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Ethiopia, Factor 12: Human Diseases

Ethiopia: Treating HIV/AIDS to improve food security for rural farmers

Until my aunt adopted my cousin, Winnie, from Ethiopia, I knew little about the African country. Recounting her trip to claim Winnie, my aunt described “areas near the Nile and southern territories where picturesque green hills have overflowing bushes of coffee beans. Other areas are harsh deserts with cracked hard earth and dry dust flying everywhere,” she said. She witnessed the devastation brought by hunger and how poverty led rural farmers to abandoning their food crops for another plant that relieves them of their hunger, chat. Streets are littered with homeless Ethiopians chewing chat, emaciated and yet unaware of their hunger (Abigail Shaw).

My cousin was no exception to Ethiopia’s hunger. When my family first saw her picture, there was a happy, plump three year-old smiling back at us. I remember hearing about how she loved to sing the ABC’s and was working on learning to count, dreaming of her new parents and new life in America. We were told she was three. We now know that Winnie was nowhere near three when she was adopted. The orphanage feared she would not be adopted if she were older so they lied, taking advantage of her stunted growth as a result of malnutrition. When I met Winnie I was startled by how much food she would stuff into her swollen belly. She was unable to comprehend the surplus of food in America and ate lunch as if there would be no dinner.

Ethiopia is located in Eastern Africa, west of Somalia and spans 1,104,300 square kilometers. Ethiopia is filled with high plateaus and hot lowlands (CountryWatch), with a “central mountain range divided by Great Rift Valley” (CIA World Factbook). The climate is characterized by tropical monsoons with wide variation due to changing topography (CIA World Factbook). In February through April there are “short” rains and “big” rains in June through September, with the annual rainfall averaging at 43 in. (CountryWatch). The temperature in January is almost the same as the temperature in July: 65.20°F and 66.50°F respectively. The population of Ethiopia is 99,465,819 with a growth rate of 2.89%, the tenth highest growth rate in the world (CIA World Factbook).

81% of Ethiopia’s total population is comprised of rural residents, mostly of Oromo ethnicity (CultureGrams). 43.94% the population is age 0-14 and tapers off from there, generally balanced between men and women (CIA World Factbook). The median age is 18. Rural families live together in large compounds, combining three or more generations of men and their families. Within the compound a son and his wife live in a house of their own. On average, there are four siblings for the typical Ethiopian. The father builds the house and the son is also given a plot of land to farm. As parents grow older, the oldest son is responsible for taking care of his parents. Within the family there are clear gender roles. Being generally patriarchal, families expect the father to provide income and mothers to take care of housework. All adults with jobs contribute in order to support the large group of extended families. Some rural families are forced to rely on children working on the farms so many rural Ethiopian children are robbed of an education (CultureGrams).

Education in Ethiopia does little to educate students and prepare them with the tools to escape poverty. Ethiopia’s expenditure on education is 4.7% of the total GDP. The average years of schooling in Ethiopia is eight years for boys and six for girls (CIA World Factbook). The total literacy rate is 57% for male population and 41% for female population. In rural areas almost all schools are public schools. The poor attend government schools, which have a lower standard than public schools middle-class students attend. These schools are forced to rely on textbooks and have one computer if any. There is an average of 70

students to one teacher. Students are left with little resources for learning if they attend at all. Many children must travel several miles, sometimes crossing over rivers in order to get to class (CultureGrams).

