

The Impact of Covid-19 in Liberia: A Case Study of Monrovia (January 2020-December 2023)

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Abstract:-

➤ *Background:*

In 130 years, there have been five pandemics related to coronavirus (Maital, 2020). An epidemic of mysterious pneumonia was characterized by dry cough, fever, and body fatigue in late December 2019(Wu et al., 2020). The situation posed additional risks and challenges to the populace, increasing physical illness (Kmetty, 2020). The spread of COVID-19 across Africa created a considerable impact ranging from economic cybertage, starvation, and educational setbacks (Webmaster, 2020). The COVID-19 pandemic occurred in Liberia five years after ebola and during the Resilient and Responsive Health Systems (RRHS) designed to support Liberia's national health workforce to improve health outcomes (Marsh et al., 2021).

➤ *Methodology:*

The research used a descriptive case study design to explain concepts, policies, and tools related to identified problems. Since the impact of COVID-19 reflects not only on survival but also on relatives, the research considered the population of Monrovia. Monrovia's current metro area population in 2023 is 1,678,000(Macrotrends, 2023). The study considered Liberia the main case, with Monrovia and Montserrado County as specific Sub-cases. The purposive sampling technique was used to ensure the representation of various socio-economic groups, including urban and rural areas and different regions within Monrovia. The research used a 95% CI and Slovinc's formula to derive a sample size of 400. Questionnaires were used to collect field data. The data herein includes documentary analysis, interviews/surveys, and observations. The data was analyzed using SPSS and narratives of qualitative findings.

➤ *Findings:*

This data suggests that a large portion of the population has been affected by job loss or reduced employment opportunities due to the pandemic. Overall, the data reflects the widespread impact of the COVID-19 pandemic on the employment status of individuals in Liberia.

➤ *Recommendations:*

The study proposes improvements to Liberia's public health sector, including better risk-benefit policies, salary increments, and training/deployment of healthcare professionals.

Keywords:- COVID-19, Impact, Socia-Economic, Policies.

I. INTRODUCTION

It is good to establish the facts about influenza and COVID-19 because they both have similar symptoms, including cough, runny nose, fever, sore throat, fatigue, and headache. However, influenza and COVID-19 can be fatal (WHO, 2021). An epidemic of mysterious pneumonia was characterized by dry cough, fever, and body fatigue in late December 2019 (Wu et al., 2020). COVID-19 belongs to a family of viruses, not flu or influenza, that usually reside in animals but can jump from animals to humans. COVID-19 is similar to flu in that it causes respiratory distress. In extreme cases, it can damage the lungs and keep oxygen from reaching vital organs (Maital, 2020). Since the virus was globally attacked in 2019, the World Health Organization (WHO) ceremoniously named it coronavirus disease 2019 and shortly referred to it as COVID-19. Additionally, the WHO classified the virus as severe acute respiratory syndrome coronavirus-2 (SARS-COV-2), which appears to be a virus from the Rhinolophus bats. The immediate host of the virus has yet to be identified (Gabutti et al., 2020).

The effects of COVID-19 on schools, businesses, and jobs globally cannot be over-emphasized for the past two years. However, the situation posed additional risks and challenges to the populace, increasing physical illness (Kmetty, 2020). Many lives were lost due to COVID-19 in America, up to over 975,000 people. Millions also lost their jobs, leaving a little over 31.6 million working to provide frontline services (Busette, 2022).

The spread of COVID-19 across Africa created a considerable impact ranging from economic cybertage, starvation, and educational setbacks. Most significantly, it exposed the limitations in various health sectors. One can safely say that the coronavirus pandemic was an easy means of breaking some cultures among Africans, and up to Date,

the scares are yet to be cured among African families (Webmaster, 2020).

South Africa has experienced countless diverse implications due to the COVID-19 Pandemic. Economic, social, health, technological, and environmental factors, amongst others, are impacts caused by the pandemic (Dr.Sekyere et al., 2020).

From the index case of coronavirus in Liberia, several mechanisms have been put in place by health associates, including the World Health Organization (WHO). It is honorable to retrospect on the ebola outbreak, which lasted from 2014 to 2016, put the Liberian health sector in a deplorable condition. COVID-19 is the second major health attack the Country has faced within five years (Davis et al., 2021). The COVID-19 pandemic occurred in Liberia five years after ebola and during the Resilient and Responsive Health Systems (RRHS) designed to support Liberia's national health workforce to improve health outcomes. The coronavirus outbreak caused 2,484 confirmed cases in Liberia, with 93 deaths. Almost all activities came to a standstill, including routine service delivery to all clinics and health centers.

