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Dr. MOULAY TAHAR UNIVERSITY of SAIDA

Faculty of Letters, Languages and Arts

Department of Literature and English Language

Covid-19 Pandemic and Ethnic Minorities in Britain

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Submitted by

Miss: MELATI Imane Amin

Supervised by

Dr. BOUARICHA Abdallah

Board of Examiners

Dr. Z. SELMI	Chair Person	University of Saida
Dr. A. BOUARICHA	Supervisor	University of Saida
Dr. A. MOUSSAOUI	Examiner	University of Saida

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Declaration of originality

I hereby declare that this submission, is my original work and that, it contains no material previously published or written by another person nor material which has been accepted for the qualification of any other degree or diploma of a university or other institution.

Date: 02/07/2024

Name: Melati Imane

Signature:

Dedication

I dedicate this humble work to my family:

My Parents

My Sisters and brother

For their support, and help.

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I would like to express my deepest gratitude to my supervisor Dr. Bouaricha for the tremendous help and the corrections he brought to my work.

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Abstract

Britain's COVID-19 crisis exposed significant health disparities, with ethnic minority populations bearing the consequences of the pandemic's consequences. This research investigates the factors that contributed to the disproportionate impact of COVID-19 on ethnic minorities in the UK compared to the general population. Adopting a socioecological approach, the study examines how individual, social, and systemic determinants shaped the unequal COVID-19 outcomes. Key factors explored include the higher prevalence of underlying health conditions, socioeconomic disadvantages, barriers to healthcare access, and the impacts of systemic racism and discrimination. The findings show that the pandemic's toll on ethnic minority communities was exacerbated by a complex interplay of social, economic, and health inequities. Ethnic minorities faced elevated COVID-19 risks due to factors such as living in deprived areas, working in high-exposure occupations, and experiencing challenges accessing timely, culturally-appropriate healthcare. The research underscores the urgent need for targeted, equity-focused public health interventions to address these disparities. Recommendations include implementing culturally sensitive healthcare initiatives, strengthening social safety nets, and taking decisive action against systemic racism to improve health outcomes for ethnic minority populations in the post-COVID era. By illuminating the multifaceted drivers of the pandemic's unequal impact, this study aims to inform the development of more inclusive and equitable health policies that benefit Britain's diverse communities.

Keywords: Covid-19, Disparities, Ethnic minorities, Health, UK Policies.

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List of Abbreviations

WHO: The World Health Organization.

ONS: The Office for National Statistics.

DFID: Department for International Development.

NHS: The National Health Services.

NICE: The National Institute for Health and Care Excellence.

BAME: Black, Asian, and Minority Ethnic.

GP: General Practitioner.

TUC: The Trade Union Congress.

AHC: After Deducting Housing Costs.

BHC: Before Deducting Housing Costs.

NPIs: Non- Pharmaceutical Interventions.

SIP: Shelter in Place.

CCIs: The Cultural and Creative Industries.

CCCs: The Cultural and Creative Content.

HST: The Historical Simulation Tasting.

General Introduction

General Introduction

Ethnic minorities in Britain faced a harsher reality during the COVID-19 pandemic compared to their white counterparts. This was evident in the higher number of hospitalizations and deaths among these communities. Several factors intertwined to create this unequal situation. Socioeconomic disadvantages, such as crowded living conditions and jobs with greater exposure risk, played a part. Furthermore, pre-existing health problems were more common in some minority groups, leading to worse outcomes from COVID-19. Communication and access to healthcare services may also have been inadequate for certain ethnicities. Your thesis has the potential to explore these disparities in greater detail, focusing on specific ethnic groups within the broader category of "ethnic minorities." It could analyze the government's response and the long-term social and economic impact on these communities.

Then this research attempts to shed light on Understanding the disproportionate impact to investigate and quantify the extent to which ethnic minorities are affected by COVID-19 compared to the general population in Britain. Identifying contributing factors to explore the social, economic, and healthcare-related factors that contribute to the higher rates of infection, severe illness, and mortality among ethnic minorities during the pandemic. Analyzing policy responses to evaluate the effectiveness of government policies and interventions aimed at addressing disparities, protecting vulnerable populations, and mitigating the impact of COVID-19 on ethnic minorities. Socioecological approach is trend of this research focused on context.

This research Includes Two-chapter theoretical framework, and one analysis. This thesis divided in three parts. A five-step research process was followed, including a general introduction and three chapters. The first chapter is titled introduction to the COVID-19 and Britain's Ethnic Minorities, and the second chapter delves deeper: Disparities in COVID-19 Impact. The third and final chapter is entitled Government Response and Policy Analysis. And finally, Conclusion: Key Findings and Considerations.

The first chapter Unveiling the Unequal Burden: COVID-19's Impact on Britain's Ethnic Minorities This chapter delves into the distinct challenges faced by ethnic minority communities in Britain during the COVID-19 pandemic. It explores the multifaceted disparities they experienced, encompassing areas of health, socioeconomic conditions, and access to healthcare. By examining these factors, the chapter aims to provide a foundational understanding of the particular issues and interactions involved, with the goal of identifying insights that can guide focused interventions and policies. These efforts are intended to reduce inequalities and enhance health outcomes for ethnic minorities within the context of COVID-19.

The second chapter, investigates the unequal effects experienced by ethnic minorities in Britain throughout the pandemic. It underscores their elevated rates of infection, severe illness, and mortality relative to the broader population. Contributing factors encompass socioeconomic disparities, heightened prevalence of underlying health conditions, barriers to healthcare access, and increased exposure risks linked to frontline work and crowded living environments. Recognizing these disparities is essential for devising targeted strategies and policies that can alleviate inequities and enhance health outcomes for ethnic minorities affected by COVID-19 in Britain.

The last chapter's, examines how the UK government has addressed the COVID-19 pandemic on ethnic minorities in Britain, with a particular focus on how these communities were affected by public health interventions such as lockdowns and vaccination campaigns aimed at controlling virus transmission within these communities. Additionally, the chapter evaluates policies designed to improve healthcare access, provide economic support, and enhance social services for ethnic minorities throughout the pandemic. This assessment aims to provide a comprehensive understanding of governmental efforts to address disparities, promote health equity, and ensure inclusive recovery strategies for all affected populations in Britain.

Examining the Disproportionate Effects of COVID-19 on Britain's Ethnic Minorities, it's essential to ask questions that explore the unique challenges, disparities, and outcomes experienced by these communities. There are key questions:

1. What underlying health disparities exist among ethnic minorities that may influence COVID-19 outcomes?

2. How have ethnic minorities' access to healthcare services been affected during the pandemic?
3. What lessons can be learned from the pandemic to improve health equity for Racial and ethnic minority groups?

The Objective of this research is as follow:

1. Then this research attempts to shed light on Understanding the disproportionate impact: To investigate and quantify the extent to which ethnic minorities are affected by COVID-19 compared to the general population in Britain.

2. Identifying contributing factors: To explore the social, economic, and healthcare-related factors that contribute to the higher rates of infection, severe illness, and mortality among ethnic minorities during the pandemic.

3. Analyzing policy responses: To evaluate the effectiveness of government policies and interventions aimed at addressing disparities, protecting vulnerable populations, and mitigating the impact of COVID-19 on ethnic minorities.

To address the aforementioned inquiries, this study proposes the following hypotheses:

1) Minority ethnic communities in Britain face worse COVID-19 outcomes due to higher prevalence of chronic conditions, socioeconomic disadvantages, and limited access to healthcare and preventive services. These factors, combined with higher exposure risks, lower health literacy, and systemic biases in healthcare, contribute to their increased vulnerability.
2) Ethnic minorities' access to healthcare services during the pandemic has been disproportionately affected due to socioeconomic barriers, limited digital access for telehealth, and systemic biases in healthcare delivery. These challenges have resulted in reduced access to necessary medical care, contributing to worse health outcomes.
3) Lessons from the pandemic highlight the need for targeted public health interventions, increased community engagement, and enhanced data collection to improve health equity for ethnic minorities. These strategies can address existing disparities and ensure more effective, culturally sensitive healthcare responses in future public health crises.

However, the lack of accurate references to analyze this research led to some hindrances to produce more comprehensive and diverse details, such as information about dating that have varied from one reference to another. Finally, this research is based on MLA style.

Chapter One

Chapter One: Introduction to the covid-19 and Britain's Ethnic Minorities

Introduction

In the wake of the COVID-19 outbreak, it has become clear that ethnic minority groups in Britain are facing an unequal share of hardships. Thus, it is fundamental to examine the ways in which this worldwide emergency overlaps with matters of health and racial background.

The pandemic has had an uneven impact across the UK, with ethnic minority groups, especially those identified as BAME, experiencing elevated levels of hospital admissions and deaths. The root causes of this imbalance include economic disparities, restricted access to medical services, dense housing situations, and a greater incidence of pre-existing medical conditions. It's essential to tackle these issues to guarantee fair health services and safeguard at-risk communities in the UK.

Health inequities lead to a higher prevalence of pre-existing medical conditions among ethnic minorities in Britain, potentially exacerbating the severity of COVID-19 symptoms. Additionally, due to socioeconomic circumstances, these communities often reside in areas with high population density, which contributes to a greater likelihood of spreading the virus.

The examination of COVID-19's impact on the COVID-19 pandemic in the UK served as a stark magnifying glass, revealing the profound inequities faced by ethnic minorities in health outcomes, economic security, and access to healthcare. This underscores the urgent need for targeted interventions and policy reforms to dismantle these long-standing disparities.

1.2 Examining the Landscape of the COVID-19 Pandemic

The outbreak of COVID-19, a respiratory illness caused by the SARS-CoV-2 virus, began in Wuhan, China in late 2019. The World Health Organization (WHO) officially named the disease in February 2020. COVID-19 is highly contagious and typically presents with fever, cough, fatigue, and can lead to lung complications.

Since the outbreak, the Chinese government and scientific community have acted quickly to identify the causative agent, immediately shared the viral genetic sequence, and taken measures to contain the epidemic. At the same time, recent research has revealed important aspects of the biology and pathogenesis of SARS-CoV-2; Other studies have focused on epidemiology, clinical features, diagnosis, and management, as well as drug and vaccine

development. This review aims to synthesize the latest research findings and expert consensus, as well as share ongoing efforts and experiences in China, to contribute to the containment of the epidemic and enhance our understanding of this emerging infectious disease. Additionally, updated guidance for prevention, control, and the management of this global pandemic will be provided.

The global epidemic of the emergence of coronavirus disease 2019 (COVID-19) in December 2019, first detected in Wuhan, China, among individuals linked to a seafood market, posed a significant global public health threat (Zhu N et al. 2020). Although the case fatality While COVID-19 exhibits a lower mortality rate (estimated at 2-3%) compared to SARS (around 10%) and MERS (around 40%), it has caused a wider pandemic due to several factors has been far more sever.

As of March 15, 2020, the virus had quickly spread to 34 places in China and had infected people in 144 countries on five continents, says the World Health Organization (2020). Dealing with COVID-19 is a big challenge for governments, people, and society overall.

From this, I gathered that this review encapsulates the most recent discoveries and professional agreement concerning virology, immunology, epidemiology, clinical characteristics, diagnosis, and Medications to relieve symptoms of COVID-19.

1.2.1 Elucidating the Emergence and Global Dissemination of SARS-CoV-2

The initial wave of COVID-19 cases in Wuhan, China, were associated with the Huanan Seafood Market (Lu, R, et al.2020). Which—because of the presence of wildlife at the market—was considered an obvious candidate for the location of the initial zoonotic (that is, cross-species transmission) event.

However, Yet, no animals from the market, such as rabbits, snakes, stray cats, badgers, and bamboo rats, showed positive results for SARS-CoV-2 in testing (WHO,2021). Additionally, the viral genome sequences found in environmental samples from the market were not seen as occupying fundamental positions on the viral phylogeny, although uncertainty exists regarding the rooting position on the tree (Hill, V. & Rambaut, A. 2020). In addition, some of the early cases of COVID-19 in Wuhan were not epidemiologically linked to the market (Li, Q, el al. 2020), and some were linked to other markets (Holmes, E. C. et al.2021). Therefore, although it

has not been resolved fully, the current evidence suggests that the Huanan Seafood Market could be the location of an early 'superspreading' event.

1.2.1.1 Early Spread of SARS-CoV-2 in Wuhan

The initial SARS-CoV-2 outbreak in Wuhan can itself be divided into three phases: (Pan, A. et al. 2020). Firstly, rapid transmission before the implementation of the large-scale population 'lockdown' of the city on 23 January 2020, with an estimated effective reproduction number (Re) of 3.5 (95% credible interval, 3.4–3.7) during this period (Hao, X. et al. 2020). (Before the city implemented a lockdown on January 23, 2020, the virus was spreading rapidly, with each infected person on average transmitting it to about 3.5 others.).

Secondly, reduction of the rate of virus transmission during the period 23 January–1 February 2020 (through lockdown and home quarantine), producing an average Re of 1.2 (95% credible interval, 1.1-1.3), lockdown and home quarantine measures led to a significant reduction in virus transmission.

Thirdly, the interruption of transmission through intensified stringent interventions during 2–16 February 2020 (centralized isolation and treatment of cases of COVID-19) and 17 February–8 March 2020 (community screening), (Chinese Center for Disease Control and Prevention.2020). Transmission was interrupted by centrally isolating and treating COVID-19 cases. Community testing to detect and contain the virus has been emphasized.

From mid-May to early June 2020, Wuhan tested nearly 10 million residents for Following the lifting of lockdown measures in Wuhan, China, in April 2020, subsequent large-scale testing identified only around 300 asymptomatic cases of COVID-19. Furthermore, no locally acquired symptomatic cases were reported after May 10th, 2020.

1.2.1.2 The Interprovincial Transmission of the Virus from Wuhan

The unfortunate coincidence of SARS-CoV-2's emergence coinciding with the mass travel associated with the Chinese Lunar New Year likely exacerbated the spread of the virus throughout China (Jia, J. S. et al.2020). Movement restrictions from Wuhan, the key transportation hub in central China, commenced on 23 January 2020, and reduced the peak population numbers leaving the city 2 days before the Lunar New Year. Unfortunately, however, the disease had spread to every province in mainland China by this time (Lai, S. et al. 2020).

Compared with Wuhan, the seropositivity rate in cities outside Wuhan was much lower. According to a national COVID-19 zero-epidemiological survey in China during March–May 2020.

In other cities of Hubei, just 0.44% of the sampled population tested positive, and only 2 out of over 12,000 individuals outside Hubei were positive. This indicates that during the initial wave, China achieved significant control over the nationwide transmission of SARS-CoV-2. (Leung, K, et al.2020).

1.2.1.2 The Global Expansion of COVID-19: Beyond China

The COVID-19 pandemic exemplified the ease and speed with which novel pathogens can traverse vast distances, affecting geographically separated countries (Bogoch, I. I. et al. 2020) Researchers identified two distinct stages characterizing the early international spread of SARS-CoV-2 infections (Yang, J. et al. 2020). In the weeks leading up to Wuhan's lockdown, a significant number of international airline passengers unknowingly carried the virus from the city to various destinations around the world. Major cities across Asia, Europe, and North America became the primary recipients of these initial imported cases, contributing to the early explosion of COVID-19 cases globally. (Pullano, G. et al. 2020). In recognition of the escalating international threat posed by COVID-19, the World Health Organization issued a Public Health Emergency of International Concern on January 30th, 2020 (Tian, H. et al. 2020).

1.2.2. Impact on Public Health, Economies and Societies

The COVID-19 pandemic's impact on the UK has highlighted disparities in healthcare outcomes across England, Scotland, Wales, and Northern Ireland. Is devolved, each constituent country having its own publicly-funded healthcare system run by devolved governments.

1.2.2.1 The Impact on Public Health

The pandemic has affected the population’s physical and mental health, and hampered access to care. Over half of A significant portion of the UK population has contracted COVID-19

since the pandemic's outset, with millions now experiencing long COVID – a condition characterized by long-term health problems following infection. Tragically, the virus has also claimed the lives of over 200,000 individuals in the UK. have lost their lives to COVID-19, and other factors, such as delayed cancer diagnoses, have resulted in additional deaths.

The measures put in place to reduce the spread of the virus have also impacted our mental health: as of March 2022, one out of every three adults in the UK stated that their mental wellbeing had worsened due to the pandemic. In addition, accessing care has at times been more difficult. When COVID-19 care was prioritized in hospitals across the UK, delivery of non-COVID healthcare became more difficult. While it was essential to safeguard under-equipped healthcare systems, it led to an increase in unaddressed demands, causing understandable concern among medical professionals.

British COVID-19 victims lost around a decade of life; the last time deaths rose so sharply in the UK was during World War II (Covid-19: Behind the death toll. 2021). In 2020, the disease was the leading cause of death among men, and second leading cause among women (Iacobucci, Gareth.2021). Findings from 2021 indicate that more than one million individuals in the UK have experienced Long COVID, with most stating significant disruptions to their daily activities (ONS.2021). Professor Danny Altman of Imperial College London said in March 2022: “It's kind of damning to me that we've given up control of omicron wave infections and said 'it's endemic, we don't care about anything (He expresses concern about the attitude towards Omicron infection, citing a lack of control measures and surrender to its endemic status.).

The pandemic caused a ripple effect through the healthcare system. Longer wait times for treatments and ambulance delays led to an increase in deaths from other illnesses. (Unexplained surge in non-Covid deaths triggers calls for probe.2021). Mental health also suffered greatly (Scott, Ellen.2021). A 2021 report by Age UK revealed a significant decline in mobility and increased pain among older adults compared to pre-pandemic times. The report further highlighted a drop in confidence among seniors, with over half feeling less comfortable going to hospitals and over a third feeling the same about visiting their general practitioners (2021).

1.3. Ethnic Minorities in Britain

Research on ethnicity in the UK, covering identity issues, ethnic diversity, and disparities among ethnic groups, is of great interest to both scholars and policymakers. This is reflected in the comprehensive body of literature examining the changing demographics of the UK, the varied life opportunities among different groups, and the ways people identify and associate. Furthermore, policy debates often address themes such as social cohesion and integration, employment equality, and other outcomes, as well as the commonalities and tensions within the UK population.

However, since the Fourth National Survey of Ethnic Minorities conducted in England and Wales in 1994, there has been no dedicated UK survey focused on ethnicity and ethnic diversity. Additionally, there has never been a panel survey specifically designed to measure issues related to ethnicity and the differences between ethnic groups.

To evaluate the varying social, economic, health, and wellbeing outcomes among different ethnic minority groups in Britain, it is essential to gather and analyze data based on identity metrics. This approach can reveal disparities and the impact of discrimination.

The demographic makeup of Britain's ethnic minority communities reflects the country's historical ties to imperialism, colonialism, and subsequent processes of decolonization, conflict, and globalization. These factors have influenced the patterns of immigration and settlement in the UK over time, particularly in urban centers like London, Liverpool, Bristol, and Cardiff, which have long histories of global trade and migration. The ethnic minority groups typically recognized in modern Britain are largely descendants of postwar migrations, primarily from non-white backgrounds (Finney and Simpson, 2009).

The regulation of immigration into the UK began with the enactment of the Aliens Act in 1905, prompted by the influx of Jewish immigrants from Eastern Europe and Russia (London, 2003). Over the past six decades, starting from the British Nationality Act of 1948, successive immigration laws have increasingly restricted the rights of colonial and post-colonial subjects to reside and work in the UK. Following World War II, Britain faced labor shortages necessitating the rebuilding of infrastructure, boosting the economy, and supporting the newly established NHS, leading the government to encourage labor migration from across the Commonwealth.

1.3.1. Current Ethnic Minorities in the UK

Over the past three decades, particularly since the 1991 Census, successive UK governments have expanded data collection on ethnicity beyond just country of birth. The ethnic categories now used encompass factors such as nationality, language spoken at home, racial classification, national or geographic origin, and religion. However, there is inconsistency in the categorization formats used by statistical agencies across Northern Ireland, Scotland, and England and Wales, making regional comparisons challenging. Moreover, census categories have evolved over time, with additions like 'Mixed' and 'Irish' in 2001, and 'Arab' in 2011 for England, Wales, and Scotland. Despite these efforts, many individuals may find these prescribed categories inadequate for describing their complex, sometimes multiple, identities. Self-identification further complicates the matter, as individuals may change their chosen ethnic group over time (Simpson et al., 2016). Nevertheless, despite these complexities and limitations, accurate assessments of ethnic inequalities in the UK and understanding their evolution over time and across regions depend heavily on collecting data in broad ethnicity categories that approximate high-quality estimates.

