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Uganda, Malnutrition

Uganda: Tackling Poor Nutrition

Overview of Uganda

Uganda is an East African country landlocked between the Democratic Republic of the Congo, South Sudan, Kenya, Tanzania, and Rwanda. The country mostly experiences a tropical climate, and the geography is characterized by hilly and low mountainous regions covered in savannahs. Uganda has a population of about 45 million people, the majority of whom live in rural areas (75%). The population of Uganda is very young, with about half ages 15 years or younger. Uganda is a republic with three branches, along with a ministry cabinet that aids the president. The current president is Yoweri Kaguta Museveni, who has been serving since 1986. The country's land area is 93,065 mi², with 34% of that land cultivated. The average farm size is 1.51 hectares (ha), roughly the size of one and a half football fields. Uganda's major crop is coffee, which is also one of the country's major exports. Other major crops grown include plantains, millet, sweet potatoes, sorghum, and groundnuts. These crops are often staples in a typical Ugandan diet. Although Ugandans receive an average of 2,226 kilocalories a day, many are still malnourished, lacking a balanced diet and essential vitamins (Uganda Bureau of Statistics [UBOS], 2018). Malnourishment plays a prevalent role in Uganda, resulting in one in three children having stunted growth. The issue is often not prioritized since people, on average, are receiving a sufficient number of calories. However, not eating a balanced diet can be just as damaging to the individual and society as an insufficient quantity of food.

Ugandan Households

A typical Ugandan household has four to five members; four is more common in urban areas, while the average is closer to five in rural environments. Women often have five children and give birth at a relatively young age (19 years old). They usually live in dwellings with iron sheet roofs and brick walls, however; over half of the households have floors made of earth rather than cement. Their meals are carbohydrate focused, with low amounts of vegetables and fruits that contribute to their diet. They also lack enough protein and lipids in their diets. In Uganda, food is typically prepared in outside kitchens or open spaces. The most common source of fuel to cook food is from firewood, which is usually taken from nearby bushes and forests. Over half of Ugandans (57%) obtain their food by purchasing it, and 37% grow their own food. This directly correlates with subsistence farmers making up 40% of the working population. Ugandans who are employed most commonly work in elementary occupations. For workers in employed settings, individuals earn an average of 168,000 UGX a month, the equivalent of 45.76 USD (UBOS, 2018).

Education

Currently, the tuition fees for primary schools has been eradicated; this has improved the number of children attending schools, but many still do not receive a sufficient education. Almost half of school-age children have either had some primary school education or none at all. For those who do finish primary school, only 40% are literate (UNICEF, n.d.). Ugandans who are under the Universal Secondary Education (USE) program do not have to pay tuition for secondary school, but many are still barred from attending due to the lack of financial resources to pay for uniforms and school materials. The largest reason for not continuing schooling is due to the expenses that arise. With the limited schooling most children receive, they are not educated on items needed for a healthy diet. This causes many to be unaware that protein, vegetables, and fruits are necessary to stay healthy.

Accessibility and Health

Only one-fifth of Ugandans use electricity (UBOS, 2018), due to limited coverage of electricity grids. The large majority of the population also uses pit latrines for toilets. 22 million people do not have access to clean water; this represents almost half of the population. In terms of health care accessibility, Uganda has implemented free access to state health facilities. This has been an improvement of 80% more visits (Bulamu Healthcare, n.d.), but there are not enough health care professionals to properly attend to the large population of Uganda. In addition, many of the health professionals in Uganda work in urban areas, where only a fourth of the population lives. In rural areas, the situation is worse; there is only one doctor per 22,000 people. Even with free access to the health facilities, the facilities are often reported to be unsanitary and do not have adequate materials with long wait times. This can discourage patients from utilizing the facilities which can also impact the inadequate education about a proper diet.

The Impact of Malnutrition

The issue of malnutrition affects people in all areas of the country. In general, 37% of the population is food insecure, with 38% of children in a chronic state of malnutrition (Furrer, 2015). This can have serious health impacts on children, many of whom are stunted in growth. This stunted growth can even lead to death. It is estimated that over 500,000 children have died from stunting (UNICEF, 2015). The young age women have children also contribute to the malnourishment issue. They often have underweight babies which puts them at a higher risk of malnutrition. Also, about a third of the female population is malnourished which further contributes to malnourishment in infants. The mother's breast milk does not contain the proper nutrients due to their own poor diet. In elderly people, malnutrition has shortened their life expectancy. The lack of necessary vitamins and minerals leads to iodine deficiency, iron deficiency, and vitamin A deficiency. Malnutrition is not equally dispersed throughout the country,

as it affects people in rural areas than people in urban areas. People who live in rural areas typically grow their own food limiting the variety of food, as well as limited access to health and education facilities to alert them of ways to improve their diets. Malnutrition is on the decline due to the laws implementing easier access to health services and education, along with increased food production. Recently, the Ugandan government has recognized the issue and has set measures in place to help combat the crises. However, the number of people falling victim to malnutrition is still high, and more efforts must be taken to solve the issue.

Current Solutions

Amber Furrer, part of the American Society for Nutrition (ASN) visited Uganda in 2015 to educate farmers on nutrition. She was sent to educate locals of carbohydrates, protein, fat, vitamins, and minerals, and the importance of eating a good balance of them. Furrer realized that cultural norms played a huge role in what proportions Ugandans eat food. Uganda has the resources to grow fruits and vegetables, and they do, but fruit is regarded as a child's food. There is also limited availability of meat and dairy products. Ugandans also favor processed foods of a typical Western diet rather than a more nutritious option. Furrer explains the largest contributor to the issue is the lack of information Ugandans have access to. Few have access to electricity, fewer own electronic devices that can provide dietary information.

