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South Africa, Factor 12: Human Diseases

South Africa: Combating HIV/AIDS for a Better Future

South Africa, the southernmost country on the African continent, is a country with many natural beauties, but also one with a broken past. Many natural resources can be found in South Africa such as some of the world's largest deposits of gold, chromium, platinum and manganese. Although the country flourishes with a successful economy, there is an extreme divide between the rich and the poor with a gap that is only expanding. As a country with a rough racial past, South Africa has come a long way since the end of the apartheid era in 1991. Starting in 1948, the National Party of Apartheid took control of the government and implemented laws to separate black, white, and mixed-race people. While South Africa remains a constitutional democracy today, racial tensions still exist within the general population affecting food security, health, education, and employment tremendously. Another contributor to economic issues is the inflation of food prices. The lower class can only afford high-caloric, low-nutrient foods which contribute to malnutrition. With poverty levels soaring to record highs, HIV and AIDS are increasing at an alarming rate and making a negative impact on society. Today, there is no cure and when untreated, HIV/AIDS is typically fatal. Prevention, education, early detection, and antiretroviral treatments will increase the life-expectancy and decrease the mortality rate in the country. Solving these issues would greatly impact the citizens and their quality of life. For the people of South Africa, their safety and well-being is constantly being jeopardized.

Nearly 52.98 million people live in South Africa making it the 5th most populated country on the African continent. The people of South Africa typically live with their immediate family, averaging four people per household. Because of the morbidity rate among South Africans, extended family members are sometimes forced to move in to help with the chores and children. On average, women in South Africa have 2-3 children with this rate slowly declining since 2004. The racial past in South Africa has taken a toll on many families, particularly African Blacks. During the apartheid, it was considered illegal for a black person to marry a white person and adultery between a white and a black person was prohibited (Thompson). Approximately 76.2% of the population is black, but white people dominate the social status ladder (Wilkinson). In past years, the common practice of polygamy affected families all across Africa, but because unemployment has been on the rise, men are unable to provide for their family.

The traditional diets of South Africans lead to nutritional problems, but the inconsistency of the urban and the rural food markets contribute to the problem as well. The problem does not rely on the amount of food available in South Africa, but the quality of the food people buy. Nearly two-thirds of the population are overweight, and the problem is only growing (Birrell). Urban diets are overwhelmingly high in fat and sugar, which contributes to the nation's obesity. Although the country is experiencing an overweight health crisis, 40% of the citizens are nutritionally deficient. People eat high-calorie diets without eating the proper nutrients they need to live a healthy life (Singh). In the wealthy cities around the coast, seafood is a common staple meal if families can afford it. However, most poor citizens eat corn porridge and vegetable stew daily. Over 45% of people are not eating meals nutritionally diverse enough to fulfill their recommended daily intake (Stassen). Fruits and vegetables are not of easy access to most South Africans, so their diets are not complete and they lack many essential vitamins and nutrients.

Former South African President Nelson Mandela once said, "Education is the most powerful weapon which you can use to change the world." Attending school regularly and pursuing higher education is a key factor in building success in one's life, yet many South African students do not experience the quality education they deserve. Students start primary school at the age of seven and switch to secondary school at the age of fourteen. School is compulsory for all citizens 7-15 years old ("South Africa"). Schooling is

a “broken journey” for most students, interrupted by irregular attendance, absent teachers, teenage pregnancy, and school-related abuse and violence. South Africa spends the largest share of GDP on education than any other African countries; however, the performance level of the individuals in school is still lower than any other country in the region. The educational facilities are outdated and need supplies to support their students. Almost 27% of public schools do not have running water and 78% percent are without libraries and computers (“South Africa”). Like other African countries, improving access to education is interfered by developmental problems such as lack of infrastructure and resources, remoteness, and poor administration.

Many inequalities exist in South African healthcare. There is a two-tier healthcare system with a large public sector and a small, but very high-quality, private sector. Over 48% of the population heavily relies on the public health sector. Most middle to low income families are forced to go through the public sector because of unavailability, high cost, and lack of insurance coverage. Access to quality healthcare is important for the well-being of citizens as well as overall physical, social, and mental health status, prevention of disease and disability, detection and treatment of health conditions, quality of life, preventable death, and higher life expectancies. South African spends approximately 8.3% of the GDP, significantly above the recommended 5% by the World Health Organization (Mafika). The fund is split almost evenly with 48.5% allotted to private, and 49.2% allotted to the public sector. Before South Africa’s transition to a democracy in 1994, hospitals were assigned to particular racial groups with the most-concentration in white areas. Because of the high poverty and unemployment levels, healthcare is now dependable on the states.

