



COVID-19, Food Insecurity and Health in Liberia

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Authors' contributions

This work was carried out in collaboration between both authors. Author FP did the literature review, limitations and abstract. Author HM did the conclusion and references. Both authors read and approved the final manuscript

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ABSTRACT

Background: This paper highlights empirical evidence on how COVID-19 has caused havoc for food security and health in Liberia. With the alarming rise in poverty, low agricultural production and poor health among Liberians, the presence of COVID-19 further intensified the magnitude of difficulty in resolving these societal problems. COVID-19 has created a scene of chaos for poor families; which have to keep struggling through it to live healthy and have equal access to food items.

Methods: A literature search was conducted using 5 electronic databases: PubMed, ScienceDirect, Cross Ref, Google Scholar and Google Search Engine. The inclusion criteria included: research that focused on COVID-19 and food security; peer-reviewed academic journals published in English in the last 5 years period; open access articles with accessible abstracts and full text; and commentaries/discussion papers.

Results: In spite of the efforts applied by the Government of Liberia in minimizing COVID-19 impacts on food insecurity and health, citizens still feel the huge effect of food insecurity and poor health due to high unemployment rate and low purchasing power.

Conclusion: COVID-19 has created unfavorable food insecurity situations and adverse effects on

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quality health and wellbeing of citizens. Food security and quality health are of interest now due to the fact that most Liberians depend on food items to survive and live healthy lives. And if proper care is not taken to reverse the unwanted course of food insecurity, thousands of Liberians would suffer from starvation, malnutrition and untimely death, even after coronavirus has left mother earth.

Keywords: COVID-19; food security; food insecurity; health and Liberia.

1. INTRODUCTION

The coronavirus pandemic remains a health and human crisis impeding food security and quality nutrition of millions of global citizens [1]. Since the emergence of coronavirus in Liberia, normal human activities have been curtailed thereby leading to an unprecedented wave of food insecurity across the country [2-5]. In Liberia, poor families spend a lot of money to buy food items on a daily basis; they usually generate the money by doing normal daily hustles like street peddling, washing cars, riding kehkeh/motorbikes, driving commercial taxi or van, selling foods at lappa-be-doors/restaurants, changing money at bureau, selling scratch cards etc. With the presence of COVID-19, coupled with all the restrictions, it is ok to safely believe that the normal hustles of those poor families have been disrupted thereby reducing their sources of income; hence, reducing their purchasing power. This level of food insecurity has not been experienced by Liberians since the end of the fourteen years of civil unrest. Fast forward to 2020, with the entry of corona virus into Liberia in March, hell broke loose once again on food security in one of the world's poorest and underdeveloped countries – Liberia [6-9]. For several years Liberia has been struggling to revive the agricultural and health sectors in adapting technologically advanced machineries that would help to resolve the issue of food insecurity and poor health among citizens in all of the fifteen political subdivisions. As such, one could possibly imagine the damaging trickle-down effects COVID-19 pandemic is having on food security in this Sub-Saharan African nation.

With the experience of combating food insecurity during the 2014 Ebola virus disease outbreak, which was not grave back then as compared to the existing case of coronavirus disease pandemic; Liberians still maintain the resilience of managing to survive on what they have in their possessions on a daily basis. The reason behind such graveness of food insecurity at this time is that, coronavirus is a pandemic which keeps

destabilizing bigger economies across the globe that Liberia usually relies on for aids, especially its staple food – rice. Unarguably, due to such high level of food insecurity, it could be projected that millions of Liberians would go to bed hungry thereby leading to preventable health complications which might take away the lives of potential citizens who could become agents of change to drive the growth and development of Liberia on the right trajectory [10-12]. It could easily be assumed that thousands of people would probably die from starvation and or malnutrition in Liberia as compared to the calculated deaths of COVID-19.