Figure 1.1 illustrates the ethnic minority distribution from the 2011 census in England and Wales. It's noteworthy that Wales exhibits significantly less ethnic diversity compared to England. In 2011, 93% of Wales's population identified as White British (Welsh, English, Scottish, or Northern Irish), whereas in England, this figure was 79%. The White British category constituted about four-fifths of the total population in England and Wales in 2011, followed by Other White groups at approximately 4.4%. Among non-white groups, the largest were Indians (2.5%), Pakistanis (2%), Black Africans (1.8%), Other Ethnicities (1.5%), and Black Caribbeans (1.1%). Mixed ethnicity categories introduced in the 2001 Census included 0.8% for Mixed White and Caribbean, 0.6% for Mixed White and Asian, and 0.3% for Mixed White and African. New categories in the 2011 Census, such as Arabs and Gypsy/Traveler, accounted for 0.4% and 0.1% respectively. Future census data will track the development of these new groups and may identify additional ethnic minority communities.

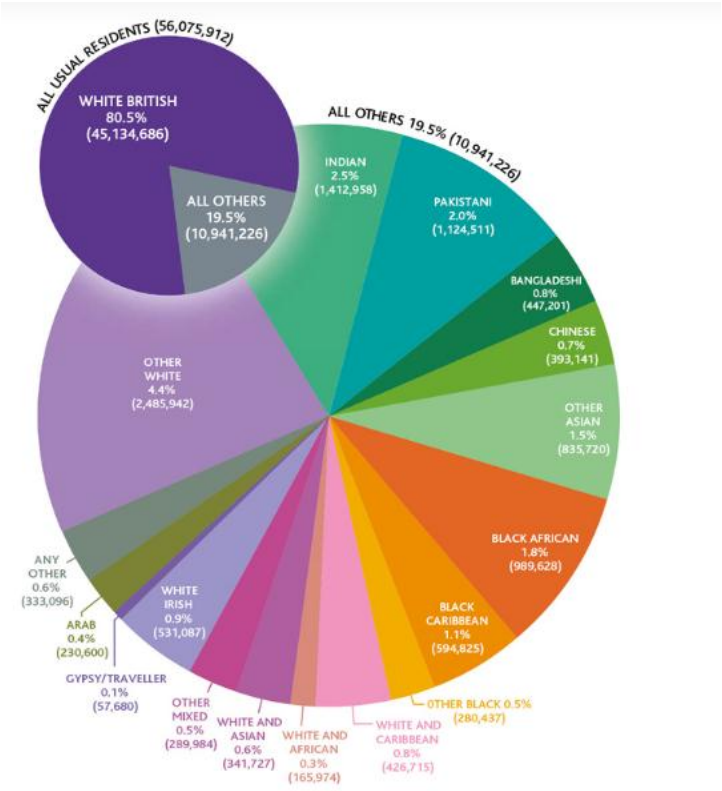

Figure 1.1 Ethnic Minority Groups in England and Wales, 2011 Census

1.3.2. Measuring Ethnicity and Minority Groups

According to sociologist Max Weber's writings from the early 20th century, a key characteristic of ethnic groups is a shared belief in a common ancestry. This belief, whether based on perceived similarities in physical appearance, customs, or historical experiences of migration and colonization, fosters a sense of group identity (Gemeinsamkeit) that transcends actual blood ties (Weber, 1978, p. 389). Unlike kinship groups focused on concrete social actions, ethnic membership hinges on this presumed shared heritage.

The concept of identification with a shared descent, whether real or imagined, has been used in later efforts to define ethnicity. For instance, Schermerhorn (1978: 12) described an ethnic group as a community within a larger society that shares a real or perceived common ancestry, historical memories, and cultural elements that symbolize their identity. Examples of these symbolic elements include kinship patterns and physical characteristics. Such as local or regional ties, religious affiliation, language or dialect, tribal connections, nationality, physical traits, or a

combination of these. An essential aspect of an ethnic group is a shared sense of identity among its members.

Cornell and Hartmann (1998), summarizing various definitions, emphasize the significance of common claims, which need not be factually based, and the self-awareness of these claims, drawing on both Weber and Schermerhorn. Anderson's (1991) concept of 'imagined communities' also highlights the importance of perceived and imagined ancestry. While some define ethnicity by "a sense of belonging," others, like Wimmer (2008), define groups in relation to how they differentiate themselves from others and establish group boundaries.

This perspective, associated with Barth's work (Barth 1969), is also emphasized by the acculturation framework, which examines ethnic identity through the coexistence of two cultures. Ethnic identity gains significance from this juxtaposition; in a homogenous society, ethnic group identity loses its meaning. This has implications for longitudinal studies like Understanding Society, as increasing integration in a multi-ethnic society can diminish the significance of ethnic group identities and boundaries. This framework underscores the importance and meaning of group boundaries in general. Research on ethnic identity within this framework aims to understand how individuals in a multicultural society, especially within majority-minority dynamics, choose their ethnic identification (Nekby and Rodin 2007). Some view ethnic identification as a linear model, where stronger identification with one group weakens identification with another. Others see it as a bimodal model, where identification with majority and minority groups are independent of each other.

The relationship between ethnicity and ethnic groups and other concepts of 'difference' can vary, sometimes being complementary, equivalent, or alternative, depending on which elements of 'ethnicity' are considered, as well as the national context and research focus. Ethnicity encompasses two main components: stable characteristics linked to heritage, ancestry, or country of origin, and the aspect of identification and identity development.

It intersects with various other concepts that are often implicit in discussions of ethnicity or are proposed as alternative frameworks for understanding social reality and differences. It is important to outline these concepts briefly for clarity and to assess whether research interests align despite using different terminology. Additionally, since measures like religion or national origin can be considered components of ethnicity, they allow us to explore how different

definitions can be drawn from a 'portfolio' of measures used separately or in combination to represent or investigate various understandings of 'ethnicity.' These related concepts include 'race,' national identity, parentage, nationality, religion, and language.

1.4 Contribution and Challenges

Prior to widespread availability of effective COVID-19 vaccines, adhering to behaviors such as hand hygiene, self-isolation when necessary, and maintaining physical distance remains crucial in controlling virus transmission. Research indicates high public compliance with UK government directives related to COVID-19 (Armitage et al., in press), (Armitage, C, et al. n.d). The COVID-19 pandemic and the measures taken to control its spread have demonstrably led to a rise in various health and well-being issues, including increased stress, depression, anxiety, and sleep problems. (Gao et al., 2020; Banks and Xu, 2020; Brooks et al., 2020; Gualano et al., 2020; Lauri Korajlija and Jokic-Begic, 2020).

The pandemic's repercussions extend beyond physical health, with many individuals facing financial hardship due to job losses and disruptions to their daily routines (Williams SN, et al. 2020). The pandemic has also likely exacerbated challenges in accessing childcare, placing additional strain on families. However, a more recent study specifically examining this issue during COVID-19 would strengthen this point (Brooks et al., 2020; Williams et al., 2020; Dalton et al., 2008). Neglecting to address these issues could hinder sustained adherence to behavior changes necessary for managing the pandemic.

However, existing research is constrained by its focus on qualitative studies with small and non-representative samples, or rapid reviews rather than systematic reviews. To overcome these limitations, it is essential to explore the specific challenges faced in Examining Public Behavior Regarding COVID-19 Directives in a National Population Sample.

Various sociodemographic factors such as age, gender, and educational attainment have been linked to specific challenges encountered Research suggests that certain demographics are more vulnerable to psychological distress during pandemics, with women, younger adults, and individuals with lower educational attainment exhibiting a higher risk (Taylor et al., 2008; Qiu et al., 2020). Understanding these sociodemographic variables is crucial as they can influence compliance levels among the population. Factors like Studies have shown that lower adherence to

protective health measures during pandemics is associated with factors like lower self-efficacy (belief in one's ability to follow guidelines), weaker psychosocial variables (perceived capability, opportunity, and motivation to comply), and certain demographic characteristics, such as younger age and lower educational attainment (Thomas E, et al. 2015). Therefore, our objective is to delve deeper into these aspects. Based on prior research, it is anticipated that challenges related to COVID-19 will be more pronounced among women, older adults, individuals from BAME backgrounds, and those with lower socioeconomic status.

1.4.1The Challenges

People encounter various challenges in complying with The UK government's COVID-19 guidelines, while intended to curb the spread of the virus, have also presented challenges for employment. These challenges include job insecurity due to factors like the inability to work, redundancy, or government furlough programs. (Thomas et al., 2015); One of the most significant effects of COVID-19 was the widespread cessation of work challenges facing the United Kingdom, and it is among the most difficult situations.

Caregiving responsibilities such as looking after children or elderly relatives, (Andrew et al., 2020); Detrimental effects on physical health, including reduced exercise and increased aches and pains. The pandemic's disruptions extend beyond physical health. Individuals have had to grapple with adapting to significant changes in their daily routines (Williams et al., 2020); while also facing financial anxieties related to paying bills, rent, or even accessing essential benefits. (Brooks et al., 2020).

Difficulties with mental well-being, including anxiousness, low mood, and feeling alone (Gao et al., 2020); and External factors affecting your well-being, such as limited housing space or difficulty getting outdoors (Thomas et al., 2015). Participants in surveys were asked to select applicable challenges they were currently facing, with an option for those not experiencing any challenges to indicate so.

Table one: An examination of demographics, compliance with, and difficulties encountered in following government guidelines issued in response to COVID-19:

Variable	N	(%)	Mean	SD
Gender	-	-	-	-
Men	**1010**	**47,2**		
Woman	**11,29**	**52,8**	-	-
Age Social Grade	-	-	**48,46**	**17,52**
Non- manual worker	**1225**	**57,2**	-	-
Manual / unemployed Ethnicity	**915**	**42,8**	-	-
White	**2000**	**93,5**	-	-
Black, Asian, minority ethnic/ prefer not to say Adherence	**139**	**6,5**	-	-
How closely are you following the UK governments COVID-19 related instructions? (Not at all [0]-very much so [10]).	-	-	**9,09**	**1,10**
Challenges	-	-	**1,81**[a]	**1,54**[a]
Adjusting to changes to daily routine	**1043**	**48,7**	-	-
Mental health challenges	**886**	**41,4**	-	-
Physical health challenges	**673**	**31,5**	-	-
Employment challenges	**417**	**19,5**	-	-
Financial challenges	**299**	**14,0**	-	-
Environmental challenges	**288**	**13,5**	-	-
Care commitment challenges	**276**	**12,9**	-	-
Other	**145**	**6,8**	-	-
Not applicable 'I'm not facing any challenges with government instructions for coronavirus''	**422**	**19,7**	-	-
D'ont know /prefer not to say	**66**	**3,1**	-	-

[a] Refers to the Average number of concurrent challenges: This emphasizes that the challenges are happening at the same time.

1.5. Initial Cases and Government Response

In response to the COVID-19 crisis, the UK government introduced a combination of public health and economic interventions to mitigate the pandemic's impact. However, due to the devolved nature of the United Kingdom, Scotland, Wales, and Northern Ireland adopted separate administrative measures compared to England. Throughout the crisis, various laws were either enacted or proposed.

The UK government had already devised a plan to tackle pandemics. When the first confirmed the first cases of COVID-19 emerged in the UK in January 2020. In response, the government issued travel advisories for travelers from high-risk areas in late January and February. Additionally, they implemented contact tracing measures, although these were eventually discontinued (Kobie, Nicole. 2020).

To emphasize the increasing spread across the country in subsequent weeks, the government gradually imposed additional restrictions on public life, initially hesitating to adopt stricter measures seen in other parts of Europe and Asia (Alwan, Nisreen A. 2020). Prime Minister Boris Johnson announced the first national lockdown on 23 March 2020, and Parliament passed the Coronavirus Act 2020, which granted emergency powers to the devolved administrations and empowered police to enforce public health measures (Calvert, J. et al. 2020).

Following the nationwide easing of stay-at-home orders, divergent policies emerged among the four nations. Scotland pursued an elimination strategy uniquely. Nationwide, localized lockdowns, social distancing measures, self-isolation mandates for exposed individuals, and face mask regulations were implemented, alongside efforts to expand COVID-19 testing and tracing.

In autumn and winter 2020, additional nationwide lockdowns were imposed due to a surge in COVID-19 cases and the emergence of the Alpha variant. A COVID-19 vaccination campaign commenced in December 2020. By mid-2021, most restrictions were lifted during the third wave fueled by the Delta variant, but the "winter plan" reintroduced some measures in response to the Omicron variant in December that year. England lifted remaining restrictions on 24 February 2022 under the "living with COVID" plan announced by the government. Economic aid was extended to struggling businesses and furloughed employees to mitigate the significant economic impact.

The government also expedited procurement processes for PPE and medical equipment due to shortages in the nascent stages of the outbreak, the UK government issued travel advisories and initiated contact tracing efforts, although these were later discontinued. However, they also focused resources on developing a contact tracing app.

The United Kingdom government's handling of the pandemic, especially the timing of implementing and easing public health measures, has drawn criticism from academic medical experts, media outlets, families of COVID-19 patients, and various political figures. This scrutiny persisted through the Partygate scandal, which exposed multiple government officials for violating COVID-19 social distancing rules during lockdowns. A public inquiry into the government's pandemic response was initiated in June 2022.

1.5.1 Pre-existing Health Inequalities Among Ethnic Minorities in Britain

The ongoing pandemic underscores the disparities in illness and mortality rates among BAME communities. These health inequalities and disparities in healthcare provision for BAME populations have been well-documented. In the UK, (Mentalhealth,2019). BAME groups face elevated risks of both mental and physical health issues, influenced by factors such as race, gender, socioeconomic status, age, and disability. According to the National Institute for Health and Care Excellence (NICE) quality standards (2018), empowering BAME communities to advocate for their physical and mental well-being is crucial at the local community level.

In England and Wales, approximately 20% of the total population belongs to BAME backgrounds (Mentalhealth,2019). Similarly, about one-fifth of the NHS workforce is comprised of individuals from BAME backgrounds; (Issar Prerana. 2019) including pharmacists increases this figure to 40% (Patel, 2020). This theoretically suggests adequate BAME representation within the healthcare workforce.

However, the challenge lies in the insufficient representation at leadership and management levels, as well as in many communities, particularly rural areas, exacerbating ongoing discrimination and healthcare shortcomings. Moreover, there is a lack of intersectional perspectives on representation; while there is focus on racial representation, little is understood about how race intersects with gender, class, age, and disability. It is recognized, though, that

women of color face precarious work conditions within the low-wage health and social care sectors (Crenshaw, 2020b).

Healthcare providers can enhance cultural awareness and community outreach to alleviate feelings of discrimination and isolation among populations most vulnerable to health disparities. This effort is particularly crucial during the ongoing monitoring of COVID-19 infections nationwide. According to the British Medical Association (BMA) (2020), urgent measures are needed to safeguard BAME communities, alongside improved data accuracy concerning COVID-19 infection rates and hospital deaths.

Community elders and spiritual leaders play pivotal roles in promoting understanding of risks, preventive measures, and healthcare-seeking behaviors through cultural gatherings and religious communications. Additionally, disseminating key health messages via BAME media platforms and social media influencers can effectively reach targeted populations (Patel, 2020). While the UK has historically struggled with genuine community-led healthcare initiatives driven by community leaders, successful models globally demonstrate the efficacy of this approach in advancing innovative healthcare practices.

According to Rose et al. (2020), The United Kingdom entered the pandemic with a widening gap in health outcomes across different populations, a trend that had been accelerating for the past decade. They suggest that to effectively reduce these disparities, resources must be allocated based on the level of need, prioritizing factors such as poverty, race, and ethnicity. They argue that current strategies overlook these fundamental drivers of inequality. The centralized and the current, uniform approach to control measures has proven inadequate in tackling these widening health disparities.

1.6 Acknowledgement of the Unequal Impact of COVID-19 on Different Ethnicities

The COVID-19 crisis served as a harsh spotlight on the UK's pre-existing health inequities for ethnic minorities. Data from the beginning of the outbreak showed Black and Asian patients experiencing a higher rate of needing advanced respiratory support due to COVID-19. (Intensive Care National Audit & Research Centre. 2020). Public Health England’s data analysis later revealed that COVID-19 mortality rates among ethnic minority groups were significantly higher—two to four times greater—than among the White population in England (Public Health

England Disparities. 2020). Factors contributing to these disparities include higher prevalence of comorbidities such as type 2 diabetes in British South Asians, greater levels of social deprivation, larger multigenerational households, varying occupational risks, and delayed access to healthcare, all of which affect ethnic minorities more severely (Hills AP, Arena R, Khunti K, et al. 2018). Despite these disparities, there was a noted scarcity of targeted public health recommendations for ethnic minority communities during this period.

Mathur and colleagues (Mathur R, Rentsch CT, Morton CE, et al. 2021). Observed that during the first wave of the pandemic in England, minority ethnic groups tended While initial data suggested Black and Asian patients requiring advanced respiratory support skewed younger, these demographics also faced social and health challenges. They were more likely to reside in economically disadvantaged areas, live in larger households, and have a higher prevalence of diabetes. Even when considering other risk factors, these ethnic groups, along with mixed ethnicities, exhibited a higher likelihood of testing positive for COVID-19. Compared to White individuals in England, and also experienced higher rates of hospitalization, admission to intensive care units (ICU), and death from COVID-19.

Among minority ethnic groups, South Asians in England had the largest household sizes, with only 20.4% residing in households of fewer than three people, and they faced nearly double the risk of testing positive—the highest among all minority groups. Notably, when adjusting for household size, the increased Interestingly, after adjusting for factors like age, socioeconomic status, pre-existing health conditions, and the severity of the illness, the risk of death from COVID-19 appeared lower for South Asians compared to initial estimates. This finding suggests that there might be other protective factors at play for this specific population group when it comes to COVID-19 severity outcomes among South Asians may partly stem from increased household transmission, highlighting a crucial factor influencing these disparities.

A significant challenge currently is ensuring the effective distribution of COVID-19 vaccines among this reduced risk observed in South Asians highlights the need for a nuanced understanding of COVID-19's impact on all ethnic minorities. A critical step in this effort is to urgently address vaccine hesitancy within these communities, particularly among frontline healthcare and social care workers who face a higher risk of exposure due to their professions from COVID-19 (Robinson E, et al. 2021). Failing to implement targeted measures to enhance

vaccine confidence could exacerbate existing health disparities between minority ethnic groups and White populations.

The capability to analyze extensive sets of routinely collected health data has been pivotal in swiftly implementing public health and regulatory directives during the pandemic (Williamson EJ, et al. 2020). Nonetheless, a persistent issue persists with the inadequate mandatory recording of ethnicity in National Health Service (NHS) medical records, which complicates efforts to accurately assess the scope of health inequalities. Therefore, it is imperative to heed recommendations from health experts and Public Health England by mandating comprehensive and routine collection of ethnicity data across NHS and social care data systems (Khunti K, et al. 2020). The findings from Mathur and colleagues underline the critical importance in public health of not only gathering such data but also ensuring its accessibility for thorough analysis and formulation of policies.

1.7 Impact on Healthcare System

The global outbreak of COVID-19 sent shockwaves through numerous sectors, but its impact was particularly acute on healthcare systems already grappling with resource constraints. Early on, the rampant spread of the virus across diverse settings caused significant disruptions in how healthcare services were delivered. This unprecedented situation necessitated difficult decisions regarding healthcare worker deployment, optimizing facility capacity, and securing sufficient medical supplies.

Studies have revealed that COVID-19 pandemic has caused substantial disruptions in health service provision, especially in resource-constrained countries (Ritchie, H et al.2024). These disruptions are attributable not only to the direct consequences of the pandemic but also to the strain it placed on healthcare systems, exceeding their capacities. The pandemic has highlighted pre-existing weaknesses in health systems, impacting both preventive and treatment services for communicable and noncommunicable diseases. Healthcare facilities postponed many essential services, and patients often skipped follow-up appointments and urgent care visits due to fear and anxiety during various phases of the pandemic.