In South Africa, there are two major groups of farmers: subsistence farmers and large-scale commercial farms, mainly operated by whites. Approximately 1/3 of farms remain after a detrimental decrease in farm profitability and water scarcity issues starting in the last decade of the 20th century. The average farm size of a subsistence farmer is 4 hectares. During the apartheid, whites owned 2% of farms, but controlled over 80% of the farmland. Only 13% of South Africa’s total land area can be used for farming and other agricultural practices (Mafika). The soil is consistently being over-worked and depleted of its vital nutrients because of the high demand for profit off the land. The increase of both organic and synthetic fertilizers have made a positive impact on crop yields. While South Africa produces many different crops, including peanuts, sunflower seeds, beans, soybeans, and other cereal and grains, maize is without a doubt the most important in South African agriculture. Maize is a dietary staple in many diets; in addition, it is used for livestock feed and a major export crop. South Africa is the number one maize producer in Africa and is expected to be for years to come (Braun). Most crop production takes place in the Northern provinces away from the coast. Efficient agricultural practices also contribute to an increase in the yield of crops and to the total overall agricultural production. Ploughing and tilling of the soil is a method typically seen as beneficial, but in South Africa, it is often abused. Tilling on dry, hard soil can cause a compaction layer which can decrease the water infiltration and increase erosion of the topsoil. This can lead to erosion and break down the organic matter in the soil. To lessen this problem, incorporating the use of cover crops can help cover the soil and enhance the resistance of the soil erosion. Other practices such as efficient irrigations can help alleviate the drought and soil problems. Improved agricultural practices will bring greater nutrition to the people and the nation and implementing these solutions will have a positive impact on farming and agriculture in South Africa.

Agriculture is one of the biggest employment sectors in Africa, yet only accounts for 2% of the total GDP. A major reason for this is that only 12% of the land is fertile and suitable for rain-fed crops (Mafika). Crop production for crops like maize and wheat fluctuate based on the rainfall of each year. In addition, the lack of financial support and inadequate education of farmers directly correlate to the profit of the crops grown. Due to the rising cost farmland, farmers are forced to use their land repeatedly. This depletes the soil of its nutrients and productivity. Farmers use artificial fertilizers and pesticides to make a worthy profit despite expenses and uneasy access in some parts of South Africa. Proper government support would go far alleviating these problems.

The racial segregation that ended in 1994 still influences the society and social status of South Africans today. Major barriers that contribute to the lack of employment include racial segregations, unhealthy citizens, and uneducated workers in the labor force. The average income for white people is over six times higher than black people with an average of 365,000 rand (\$26,902.46 USD) as opposed to blacks with 40,000 rand (\$2,974.82 USD) per year (“South Africa's Census: Racial Divide Continuing”). This is problematic considering black people account for 76.2% of the total population while whites make up for 10.3%. In addition to the segregation problem affecting South Africa’s employed population, the unemployment rate has been on the rise for the last decade. More than 30% of the labor force is unemployed and has been the highest rate since 2004 (Chutel). By improving education in the country, employment rates would overall increase and help promote economic growth. Halfway through the required schooling of children in South Africa, most students are still illiterate and innumerate. This creates a problem when young adults proceed into the work force, but cannot obtain substantial jobs due to their lack of knowledge. Along with education, the overall wellbeing of South African citizens affects their daily lives.

Accessing proper nutrition is important to live a long, healthy life. However, with the lack of nutritional education and low incomes, not all people have access to adequate nutrition or food markets. A significant contributor to families not being able to afford food is the overall inclination of food prices. The most contributing reason for this is the economy’s consumer inflation level of demand is not increasing as fast as the cost of food. South Africa has the resources and food products to feed its country, however, the problem resides on due to the lack of affordability and accessibility. One in four South African children face chronic hunger every day. The problem is more pronounced in rural areas where food is not as readily available, such as villages and tribal reserves. In these areas, the crop production heavily relies on subsistence farming and gardens. Most farmers can only grow as much food as they need to support their families because of the labor-intensive work. Most often, all the food is used and none is left over. Because of this, the people do not have anything to sell in market to make an extra income for other necessities.

Human diseases are some of the main setbacks for families trying to make a living and execute successful lives. Statistics prove South Africa has one of the most prominent and high profile HIV/AIDS epidemics in the world (“HIV and AIDS in South Africa”). The human immunodeficiency virus, also known as HIV, is a dangerous virus that attacks the immune system. In its most advanced form, AIDS, short for acquired immune deficiency syndrome, is the last and most dangerous stage of HIV infection. Typically, the body can no longer defend itself from any diseases or pathogens and if left untreated, AIDS will cause death. Although there is no cure for HIV/AIDS, an antiretroviral therapy (ART) can help control the virus and reduce the risk of transmitting the disease. The illness can create a financial burden on families, especially those with low incomes. Those affected with HIV/AIDS, tuberculosis, and other diseases may be unable to go to work and consequently cannot provide basic needs for their families. Most farmers are poor, subsistence farmers and are required to perform strenuous labor to do daily tasks on the farm. If they are affected with HIV/AIDS, farmers cannot continue working on the farm or afford to hire labor. Families suffer financially because of choosing between living necessities or healthcare treatments. People are unable to afford both the healthcare and medical treatments needed to fully recover and basic needs like food, water, shelter, and clothing.

