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India, Factor 11: Malnutrition

Malnutrition in India

The country of love, belief, multiple cultures, and color, India is home to the largest population of malnourished adults and children in the world. The quantity of underweight children in India is one of the highest in the world, and is almost double of those in Sub Saharan Africa. Major causes of malnutrition, and eventual death in India are inadequate dietary intake, lack of maternal nourishment due to insufficient education or poverty, poor access to public health services, early marriages of girls, as well as a number of environmental, geographical, cultural, and agricultural factors. Malnourished children experience developmental delays, extreme weight-loss, and illnesses. Extraordinary changes have been made in India over the years, but 42.5 percent of the children under age five are still malnourished; making them easily susceptible to serious and fatal diseases. Nearly 48 percent of children are stunted and 20 percent of children under the age of five suffer from wasting, both of which are caused by acute malnourishment. Education in women contributes a crucial role in the future and well being of children. Mothers are most commonly the primary care giver of children, and lack of education has a drastic effect on the nourishment and care given to their young. The absence of sincerity and equality shown towards women are also immense contributors to malnourishment because they are considered to be of a lesser status than of men, keeping them to receive proper care and knowledge. According to UNICEF India, only 25 percent of newborns were put to the breast within one hour of birth and less than 46 percent of children under six months are entirely breastfed. Breast milk contains antibodies that assist the baby to fight off viruses and bacteria. Research has shown breast-fed children are more resistant to disease and infection and are less likely to contract numerous diseases later in life. It is important to note that malnourishment is more common for children of mothers who were malnourished themselves, than for children whose mothers were not. Anemia, low count of red blood cells due to vitamin and mineral deficiency, affect 70 percent of children from age six months to 5 years. Children of mothers who are victims of anemia are seven times more likely to be anemic than those whose mothers are not. Insufficient access to public health institutes, clinics, etc. prevents diseases and illnesses to be cured, and preliminarily vaccinations to be distributed to the public in need. India is in a serious crisis when it comes to undernourished children and it is imperative a critical change be made within the near future, in order to save the lives of millions of innocent infants and children.

The second most populated country in the world, India holds over 1.2 billion people (2016), more than a sixth of the world's population. It has been proposed that India will be the most populated country in the world by 2022, surpassing China. Age demographics, according to census India, show that 10.7 percent of the population is within age's zero-four, 27.6 percent is within ages 25-44, and 47.9 percent of the population is under the age of 21. The average birth rate is 19.89/1000 and death rate is 7.35/1000. The infant mortality rate stands at 43.19/1000 per

live birth. The number of individuals per household varies between four and six. The typical family consists of two to three children, a mother, and a father. It is also quite common to find grandparents and extended family members within the household as well. The yearly per capita in India stands extremely low when compared to those living in the BRICS (Brazil, Russia, India, China, and South Africa) nations. The average annual income is less than \$616 (USD). It would cost about \$140.24 (USD) per month to be capable of providing necessary foods, pay for monthly electrical bills, and pay rent for a mediocre home. The average monthly per capita is \$51.3 (USD), making it difficult to pay for day-to-day essential requirements. The unemployment rate is about 3.6 percent. According to Trading Economic, 60 percent of the population works in agriculture, 23 percent in services and 17 percent in industry. Men are the primary workers in the labor force. The various religions practiced in India affect the diet within cultures. Hindus do not consume any beef, and many are vegetarians. Jains are stern vegetarians, and Muslims do not consume any pork. The most common diet in India consists of many starches, vegetable curries, and dairy products. Many base and staple ingredients found in Indian dishes are made from dairy, such as paneer (homemade cheese), ghee, yogurt and butter. Majority of deserts or sweets are chena (homemade cheese for deserts) based. Basmati rice and roti are the most common starches consumed. Also, specific diets are pursued during festivals, celebrations, or mourning's. It is conventional for expectant mothers to follow a different diet as well as lifestyle, than others. Education in large cities such as Mumbai, Kolkata, Delhi, etc. is valued upon greatly for both genders. The Indian school system consists of four levels; lower primary (age 6-10), upper primary (age 11-12), high (13-16), and higher secondary (17-18). Throughout the country students are expected to learn English, Hindi, and the language primarily spoken in their state. The total literacy rate in India is 74.04 percent. The literacy rates for men are 82.14 percent and 65.46 percent for women. Generally, children are expected to attend school for at least five years, but that becomes difficult for those living in rural areas. There are not many schools in rural areas and transportation is not readily available for the children. Women in villages have a higher illiteracy rate because they are expected to learn how to maintain their future family and future life. Unfortunately, a large portion of the population lives a long distance from the city, where most education is offered.

