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Egypt: Eliminating Malnutrition through Education and Reform

Egypt is a country with a famous past and a vibrant future. The old and the new coexist in the bustling markets and busy streets of its many cities. Egypt is a land that has captivated schoolchildren for generations and has even inspired a career – Egyptologist – to study its illustrious past. However, the Egypt of today is not the legendary land of pharaohs, sphinxes, and pyramids. It's the land of a people who are deeply invested in their future, a land of changes and revolutions, and, unfortunately, a land where sustenance is just out of the reach of some people. A well-known story in Greek mythology is the tale of Tantalus, the man who was condemned to an eternity of standing in a chin-deep pool of water that lay underneath a fruit tree. Though his prison had bountiful water and food, he was thirsty and starving. Each time he reached for a bite of fruit or a drink of water it retracted, keeping him in reach of sustenance but unable to grasp it. This is much like the situation that many urban poor Egyptians face each day. They live in a land that does not lack food, and indeed, most are not starving. Yet in this land of plenty, malnutrition plays a negative role in the lives of these people that is significant enough to harm their well-being. Like Tantalus's curse, malnutrition keeps the urban poor of Egypt out of reach of adequate nutrition and their highest potential as income-earners and members of society. In order to cast the demon of malnutrition away and remove poor urban Egyptians from their own version of Tantalus's torment, initiatives must be taken to reduce malnutrition and poverty. This effort will require reform of existing programs, implementation of new solutions, and cooperation between the everyday Egyptian and those in the international community.

Lying on the Mediterranean Sea, Egypt's lush Nile delta is contrasted with the scorching deserts of the Sahara. Tiny rural villages are paired with massive, bustling cities. Across Egypt, families have, on average, three children living with two parents, though it is not uncommon to see extended families living in the same home (Global Health Observatory). For many Egyptians, especially those living in poor urban areas, bread and other carbohydrates make up the majority of their diet. Fresh produce, as well as meat and other proteins, are very hard to come by due to high food prices and rising unemployment ("Surviving On A Crust"). Egypt is, though, a land that values education. It has a robust and well-supported school system with attendance rates of 94% of males and 91% of females ("The Situation of Women and Children in Egypt"). Despite that impressive attendance record, 46% of poor people in Egypt are illiterate, which contributes to challenges in food security ("Egypt: Improving Measurements"). Egypt has also made considerable efforts to increase access to health care for its people, 95% of whom live within five kilometers of a health facility. However, many don't utilize these resources because of poor quality of care ("Population and Development in Egypt").

A major problem for urban Egyptians is unemployment. At the end of 2012, urban unemployment rested at 16.9%, which is above the national unemployment rate of 13% (Bawadi). Many urban poor who are employed find their work in the informal sector – an area of the economy that is untaxed and unregulated by the government. In this sector, job security, employment benefits, and fair treatment are severely lacking (Wahba). Wages in this sector vary, but they are quite low on average.

Much like its attention to education and healthcare, the Egyptian government provides food for its people. The urban poor have access to food subsidies, of which there are two in Egypt. There is a ration card system that allows Egyptian households to buy set quantities of specific foods at low prices from select distributors and the *baladi* bread subsidy that provides for government-subsidized bread on a first-come, first-served basis. These subsidies provide most of the average urban poor family's food. Many Egyptians

view this government-subsidized bread as a basic human right; in fact, the Egyptian Arabic word for bread – *aish* – literally means ‘life.’ Fresh produce is available at higher cost from street markets, although soil-less rooftop agriculture is used on a small scale in Cairo. Most urban poor Egyptians, however, do not have access to a garden.

There are several major barriers to food security for the urban poor in Egypt, but one sticks out in particular. Of those Egyptians not employed in agriculture, 51.2% work in informal employment (International Labor Organization). It is difficult for people employed in this manner to earn enough income to feed their families nutritious food. Instead, urban Egyptians rely on the government-subsidized *baladi* bread and other carbohydrates, resulting in a diet that is imbalanced and nutrient-poor. This absence of key nutrients in the diets of the urban poor is what causes the growing problem of malnutrition.

Here in the West, we’re shown pictures of what malnutrition looks like. Oftentimes, it’s a child with wide, searching eyes. Her bones protrude from her paper-thin skin and her stomach bulges. Flies flit around her head. However, the specter of malnutrition in Egypt takes a different form. Many urban Egyptian children go to sleep with a full stomach. Food is widely available, thanks to the government food subsidies. Yet, even though food is at hand, malnutrition is a major problem. The issue is not lack of food; rather, lack of nutrients is the root of malnutrition in Egypt.

