

New Approaches Needed to End Hunger: A Case Study from Saint Louis

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Today, rates of world hunger are progressively increasing, causing panic globally as experts and governments scramble to address consistently growing rates of food insecurity and hunger during the COVID-19 pandemic. While most agree with expanding the current model of responding to food insecurity, through government safety net programs and short-term emergency food assistance, a growing community of experts question this consensus, and instead advocate for long term solutions to end hunger and food insecurity rather than perpetuating the cycle of hunger and food insecurity with short-term responses. This literature review examines the existing literature and current climate around global food insecurity and hunger. The paper investigates food insecurity and hunger in the United States, the need to shift from relying on short term emergency food response to seeking long-term solutions to address the root causes of hunger, and uses Saint Louis as a case study for exploring the efficacy of new approaches being used by food relief organizations to end hunger.

Food insecurity and hunger are prevalent and persistent in societies globally. Despite the efforts of food security analysts, scientists, world leaders, and the work of tireless non-governmental organizations to address both and implement long term measures to end hunger, citizens in countries globally continue to rely on emergency food services to survive. After declining for ten years, world hunger rates again began to rise, affecting people all over the globe. Today, 8.9% of people globally report experiencing hunger (Action Against Hunger, 2021). Between 2018 and 2019, the number of malnourished people increased by 10 million, and today there are 60 million more malnourished people than there were in 2014 (Action Against Hunger, 2021).

Hunger and food insecurity have long been thought of as problems that exist primarily in the developing world, but the COVID-19 pandemic has brought to light what many people working in hunger

relief already knew: rich countries like the United States have a high percentage of food insecure people. Improving food security and ending hunger is a matter not of resources, but of seeking long term solutions to understand and address the root causes of hunger and changing policies that currently favor corporations over the well-being of citizens. To do so, the public must have a better understanding of food systems, the negative impact of hunger and food insecurity on health and vulnerable populations, and how hunger connects to the social determinants of health and inequitable systems. This paper will first provide a global scholarly perspective on food insecurity and hunger. Second, it will explore food insecurity and hunger in the United States, including the socioeconomic, ethnic, and racial composition of Americans who are food-insecure, as well as the systems in place which perpetuate a cycle of hunger, food insecurity, poverty, and poor health and support short term emergency food response. Third, Saint Louis will present as a case study to examine new approaches being used by a food relief organization called Operation Food Search to create long term solutions to improve food security and end hunger. Fourth and finally, I will offer my recommendations moving forward, exploring examples of advocacy, policy change, and innovative programs from stakeholders based both in and outside the U.S.

Global Food Insecurity and Hunger

According to recent data from the Food and Agriculture Organization (FAO) of the United Nations, the Global Health Observatory (GHO), and the International Food Policy Research Institute (IFPRI), nine percent of the world population (around 697 million people) are severely food insecure and one in four people globally (1.9 billion) are moderately or severely food insecure (Rosser and Ritchie, 2019). Globally, FAO defines food insecurity as when a person lacks “regular access to enough safe and nutritious food for normal growth and development and an active and healthy life” (Food and Agriculture Organization of the United Nations, n.d.). Four dimensions of food insecurity can be identified as availability, access, utilization, and stability. These dimensions specifically refer to the physical availability of food, economic and physical access to food, food utilization, and the stability of these dimensions over time (Food and Agriculture Organization of the United Nations, 1996). Physical availability of food addresses food supply and depends on a country’s stock levels, the amount of food they can produce, and net trade. Economic and physical access to food is determined by a sufficient food supply at the national and international level to food security at the household level. Because a sufficient food supply at the national and international level does not directly translate to a guarantee of household food security, this dimension focuses on incomes, expenditure, markets, and prices in achieving food security targets. Food utilization refers to the need for good feeding and food

preparation practices, diversity in nutritional diets, and fair food allocation in a household to ensure adequate nutrient and energy intake by individuals. Stability of these three dimensions over time encompasses all these factors, as well as continued, stable, and sustainable food intake. How often an individual has access to food, and external circumstances such as poor weather and political instability (employment status and the rise of food prices) affect stability (Food and Agriculture Organization of the United Nations, 2008). “Food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (Food and Agriculture Organization of the United Nations, 1996). This definition shows that for these food security targets to be realized, all four dimensions must be achieved at the same time (Food and Agriculture Organization of the United Nations, 2008).

