotes."). Geographically, Nigeria's southern third claims a humid tropical climate which supports the majority of Nigerian agriculture. The top third has an arid climate that, combined with increasing desertification, is decreasing farmland and overall agricultural potential in that region. Nigeria is approximately twice the size of California with a total landmass of 351,649 square miles (Central Intelligence Agency). Of this land, 287,646 sq. mi. (81.8%) is arable, although only 10% of this land, and only 7% of all irrigable land is used efficiently ("Rural Poverty in Nigeria."). This statistic is alarming when one considers that 70% of Nigeria's quickly growing population is employed in agriculture ("Encyclopedia of the Nations."). A family living in rural Nigeria typically owns less than 5 acres on which they live, grow crops, and raise livestock such as cattle, sheep, goats, pigs, and chicken both for self-subsistence and occasional profit. In southern areas, families grow mainly root crops such as yams, taro, and cassava, as well as oil palm, cacao, and rubber trees. In the drier north, peanuts, cotton, and beans are grown. Grains such as rice, sorghum, pasta, and corn are common staples in all regions ("Nigeria – Crops."). The average rural family has between five and ten people living in a single home (mother, father, children), but it is common for grandparents, uncles, aunts, cousins, and other extended family to stay relatively close to work as a unit instead of farming individually (Curry). This web of family is extremely valuable in the case that one member should get injured or sick, especially as healthcare is unobtainable for 70% of Nigerians due to poverty ("Ensuring Nutrition"). Most of the day is spent in the fields using outdated tools and techniques to provide for the family- unless they have children in school, which can provide an economical strain as well as less farm labor at home. Many families cannot support having more than one or possibly two children in school, and given a choice, many will send their sons to get an education over their daughters, leading to the current 53.4% of rural women with little to no education versus the much lower 36.3% of uneducated rural males ("Education"). This lack of a formal education is a large factor in why malnutrition in Nigeria is such a problem, for without gaining knowledge of improved agricultural techniques, there is no way to begin the growth that is needed to let Nigeria's people thrive.

A child in America is given endless opportunities to broaden their knowledge of any subject they can dream of. American farmers are using modern tools and techniques that benefit both the people and the land, and in this way, there is more than enough food for the current population. In Nigeria, however, the widespread poverty is forcing farmers to overuse their land, which leads to nutrient loss in the soil, decreased food production, lower quality crops produced, and farmers losing money that could be invested in new tools, agricultural education, high-quality seed, or healthcare ("Constraints"). In Nigeria, less than three-quarters of the population can afford healthcare, leaving the remaining people to their own means of attaining a healthy life. This dream of health security is difficult for rural families to achieve because of poor nutrition, low-quality water sources, and poverty. There is no government health program in place for the majority of civilians. Instead large cities finance their own hospitals and clinics. Even in these larger cities, hospitals are inadequately stocked- for example; patients arriving for surgery are required to bring their own operating equipment (Mohammed, A.S.). In rural areas, even this mediocre treatment is not available. When one member of the family unit falls ill or gets injured, he is unable to go to a hospital or medical clinic for treatment, and therefore becomes dependent upon other

friends and family. These family members are spending more time in the home, less time working in the field, and therefore producing less food to sell at market, and more importantly, less food to nourish their own family.