Malnutrition does not just affect the person that is undernourished, making it a preeminent food security issue. Malnutrition, especially child undernutrition, has lasting impacts on the life of the child, both in his youth and throughout adulthood. A child who is undernourished is more likely to need medical attention, placing a financial and emotional burden on his family. Moreover, undernourished children, especially those who are stunted (low height for age), are more likely to drop out or repeat grades in school. This loss of education means that a malnourished child will be significantly disadvantaged as an adult, because stunted children are less likely to reach full physical and cognitive potential, thus reducing productivity (“The Status of Poverty and Food Insecurity in Egypt”).

In fact, the World Bank has estimated that undernourished children earn ten percent less income over their lifetime than their fully nourished peers (“The Cost of Hunger in Egypt”). In a poor urban Egyptian family, every cent counts. The loss of productivity and thus loss of income caused by childhood stunting can be devastating, and if a child incurs medical bills due to undernutrition, malnutrition is dealing the family a double blow. Because of stunting, the urban poor are unable to earn enough money to provide good, nutritious food for their families, instead relying on a cheaper diet that is lower in key nutrients. The issue for many Egyptian urban poor is not the availability of nutritious food like fruits and vegetables, but rather that families simply cannot afford them (Loveluck). If Egyptians were able to work to their full potential, which is impossible because of childhood malnutrition, they would be able to stop the cycle. However, because these urban Egyptians are trapped in an economic situation that forces them to buy cheaper, less nutritious food, their children will also be stunted and unable to reach full potential in adulthood, condemning another generation to the same impoverished and food-insecure situation.

Currently, malnutrition is a significant problem in urban Egypt. A report published by Egypt’s Central Agency for Public Mobilization and Statistics (CAPMAS) and the World Food Programme discovered that 17.2% of the Egyptian population is food insecure (“Food Security and Nutritional Status”). While the poverty rate in rural Egypt is higher, poverty in urban areas is growing at twice the rate of that in rural Egypt (Breisinger et al). Between 2009 and 2011, in fact, the urban poverty rate grew by 40%. Currently, 15.3% of urban Egyptians are living in poverty (“Food Security and Nutritional Status”). This growth of urban poverty is matched by a growth of child stunting, caused by malnutrition. Thirty-nine percent of children in urban Egypt are stunted, which is over the national average of thirty-one percent (Breisinger et al). Malnutrition-related diseases are also prevalent among the Egyptian urban poor. The “Cost of Hunger

in Egypt” study estimated that dietary-related diseases among undernourished children cost Egyptian families 1.2 billion Egyptian pounds yearly. The head of the state-run National Nutrition Institute estimated that iron deficiency anemia (IDA), a disease caused by poor nutrition, currently affects over half of Egyptian youth (“Egypt Moves to Tackle”). IDA can reduce learning capacity, hurt immune systems, restrict health and development, and limit adult work performance – in fact, anemia has been linked reduction in future earnings and a 15% drop in productivity. (“Iron Deficiency Anaemia”) Because malnutrition in Egypt is caused by a lack of nutrients rather than food, nearly everybody can be at risk for it. However, it is the urban poor who are particularly susceptible to malnutrition. Because they cannot afford foods like dairy, fresh produce, and meat, their diet consists mainly of subsidized *baladi* bread and other foods that are high in carbohydrates (Breisinger et al). Basically, the food they’re eating is filling, but not nutritious. This puts the urban poor at risk for stunting, wasting, and diseases like anemia.

As shown by data from CAPMAS and other humanitarian groups, this situation is not improving. Malnutrition and poverty are fundamentally linked. While malnutrition exists, it is much harder for impoverished families to work out of poverty and vice versa. Unfortunately, poverty has been rising rapidly in Egypt. Egypt’s Household Income, Expenditure, and Consumption Survey (HIECS) from 2011 shows that between 2009 and 2011 the percentage of people who moved into poverty was more than double that of those who moved out of poverty. Moreover, as unemployment grows, more and more families are relying on cheaper, less nutritious food. Already, 88% of poor families surveyed have taken this step (Breisinger et al). As poverty rises, the Egyptian urban poor try to solve their economic problems by cutting down on their biggest expense. This means that dietary diversity will continue to be reduced, as food represents a disproportionate amount (40.6%) of the average family’s budget (Breisinger et al). When meat, dairy, and produce are taken out of the equation, low-nutrient carbohydrates are left. This lack of diversity and nutrition in Egyptians’ diets will only increase the rates of malnutrition, which are already quite high. Unless malnutrition can be addressed, poverty is only going to get worse and the urban poor are only going to see their situation regress.