During the COVID-19 pandemic, alongside the direct impact of the disease itself, there was a significant risk of increased morbidity and mortality from other preventable and treatable

illnesses due to disruptions in essential health services (Crunching the numbers for coronavirus. 2020). Key factors contributing to these critical gaps included reallocating healthcare workers to support COVID-19 care, cancelling planned treatments, reduced public transportation affecting access, financial constraints hindering service utilization (HCID. 2020), and high rates of illness and death among healthcare workers, leading to staff shortages. Many countries cited shortages of medications, diagnostics, and technologies as primary causes of service interruptions (Office for National Statistics. 2021).

The COVID-19 crisis underscored the imperative for global investment in building resilient and sustainable healthcare systems. This includes enhancing health systems through investments in workforce development, improving working conditions, providing training, and ensuring adequate equipment, particularly personal protective gear and occupational safety measures. Social dialogue plays a crucial role in both responding to crises and in preparing for future health challenges, facilitating the development of resilient health systems capable of addressing ongoing and future health needs.

1.7.1 History of UK Healthcare System

The NHS, established in 1946, oversees public healthcare in the UK. Prior to its inception, healthcare access in the UK was largely limited to the affluent, except for those who could receive charitable or teaching hospital treatment. In 1911, David Lloyd George introduced the National Insurance Act, whereby a portion of employees' wages was deducted to grant them access to healthcare. However, this scheme only benefited employed individuals.

Following World War II, a concerted effort was made to establish a healthcare system providing free services based on need, funded through central taxation, and open to all. Initially, the system operated under a tripartite structure comprising hospital services, primary care (General Practitioner's), and Community Services. Concerns arose by 1974 regarding the drawbacks of this divided approach, leading to a significant reorganization permitting local authorities to support all three areas of care.

During the Thatcher era, the management system underwent restructuring, culminating in the passage of the National Health Service and Community Care Act in 1990. This legislation established independent Trusts responsible for managing hospital care.

Further reforms have transpired since the Blair administration, including the establishment of NHS Direct, which aimed to enhance healthcare quality, reduce costs, and shorten waiting times.

Recent changes within the NHS involve the dismantling of the existing governmental management structure by 2014, resulting in the displacement of approximately 30,000 administrators. Moreover, around 80% of the NHS budget will be delegated to doctors, granting them autonomy in expenditure decisions. These reforms are intended to foster continued privatization within the healthcare sector, offering patients greater choice. The overarching goal of these reforms is to mitigate medical expenses and reduce patient waiting times.

1.7.2Three Waves of Covid- 19

Britain experienced two major waves by mid-2021, with a third wave beginning around June 2021. Waves were defined by rising numbers of cases, hospitalizations, and sometimes deaths, followed by periods of decline. The timing and characteristics of these waves vary depending on location. there are Three waves of covid-19 such as There are three waves of covid -19 such as:

1.7.2.1. First Wave (Feb 2020 – Sept 2020)

In mid-February, following a challenging winter, UK health services began gearing up for the growing threat of a COVID-19 pandemic. NHS Chief Executive Simon Stevens instructed all trusts in England on March 17, 2020, to defer non-urgent elective surgeries starting in April, among other steps aimed at expanding hospital capacity. By mid-March, healthcare services across all four nations were directed to coordinate their responses to the health crisis. Prime Minister Boris Johnson subsequently declared a national lockdown on March 23, 2020, accompanied by the enactment of the Coronavirus Act (2020). As March turned into April, hospitals saw a surge in COVID-19 cases, with England alone recording 93,000 admissions over a 62-day period during the first wave. The subsequent months severely tested the UK’s health services, highlighting the consequences of underfunding and understaffing for both staff and patients. Challenges persisted until cases began to decline in the summer, with early signs of struggle evident even at the outset of the pandemic.

The initial surge of COVID-19 severely strained healthcare systems throughout the UK and highlighted the repercussions of chronic underfunding before the outbreak. the statement suggests that when the first wave of COVID-19 hit the UK, it put a significant strain on the country's healthcare services. This strain was particularly severe because the healthcare system was already under-resourced even before the pandemic began. So, the pandemic further highlighted and exacerbated the existing problems caused by a lack of adequate funding and resources in the healthcare sector.

Exceptional measures were required to fill staffing gaps in healthcare services. The already existing shortage of workers was worsened by increased absences due to illness and isolation, as well as a decrease in international recruitment. To address this shortage, staff were reassigned to crucial services, retired and inactive doctors were called back, medical students were fast-tracked into service, and volunteer programs were established.

1.7.2.2. Second Wave (Sept 2020 – Apr 2021)

In late 2020, the UK faced a surge in COVID-19 cases exacerbated by the Alpha variant. Alongside typical winter challenges, healthcare services struggled with infection prevention measures and patient segregation. The second wave saw efforts to provide both COVID and non-COVID care, but dwindling capacity, especially in non-COVID settings, strained resources. Staff faced burnout and exhaustion, compounded by ongoing COVID-related challenges. The winter of 2020/21 marked unprecedented pressure on the UK's health services, leading to a crisis. The second wave began around September/October 2020, prompting the reintroduction of restrictions by the UK government and other nations. By December 2020, daily infections reached record highs, prompting a nationwide lockdown in January 2021.

UK health services faced immense challenges in delivering both COVID and non-COVID care simultaneously. This task was made exceptionally difficult by the rapid rise in COVID-19 cases, the emergence of the Alpha variant, typical winter pressures, and the impact of ongoing infection prevention and control measures on capacity. Hospitals experienced record admissions, with a growing number of ambulances being held outside hospitals or diverted elsewhere, and significant increases in A&E wait times. Moreover, escalating staff absences further strained capacity, affecting patient care and pushing services to dangerously low staffing levels.

1.7.2.3 Third and Fourth Waves (May 2021 to Present)

The Delta variant ushered in the third wave of COVID-19 during the summer of 2021, with case numbers remaining stubbornly high, surpassing those seen in the previous summer. By August 20, 2021, the UK recorded 37,314 cases compared to 1,182 on the same date in 2020. Signs of the next wave emerged in November with the identification of the first Omicron cases in the UK. The rapid spread of the Omicron variant prompted significant efforts to ramp up the booster vaccination program, reaching a peak of 626,000 vaccinations in a single day in England in December 2021. In January 2022, COVID-19 cases hit an all-time high as the fourth wave took hold, with case numbers remaining elevated. Despite efforts to address the backlog, non-COVID care delivery continued to be impacted.

Throughout the summer of 2021, despite persistent high COVID-19 cases, the emergence of the Omicron variant prompted an intensified vaccination effort, particularly with third doses and booster shots. General practitioner (GP) facilities were utilized extensively for booster vaccinations, leading to a surge in virtual appointments to manage demand, while much of the existing GP infrastructure was repurposed for the vaccination campaign. Amid false narratives in the media and from the UK government about GPs' availability, primary care staff encountered escalating levels of patient abuse and, sadly, instances of violence. Although there's a growing focus on restoring elective care, achieving the ambitious targets set by governments across the UK will be incredibly challenging for health services without a well-funded, national workforce strategy that addresses staff retention, training, and recruitment comprehensively.

1.8 Socioeconomic Repercussions

By the middle of March 2020, the UK, like many countries, faced a rapid surge in COVID-19 cases, leading to significant government interventions to curb the spread and prevent healthcare systems from being overwhelmed. These interventions included strict lockdown measures limiting non-essential work outside the home to key workers in healthcare, supermarkets, and delivery services. The government implemented schemes to mitigate unemployment and provide financial support to workers, although some gaps in these schemes left some individuals relying on benefits like Universal Credit. This paper examines the socio-economic impacts of COVID-19, covering various outcomes related to the labor market, income, and financial support.

It also considers the geographical dimensions of these impacts, acknowledging the diverse economic landscape of the UK and the regional variations in productivity and government support. While previous studies have highlighted the unequal financial effects of the pandemic, this paper aims to delve into the local and regional aspects of the economic challenges faced by individuals, using data from the UK Household Longitudinal Study to analyze how different regions and localities have been affected financially by COVID-19.

During the initial stages of the pandemic, the UK implemented nationwide interventions and policies, with regional differences emerging only after the first lockdown was lifted in July 2020. While some local variations existed, particularly in third-sector services like food banks, these were established before area-specific measures to combat COVID-19 were introduced. The central government dictated the mitigation policy.

What's noteworthy are the geographical consequences stemming from economic marginalization, which bolster arguments for tailored support in the future to address the observed pattern of hardship. with questions being posed about the needs of the future economy and where infrastructural investment is best directed to aid recovery efforts (Martin, 2021; McCann et al., 2021).

Additionally, it is essential to examine whether the pandemic has worsened existing patterns of inequality and disadvantage in the UK over the long term. considering the tendency for financial difficulties to persist and contribute to socio-economic and geographical divisions over time (as noted by Christophers,2018; hochstenbach,2018), the geographical context of individuals may play a crucial role in shaping the requirements for future relief initiatives and recovery plans.

1.8.1 Public Services Strained

Tax evasion, the deliberate avoidance of paying taxes through illegal means, has broad consequences that reach beyond financial implications. It distorts tax distribution and carries significant societal impacts, particularly affecting public services and welfare initiatives. When taxes are evaded, both individuals and businesses withhold essential revenue from governments, impairing their capacity to fund crucial services and uphold citizen welfare.

Impact on Public Services Tax evasion has a direct impact on the funding available for vital public services like healthcare, education, infrastructure development, and law enforcement. When tax revenues decrease due to evasion, governments face budget constraints that restrict their ability to adequately invest in these essential areas. Consequently, public services may suffer from resource shortages, leading to longer wait times in hospitals, overcrowded classrooms, deteriorating infrastructure, and compromised safety measures.

Exacerbation of Inequality and Poverty Tax evasion exacerbates income inequality and perpetuates poverty cycles within societies. When wealthy individuals or corporations evade taxes, it widens the wealth gap between the rich and the poor. Progressive taxation systems rely on higher-income earners contributing a larger share of their income towards taxes. When these earners evade taxes, the burden falls disproportionately on lower-income individuals who cannot afford to evade taxes. As a result, there are fewer funds available for welfare programs aimed at reducing poverty and supporting vulnerable populations.

Trust Erosion Tax evasion undermines trust in governmental institutions and diminishes social cohesion. When individuals observe others evading taxes without repercussions, it fosters a perception of inequity and injustice. This can fracture the trust between citizens and their government as people perceive tax evaders as benefiting unfairly at the expense of honest taxpayers. Such erosion of trust can have lasting adverse effects on societal well-being, undermining confidence in the fairness and efficacy of public institutions.

Increased Tax Burden Tax evasion imposes a greater burden on law-abiding taxpayers who fulfill their tax obligations. When a substantial portion of the population evades taxes, governments must compensate for lost revenue by either raising tax rates or cutting public services. In both scenarios, honest taxpayers bear the brunt, facing either higher tax bills or reduced access to essential services. This exacerbates inequality and may foster resentment among taxpayers who perceive the burden as unfair.

1.9 Cultural and Linguistic Diversity

Cultural and linguistic diversity is crucial as it promotes adaptable viewpoints, practices, and solutions. Multilingual employees exhibit heightened cognitive intelligence. Additionally,

CLD supports employees' unique identities and cultural backgrounds, fostering pride, dignity, and a sense of belonging.

Language and cultural differences play a key role in shaping social interactions between individuals. Culture affects our values, behaviors, and customs, while language acts as the main medium for communication among people from diverse cultures. Both linguistic and cultural diversity highlight our commonalities and differences as human beings.

1.9.1Cultural Diversity

The roots of multiculturalism in the UK extend back to the early seventeenth century (Steeds, Andrew. 2018). During the nineteenth century, the British Empire was the largest in history, covering around 25% of the Earth's land and ruling about one-fifth of the world's population. The colonial era saw a merging of cultures from colonies like India, Australia, New Zealand, and Egypt (Lloyd, Amy J. 2007). Between 1801 and 1881, the UK experienced significant immigration driven by a thriving economy, with over 2 million people arriving from Ireland and more than 1.5 million from Germany and other parts of Europe (Uncovering Britain's multicultural heritage.2022).

The following table shows that the UK is home to numerous ethnic minorities. Most immigrants come from India, Poland, Pakistan, and Ireland (Wohland, Pia. 2017). Around 90% of immigrants who entered the UK went to England. They settled in English cities, giving England the largest number of cultural districts (Vital statistics in the UK: births, deaths and marriages - Office for National Statistics. 2022).

Table two: The UK Home to numerous ethnic minorities:

Ethnic group	Population (2011)	Percentage of population
White	55,1 million	87,2 %

Asians	4,4 million	7,0 %
acks-African, Caribbean and British backgrounds	1,9 million	3,0 %
Member of several ethnic groups	1,25 million	2,0 %
Other ethnic groups	600,000	0,9 %
Total	63,2 million	100 %

Language is a vital aspect of Britain's multicultural identity. English is spoken as the main language by 92% of the population, totaling 48.9 million people. In 2011, less than 5% of children aged 3 to 15 had a primary language other than English. In London, foreign languages are particularly prevalent, with 21% of residents not speaking English well or at all. The most common languages spoken at home other than English are Polish, Indian dialects, Arabic, French, and various Chinese languages. Furthermore, 1.6% of the British population does not speak English at all.

Many cultural districts have formed where immigrants have settled and brought their cultural traditions (Wolhand, Pia. 2017). In Brick Lane, in London's East End, a large Bangladeshi community has settled. Here, street names appear in Bengali alongside English signs. Today, Brick Lane is famous for its South Asian restaurants and street markets. Since the 19th century, German immigrants have significantly influenced the Richmond district. The opening of a German school there made the area even more attractive to German emigrants.

Conclusion

This study found that ethnic minority community leaders linked past discrimination and social structures to the higher rates of COVID-19 illness and death seen in their communities. Additionally, cultural norms discouraging open discussion was limited, leading to silent struggles. Racial prejudice compounded these challenges. However, trusted community and religious leaders can be powerful allies in promoting mental well-being figures, however, played

a key role in encouraging adherence to public health guidelines. Support systems like food banks were crucial in providing essential supplies.

To effectively address these disparities, collaboration is vital. Effective public health responses require close collaboration between government agencies, public health bodies, and community leaders. The latter can play a crucial role in translating key messages into culturally and religiously relevant public health guidance. To mitigate future health threats and address existing disparities, tackling the root causes through targeted interventions is critical. These interventions need to consider the unique challenges faced by different ethnicities due to cultural, economic, and geographic variations. Further research can help identify these specific barriers. Ideally, a collaborative approach would see government agencies initiate interventions, followed by local authorities taking the lead in long-term implementation, always working hand-in-hand with community leaders. Empowering ethnic minority communities to guide these strategies is essential for ensuring their needs are successfully met.

Chapter Two

Chapter Two: Disparities in the covid-19 impact

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Introduction

The global outbreak of COVID-19 exposed severe strain on healthcare systems worldwide, further illuminating persistent health disparities faced by ethnic minorities in the UK. resulting in over 3 million deaths globally as of April 20, 2021 the World Health Organization (WHO).

By the same date, the UK had recorded more than 127,000 deaths, placing it among the highest in Europe in terms of mortality rate. Recent studies from both the UK (Leach et al., Platt & Warwick; Rimmer) and the US (Clements, Mahajan & Larkins-Pettigrew) indicate a significant disparity in infection rates, mortality rates, and the need for intensive care among ethnic minorities.

As of March 2022, there have been nearly 450 million the emergence and spread of the SARS-CoV-2 virus, causing COVID-19, has resulted in millions of infections and over 6 million deaths worldwide. Research has consistently revealed concerning variations in COVID-19 risk and severity across different ethnicities, prompting significant public health concerns. The United Kingdom (UK) is one nation where these disparities have been particularly evident, research indicates that compared to White individuals, men from all ethnic backgrounds except Chinese, and women from any ethnic group other than Bangladeshi, Chinese, or mixed ethnicity, faced higher risks of COVID-19 mortality even after adjusting for differences in demographics, socioeconomic status, and underlying health conditions.

In the UK, Black African men and women were more than twice as likely to succumb to COVID-19 compared to individuals of White ethnicity. Further epidemiological studies in the UK have shown elevated While initial data in the UK suggested higher COVID-19 mortality rates for South Asian, Black, and Mixed ethnic groups compared to the White population, research from other healthcare systems, like the US, paints a more complex picture. Inconsistencies in data collection and analysis of COVID-19 outcomes across different countries highlight the need for further investigation cases and mortality among different ethnic groups in Canada are relatively scarce.

The reasons behind these disparities are complex and intertwined, involving various factors such as medical conditions (like comorbidities and medication use), social determinants

(including cultural practices, behaviors, occupational settings), and structural inequalities. Comorbidities have been linked to increased susceptibility to While SARS-CoV-2 infection is a well-established risk factor for severe COVID-19 outcomes, the impact of certain medications can be complex. For example, some drugs used to manage blood sugar (glucose-lowering) or modulate the immune system (immune-modifying) may either increase or decrease the risk of serious complications from COVID-19. Social factors like inadequate living and working conditions, low income, limited health literacy, poverty, and exposure to air pollution have all been associated with higher While research has identified social determinants of health as potential contributors to disparities in COVID-19 infection rates and mortality, isolating their precise impact remains a challenge. These factors, like socioeconomic status and access to healthcare, often intertwine and amplify each other's effects. Some studies have opted for a more nuanced approach, focusing on quantifying the influence of specific mediating factors instead of just presenting broad correlations.

Unraveling the intricacies of ethnic disparities in COVID-19 outcomes holds immense value. A deeper understanding could pave the way for swift public health interventions, particularly if modifiable risk factors are unearthed.

2.2 The Disproportionate Burden of COVID-19 Cases Among Ethnic Minorities

Unveiling new layers of complexity, a recent large-scale study delves into ethnic variations in COVID-19 experiences. health impacts reveal that ethnic minority populations faced elevated levels of severe illness and mortality throughout the pandemic due to their heightened susceptibility to contracting the virus (Joe Stafford.2023).

The study, featured in The Lancet: Clinical Medicine, reviewed findings from 77 research papers encompassing 200 million individuals globally. Previous research indicated a greater likelihood of severe illness or mortality among ethnic minority populations, yet it remained uncertain whether this stemmed from increased infection susceptibility, poorer prognosis post-infection, or both.

The research revealed that the primary factor contributing to ethnic disparities was the discrepancy in infection rates. In comparison Compared to the white majority, the recent study found South Asians were three times more likely to test positive for COVID-19, followed by

Black individuals at 1.8 times more likely, and similar trends were observed in Mixed and Other ethnic groups each had a 1.3 times higher likelihood.

Among the studies examining the risk of severe illness or fatality from COVID-19 across the entire population, Black individuals were 1.5 times more prone to hospitalization The study revealed significant racial and ethnic disparities in COVID-19 outcomes. Compared to white individuals, Indigenous people were 1.9 times more likely to test positive, while Hispanics had a 1.3 times higher chance. Additionally, the risk of requiring intensive care was considerably higher for South Asian, East Asian, Indigenous, Hispanic, and Black groups – all exceeding three times the risk compared to white individuals. Furthermore, Indigenous populations faced a disproportionate burden of mortality, with a risk twice that of the white majority compared to their White counterparts, with the Mixed ethnic group at 1.4 times and the Hispanic group at 1.3 times the risk.

The higher hospitalization rates and mortality among ethnic minority groups appear to stem from a larger portion of individuals being exposed to and infected by the virus. When examining studies exclusively focusing on individuals infected with COVID-19, the risks of severe illness and death are comparable between ethnic minority groups and the White majority.

However, upon hospitalization with COVID-19, ethnic minority individuals were more prone to ICU admission compared to their White counterparts. These heightened rates may reflect pre-existing health disparities or inequities in healthcare access and quality, all stemming from structural and institutional racism.

Elevated infection rates can be attributed to socioeconomic disparities experienced by ethnic minority groups, exacerbated by the pandemic, and occupational hazards. Disparate employment patterns, income differentials, and housing situations have influenced the varying levels of risk faced by individuals from different ethnic backgrounds. Ethnic minority groups are more inclined to hold public-facing jobs, less likely to have the option to self-isolate or work remotely, more likely to dwell in overcrowded housing, and less likely to have access to open spaces. These factors collectively elevate the risk of COVID-19 transmission.

2.2.1. Economic Implication

The global COVID-19 pandemic has significantly disrupted the economy of the United Kingdom, causing negative effects on travel, financial markets, employment, various industries, and shipping.