According to FAO (2008) food security analysts, there are three general types of food insecurity: transitory food insecurity, seasonal food insecurity, and chronic food insecurity. Knowing the differences in the types of food insecurity helps to better understand the complexity of hunger globally, and why there cannot be one solution to end hunger everywhere. Transitory food insecurity occurs when there is a sudden decrease in the ability to produce and for people to access an adequate amount of nutritious food. This type is classified as temporary and short-term, and can be caused by instability in food access and availability, as well as fluctuations in food prices and household incomes. Transitory food insecurity’s unpredictability makes it difficult to address and plan for. Early warning and safety net programs are often required to overcome transitory food insecurity. Seasonal food insecurity differs from transitory food insecurity by its predictability, as it usually follows a generally known progression, but is similar in its recurrency and short-term nature. This type occurs in “a cyclical pattern of inadequate availability and access to food,” and can be caused by changes in seasonal weather, availability of work, and disease. Chronic food insecurity occurs when people are unable to meet adequate requirements for food over a continual period of time. This type is classified as long-term and constant, and can be caused by social determinants such as persistent poverty, income level, social class, social status, and lack of access to infrastructure. It can be addressed by “long term development measures” focused on poverty, education, access to infrastructure, and access to food (Food and Agriculture Organization of the United Nations, 2008). The rest of this paper will solely focus on chronic food insecurity.

Before examining the globally shared determinants of food insecurity and hunger,¹ it is important to note a distinction between hunger and food insecurity, as well as definitions for malnutrition and poverty. Hunger is understood as the painful, uncomfortable feeling a person experiences when they are not consuming enough food energy. While all hungry people experience food insecurity, not all food insecure people experience hunger. A poor consumption of nutrients can also cause food insecurity. This can then lead to malnutrition, as malnutrition is caused by deficiencies, excesses or imbalances in the consumption of macro- and/or micro-nutrients. Additionally, poverty causes hunger, and lack of adequate access to nutritious food is also a cause of poverty. Thus, food insecurity, hunger, malnutrition, and poverty are interconnected and deeply interrelated (Food and Agriculture Organization of the United Nations, 2008).

While these definitions have been widely accepted globally, it has been challenging to find a metric that can be utilized to find “the common determinants of food insecurity across different countries” (Smith et al., 2017). In 2014, FAO’s Voices of the Hungry project created the Food Insecurity Experience Scale (FIES) to provide an experiential measure of food insecurity (Smith et al., 2017). Despite the diversity of the global population, differences in economies, governments, policies, and other factors such as agriculture, FIES reveals there are five common characteristics “associated with the largest increase in the likelihood of experiencing food insecurity around the world: having low levels of education, weak social networks, less social capital, low household income, and being unemployed” (Smith et al., 2017). Among these characteristics, “low levels of education, weak social networks, and less social capital consistently play a large role in the likelihood of experiencing food insecurity” (Smith et al., 2017). While this may fluctuate with respect to a country’s gross domestic product (GDP) per capita, FAO’s FIES shows that “country-specific policies are crucial for addressing the needs of the food insecure and that a blanket approach to development or nutrition assistance may not be effective” (Smith et al., 2017).

¹ The Integrated Food Security Phase Classification (IPC) measures the severity of a food security situation. Indicators such as “crude mortality rate, malnutrition prevalence, food access/availability, dietary diversity, water access/availability, coping strategies, and livelihood assets” are used to classify a situation as “generally food secure, chronically food insecure, acutely food secure and livelihood crisis, humanitarian emergency, and famine/humanitarian catastrophe” (Food and Agriculture Organization of the United Nations, 2008). For all of these classifications, food vulnerability analysts generally recommend “two main intervention options: reducing the degree of exposure to the hazard and increasing the ability of people to cope” (Food and Agriculture Organization of the United Nations, 2008).

Hunger in the United States

The international system views the U.S. as having an abundance of food and social programs, yet the U.S. struggles with households that face consistently high rates of food insecurity and hunger (National Research Council, 2006). Despite the U.S. having the sixth highest GDP per capita of 77,653 USD in the world (Reynolds, 2021), food insecurity and hunger remain in the country's most urgent issues. According to the United States Department of Agriculture's (USDA) latest Household Food Insecurity in the United States report, in 2019, more than 35 million people in the U.S. experienced hunger (Feeding America, 2021). Food insecurity exists whenever one faces limits and uncertainty surrounding a consistent, adequately nutritious and safe supply of food and socially acceptable ways of acquiring that food (National Research Council, 2006). This term refers to social, economic, and other constraints, not due to elective fasting, dieting, or illness. In the U.S., a lack of economic resources is the most common constraint; however, food insecurity may also be experienced by members in a household who cannot access food due to constraints on physical ability, such as limited physical capacity by elderly members and members with physical disabilities. Thus, food insecurity is considered a household level concept. It can be measured by assessing the consistency, nutritional adequacy, and safety by which there is availability of food, ability to access food, and ability to sufficiently utilize food. Not all members of a household must be considered food insecure for a household to be considered food insecure; if one or more members are food insecure, then the entire household is. Hunger, however, is considered an individual level concept and a common, but not necessary, consequence of food insecurity (National Research Council, 2006). The COVID-19 pandemic has and continues to negatively impact the United States' economic stability and household food insecurity. With the spread of COVID-19, job growth has slowed steadily, putting millions of Americans out of work (Silva, 2020), and consequently, household food insecurity rates have increased exponentially. According to data by the U.S. Department of Agriculture, in 2019 before the pandemic, 10.5% (13.7 million) of households experienced food insecurity at some point (Silva, 2020). However, food insecurity has now doubled, with as many as 23% of households struggling with food insecurity (Silva, 2020).