The president's curfew greatly affected the transportation and business sectors, causing a significant loss of livelihood and resulting in healthcare providers and patients struggling to travel to facilities (Marsh et al., 2021).

➤ *Objectives of the Study:*

The study focused on the following objectives:

- The impact of COVID-19 on Liberia's health outcomes, economic changes, and societal dynamics.
- The Socio-economic consequences of COVID-19, poverty, and economic indicators are affected in Liberia.
- The variation of the impact of COVID-19 across different regions in Liberia.

II. RESEARCH METHODOLOGY

The research used a descriptive case study design to investigate a person, group, or community and examine identifiable problems confirmed through the research. Since the impact of COVID-19 reflects not only on survival but also on relatives, this research considered the population of Monrovia. Monrovia's metro area population in 2023 was reported at 1,678,000 (Macrotrends, 2023). The research considered Liberia the main case, with Monrovia and Montserrado County as specific Sub-cases. We used a purposive sampling technique to ensure the representation of various socio-economic groups, including urban and rural areas and different regions within Monrovia. The confidence interval of 95% was used by the researcher, considering a 5% margin error. The researcher also uses Slovin's formula to calculate an appropriate sample size from a population since the population is known (Slovin, 1960). The critical z-score values when using a 95 percent confidence level are -1.96 and +1.96 standard deviations (ArcGIS Pro,2021). The sample size calculated was 400 Using the formula mentioned below.

$$n = \frac{N}{1 + Ne^2}$$

n is equal to the sample size

N is equal to the total population

e is equal to the margin of error

However, two respondents were added during the data collection process, increasing the sample size to 402.

The researcher used questionnaires to collect information from the sampled population because they are a popular tool for gathering large amounts of information based on their fast, efficient, and inexpensive nature. The data was analyzed using quantitative and qualitative analysis. The qualitative analysis focused on the thematic analysis of interviews and open-ended survey responses. The quantitative analysis also concentrates on the statistical analysis of survey data to quantify the socio-economic impact and determine the correlations.

III. RESULTS

Table 1 Sex Of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	220	54.7	54.7	54.7
Female	181	45.0	45.0	99.8
Prefer not to say	1	.2	.2	100.0
Total	402	100.0	100.0	

Field Data-2024

The data includes the frequency and percentage of male, female, and "prefer not to say" respondents. Two hundred twenty respondents, or 54.7%, identified as male. One hundred eighty-one respondents, or 45.0%, identified as female.1 respondent, or .2%, preferred not to say.

Table 2 Age of the Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
18-27 years	37	9.2	9.2	9.2
28-37 years	229	57.0	57.0	66.2
38-47 years	126	31.3	31.3	97.5
48 years and above	10	2.5	2.5	100.0
Total	402	100.0	100.0	

Field Data-2024

Table 2 above shows the frequency and percentage of respondents based on different age groups. The age groups include 18-27 years, 28-37 years, 38-47 years, and 48 years and above. The frequency and percentage for each age group are listed in the table. The cumulative percent column shows the total percentage of respondents to that age group.

