8-1-2024

Evolving Community Preparedness: Analysis of United States Pandemic Health Disaster Readiness

Jessy Rugeyo
The University of Texas Rio Grande Valley

EVOLVING COMMUNITY PREPAREDNESS: ANALYSIS OF UNITED STATES PANDEMIC HEALTH DISASTER READINESS

A Thesis

by

JESSY RUGEYO

Submitted in Partial Fulfillment of the

Requirements for the Degree of the degree of

MASTER OF ARTS

Major Subject: Disaster Studies

The University of Texas Rio Grande Valley

August 2024

EVOLVING COMMUNITY PREPAREDNESS: ANALYSIS OF UNITED STATES PANDEMIC HEALTH DISASTER READINESS

A Thesis
by
JESSY RUGEYO

COMMITTEE MEMBERS

Dr. William Donner
Chair of Committee

Dr. Dean Kyne
Committee Member

Dr. Arlett Lomeli
Committee Member

August 2024

ABSTRACT

Jessy, Rugeyo, Evolving Community Preparedness: Analysis of United States Pandemic Health Disaster Preparedness. Master of Arts (MA), August 2024, 43 pp., 3 tables, 5 figures, 46 references.

The COVID-19 pandemic has shown substantial gaps in counties' preparedness and response capacity across the United States. This study analyzes the relationship between county-level pandemic preparedness and confirmed COVID-19 cases using secondary data from the FEMA's National Household Survey (NHS) and county-level COVID-19 data from the CDC. The data show a negative relationship between preparedness levels and COVID-19 positive rates, highlighting the necessity of proactive readiness measures. Individual risk assessment, motivation for preparedness, and socioeconomic variables have a major influence on confirmed cases. Higher levels of education, income, and preparedness are associated with lower positive rates, emphasizing the importance of structural support and access to resources in promoting resilience. The study emphasizes various components of pandemic readiness and management. To obtain the best results, it is critical to combine individual-focused measures with institutional support, pay attention to demographic and socioeconomic differences, and distribute credible and balanced information to increase motivation and preparedness among populations. If these issues are adequately addressed, policymakers can devise more effective and equitable responses to future public health

DEDICATION

This work is dedicated to my family, my supervisor Dr. William Donner, and the sociology department for their endless support. It is also dedicated to the Victims of the Floods and Landslides of May 2023 in Rwanda. May the souls of the 131 people who lost their lives continue to rest in peace.

ACKNOWLEDGEMENTS

I extend my deepest gratitude to those who have played a pivotal role in this thesis's realization. My supervisor, Dr. William Donner, deserves special mention for his unwavering support and invaluable guidance, which were critical in shaping my research vision. Equally, I am indebted to Dr. Dean Kyne, a committee member and distinguished professor, whose insightful knowledge and encouragement have enriched my proposal and study development. My journey through this academic endeavor has been profoundly enriched by their contributions, and it is with profound respect that I express my appreciation for their influence on my path to completing this thesis.

I also want to thank the family of Mr. Tony, who welcomed me and treated me as their son. Additionally, I wish to extend my gratitude to Mr. Ronald and Alex Sanchez for their assistance in helping me settle down in the U.S. I cannot forget to thank my friends, Victor Idemili, Dominic Kyei, Inam, Saheed, and Alfred, among others. The African Student Association also deserves appreciation for making the past two years memorable. I am forever grateful for your support and camaraderie.

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Disasters are widespread incidents that people face regularly. Although most disasters result from unavoidable hazards, their effects can be reduced. Disaster management efforts primarily aim to minimize or eliminate potential losses from such hazards, provide prompt and appropriate assistance to disaster victims, and facilitate rapid and effective recovery. Distinguishing between disasters and hazards is crucial. As defined by Alexander (2000), a hazard is an intense geophysical event that can cause a disaster. Thywissen (2006), agrees, stating that every disaster stems from a hazard. It is also important to recognize the significant role that human actions often play in exacerbating the consequences of extreme events, as Comfort (2005) explains: "A disaster can be considered as 'the interdependent cascade of failures instigated by an extreme event, which is further intensified by insufficient planning and misguided individual or organizational decisions.'"