Households of minority groups are typically disproportionately at risk of experiencing poverty and consequently, extreme food insecurity and hunger. The explanation for this lies in the institutionalized racism, discrimination, and oppression of minority groups that the U.S. food system was built upon. As the food system was historically built on the backs of enslaved African people, it was intentionally made by the privileged to serve white Americans while disenfranchising people of color. The combination of societal economic and political institutions which continually exploit people of color

and spread misinformation about race, culture, and ethnicity make racism an undeniable, unyielding cause of poverty, food insecurity, hunger, and malnutrition (Holt-Giménez and Harper, 2016). According to researchers, approximately one in five Black and Latinx adults report they do not have enough to eat (Schanzenbach, 2020). Additionally, in 2019 USDA data revealed that “19.1% of Black households and 15.6% of Hispanic households experienced food insecurity” (Silva, 2020), while 7.9% of White Americans experienced food insecurity (Silva, 2020).

However, despite these revealing statistics, the majority of food aid programs and agricultural development programs in the U.S. rarely mention racism or racial equity (Giménez and Harper, 2016). For example, because the widely praised U.S. Good Food Movement, which calls for “honest, real food grown by people who care about their land, their community and their future” and affordability and availability to all (Farm Aid, 2015), does not cite racism as the cause of the exponential rates of food insecurity, hunger, and malnutrition in minority communities, their abundance of programs, technologies, and resources consistently and continually unevenly address the issue of racism in the U.S. food system (Giménez and Harper, 2016). Often the food aid and agricultural development community purposefully ignore these critical issues of racism and the racialization of the food system due to the topics being widely perceived as contentious, divisive, and too difficult to address (Giménez and Harper, 2016).

The concept of food apartheid examines the entire food system and accounts for social inequalities such as geography, income level, and race (Ridge, 2020), and how they perpetuate food insecurity for minority groups across the country. By viewing the United States’ food system through the lens of food apartheid, one can see how its racial caste system uses legal and social institutions to lock Black people into an inferior place in society. For example, in the area of agriculture, a report from the USDA’s census of agriculture reveals that of the 2.1 million farmers in the U.S., only half are owners of land and just eight percent are people of color (Giménez and Harper, 2016). Due to a combination of systemic discrimination by the US Department of Agriculture and a legal loophole that classifies Black land as ‘heirs’ property’ – in which all heirs of the land (white men whose ancestors owned slaves) are legally co-owners – land that Black families own is vulnerable to being sold without full consent. This issue of heirs’ property has contributed to a dispossession crisis, allowing more than thousands of acres of Black land to be forcibly bought from rural black families (Douglas, 2017). This legal loophole also strips Black landowners of an abundance of necessary rights they would otherwise have to protect and sustain their land. For example, without clear, primary ownership, many Black families must live in trailers because they are blocked from obtaining a mortgage (Douglas, 2017). Likewise, they are

ineligible for government support in the areas of state, federal housing aid, the United States Department of Agriculture itself, and necessary loans and funding that are crucial to help ensure the survival of many rural landowners (Douglas, 2017). This leaves many Black landowners with hundreds of acres of land that they cannot farm or live off. Additionally, of the 16 million acres of land that African Americans once owned, now, approximately only 2 million acres remain, and this land continues to be lost at twice the rate of land owned by white Americans (Giménez and Harper, 2016). Though the majority of landowners are white, people of color dominate the field of farmworkers; however, people of color earn \$19,349 a year, while on average, their white counterparts earn \$25,024 (Giménez and Harper, 2016). The poverty that results from this poorly paid work is subsequently racialized (Giménez and Harper, 2016). Of the approximately 47 million people in the United States that live below the poverty line, 27% are African American, 26% are Native American, 25.6% are Latinx, 11.7% are Asian Americans, while less than 10% are white (Giménez and Harper, 2016).