HIV/AIDS is the largest epidemic problem in South Africa and has left the country in distress. In 2015, an estimated 7 million people were living with the disease with an approximate 19.2% of the adult population affected. Over 180,000 South African people died from HIV/AIDS in 2015, while 380,000 more are diagnosed annually (“HIV and AIDS in South Africa”). South Africa has made tremendous strides in recent years to combat the growing problem of human diseases in the country. In particular, the current outlook in children is more encouraging; from 2002 to 2012, HIV rates declined due to programs aiming to reduce mother-to-child transmission and encouraging the use of antiretroviral medications. These methods have reduced child mortality by over 20%. Women over the age of 15 are the most

populated age group that have contracted HIV (“HIV and AIDS in South Africa”). As HIV rates continue to rise, a solution is needed to control this disease.

Improving the status of the country’s growing disease crisis will not only improve the lives of families, but also society. HIV/AIDS has a direct impact on the workforce and the productive years of a person’s life, as it is most commonly found in adults ages 20–40 years old. Impoverished households can correlate families who have contracted the disease. This is also problematic because South Africans do not have the proper access to healthcare resources and other beneficial services. If the overall rates of HIV/AIDS were to decline substantially, unemployment would decrease and impoverished families would start taking proactive steps to become more productive in the South African society.

Access to clean, steady supply of water is a privilege most people in developed countries take for granted. For those affected with diseases such as HIV/AIDS, this basic necessity becomes crucial to stay healthy. Drinking or cooking with unclean water raises risks for other diseases like cholera or developing diarrhea; because of their compromised immune systems, chances of death are significantly higher. Water is essential for life regardless of HIV/AIDS status. Taking oral medications can help reduce symptoms, but to fully digest them, safe drinking water is necessary (Kamminga and Wegelin 9). In first-world countries, antiretroviral treatments seem to be more effective than in third-world countries. The cause of this may be due to high level of clean water and proper sanitation.

To ensure that the people of South Africa receive proper treatments and prevention against HIV/AIDS, it is necessary to provide the proper care and prevention methods for South Africans. Investing in more educational programs, antiretroviral treatments (ART), and allowing easier access to clinics and hospitals would dramatically reduce the risk for unaffected citizens as well as those with HIV/AIDS for them to live longer, healthier lives. These technologies are the appropriate solution to reducing the spread of HIV/AIDS because of their efficiency and effectiveness. Pregnant women, patients with both tuberculosis and HIV/AIDS, and patients with severe HIV and a CD4 (type of white blood cell) count less than 200 mg are prioritized in receiving ART treatment (“When to Start Antiretroviral Therapy”). The country of South Africa started to offer free access to antiretroviral treatments because of the overwhelming average cost of \$9,360 USD per person per year. Through the public health system, 3 million citizens are utilizing the treatments, but this only accounts for 30% of those in need. The average cost per visit to receive ART is R120 (\$9.17 USD), plus travel and time. Patients cannot afford to take off work or afford transportation due to these expenses (Rosen et al.). With 39% of the population living in poverty, extra expenses are not always an option.

Many local projects could be beneficial to South Africa and urban families. Providing the public with more resources and better access to healthcare facilities could reduce the number of affected patients without treatment. Incorporating HIV-intervention programs into the educational system would inform adolescents about signs, symptoms, and prevention of the HIV infection. Currently, most local clinics are only open during regular business hours when students are typically in school. If hours were expanded, adolescents would have a greater chance of attaining resources such as testing and treatment. Locally, one organization that could be scaled up to help treat and prevent HIV/AIDS is the Community HIV Outreach Project (CHOP). Although there are many local and international organizations doing similar work in South Africa, CHOP has been the most successful in reaching out to the general public. The goals of CHOP projects are to reduce HIV infections, discrimination, and impact of the epidemic in South Africa. This could greatly benefit citizens on a local level by providing information and raising awareness. International organizations such as The Global Fund and United Nations AIDS organization can give financial support to local projects and provide more resources from a global aspect to eliminate HIV and AIDS. Families can get involved by supporting these organizations and utilizing the resources they have to offer (“HIV and AIDS”).

Overall, epidemics in South Africa is a growing crisis that needs to be addressed. Despite the racial challenges that are still adamant in South Africa today, there is still hope for the population through many proposed solutions. With the lack of access to the available resources, families cannot live long, healthy lives together. As of 2016, over seven million people were living with HIV/AIDS, the highest number of affected citizens in a single country in the world. Many factors in South Africa could help reduce the transmission and disease rates. Improving the quality of life of citizens affected with HIV and AIDS through treatment and prevention programs would trigger work productivity, and thus, promote economic activity and growth. Addressing the issues in South Africa will help maximize South Africa's food security, particularly in impoverished and uneducated areas. If attaining medical resources becomes easier and more affordable for the already infected HIV patients, it will minimize the wait time for citizens from diagnoses to treatment which can help save a life. Decreasing the current rate of transmission would dramatically affect the future lives of South Africans. Helping South Africa achieve these goals will not be an easy task, but supporting them with the assistance they need will benefit the families, the country, and the world.

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