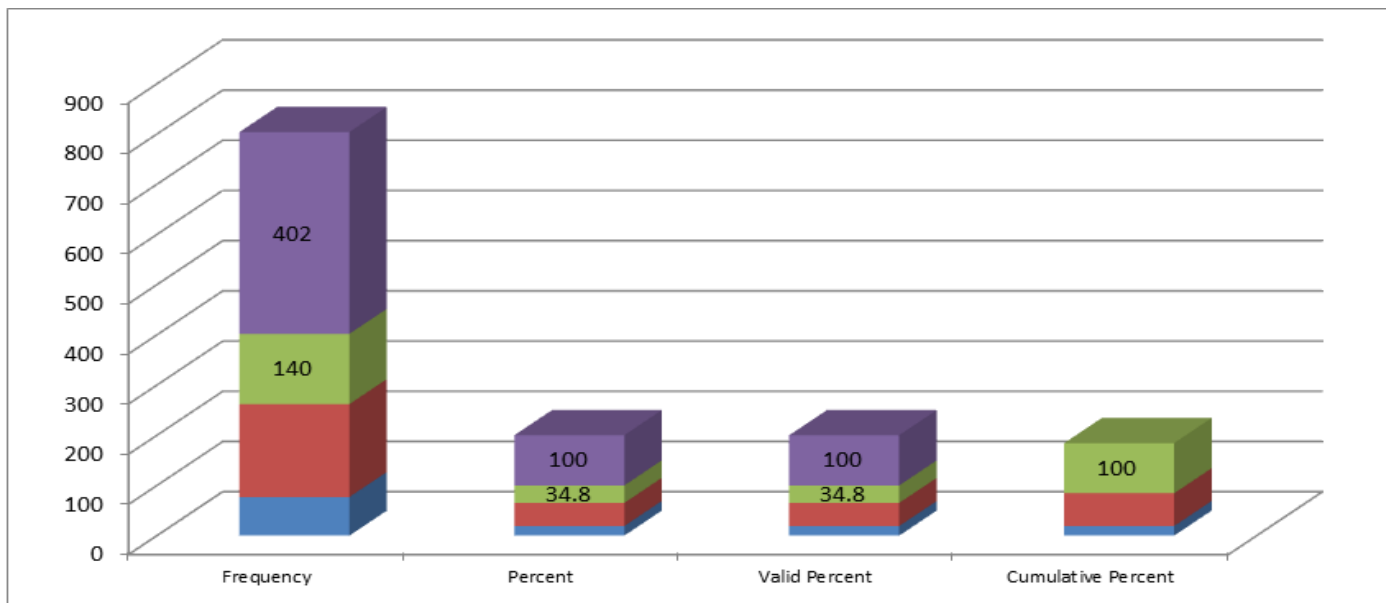


Fig 1 Employment Status of Respondents
Field Data-2024

The data collected indicates the employment status of 402 respondents. Of the total respondents, 77 (19.2%) were self-employed, 185 (46.0%) were employed, and 140 (34.8%) were unemployed. The percentages represent the valid and cumulative percentages of each employment status category.

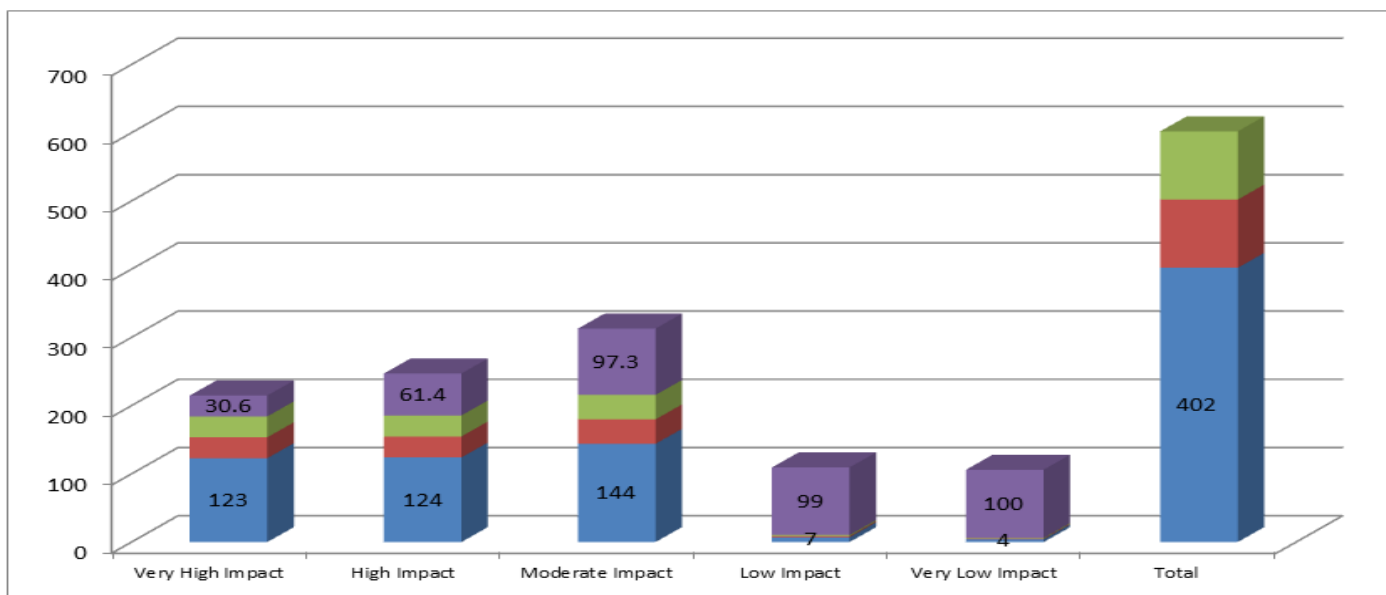


Fig 2 How would you Rate the Overall Impact of Covid-19 on the Health of Individuals in Liberia
Field Data-2024