When further examining the impact of food apartheid and the intersection of poverty, food availability, and race in neighborhoods and communities across the U.S., it is crucial to understand three concepts: food deserts, food mirages, and food swamps. These concepts describe areas where families and communities live in poverty, unemployment, underemployment, and struggle to afford and access food (Haskell, 2021). Defined by the U.S. Department of Agriculture, urban food deserts are areas where people must travel more than one mile to access a supermarket, whereas a rural food desert is an area where people must travel ten miles for access. Since grocery stores are often built in communities where people have financial resources, communities in food deserts become dominated by mini marts and gas stations that families must turn to for routine groceries (Haskell, 2021). These easily accessible local businesses charge markedly higher prices for rarely fresh food and unhealthy food. A USDA report revealed that in 2015, roughly six percent of the population (approximately 19 million people and 2.1 million households) lived in a food desert and lacked access to transportation required to access food (Silva, 2020). Of these people, food deserts disproportionately impact minority communities where urban Latino and African Americans, as well as rural Indigenous and white people live. Next, a food mirage is an area where people live in proximity to grocery stores where fresh, nutritious, and quality food is available, but not affordable. Due to this, families who live in a food mirage must often travel extremely far to access these foods. For families who do not have reliable access to a vehicle or other means of transportation, they face the same issue as families who live in food deserts. Last, food swamps are areas where communities do have sufficient access to somewhat nutritious, quality, and

affordable food, but also have access to an overabundance of innutritious, less healthy food from local fast-food joints and corner stores (Haskell, 2021).

In these regions, poverty perpetuates the cycle of food insecurity, locking families and communities into a vicious cycle that costs them their long-term health and well-being. On a house-hold level, experiencing food insecurity is highly stressful and mentally taxing (Feeding America, 2014). When people do not know if, when, and where they will access food, securing access becomes their top priority and primary focus (Feeding America, 2014). This focus takes precedence over necessary healthcare, such as buying medication and visiting the doctor (Feeding America, 2014). The combination of poor or lacking nutrition and inevitable stress makes healthcare challenging, but a new study conducted by West Health and Gallup revealed an additional challenge, as it showed that healthcare itself continues to become increasingly less affordable (Witters, 2021). One fifth of all Americans (approximately 46 million people) report they cannot afford necessary healthcare (Witters, 2021). A recent survey taken by West Health and Gallup revealed that of 3,753 adults in the U.S., about 18% report that if they needed quality healthcare today, they would not be able to afford it (Witters, 2021). Of the sample, 16% of white adults reported not being able to afford necessary healthcare, while 21% of Hispanic adults and 29% of Black Americans reported so (Witters, 2021). Additionally, while there are no longer federal level penalties for being uninsured, some states have chosen to establish and impose health insurance penalties (Kenelly, 2021). In New Jersey, Massachusetts, Vermont, and the District of Columbia, citizens are subject to fines for being uninsured (Kenelly, 2021).

Food insecurity, poverty, and the rising unaffordability of necessary healthcare services force individuals and families to make impossible decisions between obtaining food and accessing healthcare. Because time and financial resources needed to maintain and respond to health conditions become a burden, this leaves little, if any, resources to put towards critical access to nutritious, quality food and additional expenses such as rent and education (Feeding America, 2014). Thus, the cycle continues, and as people must choose between healthful food, healthcare, the risk of illness, disease, worsening existing living conditions, and even homelessness (Feeding America, 2014). The aforementioned survey by West Health and Gallup confirms this distressing reality. The survey revealed that 12% of respondents said they chose to cut back on food expenses to be able to afford healthcare (Witters, 2021). Eleven percent said they chose to go without regular over the counter drugs for preventative healthcare and maintenance so they could save for healthcare or medicine for worse health conditions (Witters, 2021). Additionally, among households with low-income, 21% of respondents reported that they have had to cut back on spending for utilities in order to afford healthcare (Witters, 2021).

The consequences of this vicious cycle of poverty, food insecurity, hunger, healthcare, and impossible decisions can be devastating to individuals and families. Food insecurity has been linked to a variety of health conditions including mental illness and chronic disease. People who must constantly worry about if, when, and where their next meal will come from experience high levels of stress. This stress can have traumatic effects on a person's mental health and cause a host of mental health problems such as anxiety, depression, and post-traumatic stress disorder (PTSD) (Waite & Thielke, 2019). In a study of 3,500 men and women living with low-income, food insecurity was reported to be positively associated with depression (Leung et al., 2014). As the severity of food insecurity that respondents experienced increased, researchers found that their depressive symptoms also increased (Leung et al., 2014). Compared to people who were food secure, respondents from the study had three times higher odds for developing depression (Leung et al., 2014). In another study, Cornell researchers found that young people (ages 15-16) who lived in homes facing food insecurity are five times more likely to attempt suicide (Lang, 2005). Additionally, a study by the American Academy of Pediatrics reported that mothers with children who experience food insecurity and severe hunger are 56.2% more likely to experience PTSD and 53.1% more likely to develop severe depression (Waite & Thielke, 2019).

