Food Insecurity: Governmental Policies and Health Complexities

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Abstract

In the realm of poverty, severe and acute malnutrition (SAM) has been predictive of food insecurity. UNICEF has recently published that children who are experiencing malnutrition and subsequent food insecurity are in need of governmental policy reform and humanitarian assistance in the form of long term aid – food, water, education, shelter, protection, and healthcare services – to improve their status quo. For instance, Nigeria has created a comprehensive government program, the Nigeria Action Plan, with the United Nations, World Bank, European Union, and the US government, for improvement in health conditions among people facing immense food insecurity in Nigeria. Although active reform and assistance cannot substitute for the long term development that could reduce the root causes of poverty, it strengthens the argument that humanitarian and governmental relief are crucial to improve the status quo, as programs and practices are incentivized to assist children in developing countries. In order to understand the origin of food insecurity, we assessed its specific relationship to governmental policies and initiatives. We then explored health complexities that arise from a lack of healthy food sources.

The Objectives of this Research:

I. To understand the relationship between food insecurity and human health, among children and adults.

II. To understand the origin of food insecurity and its relation to governmental policies and initiatives.

III. To understand how food insecurity, as measured by the United States Department of Agriculture, is contained and prevented by public health policy.

I. Introduction

Among the several factors that influence the development of human health, food insecurity remains the most profound. Food Insecurity is defined as the state of being without reliable access to a sufficient quantity of affordable, nutritious food. In the status quo, the most prominent forms of food security are high food security (Households that have no problem, or anxiety about, consistently accessing adequate food), marginal food security (Households that have problems at times, or anxiety about, accessing adequate food, but the quality, variety, and quantity of their food intake are not substantially reduced), low food security (Food insecurity characterized primarily by reductions in dietary quality and variety), and very low food security (Food insecure to the extent that eating patterns were disrupted through skipped meals and food intake is reduced because the household could not afford enough food), which is often caused by poverty, unemployment, and inconsistent access to nutritional food (United States Department of Agriculture). For instance, 9 million people each year internationally have died due to food insecurity (Beasley). Additionally, about 35 million Americans in 2019 struggled with hunger (Housman). Food insecurity can cause an increased risk of arrhythmia, obesity, high blood pressure, heart disease, diabetes, and mental health distress. Therefore, nutritional and overall human health is tarnished when people are not food secure.. As a result, government involvement and public policy are critical in order to improve the status quo.

II. Governmental Policies

Research has demonstrated that people suffering from moderate and severe food insecurity are less likely to adopt sustainable practices. To remedy this situation, proper

government adoption and implementation of policies directed at increasing food security and decreasing poverty are crucial. Therefore, in order to prevent the increasing number of people becoming food insecure, the government must introduce policies such as the Supplemental Nutrition Assistance Program and advocate for sustainable practices to improve the status quo of human health (Miller).

Food insecurity does predict detrimental effects on human health. For example, poverty, unemployment, and food insecurity can all serve as predictors of the negative implications on an individual's fitness. In fact, exposure to malnutrition resulting from unsound governmental management is estimated to account globally for 780 million people (World Health Organization). Furthermore, countries such as Ethopia, Syria, Yemen, Uganda, and Peru are unable to end the impending crisis of food insecurity due to increase corruption and lack of governmental control. Therefore, it is imperative that a political and financial agenda are implemented to improve the lives of families that are struggling to provide food on the table and a shelter over their head.

In the status quo, opportunity exists to understand the correlations among public policies and food insecurity in developing countries. There is substantial literature that highlights the association between the political agenda of developing countries and food insecurity. Examining the link between socioeconomic conditions along with increased corruption within rural communities is unparalleled to an individual's health system. Although, the Nigerian government has continued to take initiative as they have created a comprehensive government program with partners such as the United Nations, World Bank, European Union, and the US government, for improvement in the current status of Africa, due to the corruption and lack of long term implementation it leaves the program in stagnation (Gressly). Therefore, the government needs

to take direct action towards improving the lives of starving individuals whether it is through a financial plan, policy infused agricultural productivity, or social services to assist in the long term growth of children facing severe and acute malnutrition.

Numerous studies have linked food insecurity originating from corruption, poverty, and unemployment with absent government initiative. In light of recent atrocities, the overall aim of this quantitative research is to determine the extent to which food insecurity as measured by the United States Department of Agriculture affects human health in relation to public policy.

The ability to prove a causal relationship is extremely valuable, based on reliably measured variables that accurately and precisely predict a realistic outcome offers a working hypothesis to underpin future research that may ultimately identify a correlation. This study is therefore only a starting point in the research to ultimately determine the extent to which lack of governmental policies is a root cause of indisposition, prominently in developing countries such as Ethopia, Yemen, Syria, Uganda, and Peru.