India's health system has the chronic challenge of responding to the population who are disadvantaged and severely in need. The public health care system is erratic with unfunded and overcrowded hospitals and clinics, and little to no coverage in rural areas. . The statistics for India's health system is significantly low when compared to large countries. According to Deloitte, the U.S. has one bed for every 350 patients while Japan has 1 bed for every 85. India has a staggering one bed for every 1,050 patients. The dilemma in India's health care system begins primarily with the government's low spending. This places a strain on patients and their families, requiring them to pay out of pocket for costly medical expenditures. As of 2012, only 33 percent of Indian health care expenses were provided form government sources. Though health insurance is not commonly used, the health insurance market has been increasing; it has been one of the fastest-growing businesses in India. Additionally, there are significant gaps between the rural and urban populations in its healthcare system which worsens the issue further. About 70 percent of India's population lives in rural areas and has little to no access to hospitals and clinics. Ironically, rural citizens are the individuals who require the most medical attention and government intervention. Urban citizens have close access to great medicinal resources,

doctors with higher qualifications, access to preventative medicine, and quality clinics. Ultimately, this results as a better profit for investors since urban citizens have a greater capability to afford and maintain quality health care. Overall, it is important all citizens no matter if they live in the city or rural India, are given equal and utmost medical attention.

One –third of India’s population is not obtaining the fundamental amount of nutrients, leading to malnourishment. It is suggested at least 2,400 calories be consumed in a day for those living in rural India, and 2,200 calories in urban areas. According to Times of India, the average calorie intake is 1,973. An article written by late Ashok Rudra, a Marxist scholar, showed that in parts of West Bengal, hard working laborers were barely reaching 1,500 calories, depriving these individuals of several critical vitamin and minerals. It is suggested by various resources that an average of 60 grams of protein and 28 grams of iron be consumed per day, but only 45 grams of protein and 20 grams of iron are being consumed per day. The statistics provided by The World Bank suggests 62 percent of preschool aged children and 16 percent of expectant mothers are deficient of vitamin A. Vitamin A is important for retinal health, the immune system, and reproduction. It also supports heart, lung, and kidney health. Iron deficiency is the major cause of anemia. Current rates of iron deficiency lie at 74 percent for children and 50 percent expectant mothers. Also, 40 mg of Vitamin C is required per day, but only 30 mg is being consumed. Due to all of these nutritional deficiencies children and adults are suffering from several diseases caused by malnutrition. A few of the most common diseases are Kwashiorkor, Marasmus, and Goiter. Kwashiorkor; one of the most acute diseases caused by malnutrition in the world, is caused by the lack of protein and other nutrients. A patient of Kwashiorkor consumes adequate calories, but the majority of the calories are derived from carbohydrates. Due to this disease, patients suffer edema in the feet, enlarged liver, thinning of hair, loss of teeth and skin depigmentation. Marasmus, the most common disease caused by malnutrition in children, is caused due to severe deficiency of proteins and calories. The weight of a child suffering with Marasmus can reduce up to 80 percent of the normal weight, according to Lifestyle India. Children below the age of one are more susceptible to Marasmus. Common symptoms are muscle wasting, edema, dry and scaly skin, irritation and voracious hunger. Goiter is the deficiency of iodine in a human diet. The major symptoms of Goiter is the swelling of the thyroid gland, lethargy, weakness, low metabolic rate, and increased risk of the common cold.