Rates of food insecurity for children have since been worsened by the COVID-19 pandemic. According to the USDA, pre-pandemic, in 2019, households with children were reported to be almost 1.5 times more likely to experience food insecurity than households that did not have children (Silva, 2020). Of the five million children that lived in these homes, 13.6% experienced food insecurity (Silva, 2020). Now, data from North Western University finds that due to the pandemic, food insecurity rates within households with children has beyond tripled at 29.5% (Silva, 2020). With school closures across the country, many children no longer have access to the school lunch programs they normally relied on to get an adequate supply of nutritious, safe food, and face devastating effects to their physical and mental health as a result. In the first three years of life, children who experience food insecurity start life, seriously disadvantaged (Feeding America, 2021).

Additionally, children typically disproportionately at risk of experiencing food insecurity and hunger are likewise at risk of long-term severe psychosocial and academic development. Research on the associations and causal adverse health effects of food insecurity on children has been well documented (Lang, 2005). Since children are more vulnerable to hostile social conditions, food insecurity over a lifetime has long lasting effects (Lang, 2005). A 2012 longitudinal study found that experiences of food insecurity in kindergarten had a negative impact on health much later, in eighth grade (Ryu and Bartfield, 2012). A 2013 study confirmed consistent evidence of association between

food insecurity, negative health conditions, and developmental consequences for children (Coleman-Jensen et al., 2013). Due to this, children experiencing food insecurity often develop language and motor skill impairments, must repeat grades in school, and have more behavioral and social issues, such as aggression (Feeding America, 2021).

In addition to negative effects on children's mental health, food insecurity and hunger cause a host of negative physical health conditions for children. According to another review of literature, children in households that were food insecure were reported to more likely suffer from anemia, asthma, and poorer oral health (Gundersen and Ziliak, 2015). Additional adverse physical effects of food insecurity and hunger include premature births, low birth rates, stunted growth, wasting, malnutrition, and, in extreme cases, the death of infants and children (Jepkemboi, 2018). Cognitive adverse effects of food insecurity and hunger include mental and intellectual delays and impairments, babies born with a physically smaller brain size, poor performance on measures and tests of cognitive development, lower scores on achievement and IQ tests, and inability to focus and fully engage in school (Jepkemboi, 2018).

The intersection of poverty, food insecurity, and hunger experienced by teenagers often leads to dangerous social behaviors. This behavior ranges from skipping lunches and saving school provided food to take home for the weekends, choosing to go hungry so their family members and youngest siblings can eat, and selling sex for money to buy food. While not all teens facing food insecurity in impoverished communities engage in the most dangerous behaviors, they expose how far teenagers are willing to go to obtain food and survive (Popkin, 2018). In a report called "Impossible Choices," the Urban Institute and Feeding America, conducted a study in 10 diverse communities with teenagers age 13-18 (see Popkin, 2018). The findings from the study revealed recurring themes among the teenagers of stigma, strategizing around survival, poor job prospects, and dangerous, criminal behavior. Summarized, the study contained six key findings. First, teenagers commonly experience food insecurity even in focus groups where participants reported they were not food insecure. Food secure teenagers reported that they knew classmates, friends, and neighbors who consistently did not have access to a sufficient amount of quality, nutritious, affordable food. Second, because of the widespread stigma surrounding hunger, teenagers actively choose to hide their struggle with food insecurity, and consequently, are unwilling to accept help from outside their trusted friends and family, as well as often refuse the assistance of both government and non-government public food assistance programs. Third, food insecure teenagers continually exist in a survival mode, strategizing how to ease hunger and make food last longer for their families. Teenagers in families who faced food insecurity consistently reported taking on the responsibility of their own parents, providing for others before themselves, and choosing

to eat less to leave more food for family members. Fourth, due to limited job prospects for teenagers who live in impoverished communities, when faced with severe food insecurity, they will choose to engage in criminal behavior such as selling drugs and reselling stolen items. Fifth, in all 10 communities and in an overwhelming 13 of the 20 focus groups surveyed, teenagers mention selling sex for money to buy food. This theme consistently appeared in highly impoverished communities where sexual exploitation, sexual coercion, and abusive transactional relationships with older adults were also mentioned. Sixth, in a few of the communities surveyed, teenagers discussed going to jail to obtain regular meals or purposefully failing out of school to obtain summer school lunches (Popkin, 2018).