The survey categorized the impact into five levels: Very High Impact, High Impact, Moderate Impact, Low Impact, and Very Low Impact. The results show that 30.6% of respondents reported a Very High Impact, while 30.8% reported a High Impact. Additionally, 35.8% reported a Moderate Impact, 1.7% reported a Low Impact, and 1.0% reported a Very Low Impact. The survey indicates that most individuals in Liberia experienced a high or very high impact on their health due to COVID-19, as presented in Figure 2.

Table 3 Population Particularly Vulnerable to the Socio-Economic Impacts of Covid-19 in Liberia

	Frequency	Percent	Valid Percent	Cumulative Percent
The elderly	230	57.2	57.2	57.2
The children	10	2.5	2.5	59.7
The Disable	11	2.7	2.7	62.4
Working women	5	1.2	1.2	63.7
Working Men	4	1.0	1.0	64.7
The elderly, children, and disabled	138	34.3	34.3	99.0
all options	4	1.0	1.0	100.0
Total	402	100.0	100.0	

Field Data-2024

The data in Table 3 shows that the elderly are the most vulnerable to the socio-economic impacts of COVID-19 in Liberia, accounting for 57.2% of the respondents. Following older adults, children make up 2.5%, and people with disabilities make up 2.7% of the vulnerable population in Liberia. Working women and men are also vulnerable, with 1.2% and 1.0%, respectively. A significant portion, 34.3%, identified the elderly, children, and people with disabilities as the most vulnerable populations.

Table 4 Factors Contributing to the Vulnerability of Populations

	Frequency	Percent	Valid Percent	Cumulative Percent
Economic status	184	45.8	45.8	45.8
Access to healthcare	62	15.4	15.4	61.2
Geographic location	2	.5	.5	61.7
Education level	7	1.7	1.7	63.4
Economic status and access to healthcare	80	19.9	19.9	83.3
All options	67	16.7	16.7	100.0
Total	402	100.0	100.0	

Field Data-2024

According to Table 4, Economic status was reported as the most frequent factor contributing to vulnerability, with 184 responses representing 45.8%. Access to healthcare was cited as a significant factor, accounting for 62 responses, or 15.4%. Geographic location was mentioned in only two responses, indicating it as a less prominent factor, representing 0.5%. Education level was reported by seven respondents, making up 1.7% of the total. The combination of economic status and access to healthcare was a significant contributor, with 80 responses accounting for 19.9%. Sixty-seven respondents selected "all options" when asked about factors contributing to vulnerability, representing 16.7%.

Table 5 The Overall Impact of Covid-19 on the Health of Individuals in Liberia

	Frequency	Percent	Valid Percent	Cumulative Percent
Very High Impact	123	30.6	30.6	30.6
High Impact	124	30.8	30.8	61.4
Moderate Impact	144	35.8	35.8	97.3
Low Impact	7	1.7	1.7	99.0
Very Low Impact	4	1.0	1.0	100.0
Total	402	100.0	100.0	

Field Data-2024

In **Table 5**, the frequency of individuals reporting a very high impact of COVID-19 on their health was 123, accounting for 30.6%. One hundred twenty-four individuals, representing 30.8%, reported a high impact on health. One hundred forty-four individuals reported a moderate impact on their health, making up 35.8%. Only seven individuals reported a low impact on their health, constituting 1.7%. Four individuals, representing 1.0%, reported a very low impact on health.