In Nigeria, malnutrition is a problem that needs to be addressed as soon as possible. Getting the proper nutrients is difficult for Nigerians, and a large contributor to this problem is a lack of clean water. It is common for rural families to wash clothing, bathe, water livestock, and drink from a stream that has seepage from pit toilets, debris from upstream villages, and high levels of parasitic worms that will lodge themselves into the intestines of people and livestock and consume up to 25% of the person or animal's nutrients (Falola, Toyin O.). There are deworming practices in place in Nigeria, but the goals of 90% of the population being free from worms are sadly unmet. The mid-South region has the least worm-infected people with only about 48% clean, and the Northwest region is almost completely infected with only about 4% of the population free from worms (Omotola, David). These worms suck vital nutrients from men, women, and children, which leads to life-threatening deficiencies of vitamin A, protein, iodine, iron, zinc, and calcium. These missing nutrients are resulting in a vicious cycle of high infant and maternal mortality in which the mothers are deficient in one, or often all, of the above nutrients and fail to gain the weight needed during pregnancy to support a child. The mother will on average have to consume an extra 500 calories per day of pregnancy in addition to her own needs to fully support minimum child growth ("Calories During Pregnancy"). In Nigeria, 43.8% of pregnant mothers are zinc-deficient (Omotola, David) which leads to dangerously low appetite (in turn causing a cycle of lower calorie intake resulting in lower zinc levels, which decreases the appetite more), impaired mental processing abilities, diarrhea (which leads to dehydration), blood disorders, increased risk of infection, and impaired sight. Zinc deficiency is unevenly distributed in Nigeria, with the forested southern regions claiming 6.3% of children under 5 who are zinc deficient, and the dry, desert-like northern regions resting at an alarming 26% (Omotola, David). Vitamin A is an essential nutrient for visual phototransduction; a lack of vitamin A causes up to half a million children world-wide to go blind, and a quarter of a million to die within one year of the blindness setting in ("Micronutrient Deficiencies"). Protein is absolutely essential to life, specifically the growth of muscle and mental health. When humans are severely protein deficient, the body begins to break itself down, causing stunted growth and muscle wasting (prevalent in Nigerian children), fluid retention in the legs as the body's water balance is thrown off balance, lowered immune system response, and anemia (insufficient oxygen to the blood, also caused by a lack of iron). The quickest way to turn around the problem of anemia is deworming, although that technique is not producing satisfactory results in rural Nigeria, as was mentioned above (Omotola, David). These three nutrients are so essential to a person's quality of life that it is hard for them to function, let alone thrive, while their bodies and brains are not getting what they need. It is very possible to get an individual back at healthy nutritional levels, but simply getting one person well will not benefit the whole nation of Nigeria. To do that, the children of the next generation must be addressed.

Exclusive breastfeeding during the first 6 months of life is practiced by only 13.1% of Nigerian mothers ("Exclusive Breastfeeding"), and yet breast milk is commonly referred to as 'liquid gold' for the thick yellow milk that comes directly after birth (colostrum) which is extremely calorie and nutrient dense-perfect for a newborn baby. In the week following birth, the milk takes on just the right amounts of fat, sugar, water, and protein that the baby needs to thrive. So why aren't Nigerian mothers exclusively breastfeeding in order to stop the malnutrition crisis? The answer is low mother weight and lack of knowledge. The most common access to breastfeeding and child nutrition information is through a government health facility, but many women who lack healthcare rarely visit these facilities ("Determinants"). The majority of Nigerian mothers are unaware of the value of their breast milk, resulting in less than 20% of mothers exclusively breastfeeding during the crucial first two months of their child's life. Double that percentage (40%) of mothers practices a combination of breastfeeding and giving their child plain water, which aside from hydration benefits, meets none of the newborn's calorie needs. Approximately 4% of mothers in Nigeria give their child water or other liquids right from birth,

making it extremely difficult to ensure that the child consumes enough fats, sugars, proteins, water, and other vitamins that they need to escape malnutrition (Omotola, David).

It is said that it takes a village to raise a child. However, the village is not able to support the next generation if its elderly and parents are suffering from malnutrition. While it is true that the child is the future, the parent is essential to ensuring that the child is healthy enough to partake in that future. The middle ages of the population also make up the country's labor force- a crucial aspect to any country. Programs concerning education, sanitation, and nutrition currently offered by the Nigerian government are not sufficient for the adults to have the knowledge they need to help their children reach their full potential and be productive members of their communities. To directly address malnutrition, adults need to either work towards the implementation of nearby markets, or make improvements to current markets. Improvement in agricultural techniques will positively affect local markets by allowing farmers to produce a higher-quality crop more efficiently. Improvements in transportation systems will allow more food to reach the markets unharmed, thereby increasing the available amounts of nutritious food. Adults, unlike children, are more equipped to change their surroundings through determination, will power, and resources and, therefore, are the tools Nigeria needs to begin banishing malnutrition from their country.