The connection of poverty, food insecurity, and hunger to adverse health conditions experienced by working age and older adults has received less attention than children and teenagers, but has still been well documented. Food insecurity and hunger experienced by adults has been found to be linked to depression, mental illness, and poor sleeping patterns (Gundersen and Ziliak, 2015). Additionally, according to the USDA, a clear, strong link between hunger and chronic disease exists (Waite & Thielke, 2019). The Feeding America network reports that of the households that receive their food assistance, 58% experience high blood pressure and 33% experience diabetes (Waite & Thielke, 2019). Chronic health conditions are defined as health conditions that last for a year or more and result in consequences in areas of functioning, mobility, and required continual medical treatment (Gregory and Jensen, 2017). Chronic conditions and disease negatively impact the quality of a person's life, affect employment and finances, and, in extreme cases, lead to death (Gregory and Jensen, 2017). In 2012, 48% of adults reported they had one or more chronic health condition and 25% reported having multiple chronic health conditions (Ward et al., 2014). In 2010, 86% of spending on healthcare alone was spent by adults experiencing one or more chronic health condition (Gerteis et al., 2014). Additionally, healthcare spending for an adult experiencing one chronic health condition was two and a half times more than spending for an adult without a chronic health condition (Gerteis et al., 2014). While adults in financially stable and food secure homes could reduce their financial and human costs associated with their chronic health condition, adults struggling with poverty and food insecurity could not mitigate these costs, and consequently reported worsening health conditions (Gerteis et al., 2014). Extensive literature on the adverse effects of food insecurity, hunger, and malnutrition on adult health reveal that, generally, food insecurity is linked to the higher likelihood of experiencing chronic diseases such as kidney disease, hepatitis, stroke, cancer, asthma, diabetes, arthritis, chronic obstructive pulmonary disease (COPD), hypertension, and coronary heart disease (CHD) (Gregory and Jensen, 2017). Poor nutrition is linked to adults developing diabetes, heart disease, cancer, and stroke (Gregory and Jensen,

2017). For adults in the most extreme cases, this can lead to their death, as of the top ten causes of death in 2014, seven were chronic diseases (Gerteis et al., 2014).

With over 35 million people in the United States experiencing the devastating effects of food insecurity, hunger, and poverty on their health today (Feeding America, 2021), the U.S. response to ending food insecurity and hunger is clearly ineffective. Every year, millions of Americans facing food insecurity and hunger must turn to emergency food response which includes food assistance programs and food banks (Shirvell, 2019). While food assistance programs such as the Emergency Food Assistance Program (TEFAP), the Supplemental Nutrition Assistance Program (SNAP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) were originally created to be short-term emergency food responses, today, they have become resources that millions of Americans continually rely on for their long-term survival (Shirvell, 2019).

Despite extensive research and literature revealing the root of hunger and food insecurity, the cycle of poverty, food insecurity, and hunger, the U.S. has grown to rely primarily on food banks and emergency food response. In fact, the concept of distributing food to people in need has not majorly changed since the 1930s when the federal government created the first hunger relief programs, which later became food banks in the late 1960s and early 1970s. In response to the 1980 recession, Congress enacted the Temporary Emergency Food Assistance Program, now known as the Emergency Food Assistance Program (TEFAP), to assist states in the financial cost of storing and distributing excess food. This resulted in the exponential growth of food banks. In New York alone, the amount of food pantries rose from 30 in 1980 to approximately 500 in 1987 (Shirvell, 2019). Today, the U.S.' biggest organization and network of hunger relief, Feeding America, contains approximately 200 food banks that store food provided or rescued by other organizations, government agencies, restaurants, farms, and supermarkets. Working with approximately 60,000 food pantries and soup kitchens, every year, Feeding America reportedly provides about 46 million people with food (Shirvell, 2019).

While emergency hunger-relief organizations and networks of food pantries, soup kitchens, and government supplemental assistance are crucial to the communities all over the United States, the major issue with the U.S. response to food insecurity and hunger remains its perpetual reliance on emergency food assistance instead of working to end hunger itself. According to City Harvest, in 2018, there were about 25 million visits to food pantries and soup kitchens, as well as reports of seeing the same people come for food assistance consistently (Shirvell, 2019). Additionally, according to the Congressional Research Service, the Emergency Food Assistance Program (TEFAP) was created to be a temporary form of disaster relief (Shirvell, 2019). However, more than 35 years later, TEFAP remains

necessary for millions of Americans. As Noreen Springstead, the executive director of WhyHunger, a nonprofit organization based in New York City that works to end hunger globally, says, “a 50-year charitable response to the underlying problem of hunger is not an emergency” (quoted in Shirvell, 2019). Research under the current charity model of hunger response majorly focuses on the amount of food distributed to people in need and how many people are served by emergency food response. This only perpetuates the issue of hunger and food insecurity because, rather than measuring outcomes, it measures outputs (Shirvell, 2019). Additionally, it ignores the root causes of hunger and the complex intersection of food insecurity, hunger, economic inequalities, racial inequities, health, and environment that perpetuates the cycle of food insecurity and hunger (Shirvell, 2019).