If malnutrition was eliminated or reduced, the average urban poor family in Egypt would reap benefits in many areas of life. As estimated by the World Bank, undernutrition in children results in a 10% reduction in lifetime earnings as compared to peers who were not malnourished (“The Cost of Hunger in Egypt”). Because 40% of Egyptian adults are stunted, many poor, urban families have income-earning members whose productivity is negatively affected by malnutrition (“Hunger Costs Egypt Billions”). This loss of income has forced families to eat cheaper and less nutritious food, thus passing the burden of malnutrition on to the next generation, in which 39% of urban Egyptian children are stunted (Breisinger et al).

Without malnutrition, Egyptians would be able to better provide for their families. The gains in productivity and thus income would allow for better dietary diversity and would ensure that the next generation of children would not be stunted. These children would then be able to work to *their* full potential in both school and employment and would be able to provide for their future families in a way that would prevent malnutrition. It is estimated that malnutrition cost Egypt 20.3 billion Egyptian pounds in 2009, which is 1.9% of its GDP (“Hunger Costs Egypt Billions”). This is a significant amount of lost money. Eliminating malnutrition would not only help individual families, but also impact Egypt’s economy at large, resulting in more opportunities for employment. More employment means more income, which would, again, allow urban poor families to increase their intake of nutrients. Moreover, because poverty and malnutrition are so interconnected, the removal of malnutrition as a factor would also play a powerful role in reducing poverty. Without poverty, malnutrition is far less likely, completing this circle of healing.

Of Egypt’s nearly one hundred thousand square kilometers of land, only 2.97% is arable (“Egypt”). As climate change continues to reduce the amount of land suitable for farming and crop yield is diminished due to drought, rural farmers may choose to give up agriculture and move to the cities. Jobs are already

scarce, and an influx of people will only intensify the situation. An increasing urban population will stretch what few resources exist to their limits and most likely will result in growing malnutrition due to even fewer available jobs and a decrease in available services. Crop yield reduction may drive up food prices, pushing good nutrition even further out of reach for poor urban Egyptians. Malnutrition rates and childhood stunting will continue to rise due to stress on food sources, climate change, and urbanization.

Ending malnutrition can be accomplished, however, by addressing both undernutrition itself and poverty. Both of these factors play a significant role in the lives of poor Egyptians, and each is a key reason as to why the other exists. A strategy that attacks both issues in tandem would prove effective. Immediately, efforts should be made to combat childhood undernutrition. The damage has already been done to Egyptian adults, but if children can be adequately nourished they will have a better chance of working to their full potential in the future and thus avoid passing on the problem of malnutrition to their children. It is incredibly important that Egyptian children have access to nutritious food.

One way that Egyptian children could be nourished is through school feeding. Egypt already has a school feeding program that reached about 30% of schoolchildren in 2010 (“Country Highlight: Egypt”). Eligibility for the program is determined by attendance rates and a poverty map, meaning that only children with a 90% attendance rate are able to receive the meals (Lambers and Bordignen). While school feeding ensures that the children in school are being fed, many children afflicted by malnutrition see their attendance negatively affected. They then become ineligible for the program and the problem grows. If this program could be adapted so that the health problems of undernourished children and the effect of them on school attendance were taken into consideration, school feeding would be much more effective. Egyptian children should not be further punished for malnutrition. Each child’s eligibility for the school feeding program should be carefully reviewed in order to determine whether they are truly working to their best abilities. If the child is doing the best he or she can while dealing with malnutrition, the attendance requirement should be revised in order to best serve each individual. The lure of food could pull children into the schools and could help Egypt meet Millennium Development Goal Two of universal primary education, as well as helping to eradicate hunger. Moreover, the prevalence of informal employment among urban Egyptians is a serious barrier to the reduction of poverty. Many Egyptians resort to jobs in this sector after dropping out of school, often because of malnutrition. Increased access to and quality of education would make it easier for Egyptian young adults to sustain a viable job, increasing the chances that they will make enough money to adequately feed themselves and their families.