There is a vicious cycle that is overwhelming to fathom for those battling malnutrition. If a community is malnourished, when a man and woman decide to start a family, the mother will likely be unable to gain the weight required for child development. The child will be a low weight at birth and lack of nutrition will have raised the child's risk of illness, as well as mental impairments because of not enough energy being available for the body to grow both physically and mentally. As the child grows, if (s)he isn't getting the proper food or water, they will be prone to infections and their growth will fall farther beneath the healthy standard. The brain will be starved of the fats and proteins it needs to function, and the child will fall behind in that standard as well. If the child is a girl, when she marries, she will likely follow in the steps of her mother and be physically incapable of gaining weight during pregnancy, starting the wheel of malnutrition turning again (Omotola, David). If the child is a boy, when he gets his own property to farm and a family to support, he will lack the muscle mass and mental durability to utilize his land to its full potential. He will marry, father children, and then, most likely, his malnourished body will falter under the hard farm work, causing him to become dependent upon his extended family long before he would have had to if he'd had adequate nourishment throughout his life. The ill and tired body combined with the low education gives this man and woman little to no possibility of improving their financial situation, thereby condemning their children and their grandchildren to an overwhelmingly desolate cycle of wasted potential and malnutrition.

Currently, the prevalence of malnutrition in Nigeria is generally stable, with no sudden increases or decreases. The percentage of underweight children less than five years of age has decreased from 15.1% in 1990 to 12.7% in 2009, but that does not mean that every aspect has been improving. Over the same time span, the percentage of children under the age of five who are wasting (thin for height/age) has increased from approximately 9.5% to 14.5%, and those children who are stunting (short for age) has decreased from 50% to 41%. As of 2008, the percentage of wasting children in Nigeria was at an alarming high of 22% in the North, and a lower- but still worrisome- 9% in the South (Omotola, David). Nigeria's population has been growing rapidly, at a rate of almost 3% annually. Food production has been growing too, but at a slower pace that has failed to feed the growth of the people. Nigeria is the tenth most populated country in the world, and projections have estimated its population to double within twenty-two years ("Nigeria – Population"). Not taking the population increase into account, at this point in time, Nigeria has the third most malnourished children of any country in the world ("*Nigeria*" *Action Against Hunger*). Without an increase in agricultural productivity and efficiency, there is no possible way for the country of Nigeria to avoid a nutritional disaster.

In 2010, the Nigerian Ministry of Health partnered with the organization Action Against Hunger to set national guidelines for malnutrition treatment. Since then, Action Against Hunger has trained over one thousand Nigerian public health workers how to best treat malnutrition, equipped or sponsored 200 health centers, and enabled over 12,000 extremely ill people to get treatment. In the health centers, a popular way of treatment is feeding severely malnourished children with high-calorie emergency food packets to give them fuel for their bodies. This way of treatment is very temporary so Action Against Hunger is also pursuing the underlying causes of malnutrition, namely water sanitation and food security. They do this by physically and financially supporting community sanitation efforts, along with partnering with government programs like Nigeria's Rural Water and Sanitation Agency to reconstruct broken wells, pipes, and underground reservoirs. In 2013 Action Against Hunger started a program called the Child Development Grant Program with the idea to give monthly financial aid for nutritional purposes to 60,000 households over the next five years. Action Against Hunger is focusing on both the short and long term goals of treating malnutrition through immediate feeding practices and source-prevention tactics, such as the improved water sanitization and food security ("Nigeria" *Action Against Hunger*).