Many Ethiopians fall victim to disease due to weakened immune systems from malnutrition. Typically Ethiopians eat “porridge made from corn, barley, oats, or sorghum flour boiled with milk.” Two popular dishes in highland areas are *injera* and *wat*. *Injera* bread is made using a grain called *teff* and *wat* is stew made using chicken, beef, or vegetables. When it comes to dining, men are the first to eat and women follow, but children do not eat with their parents (CultureGrams). Protein is considered a luxury due to the food’s high price, so most Ethiopians only splurge on a cut of beef or chicken during the holidays (Abigail Shaw). The majority (63%) of Ethiopians are Christian and 44% belong to the Ethiopian Orthodox Church. Religion impacts diet because “Orthodox Christians do not eat pork or meat from other cloven-hoofed animals”. Unfortunately, there is little access to medical care so many illnesses go untreated, whether the problem is food related or not. Some common food or water borne illnesses include malaria, meningitis, cholera, and yellow fever (CultureGram). There are about 0.03 physicians and 6.3 hospital beds for every 1,000 citizens as of 2009 to treat these illnesses. 28.2% of rural populations have improved access to sanitation facilities while the other 71.8% do not. The health expenditure as of 2013 is only 5.1% of the total GDP (CIA World Factbook). Generally, the infant mortality rate is 55.77 deaths for every 1,000 live births. If a child survives, it is expected to live to age 62 if male and 65 if female. The total fertility rate is 5.15 (CultureGrams).

In Ethiopia there are many major barriers for rural families regarding agricultural productivity. Farming is a major occupation, with 85% of the population engaged in farming. 43% of the total GDP is earned by agriculture. Only 19.5% of the population lives in urban areas. The rate of urbanization is a 4.89% annual rate of change. An extremely small amount of land is irrigated: 2,896 sq. km of land. Farms have limited access to water as a result, making it difficult to grow healthy crops (CIA World Factbook). Ethiopia has faced drought, soil erosion, and war. The unfortunate circumstances have contributed to the poor economy and recurring famine (CultureGrams). Farmers also lack access to modern farming products like fertilizer, are unable to find access to credit, and face disorder throughout the country (Mengistu). Factors related to the government, environment, and prevalence of poverty inhibit productivity on farms.

Families living in rural areas live in small farms, doing agricultural work to provide income. 36.3% of the land in Ethiopia is used in farming, but only 15.2% of land is arable (CIA World Factbook). The land has been subdivided to accommodate so many farmers that 26% of farms now occupy less than one hectare of land. 60% of rural farms are less than two hectares. The rest of farms are between two and two and a half hectares (Mengistu). Life in rural areas is restricted due to a lack of electricity. This also limits access to cold storage to prevent post-harvest loss due to spoilage. Wealth for rural families is determined based on the size of the families’ herds. Coffee is the main crop and is a large portion of export earnings (CultureGrams). Other agricultural products include: cereals, coffee, oilseed, cotton, sugarcane, vegetables, khat, cut flowers, hides, cattle, sheep, goats, and fish (CIA World Factbook). Rural farms are small and struggle to survive with limited resources.

Ethiopia’s Global Food Security index score of 38.5 ranks 86 out of 109 countries scored. The country’s scored 32.6, which ranks 86 as well. In the availability category Ethiopia has a score of 45.5 and a rank of 88. Ethiopia’s quality and safety received a score of 34 and a rank of 97. The Global Food Security index lists three strengths of the country. The first is nutritional standards with a score of 100 out of 100. The second is volatility of agricultural production with a score of 88.8 out of 100. The third is food loss with a score of 85.9 out of 100. However, the Global Food Security index lists six challenges. The first is public expenditure on agriculture R&D, which received a score of 0 out of 100. The second is gross domestic product per capita (PPP) with a score of 0.8 out of 100. The third is diet diversification with a score of 7.1 out of 100. The fourth is sufficiency of supply, which received a score of 16.8 out of 100. The fifth is

micronutrient availability with a score of 19.1 out of 100 and the sixth is proportion of population under global poverty line with a score of 24.1 out of 100 (Global Food Security Index).

Access to markets and adequate nutrition can be difficult for rural Ethiopians. 39% of the population is below the poverty line, which makes the purchasing of nutritional food difficult. In addition, only 6,064 km of 44,359 km of roads are paved. Unpaved roads are difficult to travel on especially for long distances so some families are unable to travel to markets without great difficulty (CIA World Factbook).