The governor of the Bank of England urged the British government to assist businesses impacted by the virus (Next Bank of England governor calls for funds for coronavirus-hit firms. 2020), and collaborated with the Treasury to devise an economic stimulus plan to avert a recession (Jolly, Jasper; Kollewe, Julia. 2020). Companies listed on the London stock markets experienced declines attributed to concerns about the virus (Coronavirus fears wipe £200bn off UK firms' value. 2020). In efforts to stimulate the economy, the Bank of England reduced its interest rate from 0.75% to 0.25% (Phillip, I; et al. 2020), then to a historic low of 0.10%. Fitch Ratings downgraded the UK's government debt rating due to coronavirus borrowing, economic decline, and Brexit uncertainty (Coronavirus: UK interest rates slashed again in emergency move.2020). The government extended its overdraft with the Bank of England (Larry, E. 2020), anticipating a recession comparable to the « Great Frost » over 300 years ago (Ghris, G. 2020), yet the Bank forecasted a recovery by 2021 (Bank of England warns of sharpest recession on record. 2020).

In the latter half of March, one million British workers applied for the Universal Credit benefit scheme (Global lay-offs surge as 6.6m Americans file jobless claims.2020). By April, unemployment benefit claims surged to 2.1 million, marking an increase of 856,500 claims, as reported by UK government statistics, compiled by the Office for National Statistics (ONS), showed a sharp decline in employment rates at the beginning. This drop coincided with the initial implementation of COVID-19 lockdown measures (Sunak: No guarantee of quick economic bounce back. 2020).

A large-scale survey by the Resolution Foundation, polling over 6,000 workers, found a significant disparity in the impact of the pandemic on income groups. Those in the lowest income bracket were three times more likely to be negatively affected compared to the highest earners, with 30% experiencing hardship compared to only 10% of those in the top income bracket (Larry, E. 2020). Approximately a quarter of 18 to 24-year-olds surveyed had been furloughed, while another 9% had lost their jobs entirely. In comparison, individuals aged 35 to 44 were the least likely to be furloughed or lose their jobs, with only around 15% experiencing such outcomes

(Young people 'most likely to lose job' in lockdown.2020). Earlier research from the Institute for Fiscal Studies indicated that young people (those under 25) and women were disproportionately employed in sectors forced to shut down (Under-25s and women 'finances hit worst by virus. 2020).

In early April, the Office for Budget Responsibility forecasted that unemployment could reach 3.4 million, and GDP could plummet by 35% in the second quarter (Payne, A.2020). By June, the unemployment figure indeed reached over 3 million, with another 4 million out of work for a shorter period (Unemployment – Office for National Statistics. 2018). Although GDP declined by 20% during the quarter, it marked the most severe economic contraction since records began in 1955 (Thompson, Mark, et al. 2020).

During a Spending Review on November 25, 2020, the Chancellor of the Exchequer revealed that the UK would face its worst economic downturn in 300 years due to the COVID-19 impact. The anticipated slump, nearing -10%, could surpass the Great Frost of 1709. The report projected an unemployment rate of 7.5% the following year, with around 2.6 million people out of work at its peak. GDP was expected to contract by 11.3% in 2020 (U.K. Faces Worst Slump in 300 Years as Sunak Set to Cut Spending.2020).

2.2.2. Psychological Effects

The sudden emergence of COVID-19 rapidly upended daily life across the globe. In response, many countries enacted strict social distancing measures, including lockdowns, to control the spread of the virus (Frank & Grady, 2020). he global health crisis caused by the coronavirus rapidly changed global daily routines. To stop the virus, countries enforced strict measures like lockdowns.

Quarantine measures involve staying at home, prohibiting public gatherings and non-essential commuting, shutting down schools, universities, and unnecessary businesses, and avoiding contact with individuals outside of one's household. The complete effects of the lockdown on mental health over time remain unclear. However, growing research indicates that being in lockdown is linked to diminished social and emotional well-being in both adults (Brooks et al., 2020) and children (Jiao et al., 2020; Orgels et al., 2020). The lasting effects of lockdowns

on mental health are yet to be fully understood. However, recent studies suggest that being in lockdown can lead to poorer social and emotional well-being in both adults and children.

Furthermore, staying at home has been discovered to have adverse effects on children's well-being due to significant lifestyle changes, such as restricted physical activity and heightened domestic conflict (Wang et al., 2020). staying at home has been found to negatively affect children's well-being, leading to reduced physical activity and increased domestic conflict.

In the UK, like in numerous other nations, nationwide school shutdowns were enforced, except for the children of essential workers, in an effort to contain the spread of the pandemic. The closures are believed to have resulted in significant psycho-social impacts on children because schools serve not only as educational institutions but also as venues for social interaction with peers and psychological support (Spinelli et al., 2020; Holmes et al., 2020; Sylva, 1994). These closures are believed to have had significant psycho-social impacts on children.

So far, only a small number of studies have looked into how the COVID-19 lockdown has affected the mental health and daily routines of children and teenagers. Orgels and colleagues (2020) were among the first researchers to explore this impact on children’s mental well-being. In Spain and Italy, the researchers discovered that over 85% of parents noted changes in their children's emotional states and behaviors, with an increase in difficulty concentrating being the most commonly reported issue (76.6%). In addition to the psychological impacts of COVID-19 lockdowns on children and teenagers, certain studies have noted higher levels of stress among parents. The perceived challenges of the lockdown can contribute to parental stress, which in turn can affect children’s psychological well-being (Dalton, Rapa, & Stein, 2020; Spinelli et al., 2020). in addition to the psychological effects of COVID-19 lockdowns on children and adolescents, some studies have reported increased stress levels in parents. The stress experienced by parents due to Social and educational disruptions caused by lockdown could pose risks to children's mental health.

Lockdown restrictions were first implemented in the UK on March 23rd, 2020 (UK Government, 2020). Until now, only a limited number of studies have investigated the psychological effects of the lockdown on the behavioral and emotional well-being, lifestyle, and their correlation with parental mental health among primary school children. Initial results from the Co-SPACE study, a comprehensive multinational longitudinal investigation monitoring the

mental well-being of school-aged children and adolescents during the COVID-19 pandemic, indicated that caregivers of 4–10-year-olds in the UK observed notable rises in emotional and restlessness/attention-related issues as the lockdown extended over a one-month period (Pearcy et al., 2020).

This study investigated how parents perceived changes in various behaviors, emotional states, and daily activities among children aged 5-11 before and during the lockdown, and how these changes were linked to parental mental well-being. The research was conducted with a sizable sample of parents residing in the UK.

2.3 Increased Severity and Morality

Health inequities, disparities in health quality, healthcare access, and outcomes among different social, racial, ethnic, economic, and environmental groups, persist nationwide.

Various factors contribute to these disparities, such as genetic differences, access to healthcare, substandard care quality, community characteristics (e.g., limited access to nutritious foods, poverty, lack of support systems, and violence), environmental factors (e.g., poor air quality), language barriers, and health behaviors. These social, economic, and environmental conditions in which individuals reside, learn, work, and engage in recreation are termed social determinants of health.

Communities of color, those with lower socioeconomic status, rural populations, individuals with cognitive and physical disabilities. For instance, residents of rural areas in the United States are more prone to fatalities from unintentional injuries, heart disease, cancer, stroke, and chronic lower respiratory diseases compared to their urban counterparts.

These health inequities impose significant financial burdens on states and communities. As per a 2018 study conducted by the W.K. Kellogg Foundation and Alterum, health disparities result in $42 billion in reduced productivity and $93 billion in excess medical expenses annually.

Even when factors like income, health insurance coverage, and healthcare access are taken into consideration, disparities persist. Disproportionately poor health outcomes in areas such as infant mortality, life expectancy, and chronic disease prevalence demonstrate racial and ethnic differences independent of other variables. For instance, Black individuals exhibit higher rates of hypertension and tend to develop this condition at a younger age compared to other racial

groups. Similarly, Black and Hispanic individuals are more susceptible to strokes (Health Disparities Overview.2021).

2.4. Disparities of Covid -19 in Ethnic Minorities in Britain

The COVID-19 crisis exposed deep-rooted health inequalities faced by ethnic minority communities in the UK. Black and Asian people were disproportionately represented among those requiring advanced respiratory support for COVID-19 (Intensive Care National Audit & Research Centre ICNARC report on COVID-19 in critical care. 2020). Public Health England's data analysis later revealed that COVID-19 death rates among ethnic minorities were two to four times higher than those among the White population in England (Public Health England Disparities in the risk and outcomes of COVID-19. 2020).

Several factors were considered for these disparities, including higher rates of comorbidities like type 2 diabetes among British South Asians, greater social deprivation, crowded multigenerational living conditions, higher occupational risks, and delayed healthcare access—all disproportionately affecting minority groups (Hills AP, et al 2018). Despite these significant concerns, targeted public health recommendations for ethnic minorities were limited.

Black and mixed ethnicity groups faced higher risks of hospitalization, ICU admission, and death from COVID-19While there was a welcome decrease in risk for Black and mixed-ethnicity groups during the second wave, the concerning rise in negative COVID-19 outcomes for South Asians during this same period highlights the uneven impact of the pandemic across ethnicities.

The reasons for these differences are complex, but policy measures introduced between pandemic waves—such as improved access to COVID-19 testing, education, and addressing occupational risks—likely played a significant role. Although the study's results are broadly applicable across England and supported by extensive data, limitations include the absence of some explanatory factors not typically captured in existing data, such as occupation. Further research is needed to understand why these differences occurred and to explore them in other contexts.

The urgent challenge now is to ensure COVID-19 vaccination programs are effectively implemented among Efforts to address the disproportionate impact of COVID-19 on all minority ethnic groups must prioritize building vaccine confidence. Research suggests a higher prevalence of vaccine hesitancy within these communities, including worryingly high rates among frontline healthcare and social care workers who face a greater risk of contracting the virus (Robinson E, et al. 2021). Without direct measures to boost vaccine confidence, differing levels of vaccine uptake could worsen existing health inequalities between minority ethnic groups and White groups.

The pandemic has demonstrated the value of analyzing large-scale, routinely collected health data using secure platforms to support swift public health and regulatory responses (Williamson EJ, et al. 2020). However, a significant issue remains the inadequate mandatory ethnic coding in NHS medical records, making it difficult to accurately identify the extent of health inequalities. A key recommendation, in line with health experts and Public Health England, is to mandate comprehensive collection and recording of ethnicity data within NHS and social care systems. Mathur and colleagues' findings underscore the public health importance of collecting this data and making it accessible for analysis.

2.4.1. Economic Racial Disparities

The pandemic had a profound impact on the UK economy, with effects that differed significantly across ethnic groups, exacerbating existing racial economic disparities. For example, higher unemployment rates and increased occupational segregation in low-wage jobs among BAME individuals have widened the economic gap between white and non-white populations. Addressing the underlying causes of this situation, particularly the roles of racism and discrimination, is crucial moving forward.

Black, Asian, and Minority Ethnic (BAME) individuals were overrepresented in jobs with higher COVID-19 exposure risks and in sectors heavily affected by shutdowns, such as transport, accommodation, and food services. Before the pandemic, one in three Bangladeshi men worked in catering or related businesses, compared to about one in a hundred White British men. Similarly, one in seven Pakistani men (The Runnymede Trust, The Colour of Money . 2020) worked as taxi drivers or chauffeurs, compared to one in a hundred White British men.

These sectors faced significant shutdowns and redundancies, with transport and storage announcing 34,000 redundancies and the accommodation and food sector 16,000 by July 2020. The wholesale and retail industry, with a proportionate number of BAME workers, also announced 24,000 job losses (The Guardian, BAME workers disproportionately hit by UK Covid-19 downturn. 2020). The IFS reported Black African and Black Caribbean men were disproportionately represented in industries most affected by lockdown measures, with a 50% higher likelihood of working in these sectors compared to White British men (IFS, Are some ethnic groups more vulnerable to COVID-19 than others?). Bangladeshi men were significantly more concentrated in lockdown-affected sectors, with a fourfold higher chance of working in these industries compared to White British men. Pakistani men also faced a substantial employment risk, being nearly three times more likely to be employed in these shut-down sectors (Ibid).

Analysis by the Trades Union Congress (TUC) revealed that the industries most affected by the pandemic experienced a significant reduction in BAME workers compared to White employees. Between the third quarter of 2019 and the third quarter of 2020, the number of BAME workers in the accommodation and food sector decreased by 23%, compared to a 13% decline for White workers. In the wholesale and retail industry, the number of BAME workers fell by 16%, and in the construction industry by 14%, while the reductions for White workers in these industries were 1% and 7%, respectively (TUC, Jobs and recovery monitor: BME workers. 2021).

The COVID-19 pandemic underscored the heightened economic vulnerability of ethnic minorities during economic downturns. It highlighted enduring racial inequalities that continue to have lasting economic consequences. Even three years later, ethnic minorities, with the exception of Indians, still experience higher unemployment rates compared to the white majority. Black individuals, Pakistanis, and Bangladeshis face the greatest challenges, marked by ongoing occupational segregation and lower wages.

2.4.1.1. COVID-19, Racism and Racial Discrimination in the Workplace

Major think tanks such as the Runnymede Trust, the Resolution Foundation, and trade union think tanks brought attention to economic racial disparities in reports scrutinized by the government. In a 2021 publication, the TUC highlighted institutional racism and structural

inequality in the workplace as significant factors contributing to over half of the risk disparity between ethnic minorities and the white majority. The "racism remains a matter of life and death," (TUC, dying on the job, p.5.) drawing on the experiences of BAME workers. It pointed out the disproportionate representation of BAME workers in frontline roles during the crisis and highlighted in-work poverty within BAME communities.

A situation where discrimination confines these workers to low-wage jobs and roles that involve the most difficult and hazardous work. For instance, the TUC disclosed that one in six respondents to their COVID-19 pandemic evidence call reported increased risk due to their ethnicity (Ibid. p.3). BAME workers indicated they were compelled to undertake risky tasks and comply with employer demands to avoid losing temporary work or having their hours reduced. The report also shared stories, such as that of a BAME nurse assigned exclusively to coronavirus patients, who felt vulnerable due to her status as an agency worker, which allowed managers to threaten her job security by contacting her agency or halting her work bookings (Ibid. p. 10).

The TUC highlights the growing prevalence of insecure and low-paid employment among BAME workers compared to their white counterparts. Over the past decade, while the proportion of white workers in insecure and low-paid jobs has marginally increased from 10.5% to 10.8%, it has risen more significantly for BAME workers, from 7.8% to 12.2% (TUC, BME workers on zero-hours contracts.2021). The report notes a stark rise in the number of BAME workers in insecure employment, which more than doubled from 360,000 to 836,340 between 2011 and 2022. This trend underscores what the TUC describes as a « massive and disproportionate concentration of BME workers in insecure work, » including prevalent zero-hours contracts, illustrating structural racism's distortion of the labor market (Ibid. p. 4.).

Furthermore, the British economic structures have historically exploited and impoverished BME communities both domestically and internationally over centuries (TUC, BME workers on zero-hours contracts. [n.d]). It estimates that annually, black Indian, Pakistani, and Bangladeshi workers face pay penalties totaling £3.2 billion (Kathleen Henehan, the £3.2 bn pay penalty facing black and ethnic minority workers. 2018).

Despite improvements in access to higher education for children of first-generation immigrants, disparities persist when comparing ethnic minority group members with their majority counterparts who have similar levels of education and labor market experience.

According to Heath and McMahon, ethnic minorities encounter barriers in employment access even with equivalent training and education, a phenomenon they term 'ethnic penalties' (Anthony Heath and Daniel McMahon. 1997). Their research highlights that all ethnic minorities are more likely than the white majority to be overqualified for their jobs, attributing low wages more to a concentration of ethnic minority workers in low-paying occupations rather than widespread wage discrimination (Anthony Heath and Sin Yi Cheng. 2006).

The influential Runnymede Trust further illustrated this disparity by comparing two male graduates, one Black and one White, working in the same region with identical education levels, revealing a 17% earnings gap where the Black worker earns less than the White worker (The Runnymede Trust, The Colour of Money. 2020). Research from 2019 supports these findings, showing that ethnic minorities face substantial discrimination in job applications. Despite having identical qualifications and cover letters, nearly one in four applicants from the majority group received a positive response (a callback) from employers, whereas ethnic minorities had to send 60% more applications to achieve the same level of response, highlighting significant hiring disparities (Valentina Di Stasio and Anthony Heath, 'Racial discrimination in Britain. 2019).

2.5. Employments and Economic Challenges

Approximately 7.6 million jobs, representing 24 percent of the UK workforce, are at risk due to COVID-19 lockdowns. Those with the lowest incomes and in the most economically disadvantaged areas are the most vulnerable. As governments worldwide implement measures to curb the spread of the coronavirus and save lives, they are facing significant economic repercussions. The UK initiated a lockdown on March 23, 2020, to manage The COVID-19 pandemic, though it helped lessen the immediate health threat, it has also negatively impacted the economy.

In May 2020, economic activity, measured by GDP, was estimated to be about 30 percent lower than in February 2020. The Office for National Statistics reported that between April 6 and 19, 2020, 23 percent of businesses had temporarily closed or paused trading, and around 60 percent of those still operating experienced a decline in revenues. Although economic activity is expected to rebound as lockdown restrictions ease, the pace and patterns of recovery will differ across sectors. According to McKinsey's midpoint scenario, the UK's GDP is projected to contract by 9 percent in 2020.

Such a sharp decline in output significantly impacts employment. During the lockdown, approximately 7.6 million jobs are at risk, which includes permanent layoffs, temporary furloughs, and reductions in hours and pay. The risk is disproportionately higher for those with lower incomes. Nearly 50 percent of at-risk jobs are in occupations that pay less than £10 per hour, compared to the median hourly wage of £13.30 in 2019. In the 20 lowest-income subregions, such as Blackpool, Stoke-on-Trent, and Torbey, 23 to 29 percent of jobs are at risk, while in the 20 highest-income regions, the range is much lower at 18 to 25 percent.

The UK has historically faced substantial regional income disparities, which may be exacerbated by COVID-19-related furloughs and layoffs. The impact will largely depend on how swiftly organizations can resume full operations once lockdown restrictions are lifted and how effectively fiscal stimulus during and after the crisis is targeted to support the most deprived areas and individuals. In the short term, lower-income regions of the UK seem to be at the greatest risk (Allas, T. Canal, M. Hunt, D, V. 2020).

2.5.1. Housing Disparities

In the UK, low-income individuals often rely on housing benefits to cover housing costs. This means that if housing expenses increase, so do benefit payments. Additionally, the living standards of homeowners who have paid off their mortgages are often underestimated because their lack of rent or mortgage payments isn't considered. This is supported by the fact that disposable incomes measured after deducting housing costs (AHC) are more closely related to indicators like material deprivation and food insecurity than incomes measured before deducting housing costs (BHC).

Over time, lower-income households have been allocating a larger portion of their income towards housing compared to wealthier households. In 1968, housing expenses accounted for 9% of average disposable incomes for the poorest quarter of the population. This figure increased to 26% in 2015 but decreased to 21% in 2021. Even after factoring in housing benefits, the poorest households spent 19% of their income on housing in 2016, the most recent year for which this data is available. In contrast, the richest quarter of the population only allocated 4% of their average income towards housing in 1968 and 6% in 2021.

As housing expenses have grown in significance, they've played a larger role in determining relative poverty rates. In 2021, the poverty rate stood at 17% when incomes were measured before housing costs were deducted, but it rose to 22% when incomes were measured after housing costs were deducted. Using BHC measures, poverty appeared to decrease by 1.4 percentage points between 2008 and 2021. However, when measured AHC, poverty only decreased by 0.5 percentage points over the same period.

In the UK, we observe a significant rise in housing costs for lower-income households compared to higher-income ones in recent decades. This has led to a divergence in poverty and inequality metrics based on incomes before and after accounting for housing costs (BHC and AHC, respectively). These trends are partly driven by changes in housing tenure and variations in housing cost trends among different tenures, often influenced by institutional factors beyond households' control. Additionally, we demonstrate how the choice between AHC and BHC income measures greatly impacts our understanding of who falls under the category of low income, using age-based inequalities as a prominent example. Moreover, regional income patterns vary depending on the chosen measure, though interpreting regional incomes after housing costs deductions requires careful consideration.