Thus, instead of directing monetary assistance and humanitarian aid to these developing countries with a fragile and corrupt government, it is crucial we fix the platform the country is standing on first. To solve the existential crisis of food insecurity, over 40 billion dollars is needed to make programs more comprehensive, whether it is through rebuilding the economic, political, and social platform of a nation or providing consistent global monetary assistance. However, since programs and practices can't make such an immense investment into the improvement of malnutrition, policy makers need to take an effective approach to improving the status quo by creating a financial nourishment plan (Stewart). Although, aid may be optimal in the short term in order to address the immediate concerns of countries given the current situation with the COVID 19 pandemic, climate change, and global conflict, in the long term a balance

between policy reform resolving the root causes of poverty and a reduction in humanitarian assistance are crucial for the development of a nation in need to overcome the empirical food crisis. Given the increase in global unrest, radical policy reform is more important now than ever before, not only to improve the stability of the nation in crisis but more imperatively human health.

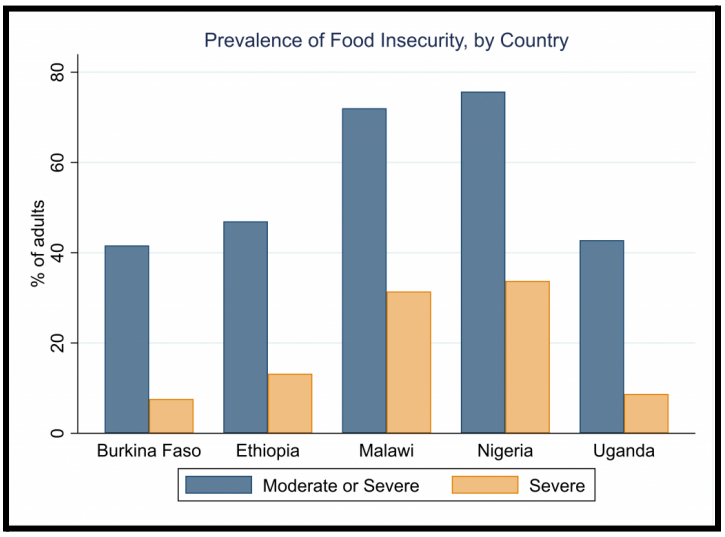

Figure I. (High Frequency Phone Survey)

III. Health Complexities: Malnutrition

Global food insecurity introduces a myriad of health effects within affected populations. Malnutrition[1] is widely regarded as the main health complexity that arises from food insecurity. Malnutrition, an umbrella term that refers to "deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients" (World Health Organization), affects a large portion of food insecure families; populations that it puts most at risk include children, pregnant or breastfeeding women, and individuals who reside in developing countries, live in poverty, or have conditions

[1] A deficiency, excess, or imbalance in nutrients which results in adverse effects on body composition (Saunders & Smith).

that affect nutrient consumption. According to the World Health Organization, malnutrition is the contributing factor to 45% of deaths among children younger than 5 globally (World Health Organization). Furthermore, it may lead to physical and mental development delays and disorders, stunting, and disease susceptibility in children.

One type of malnutrition is known as undernutrition, a condition in which there is a lack of sufficient protein, calories, or micronutrients in the body (World Health Organization). The two main types of undernutrition are marasmus and kwashiorkor. Marasmus occurs as a result of insufficient caloric intake and is seen mainly in younger children. Symptoms include dehydration, weight loss, chronic diarrhea, severe fat loss, and low body temperature. Kwashiorkor is a result of insufficient protein intake or a solely carbohydrate diet; it mainly occurs in older children. Symptoms of this type of undernutrition include edema, bulging of the abdomen, and an inability to grow or gain weight (Hansen).

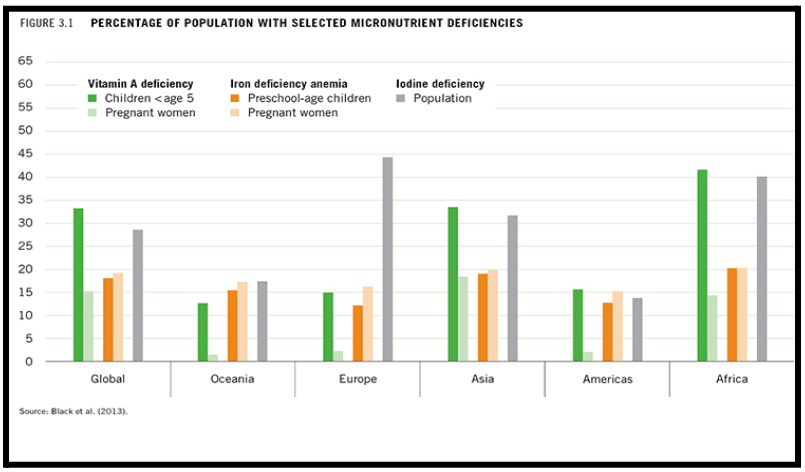

Figure II. (Black et al.) Percentage of food insecure population with nutrient deficiencies.