While no single answer to end hunger and food insecurity exists, new approaches to shifting away from the current short term-emergency food response model and moving towards long-term solutions have shown to be effective in Saint Louis, Missouri. While there is a current lack of extensive research on what new approaches are being employed from all food banks in Missouri, the responses by Operation Food Search (OFS) reflect the new, hopeful climate of change in food insecurity and hunger response in Saint Louis. OFS has transitioned to be a hunger relief organization that addresses the root causes of hunger on all levels of society. Like many food banks, OFS does have evidence of success regarding their output. Each year, they report distributing more than thirty-one million dollars’ worth of food and necessities in the city of Saint Louis and to 330 community partners in the greater Missouri and Illinois counties (Operation Food Search, n.d.). OFS has moved beyond providing immediate short-term food assistance and has implemented numerous actions to address the root causes of hunger, thus setting themselves apart from most other food banks (Operation Food Search, n.d.).

On a policy and advocacy level, Operation Food Search (n.d.) advocates for policies that empower families by providing more opportunities to obtain food and ensure healthy lives for themselves. They do this through three main actions. First, in addition to advocating for policy change to address the root causes of hunger at the state and federal level, OFS supports the existing health and nutrition safety net by providing accessible, updated, and reliable information to help people enroll in crucial programs such as SNAP, WIC, and Medicaid. This became especially important during the COVID-19 pandemic, as health and food policy has changed to address the rising rates of food insecurity and hunger. Second, through a program called Momvocrates, OFS trains and empowers a community of mothers to be champions for food safety net programs, their health, their families’ health, and their communities’ health. Momvocrates aims to move towards a food system that centers around food justice and those that are most affected by societal inequity. Third, by providing information and tools

for schools and policy makers to improve school breakfast participation, OFS ensures more children can succeed in school (Operation Food Search, n.d.).

On an education level, OFS teaches children, teenagers, and adults how to shop for and prepare quality, nutritious, and affordable meals through a variety of programs. Through their programs Operation CHEF and Grocery Store Tours, OFS effectively shifts the focus from solely distributing nutritious food to empowering families in Saint Louis to understand their nutritional needs and how they can consistently meet them. Operation CHEF provides nutrition focused cooking classes that teach families at risk of hunger food preparation skills through open discussions, recipes, and activities. Additionally, through their Cooking Matters program, they offered low-income adults an interactive tour and teach them how to get the most nutrition for their food dollars. This program responds to the well documented knowledge that the expense of groceries is a large household barrier to cooking healthy meals and aims to overcome such a barrier by providing adults with smart shopping education. OFS's nutrition programs have proven successful, with over two decades of nutritionally recognized food skills education working with community partners to empower low-income families (Operation Food Search, 2021). As a result of the programs mentioned, 83% of parents report their willingness to shift to healthier, budget friendly grocery shopping methods (Cooking Matters, 2019). In addition, 68% of parents under WIC reported the ability to maximize their benefits towards buying more nutritionally rich foods (Cooking Matters, 2019).

On an innovation level, OFS's Food is Medicine (Fresh Rx) program acknowledges the link between food insecurity and health, battling high healthcare costs with innovative programs targeting expectant mothers. Through a combination of weekly deliveries of fresh, local, and nutritious foods, nutrition education and counseling, and other supportive service such as safety net enrollment and community referrals, the program specifically aims to prevent the negative long-term health impacts of food insecurity before pregnancy, and supports mothers through their pregnancy an additional 60 days after giving birth (Operation Food Search, n.d.). The program's 24-month pilot study that supported 75 mothers and their babies proved successful and showed that it could both improve health outcomes of the mother and baby and save money on healthcare expenses. For participants, food security reportedly increased by 44%, levels of depression decreased by 14% for mothers, and, in just St. Louis City, the program is projected to ensure 118 more babies would be born at a healthy weight (Operation Food Search, n.d.).

Recommendations

While forward thinking organizations like OFS begin to make successful strides towards addressing the root causes of food insecurity and hunger and implementing innovative programs, there remains a need to go even further towards imagining, creating, and implementing long-term solutions. Moving forward, my recommendations contain four key concepts. First, we must acknowledge the history of food apartheid and advocate for policy to address the inequality in food systems. Just recently in March 2021, President Joe Biden demonstrated a much-needed commitment to an equitable food system, signing the American Rescue plan into law (Johnson and Brown, 2021). The plan dedicates five billion dollars aimed towards addressing decades of racial discrimination that U.S. agriculture has historically supported. Of the five billion, four billion dollars will go towards relieving debt for farmers who have experienced racial discrimination, and the remaining one billion will go towards creating a racial equity commission under the U.S. Department of Agriculture, which will address discrimination in access to programs, financial lending, and other support. Additionally, another four billion dollars will be allocated towards supporting the existing safety net through extending SNAP benefits and support for small and medium sized farms and restaurants (Johnson and Brown, 2021). This is a meaningful step towards addressing a legacy of systemic discrimination against Black farmers and their livelihoods in the U.S. In addition to advocating for more political and policy change like this one, we must continue to be active in holding the agricultural leaders in Congress accountable for their promises of addressing racial inequity in America's food system.