Throughout our analysis, we adhere to the income and housing cost definitions provided by the UK's Department for Work and Pensions' national statistics on household incomes, commonly known as the Households Below Average Income statistics. Incomes encompass earnings, benefits, investment income, and other income sources, after deducting direct personal taxation. Housing costs considered in UK poverty statistics comprise rental payments, mortgage interest payments (excluding mortgage principal payments), and occasionally smaller expenses like service charges and buildings insurance. Mortgage principal payments are omitted because they resemble saving, allowing households to accumulate wealth that they could potentially use later through downsizing, equity release products, or passing on to their children as inheritance (J, Cribb and T, Wernham and X, Xu. 2023).

2.5.2. Access to Helfcare Services

The COVID-19 pandemic remains a significant global health crisis, posing challenges to the provision and accessibility of healthcare services, even in countries with advanced healthcare

infrastructure and resources. Consequently, nations worldwide have had to adapt their systems to ensure timely access and effective response to the virus.

Healthcare access refers to the ease with which individuals can obtain necessary medical care, determined by various factors such as financial, organizational, social, and cultural barriers. Prior to the pandemic, access to healthcare was already a concern. Presently, there is emerging evidence of disparities in COVID-19 impact based on race and socio-economic status, attributed to reduced access to and utilization of healthcare services (Whitehead M. The concepts and principles of equity and health. 1992). This inadequate access exacerbates existing social inequalities, placing further strain on the healthcare system.

Numerous resources and personnel are being redirected from their usual duties to conduct COVID-19 testing and treatment (Abedi V, et al 2020). Limited supplies and apprehension about seeking healthcare further complicate the situation (World Health Organization. 2020). Additionally, there is growing concern about the potential side effects of COVID-19 vaccines. Therefore, it's crucial to guarantee access to medical care to prevent both COVID-19 and non-COVID-19-related illnesses and fatalities, particularly in vulnerable health systems. Strengthening existing strategies and implementing proactive measures to safeguard uninterrupted healthcare access is vital for mitigating the impact and the spread of the COVID-19 virus (Okereke M, et al. 2021).

2.6 Cultural and Consideration

The COVID-19 crisis stands out as the most substantial peacetime disruption to global health and economies in recent memory. In response, governments around the world enacted various non-pharmaceutical measures (NPIs) such as social distancing and Shelter in Place (Sip) orders, to slow the disease's spread, resulting in the shutdown of large parts of the economy. Public intervention became necessary to sustain the economy (For detailed information on the stringency of government measures and measures to support the economy). In the UK, the pandemic severely impacted the Cultural and Creative Industries (CCIs) just as household expenditure was rapidly increasing, according to data from the Office for National Statistics (ONS). (For data before the pandemic).

On the production side, although some parts of the sector have been severely affected, the CCIs have demonstrated considerable flexibility and resilience, supported by unprecedentedly large government aid packages. The enforced absence of "in-person" consumption has accelerated pre-existing trends towards digitization across all types of cultural and creative content (CCCs), (Both for-profits and non-profits organizations relied on digital platforms as a source, respectively, to generate. 2013). Many organizations swiftly transitioned their content online (See, among others . 2020), initially to support people staying at home and later as a new method to engage consumers (See, for instance, recent survey evidence from the USA. [n.d]). However, the ability to adapt digitally varies across different sub-sectors, firms, consumers, and types of content.

The capacity to adapt digitally varies significantly among different sub-sectors and firms, as well as among consumers and types of content. It could be argued that companies in industries like gaming and publishing may have even benefited from Shelter in Place (Sip) measures compared to those heavily reliant on physical presence, which have had to drastically reconsider their operational and business strategies to prevent closure. Similarly, the ability to adapt digitally may have had varying impacts on cultural organizations depending on their geographic location and the diversity of their audience. Regarding consumption, the recession triggered by the pandemic has led to significant declines in income and employment across the economy, which would have been even more severe without global government interventions. Nevertheless, the impact of the shock and the measures to mitigate it may not have been uniformly experienced by all consumers.

Simultaneously, differences in consumption technologies could have resulted in varying impacts of income and time shocks across different cultural and creative activities. Therefore, while the pandemic created a widespread shock, its effects on consumers and various types of cultural and creative content may have differed, potentially reflecting pre-existing inequalities based on socio-economic status, occupation, gender, and age. Specifically, research from the UK Creative Industries Policy and Evidence Centre and The Audience Agency underscores the significance of cultural consumption for well-being during the pandemic. They document a rise in consumption associated with the transition from physical to digital formats.

We term this period the "Great Lockdown," characterized by stringent social distancing measures across the UK. These measures mandated people to stay at home unless they were essential workers, resulted in the closure of businesses and venues, and required parents and carers to homeschool their children unless they were children of essential workers. To explore consumer behavior during this period, we utilized a unique nationally representative survey conducted by the Creative Industries Policy and Evidence Centre in collaboration with the UK Government's Intellectual Property Office and the research agency Audience Net. This survey investigated how consumers' decisions regarding home and online consumption of Music, Movies, TV, Games, Books, Magazines, and Audiobooks evolved over six consecutive weeks of lockdown.

2.6.1. Cultural Consumption and Socio – economic Status

Research on cultural consumption and its correlation with socio-economic status has been explored since at least Baumol and Bowen's work in 1966 (Baumol, W. J., & Bowen, W. G. 1966), which highlighted the elitist nature of cultural attendance. Recent studies by Borgo Novi (2004), Seaman (2005), and Falk and Katz-Gerro (2016) largely corroborate this observation: individuals with higher education levels and greater wealth are more inclined to engage in cultural activities as part of their consumption patterns (Again, the interested reader can refer to the reviews in these papers).

The relationship between cultural consumption and inequality has been extensively studied within the literature on social class. Variations in preferences across different social strata, encompassing both highbrow and lowbrow activities, have been a focal point in sociological research since Bourdieu's seminal work in 1984 (Bourdieu, P. 1984). This body of research suggests that individuals tend to align their cultural consumption habits with their immediate social environment.

However, recent studies have noted a shift among individuals from higher social backgrounds towards embracing a blend of highbrow and lowbrow cultural elements, a phenomenon termed cultural omnivorous Ness. For example, Friedman (2012), using a survey on

British comedy preferences, found that omnivorous Ness is characteristic of upwardly mobile individuals. This trend aligns with Bourdieu's observation that individuals often start with lowbrow tastes in youth but acquire highbrow tastes as they age and advance in social status.

Moreover, theoretical predictions by Biondo et al. (2022), particularly in the context of recent lockdowns, suggest that lowbrow activities may more easily adapt to changes in cultural consumption patterns compared to highbrow activities. This distinction could have significant implications, especially for highbrow cultural pursuits, which may be more vulnerable to disruptions like the recent pandemic and broader limitations on personal mobility and face-to-face interactions.

The rise of digitization has sparked debates about its impact on cultural consumption, questioning whether digital technologies mitigate or exacerbate inequality and elitism. On one hand, digital media can democratize access by reducing costs overall. On the other hand, they may reinforce existing patterns, potentially creating digital omnivores or widening inequalities. For instance, accessibility issues such as lack of reliable broadband, essential equipment, or technological know-how can hinder digital culture access, particularly for lower-income or less socioeconomically advantaged groups.

In this context, Mihaly et al. (2019) examine how digital media influence cultural consumption and the "cultural divide". Using England's Taking Part Survey focusing on museums and galleries, they find that while digital media enhance both online and offline consumption, inequalities persist, with disparities appearing wider in online consumption compared to traditional analogue methods. Similarly, WeinGartner (2020) observes that inequalities observed in offline settings are mirrored or amplified in the digital realm.

2.6.2. Demographic Factors: Gender, Household Interactions and Age

Gender, household dynamics, and age are recognized as factors influencing cultural consumption. Studies typically show that women tend to participate in cultural activities more often and with greater intensity than men. These gender differences in cultural engagement might be linked to variations in household time management (Browning et al. 1994) and differences in labor force involvement (Cellini & Cuccia, 2021).

Recent research has examined household dynamics and the interactions between partners. For example, Lazzaro and Frates chi (2017) used Italian survey data to explore how individual attributes (such as education) and couple-related factors (like having children) impact arts participation. They found that a partner's characteristics significantly influence the couple's engagement in various cultural activities. Furthermore, Mauri and Wolf (2020) showed that when women have more bargaining power within the household, it positively affects the couple's participation in « women-dominated » cultural activities, such as ballet and opera.

Research has identified a positive correlation between cultural participation and age. This is often explained by the « learning-by-consuming » and « habit-formation » concepts, originally proposed by Stigler and Becker (1977) and Becker and Murphy (1988). However, the evidence is not definitive, as some studies, such as Borgo Novi (2004), suggest that younger cohorts are more likely to attend cultural events like theater and ballet, all else being equal.

After the implementation of the Shelter-in-Place (Sip) measures, interesting evidence emerged showing that older cohorts became relatively more likely to consume certain types of content, such as games. It is important to note that the definition of cultural consumption varies in the literature, which can affect the perceived influence of age and gender. According to Favaro and Frateschi (2007), the two most commonly used metrics are the physical attendance of live performances and media consumption (see also Borgonovi, 2004).

In both instances, the influence of demographic and socio-economic factors, especially age and gender, aligns well with previous findings on cultural participation. This applies to screen media consumption, including activities such as watching TV, playing console games, and surfing the internet. The authors also find statistically significant gender effects, with peer influences being more pronounced for boys. These differences may have been intensified following the pandemic, as school closures and home-schooling disrupted physical classroom interactions. The authors find that advancements in these leisure luxuries explain the decline in labor supply among young U.S. males compared to older males since 2004. This downward trend was hastened by the Great Recession and only partially reversed afterward.

2.6.3. Communication Barriers

During the Coronavirus pandemic in the UK, communication barriers have hindered effective communication in various ways.

Language barriers are a major challenge in communication, particularly in diverse and multicultural societies. These barriers can manifest in several ways. When people speak different native languages, they cannot communicate effectively, which is especially problematic in healthcare settings where precise communication is crucial for patient care and treatment during the pandemic. Even with a common language, varying levels of proficiency can lead to misunderstandings, as non-native speakers might struggle with complex medical terminology or government guidelines related to COVID-19.

Additionally, differences in regional dialects and accents can create confusion, as specific terms or phrases used in one region might be unfamiliar to someone from another area. Cultural differences in communication styles, such as indirect versus direct communication, add another layer of complexity. The frequent use of technical terms and jargon related to health and safety measures can be daunting for the general public, especially those with limited language skills. Addressing these language barriers requires the use of translators, interpreters, and simplified language resources to ensure that everyone has access to crucial information and can understand public health directives accurately.

Psychological barriers occur when individuals experience mental blocks or issues that hinder effective communication. Emotional barriers arise when negative emotions or complicated relationships interfere with clear communication. Additionally, physiological barriers involve physical traits that make communication more difficult, such as speech impairments, stuttering, or throat diseases.

Physical barriers are the most visible obstacles to communication, occurring when people are physically separated, such as being in different rooms, miles apart, or having something obstructing their view. Perceptual barriers involve individuals' biases that distort reality and affect how they perceive communication.

Cultural barriers arise when individuals from different cultures have varying perceptions, ideologies, and values, leading to less common ground and potential communication difficulties.

Gender barriers occur because men and women often have distinct communication styles, which can impact their mutual understanding and interaction.

Technological barriers exist despite the convenience of modern technology enabling global communication; not everyone finds it easy to use these tools, leading to potential struggles. Interpersonal barriers are related to the nature of the relationship between communicators, as the way one communicates with a manager differs from how they would interact with a best friend or child. Technological barriers exist despite the convenience of modern technology enabling global communication; not everyone finds it easy to use these tools, leading to potential struggles.

Access issues create a digital divide, as not everyone has equal access to advanced technology. Additionally, individuals may lack the necessary skills to effectively use new communication tools, and technological issues such as connectivity problems, software glitches, or hardware malfunctions can impede communication. Interpersonal barriers are related to the nature of the relationship between communicators, as the way one communicates with a manager differs from how they would interact with a best friend or child. Communication styles must adapt to respect hierarchical structures, which can create tension or misunderstanding. The familiarity and comfort level with the person you are communicating with can greatly influence the effectiveness of the communication, and the appropriateness of language and tone varies depending on the relationship, requiring careful consideration to avoid miscommunication.

2.6.3.1 Medical Student's Corner: Barriers to Communication During the Covid 19 Pandemic

Effective communication plays a crucial role in enhancing health outcomes, particularly among marginalized groups such as individuals who do not speak English fluently or those with hearing impairments. Patients belonging to these demographics often experience lower levels of satisfaction and poorer outcomes within healthcare settings (Egede LE. 2006) Currently, medical education falls short in equipping students with the requisite skills to deliver adequate care to Within these groups, effective communication hinges on mastering both verbal and nonverbal skills. techniques, cultural sensitivity, adapting clinical environments, and utilizing medical translation services.

Regrettably, our medical training lacks consultation models tailored specifically Patients who are deaf or do not speak English face challenges. Additionally, there is a clear lack of training simulations for effectively communicating with such patients or utilizing translation or sign language services during clinical internships. As a result, we frequently encounter challenges in obtaining comprehensive patient histories and remain uncertain whether our patients fully comprehend our guidance.

The widespread adoption of masks in healthcare settings presents a significant communication challenge, particularly for individuals with hearing impairments or limited proficiency in English (Chodosh, J .2020). Masks hinder effective the exchange of information, collaborative decision-making, and patient compliance with medical recommendations (Appointments in General Practice August. 2020). While masks are crucial for preventing disease transmission, their impact on nonverbal communication essential for patient understanding and emotional expression is notable.

To address these issues, we advocate for simulation training involving individuals with hearing impairments to enhance healthcare providers' communication skills under masked conditions. Furthermore, transparent surgical masks should be universally available in healthcare settings to facilitate visual communication (Atcherson SR, et al. 2017). Introducing medical sign language as an optional course in medical schools could also enhance providers' ability to communicate effectively with patients who rely on visual communication cues.

2.7 Trust in Healthcare System

Due to the critical nature of reliable health guidance, vulnerable individuals assume that doctors and, by extension, other medical experts possess greater knowledge than they do, and rely on their decisions (Parsons, 1951). health advice is crucial, vulnerable people often assume that doctors and other medical professionals have more knowledge than they do, leading them to trust and rely on their judgments for medical guidance.

Nevertheless, if healthcare expectations are unfulfilled, such as with increasing mortality during a pandemic, trust can be quickly destroyed (Mechanic, 1998), leading to feelings of betrayal or anger that hinder healthcare seeking behavior (Baier, 1986). Additionally, past research indicates a correlation between poorer self-rated health and reduced trust in the

healthcare system (Armstrong et al., 2006; Mohseni and Lindström, 2007). when healthcare expectations are not met, particularly evident during events like a pandemic with rising mortality rates, trust can be severely undermined. This can lead to feelings of betrayal or anger, which in turn can deter individuals from seeking healthcare services. Furthermore, research indicates that individuals who rate their health lower also tend to have lower levels of trust in the healthcare system.

The lower trust in healthcare among patients might be due to their increased adherence to treatment, leading to better health outcomes. Therefore, achieving higher patient satisfaction, effective continuity of care, and adherence to medications hinges on establishing trust in the healthcare system (Thom et al., 1999). However, during an unexpected pandemic like the initial wave of COVID-19, the role of healthcare system trust in influencing outcomes is an empirical question, as the experience varies significantly under such exceptional circumstances.

However, it remains uncertain whether the Historical Simulation Testing (HST) had a comparable impact during an unforeseen pandemic, given that the role of experience varies, particularly in the extraordinary conditions of During the onset of the COVID-19 pandemic, uncertainty emerged, particularly regarding the influence of prior experiences, notably in the distinct conditions of the initial wave of the pandemic.

2.7.1 Health System Trust and Pandemics

During a pandemic, people's adherence to self-protective measures is influenced by their perceptions of risk (de Zwart et al., 2007; Leppin and Aro, 2009) and their confidence in the effectiveness of governmental and health system responses (de Zwart et al., 2009; Blendon et al., 2008). Previous pandemics provide consistent evidence in this regard. Winters et al. (2020) observe that individuals who are more cautious tend to rely more on Historical Simulation Testing (HST). Similarly, trust in health authorities was linked to protective behaviors and vaccination intentions during the H1N1 pandemic (Freimuth et al., 2014; Chuang et al., 2015).

Dry Hurst et al. (2020) state that trust in government and science affects how people perceive Focus on the potential for infection (Elgar et al. 2020). In a similar vein, Beller et al. (2022) conducted a study in 27 European countries following the initial outbreak of COVID-19 and found that trust in the healthcare system declined among individuals experiencing unmet

health needs and higher mental distress, such as those facing economic vulnerability and loneliness. In contrast, Zhao et al. (2019) observed that individuals who were happier and healthier tended to trust China's healthcare system more. Consequently, perceptions of risk during a health crisis like COVID-19 can have dual effects. Some individuals may alter their behavior if they feel capable of managing the threat, while others may feel helpless and thus less likely to change their behavior (Witte and Allen, 2000).

Several studies have explored the impact of trust in healthcare systems (HST) during the COVID-19 pandemic. Eichen green et al. (2021) investigated how exposure to the pandemic affected youth across 138 countries, noting a significant decline in trust towards scientists. They observed that this distrust reduced compliance with health guidelines and resulted in lower rates of childhood vaccination. Similarly, Chan et al. (2020) discovered that regions with higher trust in their healthcare systems were more likely to see reduced mobility following government mandates for essential travel only, compared to regions with lower healthcare trust (Algan et al. 2021).

Furthermore, several studies indicate that greater trust in public institutions enhances adherence to policy measures such as social distancing (Lalot et al., 2022). However, these studies predominantly focus on the impacts of trust rather than investigated the effects of the pandemic on healthcare decision-making.

2.7.2 Contracting the Coronavirus and Healthcare System Trust

COVID-19 represented an unprecedented pandemic in terms of the dissemination of risk information. Since its onset, the media has played a crucial role in reporting case numbers and fatalities (Anwar et al., 2020; Tsao et al., 2021). Therefore, one approach to assess the impact of pandemic exposure is to analyze regional excess mortality in 2020 compared to pre-pandemic periods (2016-2019). We propose that individuals' trust in the healthcare system may be influenced by this relative mortality (RM). Additionally, we aim to explore how the pandemic's impact varied across different age groups of respondents, reflecting heterogeneous exposure to the crisis.

To evaluate the pandemic's impact on healthcare system trust (HST), we propose employing a Difference-in-Difference-in-Differences (DiDiD) approach, also known as triple

difference (DiDiD) specification. This method compares trust levels in regions experiencing excess mortality during 2020 to trust levels in regions not experiencing excess mortality, and contrasts trust levels in 2020 with those in 2013. The DiDiD model is designed to mitigate potential endogeneity issues stemming from three types of unmeasured confounders: temporal variations affecting individuals uniformly (e.g., changes in healthcare systems from 2013 to 2020), individual differences that remain constant over time (e.g., inherent differences across age groups), and temporal variations affecting individuals differently (e.g., mortality rates).

Conclusion

The COVID-19 pandemic provided new evidence of the greater economic vulnerability of ethnic minorities during recessions. The crisis has shed light on pre-existing and persistent economic racial inequalities that have lasting economic impacts. Three years on, the unemployment rate among ethnic minorities is still higher than it is among the white majority, with the exception of Indians, who have achieved net progress in terms of employment status and wages. Black people, Pakistanis and Bangladeshis remain the most disadvantaged ethnic groups, with persistent occupational segregation and lower wages. Educational access and achievements have improved, but this has not fully redressed the inequity of the situation, and the role played by racism and discrimination in the 'ethnic penalty' remains a highly controversial issue.

The UK has certainly developed one of the strongest legislative arsenals in Europe on these issues and has taken major steps in addressing racial disparities and combating discrimination. However, the structural socio-economic exclusion of racial and ethnic minority communities in the UK remains disproportionately high. The post-racial society, as endorsed by the Sewell Report, has therefore not been realized. The United Nations Special Rapporteur has recommended concrete actions such as the implementation of a unified UK-level policy that lays out a comprehensive strategy to eliminate systemic and systematic unlawful racial disparities and the introduction of a mandatory equality impact assessment prior to the adoption of policies. Theresa May herself once launched the idea of requiring employers to publish their ethnicity statistics, one of the few suggested initiatives that could indeed provide a convincing response to Baroness Ruby McGregor's statement that "The time for talking is over. Now is the time to act.