2. METHODS

A literature search was conducted using 5 electronic databases: PubMed, ScienceDirect, Cross Ref, Google Scholar and Google Search Engine. Some of the terms that were searched included: COVID-19, food system, food security, food insecurity, health and Liberia. They were interchangeably used in different combinations. The inclusion criteria included: research that focused on interconnectedness among COVID-19, food security and health; peer-reviewed academic journals published in English in the last 5 years period; open access articles with accessible abstracts and full text; and commentaries/discussion papers.

3. COVID-19 ENTRY INTO LIBERIA

In March 2020, the fear of COVID-19 grasped millions of Liberians to the extent that they fervently prayed against the entry of COVID-19 on the Liberian soil. The continuous fear factor was not a sufficient reason to prevent the entry of coronavirus in Liberia. At times, our will does not always prevail in uncertain circumstances. Unfortunately, one early morning, the news of the first positive index case of COVID-19 linked to a Liberian government official who contracted the corona virus diseases from Italy increased the level of fear in citizens and everyone was confused not knowing how to absorb such unbearable information.

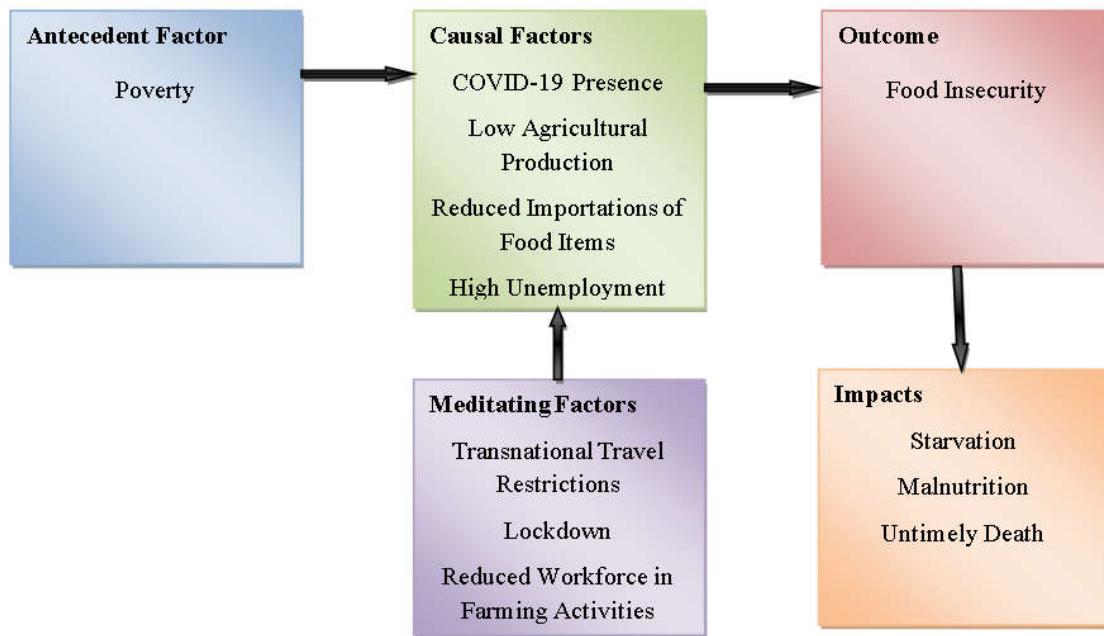


Fig. 1. Causal theory illustration of COVID-19, food insecurity and health in Liberia

Knowing how the corona virus disease scattered bigger economies across the globe, and with the level of poverty and illiteracy in the Liberia, people began to wonder how Liberia would come out of this nightmare without damaging all sectors within the economy of the nation. The Ministry of Health and National Public Health Institute of Liberia began to work with the International Community and foreign partners in working on modalities that would ease the fear in the citizens and help to collectively combat corona virus disease out of Liberia. In an effort to minimize public exposure to the COVID-19, the Government of Liberia instituted several measures to ensure public safety. Some of the measures included; declaring a state of emergency, imposing a partial lockdown (from 3 PM to 6 AM), imposing domestic and international travel restrictions, curfews, limiting availability to essential services at institutions, decongesting work stations etc. All of these measures coupled with the already high unemployment rate, low agricultural production, reduced workforce in farming activities and reduced importations of food items are leading to food insecurity. Consequently, food insecurity is further leading to starvation, malnutrition and untimely death. Liberians are people with high level of resilience; evident by their commitment in combating Ebola Virus Disease in 2014 and by

extension their coping mechanisms put into place after the fourteen years of civil unrest.