If the malnutrition crisis in Nigeria is to be resolved, it is critical that the children are focused on first. The first two years of a child's life is where the majority of essential growth takes place (Omotola, David) and so it is during this phase of life that it is crucial to get children the nutrients they need in order to establish a stable foundation for the rest of their life. The easiest, most direct, way to provide these nutrients is through clinical emergency feeding, but this route is not a long-term solution. Curative treatment is focused on treating a problem that is already present. Preventative treatment focuses instead on tackling the sources of a problem, and in the case of Nigeria, this treatment is sorely needed. The Nigerian government, as well as local communities, needs to work towards rebuilding the crumbling roads that prevent both people and crops from reaching marketplaces. The sad state of the roads is the reason why 45% of Nigeria's tomatoes are ruined before ever being consumed ("Feed Yourself"). International efforts such as Action Against Hunger, UNICEF, and World Vision, as well as local efforts, should focus primarily on locating clean water for consumption (both livestock and human, as infected livestock can transmit diseases to humans) and increasing their agricultural productivity. There are multiple ways that rural Nigerians can increase their efficiency in agriculture, but none of them will be applied unless the rural population is educated on the new techniques and tools of modern farming. Instead of each family farming a small plot of land, it may be more efficient if a community worked as a joint party to mass-produce crops on a larger-scale farming operation. Rural farmers need to be educated about the benefits of fertilizers, how to maximize crop yields, and avoid soil overuse. Knowledge of current trends in prices and marketing technique would fight poverty by increasing the farmer's ability to set his prices to the current trends, and therefore earn a higher income to support his family. Nigerian women in both urban and rural areas need to be given knowledge about the benefits of breastfeeding their children for at least the first 6 months to a year, so that children with poor nutrition otherwise are at least benefiting from the high-quality nutrition that is available for no monetary cost.

When the Nigerian government shifted its economic focus from agriculture to oil production, it began to import extreme amounts of food- reaching a staggering high of N630 billion worth of agricultural products in 2012 ("Nigeria: 'Nigeria Imported Food Items'"). Nigeria has the ability and resources to feed itself, but is failing to do so. The government needs to make agriculture a priority, and to fund it properly so that Nigerian farmers are able to use their lands optimally. If this happens, farmers will be able to not only produce enough food for their families, but will also be able to sell the extra food to less fortunate families, giving them valuable nutrients that would not be present if farmland wasn't used to its full potential. In Nigeria, each year approximately 2 billion dollars worth of shea nuts, which are a common ingredient in beauty products worldwide, rot on the ground ("Feed Yourself"). If the government and local groups were to set up a farming or collection system for these shea nuts, the country could export them for a higher income. With this extra money, the government needs to supply all health clinics in both urban and rural areas with the proper medicines and treatment knowledge to improve the quality of

life in those areas. This money can also be spent in sending informed instructors to rural communities to talk about the above techniques to battle malnutrition, including water sanitation, breastfeeding, and agricultural improvements.

A root cause of malnutrition, as mentioned above, is water sanitation. An organization called The Water Project has been a pristine example of external and local efforts coproducing sustainable positive results for communities. The Water Project treats each site as an individual project with individual needs by first surveying each site for unique geological characteristics such as the depth to the water table and soil composition as well as what use the well will serve within the community. Then, the locals are engaged in fundraising efforts to pay for the construction of the well, sewer system, and any other water-based amenities that need implemented. These new additions to the community provide resources for up to thousands of rural families in need, as well as employment for former child-soldiers and other victims of violence as maintenance crews, operators, and further sanitation educators (“Wells for Sierra Leone”). If Nigeria can put projects such as these into effect, it will not only improve the water sanitation, but it will actively engage the people in creating a better, healthier, life for themselves.

The key of success for these projects as well as those that directly address malnutrition (emergency food packet distribution, agricultural improvement) is that the government be willing to work with the people, for the people. The government must make the conscious decision to incorporate infrastructure into the national budget and then follow through by ensuring that the budgeted money is spent where it is most needed. This does not mean that industry and expansion should be excluded entirely, but rather that a balance needs to be found between the two. For example, if Nigeria could increase their spending on roads, water sanitation, food availability, and education, the majority of the population would experience a dramatic rise in both physical and mental health, leading to a boom in the Nigerian workforce. This increase in healthy workers would allow for growth of industry, resulting in an overall profit for Nigeria. A profit would enable the country to further expand on current projects, such as more efficient agricultural techniques, increased crop yields, and education for rural communities. If Nigeria is able to implement even a small portion of these new ideas, a new cycle may begin- one of improvement, prosperity, and health.