The pandemic caused a severe recession, with an unprecedented drop in GDP during the first national lockdown in 2020. As businesses and consumers adapted, subsequent lockdowns in

autumn 2020 and winter 2020/21 did not lead to as severe a decline in economic activity. Numerous policies were introduced by the government and the Bank of England in order to support businesses and workers and mitigate at least some of the negative economic impacts from the pandemic and lockdowns. These measures were designed to keep businesses afloat and as many people as possible employed. The measures financially supported businesses, workers and the wider public during the pandemic, as well as attempting to reduce economic uncertainty. Many of the costs of the pandemic were associated with reduced economic activity, but we also cannot estimate precisely how much of this reduction was caused by the lockdowns and how much would have been caused anyway by people voluntarily reducing their social contact.

Chapter Three

Chapter Three:
Government Response and Policies.

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Introduction

During the COVID-19 pandemic in the UK, the government implemented a range of public health and economic strategies to lessen its effects. Due to devolution, Scotland, Wales, and Northern Ireland had distinct administrative approaches compared to England. Several laws were passed or proposed during this period.

The UK government had a pre-existing pandemic response plan. Following the first COVID-19 cases in January 2020, the UK issued travel warnings and launched (but later stopped) contact tracing to limit the virus spread (Nicole, K. 2020). With the escalating viral transmission, the government gradually imposed societal restrictions, initially resisting stricter measures seen in other regions (Alwan, Nisreen A, et al 2020). Prime Minister Boris Johnson declared the first national lockdown on March 23, 2020, accompanied by the introduction of the Coronavirus Act 2020 by Parliament. This act provided emergency powers to devolved governments and authorized law enforcement to enforce public health regulations (Jonathan, C, et al 2020).

Following the relaxation of the nationwide stay-at-home order, policies diverged among the four nations. Scotland pursued an elimination strategy, while local lockdowns, social distancing measures, self-isolation mandates, mask rules, and expanded testing and tracing efforts were implemented nationwide. In late 2020, additional lockdowns were enforced due to rising COVID-19 cases and the Alpha variant. Vaccination efforts commenced in December 2020. By mid-2021, most restrictions were lifted during the third wave driven by the Delta variant, though some rules were reinstated in response to the Omicron variant in late 2021. England lifted remaining restrictions on February 24, 2022, under a "living with COVID" plan. Economic aid was extended to struggling businesses and furloughed workers, with streamlined procurement processes for PPE and medical equipment.

Academic medical sources, media outlets, relatives of COVID-19 patients, and political figures have criticized the UK government's handling of the pandemic, especially regarding the timing of implementing and lifting public health measures. This criticism persisted during the Partygate [2]scandal, where multiple government officials were found to have violated COVID-19 social distancing rules during lockdowns. In response to these concerns, a public inquiry into the government's pandemic response was initiated in June 2022.

3.2 Prior Pandemic Response Plans

In 2011, the UK introduced its Influenza Pandemic Preparedness Strategy, which was later updated in 2014 (UK Influenza Pandemic Preparedness Strategy .2020) to include a review of medical and social countermeasures (Overarching government strategy to respond to a flu pandemic: analysis of the scientific evidence base.2020). Guidance on pandemic flu was initially provided in 2013 and revised in 2017, offering recommendations for local planners and businesses, as well as establishing an ethical framework for the government's response (Pandemic flu.2017).

Key differences between regular seasonal flu and pandemic flu illustrate why pandemic flu is viewed as a major threat. Pandemic influenza is one of the most critical natural challenges that could impact the UK.

In 2016, the government ran Exercise Cygnus, a three-day exercise simulating a large-scale flu outbreak. A report by Public Health England the next year, which was not publicly disclosed, highlighted shortcomings in emergency preparedness, inadequate central oversight, and difficulties in managing care home capacities (Pegg, D. 2020). In June 2020, Treasury Permanent Secretary Tom Scholar and Cabinet Office Permanent Secretary Alex Chisholm informed the Public Accounts Committee that the civil service had failed to develop a plan to mitigate the pandemic's economic impact (Rajeev, S.2020).

3.3. Awareness and Recognition of Disparities

Epidemics and pandemics tend to highlight and worsen existing inequalities in society, including those related to poverty, race, gender, age, and sexual orientation (Harding, H; et al. 2018). The COVID-19 pandemic highlighted significant disparities in health outcomes. These included the well-documented increased risk with age and the surprising finding of a higher risk of severe illness for people with obesity (Williamson, E; et al. 2020).

Different infections can have unique health effects of HIV among men who have sex with men in the 1980s or the susceptibility of young adults, the elderly, and infants during the 1918-1919 influenza pandemic (Taubenberger, J. K and Morens. 1918). However, some effects, such as higher exposure risk and poorer health outcomes among socioeconomically disadvantaged groups, are recurrent themes across various pandemics (Suhrcke, M; et al.2011).

The COVID-19 pandemic exposed how some inequalities are inherent to airborne respiratory viruses. For instance, densely populated households and close-contact work settings experienced higher transmission rates without proper ventilation or protective gear, with rural regions experiencing comparatively fewer cases (Aldridge, R; et al. 2021).

Apart from the immediate health effects, some measures implemented to manage COVID-19 can lead to inequalities, although the full extent of their impact may never be known due to the absence of a clear comparison scenario. For instance, in the short term, less privileged communities and younger individuals bore a disproportionate burden of public health measures like school closures and restrictions on the hospitality sector. However, determining the scale of the comparative impact of not implementing these measures (resulting in possibly sustained high levels of community transmission) on these groups is challenging (Powell, A; et al. 2022). Inequalities stemming from the infection and the subsequent policy responses may not be immediately evident but may not be immediately apparent but become clear as the pandemic progresses, like with COVID-19.

The uneven distribution of risks associated with SARS-CoV-2 exposure and the resulting health outcomes from COVID-19 developed swiftly as the epidemic spread throughout the UK. This advancement was driven by the virus reaching more individuals and communities, alongside the enhancement of research initiatives, standard data collection, and community involvement to adequately capture the required information.

3.3.1. Initial Outbreak

Early accounts of cases and investigations into outbreaks provided preliminary clues about potential inequalities. By January 2020, reports from China revealed that COVID-19 caused more severe outcomes in older adults and men (Verity.R; et al.2019). Over the subsequent two to three months, additional data, mainly Initial reports from regions like China and Italy during the pandemic's emergence highlighted a heightened risk of severe illness and mortality for individuals with pre-existing health conditions and weakened immune systems. Additionally, early data from China hinted at a potential link between low-skilled occupations and an increased risk of developing severe COVID-19 (Shi Y; et al.2020).

In response to the emergence of COVID-19 cases in the UK, health officials adopted the FF100 enhanced surveillance protocol. This protocol aligned with World Health Organization (WHO) guidelines and incorporated lessons learned from past pandemic responses to outbreaks like Middle East respiratory syndrome coronavirus (MERS-CoV) and H7N9 influenza (Public Health England.2015). The FF100 protocol focused on collecting essential demographic information and closely monitoring clinical symptoms within the initial group of several hundred SARS-CoV-2 cases. This aimed to establish a comprehensive picture of the characteristics of those initially affected (Boddington, N; et al. 2020). Initial findings indicated that pre-existing health conditions significantly increased the risk of severe illness. However, it's important to acknowledge potential biases in FF100 investigations, such as the likelihood that initial cases may involve returning travelers who share similar socio-economic or health statuses.

Before the pandemic, various surveillance mechanisms and established data collections like Utilizing laboratory data from the Second-Generation Surveillance System (SGSS) alongside death certificate information compiled by the Office for National Statistics (ONS) were already operational. These systems early on revealed that frontline workers and those in face-to-face service roles, such as transportation and cleaning, faced a disproportionately high risk of exposure and infection. While these systems couldn't pinpoint precise reasons for this trend, it was likely influenced by multiple factors, possibly including non-occupational risks alongside job-related ones (EMG transmission Group.2021). Additionally, specific surveillance systems were created from scratch, like those tracking COVID-19 fatalities in hospitals along with hospitalization data from NHS facilities.

A review of hospital admission data revealed early signs of inconsistencies. By February 2020, there were indications of a higher likelihood of hospitalization among older individuals, males, and those with specific underlying health issues (ICNARC.2020). Additionally, the regular release of intensive care unit data contributed to an evolving awareness an early trend emerged from hospital admission data in the UK, suggesting ethnic disparities. During the first wave of the pandemic, statistics revealed higher hospitalization rates for Black and Asian patients compared to their white counterparts (Intensive Care National Audit and Research Centre.2022). However, ethnic inequalities were often intertwined with factors such as deprivation and residing in regions with high infection rates. As the pandemic progressed and the epicenter shifted to areas

with diverse ethnic compositions, the patterns of infection and severe illness evolved. Furthermore, the rollout of vaccines varied across communities, affecting the risk profiles differently.

Several studies conducted during the early Different phases of the COVID-19 response proved instrumental in uncovering inequalities associated with the virus. A case in point is the ONS COVID-19 Infection Survey, which provided weekly assessments of infection rates and immunity, facilitating thorough examinations of variations in factors like occupation, ethnicity, and socioeconomic status (Deaths involving COVID-19 by local area and socioeconomic deprivation.2020).

The Vivaldi study focused on gathering both gathering both qualitative and quantitative data from care homes. Aims to gain a comprehensive understanding of working conditions within these facilities, alongside investigating the dynamics of COVID-19 transmission and immunity among residents and staff. among residents (University College London.2022). Its insights have influenced ongoing policy decisions, including vaccination strategies. Additionally, research targeting specific demographics and environments, such as children and adults with learning disabilities, homeless communities, and incarcerated populations, contributed significantly to understanding the pandemic's impact on these vulnerable groups (Lewer D; et al. 2020).

3.3.2 Infection Risk

Certain job sectors like factory workers, healthcare professionals, emergency responders, social caregivers, and those in close-contact professions with high public interaction, like taxi drivers and security personnel, were more susceptible to contracting infections. Additionally, residing in densely populated areas like cities and socioeconomically disadvantaged areas added to this risk. Initially, cities had higher infection rates compared to rural areas, with more people engaging in essential activities like Commuting by public transport (Beale, S; et al. 2022). The influence of this factor persisted to some degree throughout the pandemic, particularly in urban centers received significant national attention and corresponding mitigation efforts. However, rural regions, initially less affected, saw a surge in cases in later waves when public health restrictions eased, leading to lower immunity levels.

Living in crowded and multi-generational households poses an additional risk factor often associated with the spread of infectious diseases (Public Health England.2020). This type of housing situation is more prevalent among socioeconomically disadvantaged groups, particularly Ethnic minority groups in the UK, including Bangladeshi, Pakistani, and Black African communities, compared to white British households (Gov.uk. Overcrowded households. 2020). Dense living arrangements, like homeless shelters, create a significant risk of COVID-19 transmission for a vulnerable population already burdened by socioeconomic disadvantages and health problems (Hayward, A and Storey, A.2022). Launched in March 2020, the Everyone In initiative aimed to house rough sleepers and homeless individuals in safe accommodations. This program received widespread recognition for its life-saving impact during the pandemic (House of Commons Library.2021).

3.3.3 Severe Disease and Mortality

From the very beginning of the COVID-19 pandemic, age has consistently been identified as the strongest predictor of hospitalization and death from the virus (Public Health England. 2020). with a clear trend of increasing risk with age. Older individuals faced substantially higher risks of hospitalization and mortality, while children and young adults experienced a much lower likelihood of severe outcomes (Ward, J; et al.2021).Socioeconomic deprivation emerged as a strong factor influencing COVID-19 mortality rates.

Even after accounting for age, sex, region, and ethnicity, death rates were more than double in the most deprived areas compared to the least deprived. Across various ethnic groups, minorities collectively faced higher all-cause mortality rates and COVID-19-related death rates compared to their white British counterparts, with variations observed over time and among different ethnicities (Public Health England 2022). Additionally, throughout the pandemic, COVID-19 death rates among working-age individuals were consistently and significantly higher among men than women (Ibid).

Individuals with disabilities represented another demographic facing a notably elevated People with disabilities faced a heightened risk of severe complications and premature mortality from COVID-19. In England, during the pandemic's initial wave, a significant proportion (60%) of deaths involved individuals who reported having a disability (Office for National Statistics.2020). Research utilizing learning disability registry data consistently identified a

substantial increase in COVID-19 hospitalization and mortality rates for this population group. However, it's important to recognize limitations of the learning disability register as a definitive assessment tool. These limitations include potentially broader categorization of learning disabilities and the possibility that some analyses may not have fully accounted for underlying health conditions (Williamson, E; et al 2021).

Pre-existing health problems like diabetes and obesity increased the risk of serious illness from COVID-19. These conditions are more common among lower-income groups and some minority ethnicities. While underlying health issues explained some of the difference in death rates between ethnicities, people from Black and South Asian backgrounds were still more likely to catch COVID-19 and die from it in the first wave of the pandemic, even when compared to white people with similar factors like income, age, and health conditions (Williamson, E; et al. 2020). While the gap in positive tests and deaths remained for South Asian communities in the second wave, it narrowed for Black ethnic groups.

It was difficult to pinpoint the exact reasons behind these differences because many risk factors overlapped. For example, some South Asian communities might be more likely to have jobs with high contact, like driving taxis or working in caregiving. They might also have higher diabetes rates, live in larger households with multiple generations, and reside in areas with ongoing outbreaks, such as the north-west of England. Additionally, some groups might have different healthcare access patterns, use testing services differently, or face challenges getting healthcare altogether. Distinguishing between risk factors and confounding factors was inherently complex, and residual confounding likely persisted.

3.4 Targeted Policies and Interventions

As the UK faces a new surge of Early data on COVID-19 cases, especially during winter months, revealed a concerning trend: the virus significantly impacted older adults, people with lower socioeconomic status, and ethnic minority communities, not just in the UK but globally. While our understanding of the virus (SARS-CoV-2) continues to evolve, this initial observation highlighted the need for targeted public health measures to protect these vulnerable populations (Aldridge RW; et al. 2020). Large-scale data analysis paints a clear picture: certain groups face a higher risk of both catching COVID-19 and experiencing severe illness (Niedzwiedz CL; et al 2020).

Several factors conspire to put ethnic minorities at greater risk of exposure to COVID-19. These include the types of jobs they hold, the nature of their social interactions within their communities, how many generations live together in their households, and the underlying social and economic inequalities they face (Ethnicity sub-group of the Scientific Advisory Group for Emergencies.2020). Many ethnic minority communities in the UK are overrepresented in jobs that put them at greater risk of catching the virus (Office for National Statistics Coronavirus.2020) and are less likely to have the flexibility of working from home.

Dense living conditions and interconnected social networks in deprived areas facilitate the transmission of infectious diseases. Ethnic minority households, commonly characterized by extended family structures (Scientific Pandemic Influenza Group on Behaviors. 2020), further amplify this risk, especially with multigenerational living arrangements where older adults, working-age individuals, and children coexist (UK Government Families and households.2019). Managing the risk within such households, particularly in overcrowded conditions, poses additional challenges, making it harder to isolate vulnerable individuals effectively (Kenway P, Holden J.2020).

In the UK, larger households have been linked to increased SARS-CoV-2 transmission (Martin CA; et al. 2020). Moreover, research indicates that older south Asian women living in multigenerational households face a higher risk of COVID-19 mortality compared to south Asian men of the same age group, suggesting a gender intersection. These disparities are compounded higher exposure to the virus at work due to the nature of their jobs, and limited power to advocate for safer practices due to potential racial bias (Iacobucci G.2020), substandard housing conditions further disadvantage these communities in their fight against COVID-19. Urgent strategies are needed to curb SARS-CoV-2 transmission in workplaces, address within-household spread, and tackle racism and stigma.

UK organizations like organizations like the South Asian Health Foundation, the Runnymede Trust, and the Scientific Pandemic Influenza Group on Behaviors have developed a strong set of recommendations (Patel P, Kapoor A, Treloar N. 2020). Among their recommendations are prioritizing access to testing for ethnic minority workers and their families, as well as ensuring ethnicity recording in all healthcare interactions, addressing racist stigma across communities, workplaces, and government messaging, and launching culturally sensitive

outreach campaigns through various local channels such as community groups, faith organizations, and voluntary sectors.

The UK faces challenges in implementing evidence-based recommendations to address the disproportionate impact of COVID-19 on certain communities. Despite local-level public health initiatives, policy action has been limited, partly due to ongoing debates, even within the government, about the role of structural racism in driving higher mortality rates (Butt J. 2020). However, it's crucial to recognize While structural racism and economic disadvantage undoubtedly play a role, these recommendations acknowledge the complex web of economic, social, and institutional factors that contribute to health disparities (Lawrence D.2020).

Lockdown measures in the UK overlook the increased risks faced by ethnic minorities and gender inequalities. Despite a community champions program launched with £25 million in funding, it's essential to recognize that risks arise from more than just communication failures (Government Equalities Office. 2020). Closing the gap in health outcomes requires a multi-pronged approach that tackles occupational disparities, substandard housing conditions, and unequal access to social support systems.

To effectively combat the unequal burden of COVID-19 on ethnic minorities, a nationwide, government-funded initiative is crucial. This program should encompass several key elements clear and accessible guidelines, public health messages tailored to different cultures, financial aid for those needing to self-isolate, and coordinated policies that promote racial equity in workplaces, such as anti-discrimination legislation specifically targeting COVID-19 and adaptable social bubble rules for multigenerational households (Bear L, James D, Simpson N, et al.2020). These measures aim to replace universal approaches with strategies that effectively support all communities and reduce mortality among the most vulnerable ethnic groups.

3.4.1. Urgent Actions and Policies Needed to Address COVID-19 Among UK Ethnic Minorities

The UK, along with many other countries, faces a winter surge of COVID-19. While our understanding of the virus (SARS-CoV-2) keeps evolving, existing data reveals a concerning trend the pandemic continues to disproportionately affect older adults, those from lower socioeconomic backgrounds, and ethnic minority communities (Aldridge RW; et al.2020). Large-

scale data analysis quickly identified certain population groups as more susceptible to catching COVID-19 and experiencing severe illness (Niedzwiedz CL; et al. 2020).

A complex interplay of factors puts ethnic minorities in the UK at greater risk of contracting COVID-19 (Ethnicity sub - group of the Scientific Advisory Group for Emergencies (SAGE).2020). Several factors contribute to this increased risk for ethnic minorities, such as a higher likelihood of being in jobs with greater exposure to the virus, fewer opportunities to work remotely, and the ongoing effects of structural racism (Office for National Statistics.2020). Places with a high number of people living close together and limited resources often see faster rates of infectious disease spread. This can be further amplified by strong social connections within certain communities (Scientific Pandemic Influenza Group on Behaviors.2020). Adding to these challenges, many ethnic minority families live in multigenerational households, housing older adults, working-age individuals, and children together (UK Government. Families and households.2019), which complicates efforts to protect vulnerable family members, especially in crowded living conditions (Scientific Pandemic Influenza Group on Behaviors.2020).

In the UK, larger households have been linked to higher rates of Direct SARS-COV-2 transmission (Ward H; et al. 2020).Studies also suggest that older South Asian women over 65 in multigenerational households face a higher risk of dying from COVID-19 compared to men in the same age group (Nafilyan et al., unpublished data). This highlights a gender disparity in vulnerability. These challenges are further compounded by their jobs putting them at greater risk of exposure to the virus, along with the difficulty of speaking up about unsafe workplace practices due to potential racial discrimination (Iacobacci G.2020), Substandard housing adds another layer to the challenges faced by ethnic minority communities, Immediate action is needed to reduce SARS-CoV-2 prevalence by minimizing workplace transmission, addressing household spread, and tackling racism and stigma effectively.

UK organizations organization like the South Asian Health Foundation, the Runnymede Trust, and the Scientific Pandemic Influenza Group on Behaviors have developed a robust set of recommendations to address the disproportionate impact of COVID-19 on ethnic minorities (Patel P, Kapoor A, Treloar N. 2020). Their recommendations include prioritizing access to testing for ethnic minority workers and their households. Additionally, they emphasize the importance of consistent ethnicity data collection across healthcare encounters. To further combat

the pandemic's impact, they propose tackling racial stigma in communities, workplaces, and government messaging. Finally, they advocate for culturally sensitive outreach campaigns delivered through local authorities and community partners organizations, faith groups, and nonprofit sectors.