HIV/AIDS is a huge issue in Ethiopia. In 2014 36.9 million people were living with HIV. In Sub-Saharan Africa alone there were 25.8 million people living with HIV as of 2014 (Fact Sheet 2015). Two thirds of the adults and children infected with HIV/AIDS are located in Sub-Saharan Africa (Philipose) and as of 2014, 730,000 Ethiopians were infected with the disease (HIV and AIDS Estimates). “FAO estimates that AIDS has killed seven million agricultural workers in Africa since 1985. It has the potential to kill 16 million more within the next 20 years” (HIV/AIDS & Food Security).

The disease infects far more women than men, and now more women are affected globally than ever. 59% of people in Sub-Saharan Africa with HIV are women. Women have less access to information about AIDS because of low social and socioeconomic status and less control over prevention methods because of a subservient status. Women can become infected as a result of the responsibility of taking care of sick family members, a gender role assigned to African women. When girls take care of those infected with HIV, there can be social repercussions. Girls stop going to school, lose their jobs, and brave discrimination (Philipose). Biological aspects also play a role in the higher infection rate for women. There is a “greater efficiency of male to female transmission” for HIV (HIV/AIDS & Food Security). During war, one tactic is to be violent toward women and purposefully infect women with HIV, contributing to the spread of the disease. Another contributing factor is the transmissions of HIV from the mother to the child during childbirth or breastfeeding and women often have less access to healthcare (Philipose).

Human disease is a major factor in the limitation of food production. When people live with HIV/AIDS, it creates food insecurity and spreads quicker when mixed with malnutrition and poverty, creating a cycle poverty (Philipose). HIV/AIDS can cause food insecurity because the disease directs money away from the purchasing of food. Additionally, farms are not likely to be mechanized in developing countries so the success of the farm is dependent on the labor force (HIV/AIDS & Food Security). When workers have HIV/AIDS labor is taken away from the farms (Philipose). Workers without HIV/AIDS are also pulled from the labor force as a result of funeral attendance and mourning. Workers on farms spend an average of 10% of labor time at funerals instead of working on a farm (HIV/AIDS & Food Security). According to *HIV/AIDS, Gender, and Food Security in Sub-Saharan Africa* by Anandita Philipose, “it is estimated that the size of the labor force in Sub-Saharan Africa will be 10 to 30 percent smaller by 2020 than it would have been without AIDS” (Philipose). When the working family members die from the disease, children are left orphaned and unable to work on farms. As the working population grows smaller less land is cultivated, less crops and animals are produced, and more land becomes overgrown and unfarmable. Families must sell their farms and their assets and the agricultural production in communities drops (Philipose).

Recently, improvement on the prevalence and impact of HIV/AIDS appears to have been made. From 2000 to 2014, there was a 41% drop in new HIV infections; however, 66% of new HIV infections are located in Sub-Saharan Africa. From 2004 to 2014, there was a 48% drop in Sub-Saharan African deaths related to AIDS. 10.7 million people, 41% of people living with HIV in Sub-Saharan Africa, have access to antiretroviral treatment. In 2002 less than 100,000 Sub-Saharan Africans had access to antiretroviral treatment. Now five out of every seven people with access to antiretroviral treatment live in Sub-Saharan Africa (Fact Sheet 2015). Before labeling the HIV/AIDS epidemic as improving, one must consider the

reason behind the increase or decrease. The stabilization could merely be a result of an equal number of new infections and AIDS related deaths (Philipose).