To alleviate micronutrient deficiency and protein-energy malnutrition in India, there needs to be more government and foreign organization involvement, which will lead to nutrition education, access to nutritious foods, and accessible health care. Foreign organizations and the government need to focus on those living on the poverty line. It is pivotal women’s education improves. Women are the primary care givers of their young, yet many do not have knowledge on what is nutritionally best for their children. Various non- profit organizations/groups located in urban areas, that focus on nutrition and prenatal health care need to travel to the rural areas and provide education to all women and children in need. It is important those strictly living in poverty are targeted by the organization. Government owned health care facilities need to be built, rather than private owned. The healthcare facilities should be geared towards those living in rural areas. Because it is not possible for the facilities to be in a complete rural area due to lack of resources, it is important they are relatively close in distance. At the least, there should be more small

clinics offering emergency therapeutic feeding for children and adults. Finally, the only way malnourishment can be improved is by food security. Globally, 30-50 percent of food production is wasted due to incompetent preparation or inadequate storage facilities. In India, nearly 40 percent of annual food production is wasted. All the excess production of food should help nourish those in need, rather than going to waste. Many families simply cannot afford sufficient quantities of food to accommodate their family. A possible solution to this situation is to create food banks all over the country, where the unused food may be donated. Currently, the largest food bank is the India Food Banking Network. According to their statistics, they serve one million malnourished children per year and are located in eleven states within the country: Ahmedabad, Bangalore, Chennai, Delhi, Ghaziabad, Noida, Guragaon, Hyderabad, Jaipur, Kolkata, Mumbai. Organizations are very impactful for the malnourished living in the city, as the organization is based primarily in the city. Creating organizations similar to India Food Banking Network, but basing them in rural areas would be most beneficial to all citizens. As mentioned before, it is the citizens who are distant from the city who are at most need. It cannot be stressed enough on how the government needs to take immediate action in order to improve this catastrophic situation. More priority needs to be given to the malnourished and an urgent action needs to be taken by the officials of India. Another long-term, possible solution would be to generate a small, consumable product which contains all the nutritional requirements a person may need in one day to function properly. This would have the daily, recommended calories, proper vitamins and minerals, and other nutrients a person requires in order to prevent malnourishment. There are few products similar to this idea, but they are typically meat based. Since India consists many citizens of Hindu faith, it would be beneficial to introduce a product that is vegetarian as well. This solution will take much research, organization, dedication and time in order to be implemented due to the complex structure yet compact size. It is also important to keep in mind that age, gender, genetics, profession, living situation, etc. plays a large role into the nutritional requirements of person- this could lead to a variety of pills or consumable products to be created for different people. If this developing solution is followed through and successful, curing and preventing malnutrition in not only India, but other developing countries will be much more feasible.

Overall, statistics show that malnourishment in India is improving, but India remains to still be among the highest in the world. The government, as well as the general public needs to start respecting the environment. Streets in India are filled with trash, and millions of people have to live on the street. Air pollution and water safety needs to be given more priority because that is how many of the malnourished become severely ill, apart from being malnourished. The Indian government should fund for more programs who aim to spread a message about malnourishment in the country. Schools in India need to be taught about malnutrition and the consequences of it, hopefully one day creating a large impact. More programs need to be created where numerous classes about prenatal health for expectant mothers, importance of nutrition, necessary micronutrients, and health care assistance are discussed and made aware of. Perhaps more community service opportunities need to be offered for those in urban areas. This would bring awareness to the issue as well as a possible solution for those in need.

I believe India is beyond capable of overcoming malnourishment only if the government, fellow citizens of India, and foreign organizations come together to create a plan of battle for those

suffering from malnourishment. More jobs need to be created so that a stable income can be earned. Health care needs to be more accessible by those who reside in rural India. Education needs to be given more sincerity towards woman. They need to learn about nutrition and how it affects the future of their children. Greater programs and organizations need to be formed specifically geared towards those suffering from malnourishment. It is extremely important the government become more involved and engaged with the significant numbers of malnourished citizens. More of the government money needs to go towards creating hospitals and preventative care centers. Appropriate vaccinations need to be administered to the children in order to better protect them from dangerous diseases. Citizens living in rural areas need to be given equal opportunity similar to those who live in urban areas. They need to have access to clean water, standard living spaces, education, reliable jobs, and proper nutrition. In conclusion, malnutrition is most severe in India, and eradicating it completely is a serious task, but with utmost attention and sincerity, it is not impossible.

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