Second, we cannot rely solely on the existing safety net and government programs to solve issues concerning hunger and food insecurity. We must invite broader innovation from different stakeholders (parties who can either be affected by or affect the food system), such as the postal service. For people living in rural America, hunger is persistent, and the COVID-19 pandemic has only worsened their situation. Food banks and their community partners have been forced to turn to innovation to reach food-insecure people living in rural America (Food Bank News, 2021). In 2015, The Montana Food Bank Network (MFBN) began using UPS to send packages of food to some of its most remote addresses. MFBN, a food bank based in the West of Montana also did this, with its main focus to reach food-insecure American Indian reservations. In response to COVID-19 cases beginning to emerge in an extremely remote reservation, a delivery route intended for firewood has been adapted to deliver food to residents through drive-throughs and personal contactless deliveries to keep them from having to move in and out to seek access to food. Today, with the help of volunteer friends and family, as well as partner organizations, the relief effort has since expanded to include more drive-throughs. For those

affected by COVID-19, residents with compromised immune systems, and families, home deliveries ensured access to food and containment of COVID-19 within the reservation. The effort is estimated to have helped more than 3,000 families living in Utah, Colorado, and New Mexico (Food Bank News, 2021). This out-reach exemplifies how innovating at a community level to address hunger and food insecurity can help in areas the government is not yet equipped to.

Third, we must improve the connection between farms and consumers to increase access to nutritious, quality, and affordable food for individuals and families experiencing food-insecurity and hunger (Operation Food Search, n.d.). This begins with tackling the issue of food waste in the U.S. Every day in the United States, about one pound of food per person goes to waste (Gregory and Jensen, 2017). Cumulatively in 2017 alone, this equated to about 81.4 billion pounds of food that went to waste (Gregory and Jensen, 2017). At a community level, gleaning is a process that allows consumers to visit farms directly and rescue fresh food that would otherwise go to waste or go unharvested. Gleaning has been effective across the country, and specifically in St. Louis. The practice benefits both farms and consumers, as it builds a stronger connection between farms and consumers through volunteers learning how to glean and acknowledging and appreciating the labor of farming. Additionally, it reduces food waste. Farms also receive tax benefits to encourage their donations of food. For consumers, specifically those facing food insecurity, gleaning offers direct access to local, fresh, nutritious food (Operation Food Search, n.d.).

Fourth and finally, we must use available data and shared language to ensure the coordination of all stakeholders. As I have explored throughout this paper, the issue of hunger and food security are not one-dimensional. The root causes of hunger and the complex intersection of food insecurity, hunger, economic inequalities, racial inequities, health, and environment (Shirvell, 2019) are multidimensional issues which require the communication and coordination of all stakeholders involved. A good example of stakeholders coordinating to ensure an adequate response to the multidimensional nature of poverty is a poverty fighting foundation in Paraguay, *Fundacion Paraguaya*, coordinating with food banks globally to spread its highly successful method of empowering impoverished families (see Food Bank News, 2021). The foundation's method, the poverty stoplight, collects data through a visual app surveying income, access to nutritious food, vaccinations, budget, and home composition on a household level. The poverty stoplight moves beyond the usual method of measuring poverty as a ranking to inform policymakers and the government. Instead of this, they give the data collected directly to families to educate them about their financial standing in each dimension. This allows the family to understand that the areas they need the most assistance in and create a pathway of sustainable and

achievable goals to move themselves out of poverty. After families feel empowered to take these actionable steps, *Fundacion Paraguaya* connects them with food banks which facilitate connections to other services and organizations that can help realize their goals and seek further solutions. Currently, the foundation works in 30 countries, with approximately 400 organizations including local governments and schools. In the U.S., it coordinates with the Salvation Army to reach populations struggling with homelessness in Orange Country, and in New Orleans, it works with vulnerable, young Black people who were formerly incarcerated. While a randomized controlled trial (RCT) examining the efficiency of the program remains in progress, the foundation reports increased levels of empowerment from families in their ability to improve their circumstances after using the poverty spotlight (Food Bank News, 2021). The foundation continues to expand its coordination with stakeholders globally, seeking to work with food banks to continue this much-needed work.

While Operation Food Search in Saint Louis and other organizations make progress moving towards long term solutions and addressing the root causes of hunger and food insecurity, consistent effort in the areas of policy change, advocacy, education, and innovation are needed to move forward and create a just food system that benefits all people regardless of social determinants such as race, ethnicity, and income.

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