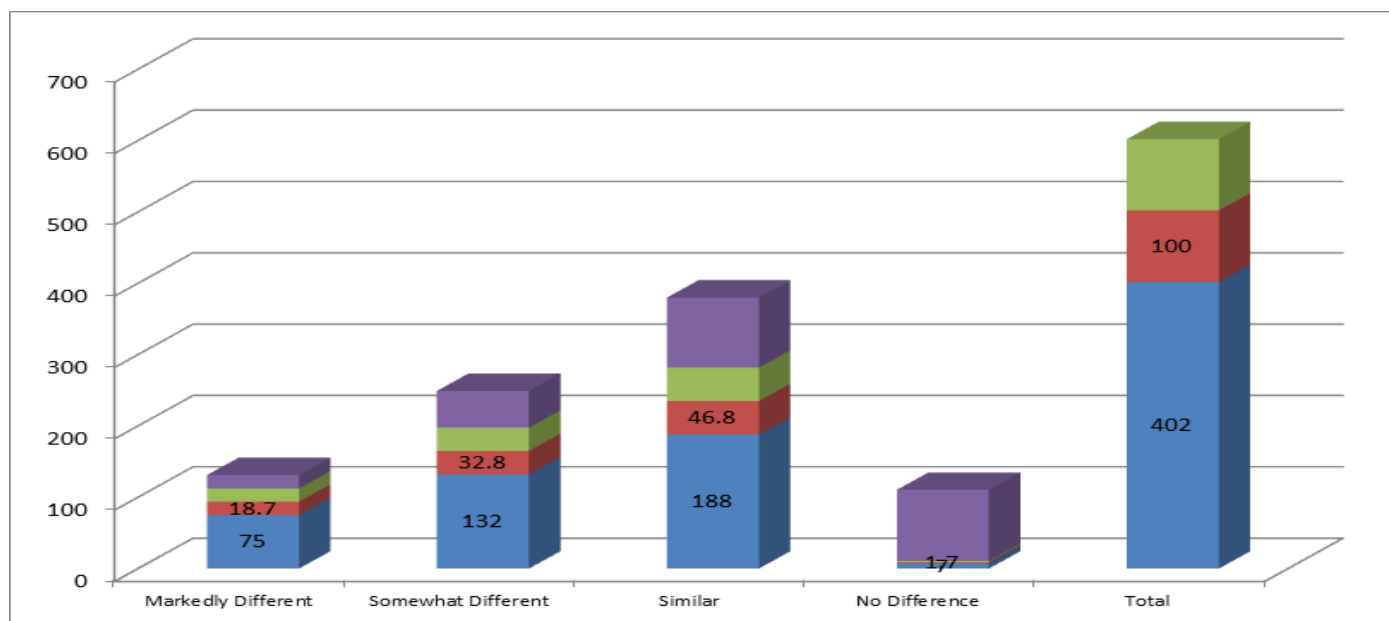


Fig 3 The Impact of Covid-19 Across Different Regions Within Liberia
Field Data-2024

In **Figure 3**, The impact of COVID-19 has been reported to vary across different regions within Liberia. According to the data, 18.7% of respondents reported the impact as "Markedly Different."32.8% of respondents indicated that the impact was "Somewhat Different." A significant portion, 46.8% of respondents, reported that the impact was "Similar" across different regions. Only 1.7% of respondents noted "No Difference" in the impact of COVID-19 across regions in Liberia.

Table 6 Implications of Local Policy Based on the Findings of the Study

	Frequency	Percent	Valid Percent	Cumulative Percent
The Liberia Public Health Laws	38	9.5	9.5	9.5
The Integrated Disease Surveillance and Response (IDSR) policy	19	4.7	4.7	14.2
The International Health Regulations Policy (IHR)	100	24.9	24.9	39.1
All options	245	60.9	60.9	100.0
Total	402	100.0	100.0	

Field Data-2024

The study findings in Table 6 show that 9.5% of participants foresee local policy implications related to The Liberia Public Health Laws. Similarly, 4.7% of participants anticipate the implications of the Integrated Disease Surveillance and Response (IDSR) policy. A significant 24.9% of respondents foresee policy implications regarding The International Health Regulations Policy (IHR). Overall, 60.9% of respondents see potential local policy implications based on the study's findings, including the Liberia Public Health Laws, the Integrated Disease Surveillance and Response, and the International Health Regulations Policy.

IV. DISCUSSION ON FINDINGS

➤ *The Impact of COVID-19 in Liberia*

In reference to Figure 3, the impact of COVID-19 was similar in different regions of Liberia. 46.8% of the respondents pointed towards the similarities of the impact. The COVID-19 pandemic has strained Liberia's healthcare system, leading to a decrease in access to essential medical services and an increase in overall mortality rates. The Country has experienced challenges in containing the spread

of the virus due to limited healthcare infrastructure and resources. COVID-19 has caused significant economic disruptions in Liberia, resulting in job losses, decreased productivity, and decreased GDP growth. The pandemic has taken a toll on various sectors, such as tourism, trade, and agriculture, leading to financial hardship for many Liberians. The pandemic has exacerbated social disparities in Liberia, with vulnerable populations facing increased hardships. Measures such as lockdowns and social distancing have impacted social interactions and traditional practices, leading to changes in societal norms and behaviors. These findings lined with Alhassan et al. March 2023 article titled "Perceived impacts of COVID-19 responses on routine health service delivery in Liberia and UK': cross-country lessons for resilient health systems for equitable service delivery during pandemics" shows a mixed impact on routine services in both settings, with significant adverse impacts including diminished availability and utilization of critical health services for socially vulnerable populations, linked with reallocation of health service resources for COVID-19.