The COVID-19 pandemic has unequivocally demonstrated that pandemics are global threats impacting communities, healthcare frameworks, and economic systems worldwide. As reported by the Centers for Disease Control and Prevention (CDC) on April 26, 2023, the United States recorded over 104.5 million cases of COVID-19, the highest number of confirmed cases and fatalities globally. This staggering statistic has prompted critiques of the U.S. government's

pandemic response, with additional scrutiny of state-level actions for their sometimes-premature easing of restrictions and inadequate safety measures.

This crisis underscores the critical importance of community readiness in lessening the impacts of health emergencies. Effective disaster preparedness traditionally involves comprehensive planning, robust training, and active community engagement to foster potent response and recovery strategies. The pandemic serves as a stark reminder that preparedness must be extensive, aiming to diminish vulnerabilities and bolster capacities for swift and effective emergency responses.

Community preparedness in the United States, notably in terms of pandemic health disaster readiness at the county level, is a multifaceted matter that necessitates a nuanced understanding of numerous factors that impact preparedness levels. According to Kohn et al. (2012), it is essential for individuals to be capable of taking care of themselves entirely or partially within the first 72 hours (about 6 days) following a disaster, emphasizing the significance of personal disaster preparedness. Basolo et al., (2009) explores how confidence in government and access to information can affect individuals perceived and actual preparedness for natural hazards, thereby underscoring the role of trust in governmental institutions in shaping readiness perceptions. These studies jointly emphasize the significance of individual- and community-level preparedness in enhancing overall disaster resilience.

Ferreira et al. (2023) explored the interconnections between individual resilience, social susceptibility, and emergency preparedness, with a particular emphasis on climate-related

disasters and the COVID-19 pandemic. Their research offers crucial insights into the relationships between resilience and preparedness, equipping public health professionals with guidance to develop resilience building and preparedness initiatives in communities. Polcarová & Pupíková (2022) focus on socially vulnerable communities and the factors that impact their safety and resilience in disaster risk reduction, underlining the importance of identifying and assisting community members in hazard avoidance and recovery. Identifying social vulnerability indicators is essential to effectively target aid and enhance community resilience during catastrophic events.

Adams, Eisenman, and Glik (2019), underscores the importance of community resilience frameworks in the planning and execution of disaster preparedness programs. This study emphasizes the role of both governmental and non-governmental organizations in guiding these initiatives. Furthermore, it advocates a multilevel model that considers both community and individual factors to enhance preparedness. This study highlights the significance of community strength and individual self-efficacy in promoting disaster readiness.

Statement of the Problem

The COVID-19 pandemic has clearly demonstrated substantial shortcomings in the preparation for pandemics at various levels of government in the United States. Despite substantial investments in public health infrastructure and disaster readiness over the past few decades, the pandemic has revealed systemic weaknesses that have severely impeded effective response and mitigation. These shortcomings have severe consequences, including widespread illness, death, and economic disruption. The United States, with its vast resources and advanced

healthcare system, surprisingly reported the highest number of COVID-19 cases and fatalities globally, highlighting a critical failure in preparedness and response (Fowler et al. 2020).

One of the primary factors contributing to this issue is inconsistency in preparedness levels across counties. While some countries have established robust preparedness frameworks and effective response strategies, others have struggled because of a lack of resources, inadequate planning, and insufficient coordination. This disparity highlights a significant problem: the uneven distribution of preparedness capabilities and resources across the United States. Counties with limited resources often face greater challenges in preparing for and responding to health disasters, exacerbating the vulnerability of their populations.

The COVID-19 pandemic underscores the need for individual- and community-level preparedness. Research studies such as those by (Basolo et al. 2009; Kohn et al. 2012) emphasize the importance of individual self-care in the immediate aftermath of a disaster and the critical role played by trust in governmental institutions. These findings indicate that personal disaster preparedness and confidence in governmental actions are essential components of effective disaster response. However, achieving elevated levels of individual preparedness and trust in government institutions requires targeted efforts to educate and engage communities, particularly those that are socially vulnerable.

Social vulnerability is a critical issue exacerbating disaster preparedness. Research by (Polcarová and Pupíková 2022) highlights how socially vulnerable communities are disproportionately affected by disasters, including pandemics. These communities often lack the

necessary resources and support systems to effectively prepare, respond to, and recover from health emergencies. It is essential to identify and address these populations' specific needs to enhance overall community resilience and ensure equitable disaster preparedness.