IV. Specific Nutrient Deficiencies

Micronutrient deficiencies including vitamin, iron, and iodine deficiencies are a major cause of health risks among those who are undernourished. Vitamin deficiencies such as a Vitamin A deficiency can cause blindness and compromise one's immune system. Insufficient iron hinders the body's ability to produce red blood cells, which in turn compromises the body's ability to carry hemoglobin, a protein that carries oxygen throughout the body. Iron deficiency anemia can cause rapid or irregular heartbeat, also known as arrhythmia, which can ultimately lead to fatal heart failure. A lack of iodine in an individual's body causes preventable brain damage and intellectual disability; it can also cause enlargement of the thyroid as well as hypothyroidism.

The second type of malnutrition is known as overnutrition, which is defined as an imbalance of nutrients as a result of overconsumption. Some health conditions that arise from overnutrition include obesity, high blood pressure, heart disease, and type 2 diabetes. Overnutrition is most commonly found in food deserts, geographic areas that have a limited access to affordable and nutritious foods. This is the opposite of food oases, which are areas that have a higher access to supermarkets with fresh produce. Food deserts tend to be located in marginalized communities, such as those of color or low-income (Brooks). A study known as the Bronx Paradox found that residents of the Bronx face an 85% higher risk of being obese than their counterparts in Manhattan (Dolnick). This finding is due to the fact that the Bronx is predominantly home to socioeconomically disadvantaged individuals, who therefore primarily live in food deserts. Food-insecure families commonly consume high-caloric, innutritious processed foods, which contribute to obesity and the other aforementioned health conditions. A study conducted in Portland, Oregon showed similar results. According to the data collected by researcher Daniel Sullivan at Portland State University, out of 425 individuals living in the

Portland area, white and college-educated residents were more likely to shop at a specific gentrified supermarket than their minority and less-educated counterparts. Food-insecure families commonly consume high-caloric, innutritious processed foods, which contribute to obesity and the other aforementioned health conditions.

V. Indirect Health Repercussions

In addition to the direct health effects of food insecurity, a number of indirect health issues are associated with conditions of inadequate food sources. Those living in food insecure households also have difficulties managing chronic, diet-related health conditions (Murthy). Without access to nutritional foods due to financial constraints, many food insecure families resort to buying inexpensive and nutritionally poor foods. This, in turn, causes harm to their health due to inefficiency in managing diet-related conditions such as diabetes, cholesterol, obesity, and hypertension.

VI. Mental Health Consequences

Mental health strife is another common but often unacknowledged health consequence. Food insecurity is associated with a 257% higher risk of anxiety and a 253% higher risk of depression (Fang et al.). Mental health issues are heightened especially during public health emergencies such as the ongoing Covid-19 pandemic. A study conducted by BMC Public Health found that isolation measures were strongly associated with anxiety and depression, toppled on with financial stress, loss of employment, and the burden of childcare; feelings of alienation, worry, and shame from being food insecure can cause additional psychological problems (Fang et al.).

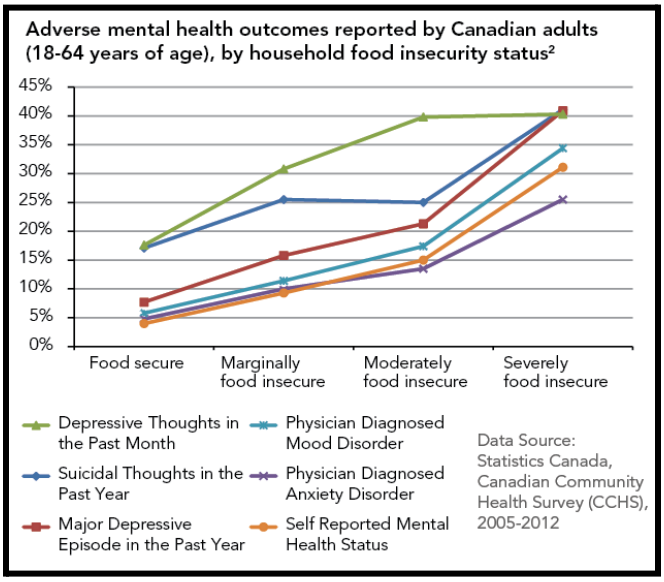

Figure III. (Devlin). Mental health outcomes in relation to food insecurity.

VII. Conclusion

In retrospect, the overall aim of this quantitative research is to determine the extent to which food insecurity impacts the health of an individual, especially due to the lack of governmental policies. This understanding can help inform future studies which can ultimately shape public health policies in developing countries with respect to malnutrition, hunger, and food insecurity. However, although governmental reform and medical assistance can improve the short term sustainability of a human health, there must be social, economic, and political collaboration, for long term sustainability. Advocacy efforts are crucial to improving food insecure conditions.

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