Egyptian children also need to understand the fundamental role good nutrition plays in leading healthy lives. Schools could pair nutrition education with the distribution of food and explain what a balanced diet looks like and the importance of eating one. If programs like this were put in place, children would be exposed to good nutrition from a young age. They could then pass this knowledge on to their parents and, in the future, their own children. Nutrition would always have a place in their life, so reverting to a less-nutritious diet would be far less likely. WASH for Schools, which uses sanitation education and practices to promote attendance, good health, and community pride, could be used as a blueprint for a similar program that focuses on nutrition in Egypt’s schools (“Raising Even More Clean Hands”). Egypt’s children would grow to have pride in good nutrition and would be more likely to pass their knowledge on to the next generation. A program like WASH for Schools would benefit the individual and the community at large, as community-wide education initiatives could be paired with those taking place in schools. If the whole community were involved, urban poor families would have support from their peers and would feel more inclined to accept nutrition education.

On a larger and more long-term scale, initiatives that change how Egypt’s food subsidies are distributed could allow more of the population to have access to nutritious foods. Egypt’s ration system, which allows people to use ration cards to get set amounts of subsidized food, covers 80% of the population. However, 73% of those eligible for the program are not impoverished, and 19% of the most food-insecure

Egyptians aren't able to utilize this subsidy (Breisinger et al). If the ration card program's targeting was reevaluated, this program could more effectively reach food-insecure Egyptians and help to eliminate malnutrition. Better targeting could be achieved simply by changing the criteria for involvement in the program to discourage the non-poor from participating and by continually updating databases to account for births and deaths. This would help stop fraudulent use of the ration program as well as cut costs. It would also allow families to focus more on work and school than the constant struggle of finding food, as well as reduce the disproportionate amount of income that is spent on food. The savings could be applied towards more education, nutritious food, better housing, or resolve other quality of life issues.

Simply by eating a balanced diet, Egyptian children would have a brighter future. The stunting and diseases that plagued them due to malnutrition would be eliminated, allowing them to achieve full potential in adulthood, ensuring that they could provide for their families and keep them out of both extreme poverty and hunger. This would result in the completion of Millennium Development Goal One and Two. The Millennium Development Goals of decreased child mortality (four) and improved maternal health (five) could also be achieved through ending malnutrition, as women and young children bear the brunt of diseases and other dangers associated with undernutrition. Good nutrition begins in childhood, and through school programs (both feeding and nutrition education), the importance of it can be planted in the mind of the child and passed down to the next generation. This would start a healthy cycle and further serve to eradicate malnutrition.

In order to carry out these programs, cooperation between the people of Egypt, their government, and international organizations must continue. The government must be willing to reform their ration program and school-feeding system, continue fortifying the subsidized *baladi* bread with nutrients, and make sure the food gets to those who most need it. Egypt's government also has to remain open to assistance from international organizations. From 2007 to 2011, the World Food Programme partnered with the country to provide school food to students. Egypt must remain open to cooperation like this in the future, whether it is in a similar capacity such as implementing a reformed school feeding system or an entirely different initiative. Perhaps a program like WASH for Schools would be best implemented by an international aid organization in order to keep it corruption-free and efficient. It is only through cooperation between international groups, Egypt's government, and the Egyptian people that malnutrition can be completely eliminated. Communities must be open to implementing recommendations. They must be engaged and supportive of initiatives that aim to reduce malnutrition, as well as provide an environment that is conducive to change. In turn, the urban family should remain committed to education. Children must stay in school, and families must stress this. A support system around the child is the best motivator. Moreover, families must be willing to change their diets to include more nutritious foods. Change is difficult, but it is only through this change that problems can be solved.

Tantalus never escaped his eternal torment, but Egyptians can. Rapid and intense change is occurring in Egypt and this political upheaval can be paired with a revolution in nutrition. Malnutrition and its root cause, poverty, can be eliminated through a series of efforts that attack both issues and involve cooperation between the everyday people, government, and international groups. The elimination of malnutrition will allow this generation to pursue their dreams, free from the spiraling trap sprung by undernutrition and poverty. Egypt's next generation, already privy to a country that is remarkably different than their parents', will also have a much brighter future. The streets of Cairo, Alexandria, and other Egyptian cities will be filled with happy and healthy children, children who will never be limited in any way by food. They will be able to concentrate on issues other than putting food on the table and look to a world beyond the *baladi* bread line. Egypt's problems and political struggles will be better solved by a populace that is well nourished and well educated. These adults, once children who fought on the front lines of a nutritional revolution, will be able to forge a future based on dreams that once were out of reach. It is this generation that will see malnutrition relegated to the dusty corners of history, shunted behind relics of Egypt's illustrious past – a past that will be rivaled by the future.

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