Additional comprehensive policies are needed, such as enacting specific COVID-19 anti-discrimination legislation in workplaces to facilitate occupational risk evaluations. This should include prioritizing testing for vulnerable groups in all essential worker roles, not limited to healthcare personnel. Immediate financial assistance is crucial to enhance living conditions in both private rental and social housing sectors (Butt J.2020). Moreover, guidelines on social bubbles should be adapted to accommodate multigenerational extended households, allowing for interactions between larger households based on current transmission rates. It’s imperative There's a need to move away from a one-size-fits-all approach to COVID-19 policies and regulations. Instead, we should implement measures that acknowledge the diverse needs and risk factors faced by different communities throughout the UK, thereby reducing mortality rates among the most vulnerable ethnic groups (Lawrence D.2020).

3.5 Evaluation of Effectiveness

The National Health Service (NHS) ranks as one of the world’s most extensive and thorough national healthcare systems. It delivers publicly funded healthcare to both citizens and foreign residents in the United Kingdom. Distinct from public health systems in other nations, the NHS offers healthcare services at no cost to patients. As a result, the UK government dedicates substantial financial resources to the NHS each year, with spending continuously rising since its inception.

COVID-19, a coronavirus known for its high transmission rate, began impacting the UK at the start of 2020, rapidly infecting over 2.3 million people within the first year. In 2021, during the height of the pandemic, approximately 30,000 new cases were reported daily (Gov.UK .2023). That year, the UK government invested more than £276.6 billion in national healthcare, which comprised 26.1% of its total spending (Statista 2022).

The considerable investment by the UK government in the NHS is a contentious issue. While this high level of spending has provided significant advantages to the local population and aided in the economic recovery from the pandemic-induced recession, it has also increased the government's budget deficit and led to some inefficient use of medical resources. This paper seeks to analyze the economic efficiency of Leveraging online databases, economic principles, and real-world examples, this study analyzes the UK government's substantial funding of the NHS. The ultimate goal is to propose policy changes that enhance the effectiveness of the National Health Service.

3.5.1. Negative Effects and Budget Deficit, A Spike in National Debt

In the context of the COVID-19 pandemic, the UK economy entered a recession. As the economy functions in a circular flow of money, the government's tax revenue declined due to decreases in citizens' income, company revenue, and other factors. Simultaneously, the UK government ramped up spending, particularly on healthcare. This combination of increased spending and reduced revenue led to a significant budget deficit and a substantial rise in the national debt for the UK government.

Table one: Government Gross Debt.

Financial year ending March	2016	2017	2018	2019	2020	2021
Debt (EBN)	1651,0	1719,8	1763,2	1820,6	1875,7	2223,0
Debt (as %GDP)	84,5 %	84,3 %	83,5 %	82,8 %	83,0 %	103,7 %

Data source: Gov. UK [4] (Gov.UK (2022) UK government debt and deficit: September 2022.)

According to Table 1, the UK government's national debt remained relatively stable from 2016 to 2020, with less than a 1% change annually in the debt-to-GDP ratio. However, in 2021, there was a substantial spike in the national debt, increasing from £1875.7 billion to £2223.0 billion, resulting in a 20% rise in the debt-to-GDP ratio. The budget deficit for 2021, as indicated in Table 2, was £327.6 billion, which is approximately five times greater than the previous year's deficit. These figures highlight The UK government's budget deficit and national debt soared during the height of the COVID-19 pandemic.

Table two: General Government Deficit.

Financial Year Ending March	2016	2017	2018	2019	2020	2021
Deficit (EBN)	83,1	55,6	55,1	39,1	59,1	327,6
Deficit (as %GDP)	4,3 %	2,7 %	2,6 %	1,8 %	2,6 %	15,3 %

Data source: Gov. UK [4] (Ibid)

3.5.2. Positive Effects of Welfare Economics and Living Standards

The substantial investment by the government in the NHS significantly enhances public health across the UK, a crucial component of the standard of living analyzed in welfare economics. A key measure of this standard is life expectancy, in which the UK currently ranks 29th out of 193 nations, boasting an average life expectancy of 81.77 years as of 2023 (Robert Atenstaedt; et al.2015), placing it only 3.5 years behind the leading country on the list (World meters (2023) Life Expectancy of the World Population).

How does the substantial government spending on the NHS correlate with the elevated life expectancy in the UK? To explore this issue, the paper utilizes life expectancy data sourced from "UK Life Expectancy 1950-2023 | Macrotrends" and government spending data from "Healthcare Expenditure UK 1997-2021 | Statista" to analyze the connection between government spending on the NHS and life expectancy in the UK. Table 3, which merges data from both sources, provides the findings.

Table three: Government Spending on HNS and Overage life Expectancy in the UK from 2000 to 2021:

Year	Government Spending on NHS (in bn)	Life expectancy (year)
2000	78,9	77,67
2001	86,1	77,91
2002	94,3	78,16
2003	101,9	78,41
2004	110,5	78,67
2005	117,6	78,92

2006	126,6	79,18
2007	135,8	79,43
2008	144,1	79,69
2009	152	79,93
2010	164	80,16
2011	165,5	80,4
2012	170,9	80,63
2013	176,4	80,87
2014	184,3	80,93
2015	188,7	80,98
2016	195,5	81,04
2017	201	81,09
2018	210	81,15
2019	222,7	81,47
2020	275,5	81,4
2021	276,6	81,52

Data source: Statista [2], Macrotrend [11] (Statista (2022) Total healthcare expenditure in the United Kingdom from 2000 to 2021)

(Macrotrend .2023)

3.6. Potential Policies to Improve the Current

The COVID – 19 pandemic is a time when the economies of many countries have been hit hard. The UK government has largely increased its spending on NHS during the pandemic both as a way to ensure the living standards of their citizens and as an expansionary fiscal policy to help the economy to recover. To investigate whether the UK government had reached its goal thus giving potential policies for adjustment, this paper evaluates the pros and cons of the high government spending on NHS with the discussion of budget deficit, market inefficiency, welfare economics, and the impact on AD. (Jeremy, Y. 2023).

The result of the investigation shows that government spending on NHS did improve the standard of living in terms of life expectancy. However, such an impact will only be smaller as the government spends more money due to the limitation of current technology. Thus, the government is suggested to shift its focus from the purchase of medical resources to investment in the research and development of healthcare.

In terms of economic recovery, government spending on NHS has little impact on the economy due to the relatively small multiplier under COVID – 19. Meanwhile, the potential risks of the high budget deficit imply that the government spending on NHS might not be worth it if it could not stimulate significant economic growth. The government may want to wait for the MPC to increase in order to achieve a greater multiplier effect or just simply use monetary policy as an alternative as it does not have the costs of the budget deficit.

Meanwhile, the tragedy of the common and overtreatment as the long – standing problems of NHS are also discussed in the paper. It is suggested that the government improves the guidelines for medical treatment as soon as possible and punish those who abuse medical resources.

3.7 Community and Initiatives

Since the onset of the COVID-19 pandemic, communities have become more proactive. Residents are fostering stronger connections and displaying increased concern for one another. Informal support networks have emerged in neighborhoods to assist those in need, with over 2000 groups now registered on the mutual aid platform created during this crisis (Stansfield, J.et al. (2020).

Communities worldwide are united in solidarity towards those aiding us all. Numerous individuals have volunteered formally, serving in the NHS, community centers, and local charitable organizations. The weekly ONS surveys on the social effects of COVID-19 have shown a consistent rise in community solidarity in recent weeks;

Almost 64.1% of adults now believe that if they required assistance during the pandemic, their local community members would offer support, marking an increase from the previous week's 57%. The ONS reports a rise in community spirit, with 64.1% believing local members would assist during COVID-19, up from 57%. This mirrors increased formal volunteering and the emergence of over 2000 mutual aid groups.

77.9% of adults now believe that people are increasing their efforts to assist others since the pandemic, marking a rise from the previous week's 67.9%. Adults observe increased acts of kindness since the pandemic, reflecting a rising trend of community support, evidenced by a surge in formal volunteering and the establishment of informal support networks.

Approximately 62.6% of adults have reached out to neighbors who might require assistance at least once in the past week, marking an increase from the previous week's 53.8%. This reflects a growing sense of community support and solidarity during the pandemic.

More than a third of adults (37.5%) have taken on shopping or other tasks for their neighbors, representing a rise from the previous week's 27.7%. More adults are now helping with errands or shopping for neighbors compared to the previous week, underscoring a broader trend of increased community support and solidarity during the pandemic.

The voluntary and community sector (VCS) has long been integral to the public health system, a fact increasingly highlighted in today's context. With their proximity to and proficiency in engaging marginalized communities, they excel in fostering community-centered strategies, crucial for addressing health disparities. National charities and larger VCS entities play a pivotal role in supporting local organizations by facilitating sector-wide collaboration and coordination.

3.7.1. Community Resilience

Strong community infrastructure and supportive social networks are critical elements that enable communities to endure and adjust to crises. The significance of community resilience during emergencies is acknowledged both nationally and globally. The UK Community Resilience Development Framework outlines measures for Local Resilience Forums to prioritize community involvement in response and recovery efforts. These measures encompass identifying local community networks, evaluating diverse needs, bolstering community-led initiatives, and collaborating with voluntary and community sector (VCS) partners (Stansfield, J.et al. (2020).

Additional recommendations provided by the Global Inter-Agency Standing Committee emphasize the importance of organizations in fostering environments conducive to community mobilization, self-reliance, and social support.

The World Health Organization suggests evaluating community resilience by assessing various capacities across social, human, cultural, environmental, and economic domains, recognizing that numerous factors influence a community's resilience and well-being.

3.8 Lessons Learned and Future Recommendations

Despite possessing considerable expertise and a robust scientific advisory framework, the UK's management of the Covid-19 pandemic has been, and remains, inadequate in terms of mitigating mortality, illness, and economic repercussions. During pivotal moments, UK government policies neglected to adequately consider scientific evidence, while concurrently efforts were made to attribute policy shortcomings to scientists.

The role of scientific guidance in addressing Covid-19 in the UK underscores three key lessons for enhancing its future deployment. Firstly, there's a need for greater independence of government scientific advisors and advisory bodies from political influence. Secondly, these advisors should be empowered to confront the distortion and misuse of scientific evidence by decision-makers, which undermines public health policies. Thirdly, there should be enhanced transparency in government scientific advice, with advisors actively engaging the public. Implementing these lessons is crucial for the ongoing response to the current crisis, the UK's ongoing public inquiry into coronavirus, and the country's readiness for future crises.

3.8.1Vaccine Rollout in the Second Phase of the Pandemic

The successful deployment of Covid-19 vaccines in 2021 led to a broadly positive perception, commonly referred to as a 'halo effect', regarding the management of the pandemic, as noted by Nisbett & Wilson (1977), Landler & Castle (2021), and McTigue (2021). The successful Covid-19 vaccine rollout in 2021 created a positive perception, known as the "halo effect," regarding the pandemic's management. This term refers to the cognitive bias where a positive impression influences perceptions of related aspects.

As the pandemic approached its second year, any errors in decision-making during its early stages and deficiencies in advisory procedures were being minimized or justified due to the unprecedented scale and urgency of the challenge. Scientific advice entered a phase of self-justification, akin to the concept described in the influential study by Carol Tavros and Elliot Aronson. As the pandemic reached its second year, initial mistakes and advisory shortcomings were downplayed due to the unprecedented challenge, reflecting a phenomenon described by Tavros and Aronson.

Despite some adjustments and minor adjustments along the way, the UK's scientific advisory system was portrayed as having functioned mostly as planned, according to Thomas

(2022). However, despite ongoing high levels of Covid-19 transmission, SAGE and its subgroups were disbanded in Spring 2022 as government ministers declared As the COVID-19 situation improved, the UK disbanded its Scientific Advisory Group for Emergencies (SAGE) and its subgroups in spring 2022 despite ongoing high transmission rates, reflecting the challenge of balancing public health with economic and social pressures during crises.

3.8.2 Learning Lessons and the Covid-19 Enquiry

Scientific counsel, akin to other components of the UK's informal government guidelines, has historically depended on prominent figures in the scientific realm contributing to the nation's welfare. Doubleday and Wilsden (2013), and Joseloff (2007), have noted this trend. The occurrences surrounding the BSE outbreak and debates on genetically modified crops in the late 1980s and 1990s prompted a reevaluation of the underlying principles guiding this system.

The extensive UK public inquiry into the BSE crisis, led by Lord Phillips and spanning 16 volumes, underscored numerous shortcomings in disease modeling and expert presumptions regarding public reaction. The BSE Inquiry (2000) elucidated these uncertainties, aggravated by scientific advisors who lacked comprehension of agricultural realities. Ministers reassured the public about beef safety, fearing they might incite panic among what they perceived as an « irrational and ill-informed » populace (Millstone & van Anenberg, 2001). Failures in BSE policy led to a form of societal fracture, described as 'civic dislocation' by Joseloff (1997), as citizens and consumers lost trust in the institutions designated to safeguard them.

The UK advisory system might benefit from recalling previously held knowledge that seemed to have been overlooked during times of crisis (Ballou, Pearce, Stilgoe, & Wilsden, 2022). Despite the higher stakes involved in decisions regarding Covid-19 compared to those concerning BSE, the response from both within the advisory system and the broader UK scientific community has been predominantly restrained and deferential, showing a tendency towards self-absolution rather than engaging in more transparent institutional introspection (Ball, 2022).

Given the circumstances, it was unexpected that the formal examination of scientific guidance wasn't given more emphasis in the initial scope as part of the ongoing UK Covid-19 Inquiry chaired by Baroness Hallett (UK Covid-19 Public Inquiry. 2022). The decision early on to

exclude the advisory system from the inquiry's purview drew criticism from Independent SAGE, other experts, and groups representing families of Covid-19 victims, who regarded it as a significant oversight (Inge, S. 2022a).

In May 2022, Baroness Hallett addressed these concerns by suggesting an amendment to the Inquiry's scope to encompass « the availability and use of data, research, and expert evidence » (Hallett. 2022). Subsequently, in Following the release of its revised mandate in June 2022, the UK Covid-19 Inquiry « how decisions were made, communicated, recorded, and implemented, » as well as « the availability and use of data, research, and expert evidence » (UK Covid-19 Inquiry, 2022).

The UK's scientific advisory system has experienced both successes and failures, notably during crises like BSE and the Covid-19 pandemic. While adept at generating evidence quickly, there are flaws in how ministers utilize scientific advice. The ongoing UK Covid-19 Inquiry aims to address these issues, emphasizing the importance of learning from past experiences to improve future governance.

Pillay and King (2021) call for a thorough review of the structures overseeing government scientific advice, emphasizing the importance of independence, trust, transparency, and direct communication with the public. Contributors such as Michie and West, Ball, and Wilsden offer insights from various perspectives, including involvement in advisory roles, journalism, and research in science policy, to inform this review and improve the effectiveness of scientific advice within government.

3.8.3. A Comprehensive Global Response to Covid-19

Effectively tackling COVID-19 requires a unified global strategy alongside interconnected global challenges in health, humanitarian aid, economy, and climate. It's crucial that our response goes beyond short-term fixes and tackles the underlying issues, promoting resilience and sustainable development through initiatives like Building Back Better.

Ensuring adherence to fundamental principles: Both national and international efforts should be anchored in the Sustainable Development Goals (SDGs) as their primary framework, in full alignment with the Paris Agreement, the commitment to Leave No One Behind (LNOB), International Humanitarian Law, and International Refugee Law, while upholding and respecting

human rights and international labor standards. It's essential to integrate the recommendations of the ILO's Centenary Declaration for the Future of Work (2019) and conduct comprehensive gender impact analyses. When utilizing official development assistance (ODA), it should prioritize poverty alleviation, adhere to the International Development Act (IDA) and OECD DAC regulations, follow the Principles and Good Practice of Humanitarian Donorship, target marginalized populations first, promote sustainable development, and encourage local ownership, conflict sensitivity, and transparent aid management. Placing these principles at the core of national or global responses is imperative for Building Back Better (BBB) and achieving genuine sustainable development.

Strong global leadership and sufficient funding are crucial Collaborative and coordinated leadership, led by the UK Government and supported by other governments, particularly those in the G7, G20, EU, and OECD, as well as key multilateral institutions such as the UN, World Bank, IMF, and WHO, are essential for addressing the pandemic and facilitating a sustainable recovery to build back better. This entails actively engaging with and increasing funding to civil society, national governments, and multilateral institutions to enable a rapid, effective, and inclusive response.

Ensuring No One is Left Behind: The response should be free from donors' national agendas and focus on reaching the most marginalized communities first. This involves implementing targeted measures and safeguards to ensure programs are gender-responsive, sustainable, inclusive, pro-poor, human-rights-based, conflict-sensitive, and adhere to best practices in safeguarding.

Healthcare and Health Systems: Essential to an effective response is enhancing global public health capabilities to prevent the virus’s further spread and provide assistance to those impacted. Additionally, there should be increased long-term investments in strengthening national public health systems.

Humanitarian Response and Conflict Sensitivity: It’s important to mobilize timely, coordinated, effective, inclusive, principled, and needs-based funding that reaches frontline responders. Integration across the humanitarian-development-peacebuilding nexus is necessary, addressing both the symptoms and underlying causes of poverty, conflict, and fragility.

Protection of Rights and Effective Governance: It's crucial to safeguard people's rights during and after the Covid-19 crisis and maintain effective governance structures.

Addressing Broader Socio-Economic Impacts: Implementing comprehensive, context-specific economic and social support programs, including cash transfers, large-scale employment initiatives, and livelihood support, is essential to counter unsustainable levels of formal and informal unemployment, income loss, and limited fiscal capacity for governments. This also involves implementing conflict prevention initiatives.

Access to Public Services and Strengthening Systems: Ensuring access to and investing in inclusive, high-quality public services, particularly in health, social protection, and education, is vital.

3.8.4 Importance of Community Engagement

Holistic healthcare methods, which have been embraced by community referral specialists since the mid-1990s, are supported by ample evidence (Howarth M; et al. 2020). Community resources like museums, libraries, and third-sector organizations play a vital role in promoting social health and wellbeing through activities such as art, nature, music, and creative endeavors, collectively referred to as ‘community activities (Chatterjee H., Noble G.2013).

Engaging in community activities encompasses aesthetic involvement, stimulating imagination and emotions, cognitive and sensory stimulation, social interaction, and physical exertion. These elements collectively promote positive psychological outcomes such as coping mechanisms and emotional strategies. Positive psychological outcomes, like coping and emotional strategies, help manage stress and enhance mental well-being, aiding individuals in navigating challenges effectively.

Physiological outcomes, such as a decrease in stress hormone response, social outcomes like decreased feelings of loneliness and isolation, and behavioral outcomes such as adopting healthier behaviors and developing new skills (Fancourt D, Finn S.2020) are all associated with participation in community activities. Participating in community activities can lead to positive changes in individuals' physical, social, and behavioral well-being. This includes reducing stress levels, combating feelings of loneliness, and adopting healthier habits and skills.

The available evidence indicates that employing salute genic methods is beneficial for managing and preventing chronic conditions, easing the burden on public healthcare systems, and fostering resilience and wellness in both individuals and communities (Henry H., Howarth M.L.2018). However, while cultural engagement has been shown to positively affect the overall population, there's still inconsistency in demonstrating community assets as effective tools for reducing health disparities in disadvantaged, marginalized, or vulnerable communities (Cyril S; et al.2015).

During the COVID-19 pandemic, vulnerable groups faced disparities from the outset (Marmot M.2020). Factors such as poverty, low income, or being part of a single-parent household indicated a higher likelihood of experiencing significant COVID-19-related consequences (Bibby J., Everest G., Abbs I.2020). Additionally, individuals living in deprived areas were at a greater risk of exposure to the virus. These inequalities expose vulnerable groups to potential health challenges, further compounded by preexisting structural and institutional barriers (Marmot M.2020). For example, individuals with chronic physical or mental health issues are particularly susceptible to experiencing disproportionate and adverse effects from both the viral load and the socioeconomic repercussions.

Hospital outpatient visitors and individuals managing chronic health conditions have encountered disruptions to their treatment schedules and elective procedures due to the pandemic (Propper C., Stoye G., Zaranko B.2020). Moreover, the mental health service landscape in the UK has shifted, highlighting a growing demand for the expansion of telehealth services within community care (Johnson S.2020).