Without the prevalence of HIV/AIDS in Ethiopia, food and income would become much easier to access. The disease takes away time from laborers when friends and family die and the deaths must be handled. Ethiopians with HIV/AIDS are unable to work. Not only does the farm lose workers and in turn profit, but rural families lose an income. Remove HIV/AIDS and labor comes flooding back into agriculture. Farms would have an increased yield and a bigger profit with more laborers. Money would be available for families to spend on food or a greater quality of food. Families would be able to escape poverty and have a better diet. The amount of children orphaned would decrease in addition to child mortality rates as parents who would have died from AIDS survive. Improving or eradicating HIV/AIDS would have a large positive impact on agriculture and rural families in Ethiopia.

Climate change, urbanization, and population growth all have an impact on HIV/AIDS. Weather in Ethiopia is becoming increasingly unpredictable, which makes it difficult for farmers to maintain their crops. Ethiopian farmers must sell their livestock and pull their children out of school in order to increase workers on their farm (Climate change increasing poverty and vulnerability in Ethiopia). Money must go to increasing crop production so families are unable to divert money toward prevention of diseases like HIV. Urbanization can worsen the epidemic. Increased migration to urban areas in Africa in the past 50 years has overwhelmed the infrastructure and led to an abundance of people living in squalor (Godfrey). In Ethiopia, the rate of urbanization is 4.89%. The population growth rate in Ethiopia is 2.89%, which adds to the crowding of slums in urban areas (CIA World Factbook). In Addis Ababa, Ethiopia, the slums are “often no more than small rooms separated by scraps of wood, corrugated metal or plastic sheets” and in certain areas of the city, girls as young as twelve must sell themselves in order to provide for their families. The urbanization severely affects the health of people living in cities. Ethiopian towns have an average HIV prevalence rate of 15%; however, rural areas have an average rate of 0-3% (Godfrey).

Women’s rights also have a big impact on the prevalence of HIV/AIDS. Because gender is so visible and ingrained into culture, it is a main form of categorization in African countries. As a result of the categorization, women are being placed in a role that is subservient to men. AIDS is a leading cause of death among women aged 20-40 in sub-Saharan Africa. The low status possessed by women is the main cause of greater female vulnerability to HIV infection. “According to UNICEF (2010:4) in sub-Saharan Africa, the rate among women (12.2 million) has already surpassed that of men (10.1 million) and AIDS is a leading cause of death among women aged 20-40 in sub-Saharan Africa.” Additionally, families may not be able to afford to spend precious income on the education of women so the women have limited knowledge on how to protect themselves (Gatta).

When it comes to AIDS policy there is three pillars to follow. The first is prevention, education, and awareness in order to reduce HIV transmission. The second is mitigation, or “reducing the impact of HIV and AIDS and supporting orphans and vulnerable children”. The third pillar is care, which involves providing direct assistance to people living with HIV/AIDS and their family (Philipose).

The United Nation’s World Food Programme has made strides in improving food security in Ethiopia. Ethiopia is one of 25 developing countries that have reached the Millennium Development Goal (MDG) 1. The percentage of the population that is undernourished has dropped from 75% to 35% over two decades. Additionally, Ethiopia has reached the MDG 4, which concerns child mortality. Nine out of ten children in Ethiopia are enrolled in primary school and the country “aims to foster sustainable, broad-based development” in the five-year plan. However, Ethiopia remains one of the most food insecure countries. About one third of the population lives below the poverty line (What are the current issues in Ethiopia?). Currently the WFP provides special nutritional supplements for around one million Ethiopians. People who receive the supplements include: pregnant women, nursing mothers, young

children under five, and people with HIV/AIDS. In order to help refugee, relief and HIV/AIDS operations, WFP offers cash and voucher based assistance (What are the current issues in Ethiopia?)

USAID currently has a local program in Ethiopia that aims to strengthen the response of Ethiopian communities to HIV/AIDS. One of the program's multiple approaches is to provide care directed at the needs of the whole family. Another approach is holistic care for those living with HIV/AIDS. A third approach is boosting resources that already exist and training health professionals. The program also helps create sustainable approaches by giving Civil Society Organizations (CSOs) the ability to handle resources. In the past CSOs have made great strides in helping communities address HIV/AIDS so increasing their efficiency will make a difference. Lastly the program encourages local, regional, national, and international partnerships (Strengthening Communities' Responses to HIV/AIDS in Ethiopia). USAID's program will make a big difference on HIV/AIDS in Ethiopia if it can be scaled up successfully.