Before entering Liberia, novel coronavirus disease first occurred on the Chinese soil in December 2019 after three bronchoalveolar lavage samples were collected from a patient with pneumonia of unknown etiology. It was a new strain of coronavirus. After several laboratory analyses using illumina and nanopore sequencing, the virus identified had typical features of the coronavirus family. Furthermore, from phylogenetics analyses conducted with full genome sequence, bats were observed to the reservoir of COVID-19 virus [13]. It then began to uncontrollably spread across most countries around the globe. This was, in part, due to the no restriction on transnational trade and international travels by people who were leaving China to other parts of the world during the heat of the incidence of the virus at that time. The December 2019 outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) resulted from a rapid spread of a viral strain that leads to severe respiratory illness named coronavirus disease 2019 – COVID-19 [14]. The World Health Organization responded on January 30, 2020 by declaring COVID-19 a global pandemic [14].

4. COVID-19, FOOD INSECURITY AND HEALTH

Over the years, food shortages have been significantly attributed to extreme weather, economic crises, conflicts or insecurities, sanctions, health shocks and climate change impacts such as droughts, floods, heatwaves and cold spells [14]. For instance, economic crises in Haiti, Sudan, Zimbabwe and Venezuela contributed to food insecurity in those countries in 2019; while, armed conflicts and political instability were considered as driver forces behind the food insecurities in the Middle East, several Asian countries, Lake Chad Basin and Central Sahel Regions [14]. In Liberia, food insecurity remains a chronic challenge to Liberia's socio-political stability, socio-economic progress and sustainable development goals due to problems of post-conflict social rehabilitation, volatile food prices, change in food supply, low-scale merchandise farming and potential health crises, one of which is the corona virus pandemic [15]. Evidently, COVID-19 has interrupted quality food accessibility and adversely impacted food security, which could be connected to further adverse preventable health complications [16].

From the onset of an emergent overlooked health problem, COVID-19 pandemic has over time being transformed into a grave economic threat to food security in manners of lockdowns, economic decline, food trade restrictions and rising food inflation thereby destabilizing respective progress in food supply chain systems in terms of food availability, food stability, food utilization and food accessibility [17-19]. In furtherance, COVID-19 has disrupted all four pillars of food security- food availability, food stability, food utilization and food accessibility [20]. In Liberia, where majority of the population are mostly vulnerable to hunger and malnutrition [21], it remains a matter of consciousness to safely navigate your thoughts into assuming the devastating impacts of the existence of COVID-19 on the already impoverished and frustrated citizenry. Among the United Nations Sustainable Development Goals (UNSDG) to be achieved by 2030, ending hunger and establishing food security remains a top priority for Liberia which has been massively disrupted by the presence of COVID-19 pandemic [18].

Liberia has a vulnerable food supply system; henceforth, a high food insecure state. During this COVID-19 pandemic, Liberia experienced the hardest hit in the food market when its staple