In response to the COVID-19 pandemic, communities mobilized to support vulnerable and isolated individuals through various initiatives (McKenzie G., Adams B. 2020). The pandemic spurred the creation of new community initiatives dedicated to assisting vulnerable and isolated individuals, while others were modifications of existing services (Culture Health and Wellbeing Alliance.2020). While many services have been adjusted to cater to vulnerable individuals, there is limited understanding of the effectiveness, mechanisms, and impact of these service modifications on vulnerable populations.

3.9 Importance of Effective Policy Responses

Government reactions to the pandemic have varied significantly over time, even within states. Following the World Health Organization's declaration of a pandemic, extensive global lockdowns were initiated in March 2020. Subsequent months saw a range of measures implemented worldwide. These diverse policy approaches have led to varied outcomes, influencing not only the spread of the virus but also individuals' responses to restrictions, the economic impact on nations, and the declining well-being of billions globally, particularly concerning mental health during lockdowns.

Developing and testing a vaccine to meet global standards typically requires a minimum of one year. Consequently, policies enacted before a vaccine is available are crucial for containing the spread of infections during a new pandemic. Understanding citizen response to various policies until a more permanent solution can be implemented globally is thus highly significant.

Two primary factors must be considered for these policies: their effectiveness in controlling disease transmission and their impact on people’s livelihoods. Prolonged negative effects on livelihoods can diminish policy effectiveness due to fatigue and eventual non-compliance.

Facial coverings have the highest impact, reducing COVID-19 cases by 8.8% within about a month, and are the most cost-effective method, as confirmed by Mitzie et al. Gathering restrictions are most effective for achieving a short-term impact of 5.9%. Other measures like workplace closures, cancellation of public events, stay-at-home orders, school closures, and movement restrictions operate over around 25 days with decreasing impacts ranging from 4.5% to 1.9%. Public transport closures have a short-term impact of 1.0% over 12 days. Public information campaigns and international travel controls have negligible impact based on global evidence.

Immediate implementation of facial coverings is recommended for new airborne pandemics as they are effective and affordable, with no adverse effects on mobility or economic growth. School closures, with a relatively small impact of 2.1%, should be a last resort due to their serious long-term effects on children’s education. For instance, in Uganda, school closures

lasting 82 weeks adversely affected many students. The minor impact of school closures was also noted in the study by Viner et al., which found that « school closures alone would prevent only 2–4% of deaths, much less than other social distancing interventions. »

Except for public awareness initiatives, which have sustained significant activity since April 2020, the individual components of strict measures have exhibited a consistent pattern, peaking between March and April 2020, followed by a gradual decline. Conversely, the enforcement of facial coverings saw a slower initial uptake but stabilized around 70% by the end of 2020.

Overall, there was a consistent uptick in case numbers, yet the highly transmissible Omicron variant led to a significant surge from December 2021 to April 2022. Luckily, there wasn't a corresponding rise in fatalities during the early months of 2022.

The evaluation of government non-pharmaceutical intervention (NPI) policies examined how various responses aimed to decrease case numbers over varying timeframes. Each policy's peak effectiveness and the associated timeframe were determined (Table 1). The objective is to pinpoint policies that decrease cases, demonstrating a strong negative correlation with significant absolute values.

Face masks make the most significant impact by effectively reducing the percentage of new COVID-19 cases within a 31-day timeframe. Apart from public awareness campaigns and international travel restrictions, all other measures of stringency show a positive influence on the percentage change in smoothed case counts per million, with their most effective timeframes falling between 12 to 31 days.

Table1: Covid-19 policy responses, impact, and horizon over which policies attain maximum efficiency:

Policy	Impact %	Horizon (days)
Facial coverings	8,8	31
Gathering restrictions	5,9	12
Workplace closures	4,5	25
Cancellation of public	3,4	23

events		
Stay home requirements	3,1	26
School closures	2,1	25
Internal movement restrictions	1,9	25
Closure of public transport	1,0	12
Public information campaigns	0,0	49
International travel controls	-0,1	1

3.9.1. Policy Recommendation

The COVID-19 pandemic is a worldwide crisis requiring an international response, and the UK has the capability and responsibility to lead. In our interconnected world, no nation will be safe from the virus until it's eliminated globally. To ensure global recovery and resilience, it's essential to address not only the pandemic but also the interconnected humanitarian, socio-economic, and climate challenges exacerbated by COVID-19.

It's crucial for the UK to understand that its economic growth and welfare are intertwined with other nations through shared security, trade, global supply chains, and sustainable development. Wealthier nations must swiftly and decisively support vulnerable populations globally. Just as the UK government has implemented bailouts, furlough schemes, and expanded social protection measures domestically, a similar countercyclical approach is necessary in international development to prevent a global economic downturn and a rise in insecurity, hunger, and poverty.

In this critical time, the world requires a comprehensive Marshall Plan By actively contributing to the fight against COVID-19, the UK has a chance to embody the principles of Global Britain through international leadership. Notably, the UK stands out as the third-largest donor to the global COVID-19 humanitarian response plan, providing funding of USD 313.4 million. Moreover, following the High-Level Event on Financing for Development on May 28, the UK is spearheading the Sustainable Recovery workstream, driving discussions on tangible proposals to address the challenges posed by COVID-19. Additionally, the UK's Secretary of

State for International Development, along with counterparts from Nordic countries, has endorsed the UN Secretary-General's call for a recovery strategy aligned with the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change.

Nevertheless, it's imperative to ensure that these pledges translate into tangible initiatives. The primary goals include outlining essential policies for the international development and humanitarian sector to address COVID-19 in both the immediate and extended periods, acknowledging the dynamic nature of the situation. Additionally, identifying critical areas requiring immediate attention and action from the UK Government and other global stakeholders is crucial.

Based on the effectiveness of masks, we suggest mandating their use as the initial step in combating airborne diseases before vaccination. Implementing restrictions on gatherings can also yield significant results within a short span of just 12 days. For countries with a robust digital infrastructure, options like workplace closures, event cancellations, and stay-at-home orders are viable, allowing for pandemic control without severely impacting the economy.

However, in less digitized regions with limited internet access, the approach must carefully balance public health and economic concerns. COVID-19 has exacerbated global income inequality, reversing progress made over the past two decades and disproportionately affecting vulnerable groups and Emerging Markets and Developing Economies (EMDEs), where income inequality is notably higher than in advanced economies.

strongly advise against implementing school closures unless absolutely necessary due to the significant negative impact on students' futures, as evidenced, especially in the case of Uganda, and the particularly adverse effects on girls' education. Limiting internal movement and public transport is likely to affect the economy due to the critical role mobility plays in business operations. Public information campaigns have been consistently maintained throughout the pandemic to the extent that they no longer provide additional explanatory value. International travel restrictions are effective only in the initial stages of a pandemic, but our analysis indicates that once cases are reported domestically in multiple countries, they become unnecessary as a mitigation measure.

The effectiveness of pandemic management policies hinges on citizen cooperation, underscoring the need for governments to minimize fatigue and avoid jeopardizing citizens' livelihoods over prolonged periods. Income support and Gross Domestic Product (GDP) per capita serve as reliable predictors of compliance likelihood. Essentially, a nation's financial stability determines its capacity to ensure citizens' comfort and adherence to restrictions. In cases where income support isn't feasible due to financial constraints, lockdowns are likely to falter, making it more prudent for poorer nations to prioritize mask mandates and other social distancing measures.

3.9.2 Effect of Covid-19 and Policy Responses on Mobility

Before April 2020, there was significant uncertainty surrounding the virus, including its transmission, treatment, and prevention. The initial wave of deaths prompted widespread lockdowns and stringent mobility restrictions, with the global average stringency index peaking at 80.83% on April 18, 2020. Just six days later, on April 24, 2020, the highest mortality ratio of 6.35% was recorded. However, global efforts to limit mobility, coupled with WHO recommendations for facial coverings, successfully reduced the mortality rate to below 2.0%. Despite initial lockdowns, subsequent waves of the virus, marked by the emergence of different variants such as Beta, Delta, and Omicron, occurred. According to the WHO, these variants were estimated to have emerged in May 2020 (Beta), October 2021 (Delta), and November 2021 (Omicron), with Alpha being the original variant sequenced. Omicron, the most contagious variant, saw cases soar to over 3.5 million in January 2022.

Tables 1 and 2 provide precise tracking of the levels and fluctuations in these critical variables between key dates. For instance, from the declaration of the virus as a pandemic on March 11, 2020, to the peak mortality ratio of 6.35% on April 24, 2020, the normalized case count increased by 157.85%. This occurred during the initial global lockdown, where over 100 countries implemented full or partial lockdown measures (British Broadcasting Corporation (BBC).2022. These restrictions resulted in an 8.21% decrease in the normalized case count and a 2.65% reduction in the mortality ratio by the detection of the Beta variant in May 2020. Compliance remained consistently above 80% throughout this period, indicating widespread adherence to stay-at-home orders and recommended guidelines.

On June 6, 2020, the WHO officially endorsed mask usage. In the subsequent four months leading up to the detection of the Delta variant in October, the mortality ratio decreased by more than half, from 1.99% to 0.92%. However, despite this decline, there was a 314% increase in the number of cases during the same period, attributed to a drop in compliance from 77.94% to 31.52%. As the Delta variant emerged and approached the end of 2020, there was an 18.82% increase in compliance. Concurrently, the mortality ratio rose to 1.76%, indicating that people's behavior in terms of risk aversion is largely influenced by their perception of the virus's severity at any given time.

Table 1: Global averages for morality ratio, stringency index, residential mobility, new smoothed per million, and compliance on key dates.

Period/event	Data measured	Mortality ratio (%)	Stringency index (%)	Residential mobility (%)	Mean new cases smoothed per million	Compliance with 3-month window (%)
Pandemic status declared	11/03/2020	1,19	26,31	0,90	6,05	NA
Uncertainty period	24/04/2020	6,35	79,78	20,31	15,60	87,80
Beta detected (South Africa)	15/05/2020	3,70	74,29	15,95	14,32	84,43
WHO recommends masks	06/06/2020	1,99	66,96	11,89	20,17	77,94
Delta detected (India)	15/10/2020	0,92	52,88	7,04	83,51	31,51
Start of vaccine rollout/end of 2020	31/12/2020	1,76	56,69	11,56	129,16	37,44
Omicron detected (multiple countries)	15/11/2021	1,09	45,0	1,83	199,01	24,24
End of 2021	31/12/2021	0,36	46,29	5,46	386,21	21,30
Height of omicron	26/01/2022	0,19	48,47	6,3	1157,70	19,85

In the eleven months following the commencement of vaccination campaigns, the mortality ratio decreased to 1.09%, accompanied by a corresponding decline in compliance to 24.24%, despite encountering three waves of the Delta variant. In November 2021, the Omicron variant emerged, leading to a 94% increase in normalized case counts by the end of the year. Nevertheless, during this period, the mortality ratio decreased to 0.36%, and compliance dropped to 21.3%. It is widely believed that the Omicron variant is more transmissible but less fatal compared to the Delta variant (Mohapatra, R. K. et al.2022).

Omicron surged to its peak normalized case count of 1158 new cases smoothed per million on January 26, 2022, indicating an almost 200% rise in just 26 days. However, during this period, the mortality ratio decreased to 0.19%. The ongoing decline in the mortality ratio throughout 2021 and into 2022 illustrates successful management in reducing the risk of fatality, despite the increasing number of infections and positive tests.

As the mortality ratio decreased, there was also a decline in stringency measures and a corresponding decrease in residential mobility (people staying at home). For instance, during the peak of the first wave on April 24, 2020, the global average stringency was 79.78%, with residential mobility at 20.31%.

Table2: Percent change since previous date in global average for morality ratio, stringency index, residential mobility, new cases smoothed per million, and compliance on key dates.

Period/event	Data measured	Change in morality ratio (%)	Change in stringency index (%)	Change in residential mobility (%)	Mean new cases growth rate (%)	Change in compliance with 3-month window (%)
Pandemic status declared	11/03/2020	NA	NA	NA	NA	NA
Uncertainty period	24/04/2020	5,16	53,47	19,41	157,85	NA
Beta detected (South Africa)	15/05/2020	-2,65	-5,49	-4,36	-8,21	-3,84
WHO	06/06/2020	-1,71	-7,33	-4,06	40,85	-7,69

recommends masks						
Delta detected (India)	15/10/2020	-1,07	-14,08	-4,85	314,03	-59,57
Start of vaccine rollout/end of 2020	31/12/2020	0,84	3,81	4,52	54,66	18,82
Omicron detected (multiple countries)	15/11/2021	-0,67	-11,69	-9,73	54,08	-35,26
End of 2021	31/12/2021	-0,73	1,29	3,63	94,07	-12,13
Height of omicron	26/01/2022	-0,17	2,18	0,84	199,76	-6,81

However, by the end of 2021, stringency had reduced to 46.29%, and residential mobility had declined to 5.46%. The correlation between stringency and residential mobility serves as a useful indicator of compliance, showcasing how human behavior has fluctuated over time. Various factors influence compliance, which differ from person to person. For example, a UK study (Ganslmeier, M.2022) highlighted increased symptoms of fatigue among males, the divorced, part-time employees, and/or parents of more than two children during warmer periods. By analyzing multiple variables, we can provide insights into how populations collectively respond.

Conclusion

The government's actions impact the course of COVID-19. Initially, with limited measures and few infections, fatalities were low. As cases rose, the government responded, leading to a decrease in fatalities followed by a subsequent increase before ultimately decreasing to near zero.

The case fatality rate initially surged from zero to a peak due to the discovery of potentially infected individuals and those already infected. Subsequently, as the government implemented more response measures, including policies to control the spread of COVID-19, the fatality rate decreased, leading to the initial efforts to contain the COVID-19 pandemic appeared successful. However, a resurgence emerged due to several factors, including mutations of the virus, a loosening of restrictions, and inadequate social distancing practices within certain communities, causing the fatality rate to rise from a low point to another peak. Similarly, with successive rounds of government response measures globally, the fatality rate is expected to eventually be brought under control, converging to near zero.

We can enact the following strategies: Firstly, recognizing the pivotal role of government response in shaping the epidemic's course, it's imperative for governments to enhance their response efforts during periods of rising mortality. Secondly, acknowledging the cyclical nature of the epidemic's progression, nations must prepare for long-term management of COVID-19. Thirdly, in the absence of external interventions like vaccines, countries should maintain stringent response measures. Fourthly, alongside government actions, increased public awareness about the dangers of COVID-19 could bolster individual self-discipline. Lastly, governments should expedite the development of more efficacious vaccines and foster collaboration in vaccine research and distribution. Ultimately, global sharing of vaccines Will be key to humanity's Triumph over COVID-19 (Jan M B.2021).

During the ongoing COVID-19 pandemic, governments worldwide are either experimenting with public policies or implementing measures that may seem excessive. The involvement of structured public health agencies in pandemic response means that the latest discoveries in biomedical sciences and epidemiology are likely influencing policy decisions.

Understanding the breadth of health information online and evaluating the pros and cons of specific policy measures are crucial. These issues can be tackled by various stakeholders such as interest groups, policymakers, think tanks, elected officials, and engaged citizens. Addressing this disparity is likely to impact the effectiveness and efficiency of policy actions. Research indicates that many nations require support to enhance their capabilities in this regard, emphasizing the need for increased global assistance as a priority intervention (Germà B, Óscar G, Ferran A M.2021).

General Conclusion

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Britain's ethnic minority communities faced a harsher reality during the COVID-19 pandemic. Compared to the white population, statistics reveal a concerning trend of increased infections and fatalities among these groups. This disparity can be traced back to a combination of factors. Socioeconomic disadvantages, pre-existing health conditions, and the types of jobs many ethnic minorities hold are all believed to have contributed. Understanding these factors and their role in the unequal impact of the pandemic is essential. By doing so, we can develop more effective public health initiatives and work towards a fairer healthcare system in Britain.

The socioecological approach dismantles the idea of individual behavior existing in isolation. Instead, it recognizes a multitude of influences acting at different levels. These levels range from a person's own biology and knowledge to the dynamics of their social circles and the wider environment they live in. Institutional policies and practices, along with broad public policies, all play a role in shaping the context for individual choices. This comprehensive perspective is essential for understanding the reasons behind behavior. In public health, for instance, it encourages interventions that go beyond individual education to address the social and environmental factors that shape people's decisions. By taking these various levels into account, the socioecological approach allows for the development of more robust and effective strategies.

The socioecological approach proves valuable for several reasons. Firstly, it tackles intricate issues where a simple explanation falls short. Many human behaviors and societal challenges, such as public health concerns or educational gaps, involve a web of interacting factors. This approach helps us untangle these complexities by considering influences at various levels. Secondly, it fosters the design of more impactful.

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The socioecological approach proves valuable for several reasons. Firstly, it tackles intricate issues where a simple explanation falls short. Many human behaviors and societal challenges, such as public health concerns or educational gaps, involve a web of interacting factors. This approach helps us untangle these complexities by considering influences at various levels. Secondly, it fosters the design of more impactful interventions. By pinpointing the factors influencing behavior across different levels, it allows us to create more comprehensive solutions. This goes beyond just targeting individual choices and instead addresses the broader environment that shapes those choices. Thirdly, it sheds light on social injustices.

This approach highlights how social and environmental inequalities can contribute to negative outcomes. By acknowledging these inequalities, interventions can be designed to address them and create a more level playing field. Fourthly, it promotes sustainable solutions. Interventions focused solely on changing individual behavior can be difficult to maintain in the long run. The socioecological approach encourages interventions that address the underlying social and environmental factors, leading to more lasting solutions. Finally, it provides a holistic understanding of human behavior. By examining individual choices within the context of their environment, it provides a richer perspective on how people behave. This proves valuable in various fields, from public health to education to urban planning.

The socioecological approach is a powerful tool for unpacking the reasons behind the disproportionate impact of COVID-19 on Britain's ethnic minorities. It transcends purely biological explanations and delves into the social and environmental factors that likely played a role. For instance, factors like multigenerational living arrangements or jobs with high contact, limited access to healthcare or healthy food options in certain communities, language barriers or workplace policies hindering access to information, and broader social and economic inequalities could all have contributed. By examining these various levels, the socioecological approach can guide the development of more equitable solutions.

This might involve targeted outreach programs in specific languages, improved access to healthcare facilities in vulnerable communities, or advocacy for policies that address workplace safety and income disparities. Ultimately, this approach not only helps us understand the current situation but also equips us to prevent similar inequities in future public health crises. In this thesis exploring the disparate impact of the COVID-19 pandemic on ethnic minorities in Britain, a socioecological approach provides a powerful lens. It goes beyond just biological explanations and delves into the social and environmental factors that likely contributed. This framework allows you to investigate how factors such as multigenerational households or jobs that require high contact, limited access to healthcare or healthy food options in particular communities, language barriers or workplace policies that impeded access to information, and even broader social and economic inequalities may have influenced the course of the epidemic.

By dissecting these interconnected layers, a socioecological approach enables you not only to understand the root causes of these disparities but also to propose more equitable

solutions. This could include targeted awareness programs in specific languages, improving access to healthcare facilities in vulnerable areas, or advocating for policies that address workplace safety and income disparities. Ultimately, this approach promotes a richer understanding of the unequal burden and paves the way for a fairer healthcare system in Britain. This thesis examining the COVID-19 pandemic's impact on Britain's ethnic minorities is significantly bolstered by the socioecological approach. This framework transcends purely biological explanations and delves into the social and environmental determinants of health. It compels us to consider factors such as multigenerational living arrangements or high-contact jobs, limited access to healthcare or healthy food options in certain communities, language barriers or workplace policies hindering access to information, and even broader social and economic inequalities.

By unpacking these layers of influence, the socioecological approach empowers the development of more equitable solutions. This might involve targeted outreach programs delivered in specific languages, improved access to healthcare facilities in vulnerable communities, or advocacy for policies that address workplace safety and income disparities. Ultimately, this approach not only equips us to understand the current situation but also strengthens our capacity to prevent similar inequities in future public health crises.

To advance this research scope on the COVID-19 pandemic and ethnic minorities in Britain, it would be effective to conduct a multi-faceted approach that goes beyond national data. It needs to look for data disaggregated by race at the regional and local levels to reveal differences in the burden of the epidemic across different groups and locations. This quantitative analysis has to be complemented by qualitative research to capture the lived experiences of these communities. This would consolidate the data collection and analysis in order to benefit from the socioecological framework.

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