There is no reason for Nigeria to be a malnourished country. The current statistics concerning vitamin deficiencies, child wasting/stunting, and maternal malnourishment are alarming, but that does not mean that improvement is impossible. Currently, the cycle of malnutrition paired with water contamination and poor medical services have the people of Nigeria trapped unless a significant change is implemented in the near future. To successfully reduce the levels of malnourished people in Nigeria, there is not just one factor that needs to be focused on; it is a nationwide crisis that requires a nationwide effort to resolve. The government needs to take in the condition of its rural population and adjust budgets to provide improved roads, clean water sources/filters, and fully stocked health clinics that are available at a price that is affordable for the majority of the people. Rural farmers who are unable to access education facilities need to take the initiative to meet with other farmers who have been educated on the current marketing trends, prices, and field techniques to increase crop yields. This valuable education can be spread by word of mouth through rural communities, and if farmers then take it upon themselves to act on this knowledge, a much greater percentage of the Nigerian people will have access to nutritional food. Along these same lines, women who have had the benefit of learning about breastfeeding and the nutritional needs for both her and the baby both during and after pregnancy need to share their education with women who do not know about the potentially life-changing effects of giving breast milk to children. The children are the future of a nation, and it is through them that the malnutrition crisis will be resolved. If the international aid groups, national government, and local communities join together to whole-heartedly and aggressively fight the cycles of malnutrition in the people’s homes through improved water sanitation, road construction, healthcare attention, and effective farm usage, it is only a matter of time and determination before malnutrition will be a problem of the past for the people of Nigeria.

Works Cited

- "17 Famous Nigerian Quotes." *Jide-Salu.com*. N.p., 30 Sept. 2009. Web. 12 Mar. 2014.
- "Arable Land (% of Land Area) in Nigeria." *Arable Land (% of Land Area) in Nigeria*. N.p., n.d. Web. 12 Mar. 2014.
- "Calories During Pregnancy." *Whattoexpect.com*. N.p., n.d. Web. 12 Mar. 2014.
- Central Intelligence Agency. Central Intelligence Agency, n.d. Web. 12 Mar. 2014.
- "Constraints to Increasing Agricultural Productivity in Nigeria." *International Food Policy Research Institute (IFPRI)*. International Food Policy Research Institute, n.d. Web. 12 Mar. 2014.
- Curry, Tim. "Countries and Their Cultures." *Culture of Nigeria*. N.p., n.d. Web. 12 Mar. 2014.
- "Determinants of Breastfeeding Patterns in Anambra State, Nigeria." *Comminit.com*. USAID, 12 Nov. 2013. Web. 12 Mar. 2014.
- "Education." *UNICEF Nigeria*. UNICEF, n.d. Web. 12 Mar. 2014.
- "Encyclopedia of the Nations." *Agriculture*. Encyclopedia of the Nations, n.d. Web. 12 Mar. 2014.
- "Ensuring Nutrition and Food Security in Rural Nigeria." *International Food Policy Research Institute (IFPRI)*. International Food Policy Research Institute, Nov. 2009. Web. 12 Mar. 2014.
- "Exclusive Breastfeeding (% of Children under 6 Months) in Nigeria." *Tradingeconomics.com*. Trading Economics, n.d. Web. 12 Mar. 2014.
- Falola, Toyin O. "Political Process." *Encyclopedia Britannica Online*. Encyclopedia Britannica, n.d. Web. 12 Mar. 2014.
- "Feed Yourself." *The Economist*. The Economist Newspaper, 04 May 2013. Web. 11 Mar. 2014.
- "Micronutrient Deficiencies." *WHO*. World Health Organization, n.d. Web. 10 Mar. 2014.
- Mohammed, A. S., I. E. Idowu, and Y. A. Kuyinu. "Structure of Primary Health Care: Lessons from a Rural Area in South-West Nigeria." *Ajol.info*. African Journals Online, 2010. Web. 12 Mar. 2014.
- "Nigeria." *Action Against Hunger*. ACF International, n.d. Web. 11 Mar. 2014.
- "Nigeria - Crops." *Nigeria - Crops*. N.p., n.d. Web. 12 Mar. 2014.

"Nigeria - Population - Size And Growth Rates." *Nigeria - Population - Size And Growth Rates - OnlineNigeria.com*. N.p., n.d. Web. 11 Mar. 2014.

Omotola, David. "Protein Seminar - Lagos, Nigeria." *Wishh.org*. World Initiative for Soy in Human Health, n.d. Web. 11 Mar. 2014.

"Wells for Sierra Leone." *The Water Project*. N.p., n.d. Web. 17 July 2014.