food item- rice, reduced to a level where citizens could barely see it in the local markets to buy. This is because Liberia imports approximately 80 percent of its staple food from foreign countries [22]. With the complete lockdown in those countries, one could predict that Liberia would be faced with a huge challenge in getting timely supplies of rice for its citizens. For instance, in July 2020, the price of 25 kg bag of rice artificially increased from \$2,600 Liberian Dollars to between \$4,000 - \$5,000 in the Monrovia, the capital city. Think about what the price of rice would be in the hinterlands- the interiors of Liberia. This caused a lot of distraught among government, wholesalers, retailers, and consumers. That unfortunate incident was just one of the direct manifestation of the adverse impact COVID-19 pandemic is displaying on an already struggling and suffocating economy. Due to COVID-19 pandemic, local farmers could not produce local farm products at will. Furthermore, with the presence of coronavirus disease, there is a continuous threat to quality nutrition across the fifteen political subdivisions, which is very severe in most vulnerable populations. Coronavirus pandemic has further intensified food insecurity in Liberia, highlighted the fragile nature of Liberia food supply system and exposed the vulnerability of both the agriculture and health sectors. Liberia would be one of those countries that will keep struggling to recover from the destabilizing effects of coronavirus pandemic in all of its sectors, not just the agriculture sector. Even after coronavirus pandemic, it will take the help of foreign partners to boost the entire economy.

Transportation fares have increased across the entire country since the inception of the index case of the novel coronavirus disease in Liberia. We have been observing similar trends surrounding such. This is, in part, due to the regulation from the Ministry of Transport ordering all taxi drivers to have three persons at the back seats and one person at the front seat; thereby reducing the numbers of passengers in vans and buses. Transportation has a significant role to play in the increment of prices of food items across the fifteen political subdivisions during this coronavirus period. Due to the high transportation fares paid by wholesalers and retailers, the food items being transported from one region of the country to another have increased prices. It is obviously not a healthy experience for poor farmers who might not have the necessary financial resource to swiftly transport their farm produce. As a result of such,

poor farmers become victims of the inadvertent negative impacts of coronavirus on food security. For instance, the transportation fare from Monrovia (capital city of Liberia) to Gbarnga, Bong County before the entry of COVID-19 into Liberia was \$800 Liberian dollars; while the current transport fare covering similar distance during this COVID-19 period is \$1,500 Liberian dollars. The transport fare during COVID-19 almost doubles the transport fare before COVID-19.

The uncontrolled stressful events involving strenuous coping mechanisms to adjust oneself to the prevailing food insecurity problem during this COVID-19 period might lead to health complications such as high blood pressure [23], heart problem [24], stroke [25] or diabetes [26] in most parents. This could result from the endless struggles and challenges they are currently faced with in finding money to be able to provide the daily basic needs of their immediate families as well as pay their children tuition and fees when schools resume normal activities. This is obviously a tough time for all poor families. The stress of losing their jobs as a result of companies or non-government organizations not being able to adequately source funding for their operations across the country because of the restrictions in transnational travels is another worrisome situation.

5. LIMITATIONS AND CONCLUSION

This paper might not have included all the necessary published literature due to limited databases reviewed. It was also a challenge finding published articles on similar themes on Liberia; that indicates there are little or no published articles from other Liberian researchers on the themes of interest. However, this paper looked at major concentrations in literature at the intersection of COVID-19, food insecurity and health; and summarized empirical evidence relative to COVID-19, food insecurity and health in Liberia. The devastating impacts of novel coronavirus disease on food security and health in Liberia cannot be overemphasized. More so, COVID-19 and food insecurity have adverse effects on quality health and wellbeing of citizens. However, COVID-19 has further offered an opportunity for countries around the globe to thoroughly review their current resilient toolkit for food supply systems and develop enhanced policy and strategies that would prepare them for any uncertainty of such nature in the future [27]. Food security is of interest now due to the fact

most Liberians depend on food items to survive, most especially rice- their staple food. Food insecurity, at a larger extent, could conclusively act as a multiplier for the pandemic with respect to its adverse health effects on citizens [28]. Furthermore, coronavirus pandemic continues to impede food security and quality health in millions of people. And if proper care is not taken in the right direction to reverse the unwanted course of food insecurity, thousands of Liberians would suffer from starvation, malnutrition and untimely death, even after coronavirus has left mother earth. Finally, this narrative literature review serves as a fundamental tool for future researches that would focus on the major themes that have been discussed.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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