Ugandans are also unaware that they are malnourished since they are eating a sufficient amount of calories (Abdallah, 2019). To tackle the information gap, the Ugandan Ministry of Agriculture has reported that they are teaching communities how to prepare nutritious food. Some organizations not run by the government, such as the one Furrer was a part of, have also sent nutrition professionals to educate farmers. Although this method is effective, it is difficult to reach all of the large Ugandan population. Another approach the Ugandan government is researching crops, and improving them to provide the nutrients many are currently lacking. It has already been found that making orange sweet potatoes more accessible would decrease vitamin A deficiency.

In the past, crops have been genetically engineered to provide nutrients that are not naturally present in the crop. One example would be golden rice. Golden rice was engineered to contain vitamin A to help combat the deficiencies in developing countries. The utilization of golden rice does spark heated debate. People who oppose golden rice believe the method to be expensive when compared to other methods to solve malnutrition (NYU Langone Health, n.d.). Golden rice also does not provide enough vitamin A to meet the recommended daily intake. Golden rice only tackles one part of malnutrition and does not solve the economic, social, and cultural effects that contribute to poor nutrition.

Recommendation

Using education to tackle malnutrition is the best option in a country like Uganda. Their agriculture can provide nutrient-rich foods, but the lack of diet information is one of the biggest reasons for malnutrition.

Education on how to eat a balanced diet would tackle all types of vitamin and mineral deficiencies, more than solely distributing genetically engineered crops could. The first step is to provide even easier access to education and reduce the costs of secondary school so that more children would be able to continue schooling. Scholastic materials should also be provided in schools to limit the cost even further. This would have to be put into place by the Ugandan government. Funding to improve the education and lower costs of tuition would come from the federal budget. More of the budget should be allocated to the Ministry of Education and Sports. The money given to the Ministry of Education and Sports can expand on programs such as the USE program to encourage Ugandans to continue secondary school, as well as expand on the nutrition portion of the national curriculum and train teachers on the subject. The funding usually distributed to the security sector can instead be invested in the education and agriculture sector of the federal budget. Upfront, this can seem like an expensive investment, but without tackling the malnutrition issue, the government can lose hundreds of millions of dollars in the next decade from the decline of physical productivity, lower IQ, and disabilities that stem from malnutrition (Relief Web, 2009). Robert Mwadine, an advisor for the Academy for Education/Food and Nutrition, predicts that by spending one million dollars on nutrition programs, it could save the country 6 million dollars. By the combined effort of NGOs, such as the ASN mentioned earlier, and government-sponsored education programs, more communities can be reached to educate the current farmers. Even educating just a few members of the community allows those individuals to spread the information to be spread throughout the community.

Implementation of the nutrition education programs will present the challenge of outreach and enforcement. Reaching every school will be difficult, especially in rural areas of the country. In addition to giving schools the information that needs to be taught, teachers must also be educated on the topic. One way to combat this is to have local governments oversee the implementation of the programs. In Uganda there are 134 administrative districts that can act as the local government to ensure outreach to schools within the district. They can also act to enforce the programs and ensure that it is being implemented. One of the largest issues in the nutrition program is to address the cultural norms around eating. A study conducted in the Karamoja sub-region of Uganda, one of the most food insecure and diverse areas of the country. It was found that “social acceptability of certain foods has been seen to vary significantly across cultures” (Olum, Okella-Uma, Tumuhimbise, Taylor, & Ongeng, 2017). As a result, the level of food insecurity varied between the groups as well. An ideal program would have a curriculum that would be customized to specific regions and ethnic groups in Uganda. However, realistically, this would be very difficult to implement, especially at the beginning. As the program becomes more developed over time each of the four administrative regions as well as individual districts could add or alter the existing curriculum to accommodate the diversity of cultural norms within Uganda. To tackle education at a national level, basic nutrition information would be taught such as the food groups and why it is important to consume foods from each group. Another important aspect would be including curriculum regarding growing and tending to crops that would fulfill the deficient areas of their diet since the majority of food insecurity occurs in areas where people grow their own food.

The Ministry of Agriculture or other similar organizations could help to work with the nutrition program by distributing seeds of those crops, further encouraging the consumption of more diverse foods. This could include genetically engineered crops such as the golden rice already being used to

address malnutrition in other countries. The "Ministry of Agriculture is mandated to research and to develop nutritious food crops that will provide essential micronutrients like Vitamins A, iron, zinc and iodine" (Abdallah, 2019). This work should be continued and expanded to develop more varieties of crops and distribute seeds.

In order to educate the future farmers of Uganda, nutritional information must be implemented in schools, especially at the primary level. This ensures that the large portion of children who do not attend secondary school still receive nutritional information. The Ugandan government, specifically the Ministry of Education and Sports, must add this to their primary curriculum. By introducing nutritional education at a young age, it can prevent health problems that can occur in the future due to malnutrition. In addition, education about crops to grow can be extremely helpful in rural areas where most Ugandans grow their own food. This helps them have further information on how to implement nutritionally healthy practices. This is also a method that is easy to access since people would not have to seek the information through health facilities, but rather have the information presented to them.

By tackling the malnutrition issue, people will be more physically able to work, improving both the financial prosperity of the individual and the country. Once education is put into place, the knowledge is easily passed down to future generations to continue the trend of declining cases of malnutrition. The individual prosperity that can be achieved from overcoming malnutrition will also help to increase access people have to electricity and electronic devices that would provide Ugandans with an even larger resource of knowledge that would aid in solving malnutrition.

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