When addressing HIV/AIDS, gender issues must be taken into account. Interventions must meet the differing needs of both men and women and address the negative effects of gender roles. Behavior must be changed so that the relationship between men and women is more equal. Women must be empowered through increased access to education and to social and economic resources. The UNAIDS 2004 report suggests five areas to improve gender inequality. The first is document land rights for women in areas majorly affected by HIV/AIDS. The second states that awareness of the disease must be spread, especially among policy makers and donors. The third is to reform legislation and the fourth is to change the legal system by establishing precedents and providing women with access to the legal system. The fifth is to support experimentations and initiatives that help make land ownership independent of gender (Philipose).

The current sexual culture in Ethiopia has contributed to the spread of HIV infection and in order to improve the situation, social interaction must be targeted. In Uganda, the prevalence rates have fallen sharply and social interaction played an important part. A study in Malawi also "showed that social interactions on the subject of HIV/AIDS have significant and substantial effects on perceptions of HIV/AIDS risk." Social interactions are helpful because people can learn how to contain the epidemic. Through community meetings, health counseling, etc., women can learn about behavioral changes that can help prevent HIV/AIDS and be encouraged to get tested for HIV. Additionally, stigma must be addressed because it "reduce[s] an individual's willingness to practice prevention, seek HIV testing, disclose his or her HIV status to others, ask for (or give) care and support, and begin and adhere to treatment (ICRW 2006)." HIV related stigma could be defined as fear of contact with someone living with HIV/AIDS, judgment based on values, discrimination, and disclosure (Philipose).

Many governments in Sub-Saharan Africa have created plans to initiate programs to prevent the spread of HIV/AIDS that are comprehensive and multisectoral; however, there have been problems with implementation. Health budgets in Sub-Saharan Africa are only \$5-10 USD per person per month and government programs are often understaffed, keeping people from accessing health officials. Additionally, AIDS has devastated the household and agricultural productivity, but no agricultural policies are in place to counteract the effects. In order for prevention programs to be more effective they need to have a bigger scale and a more focused approach. Programs that target the poorer, less educated population are most effective and as the epidemic grows, women and young people need to be targeted as well. Targeting the rural families is also an important part reducing the epidemic's spread. Agricultural productivity needs to be increased by providing access to markets with infrastructure like roads and the resilience of households must be strengthened so families can recover from HIV/AIDS. In order to combat the gender issue, women need to be encouraged to become food providers (Philipose). Additionally, corporations can play a role in implementation by providing services that cover "awareness raising and communication for behavior change, testing, laboratory analyses, clinical services, drugs

distribution and supply chain management, as well as care for the PLWHAs and their families” (Nankobogo).

With a global food security index score is 86, hunger is a huge issue in Ethiopia. The problem is partly caused by HIV/AIDS. Rural families struggle to support themselves and their farms as their efforts are focused on the HIV epidemic. The lack of resources leads to famine as workers’ time is occupied with HIV/AIDS. Additionally, HIV/AIDS is worsened by climate change, urbanization, and population growth. While the prevalence and impact appears to be decreasing, the data may not tell the entire story and attempts to improve the situation in Ethiopia still need to be made. When approaching the HIV/AIDS problem, differences in gender roles need to be accounted for because women are placed in a subservient role and lack an education on HIV/AIDS prevention. Solutions must attempt to change sexual culture and provide access to knowledgeable health professionals. As Norman E. Borlaug wisely said, “Food is the moral right of all who are born into this world.” The government, outside organizations, and rural farmers themselves need to work together so that one day all Ethiopian have the moral right to food.

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