➤ *The Socio-Economic Consequences of COVID-19 in Liberia:*

As demonstrated in Table 3, the socio-economic consequences of COVID-19 in Liberia have been significant, with various economic sectors experiencing the pandemic's impact. Poverty rates in Liberia have been on the rise due to the effects of COVID-19, leading to increased financial strain on many individuals and families. Economic indicators in Liberia, such as GDP growth rates and unemployment levels, have been negatively affected by the pandemic, resulting in economic hardship for many people in the Country. The healthcare system in Liberia has also faced challenges due to COVID-19, with limited resources and infrastructure to respond to the population's healthcare needs effectively. This study's results correlate with the UNDP August 3, 2023 report on the digital socio-economic impact of COVID-19 on Liberia's informal sector, which was initiated to support the government of Liberia in designing and implementing effective and targeted measures to alleviate the negative impacts of the COVID-19 pandemic on households and micro enterprises in the informal sector.

➤ *Variation of COVID-19 Across Different Regions in Liberia, Specific Challenges and Opportunities:*

In Table 5, The impacts of COVID-19 vary across different regions in Liberia due to varying levels of infrastructure, healthcare access, and economic development. In Monrovia, specific challenges such as overcrowded urban areas and limited healthcare resources have been evident in dealing with the COVID-19 pandemic. However, Monrovia also presents opportunities for community engagement, innovative solutions, and international aid to address the challenges posed by COVID-19. This study's findings align with Alhassan et al. article "Perceived Impacts of COVID-19 Responses on Routine Health Service Delivery in Liberia and UK: Cross-Country lessons for resilient health systems for equitable service delivery during pandemic," Published March 29, 2023, which shows a mixed impact on routine services in both settings, with significant adverse impacts including diminished availability and utilization of critical health services for socially vulnerable populations, linked with reallocation of health service resources for COVID-19.

➤ *Policy Implications for Effective Response and Recovery Strategies in Liberia*

In Table 6, effective response and recovery strategies in Liberia require careful consideration of policy implications. Policy implications include government regulations, resource allocation, and international cooperation. Government regulations can impact the implementation and success of response and recovery efforts. Resource allocation is crucial for providing necessary aid and support to affected communities. International cooperation can enhance the effectiveness of response and recovery strategies through collaboration and sharing of resources. It is essential to address policy implications to ensure a coordinated and efficient approach to response and recovery in Liberia.

V. CONCLUSION

The COVID-19 pandemic has adversely affected Liberia's health outcomes, economic changes, and societal dynamics. Poverty rates and economic indicators have been negatively impacted, with poverty rates increasing due to job loss and reduced income opportunities, considering 19.2% of respondents are self-employed, 46.0% are employed, and 34.8% are unemployed. Economic indicators such as GDP growth and unemployment rates have also suffered. The effects of the pandemic vary across regions, with Monrovia facing specific challenges and opportunities. Liberia's GDP contracted in 2020 due to COVID-19. Vulnerable populations, including low-income households, the elderly, and marginalized communities, face heightened risks due to limited access to healthcare, lack of financial resources, and inadequate social support. Addressing vulnerability should involve targeted support, healthcare access, and inclusion policies. Liberia's healthcare system has struggled with limited resources and infrastructure during the COVID-19 pandemic, causing strain on healthcare resources, disruption to education, and exacerbation of social inequalities. The Country faces long-term recovery challenges, requiring sustainable solutions and support from the international community. Practical mitigation strategies include mass vaccination campaigns, public health policies, and addressing socio-economic disparities. Liberia's experience with COVID-19 is similar to that of other developing countries, highlighting vulnerabilities in healthcare and economic systems.

RECOMMENDATIONS

The study proposes improvements to Liberia's public health sector, including better risk-benefit policies, salary increments, and training/deployment of healthcare professionals. It emphasizes the necessity of collaboration between government, NGOs, and international partners to strengthen response and recovery efforts in addressing future public health challenges.

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