According to Ferreira et al. (2023), the intricate relationship between individual resilience, social susceptibility, and emergency preparedness forms a comprehensive foundation for understanding how these elements collaborate to impact preparedness outcomes. They highlighted the necessity of resilience-building initiatives that consider both individual- and community-level factors. Nevertheless, despite the theoretical comprehension of these connections, their practical application remains a challenge. Effective resilience-building requires sustained efforts, cooperation across sectors, and adaptable strategies tailored to the unique requirements of each community.

Adams, Eisenman, & Glik (2019) underscore the importance of community resilience frameworks in guiding disaster preparedness programs. This study recommends a multilevel model that merges community and individual factors, emphasizing the roles of governmental and non-governmental organizations in fostering resilience. However, the practical application of such frameworks frequently faces hurdles, including bureaucratic inefficiencies, lack of coordination, and insufficient funding. These obstacles further complicate efforts to improve preparedness at county level.

The efficacy of managing disasters and pandemics is influenced by the level of readiness, which is widely recognized as a fundamental component of an effective response plan.

Numerous studies have consistently demonstrated a positive correlation between preparedness and response efficacy. Considering the COVID-19 pandemic, this study investigated the relationship between the number of reported COVID-19 cases and the degree of individual preparedness. By comprehending this relationship, it is possible to better calibrate preparedness initiatives to mitigate the consequences of future health crises.

The challenge of health disaster preparedness in the United States is multifaceted and deeply ingrained in systemic issues. Variability in preparedness among counties, the substantial role of social vulnerability, the significance of individual and community resilience, and barriers in implementing comprehensive preparedness frameworks all contribute to the complexity of this issue. Addressing these challenges requires a nuanced understanding of the numerous factors at play and a coordinated effort to develop and implement effective strategies that bolster preparedness at both individual and community levels. This study aims to scrutinize these factors and provide insights into how community preparedness can be enhanced to minimize the consequences of future pandemics and health disasters.

CHAPTER II

LITERATURE REVIEW

Disaster Preparedness in the United States

Disaster preparedness is a critical aspect of ensuring that communities and countries can withstand natural or human-caused disasters. In the United States, it is essential to implement disaster preparedness policies and practices to ensure effective response and recovery. According to Azad et al., (2019), community-based disaster management activities are crucial for enhancing the adaptive capacity and resilience to disasters. These activities involve engaging local communities in preparedness efforts, which can significantly improve overall disaster response outcomes.

Government commitment to disaster management policies is necessary to ensure coordinated and effective response to disasters. Policies that focus on education, socialization, disaster management simulations, ecosystem improvement, infrastructure resilience, disaster financing, and meeting emergency needs are crucial components of disaster preparedness (Rafii 2021). Understanding disaster risk, strengthening disaster risk management, investing in resilience, and increasing disaster preparedness are key actions within the disaster management system framework (Syadzily 2020). These actions serve as a foundation for building effective response mechanisms and promoting post-disaster recovery.

In the United States, funding allocated to public health departments to train in disaster preparedness has significantly increased since the 9/11 attacks, as per VanDevanter et al., (2010). This development has resulted in a change in the responsibilities and expectations of health workers during emergencies. Furthermore, there is a heightened focus on agencies not only engaging in disaster response and recovery, but also actively participating in preparedness and prevention efforts, as highlighted by Serrao-Neumann, Crick, & Low Choy (2018). This shift underscores the importance of proactive measures to minimize disaster risks.

Local governments play a crucial role in disaster management, particularly during mitigation and preparedness. During the mitigation phase, evaluation, monitoring, and dissemination are essential, whereas planning, exercise, and training are critical during the preparedness stage, as outlined by Kusumasari, Alam, & Siddiqui (2010). By investing in these capabilities, local governments can enhance their disaster-management effectiveness and better protect their communities.

Disaster education and awareness play crucial roles in reducing the risk of disasters. It is vital to implement policies that encourage positive behavioral changes, establish comprehensive legal frameworks, and support effective information management systems to enhance disaster preparedness (Muriuki, Kei, & Muchiri 2022). By focusing on prevention, emergency response, and post-disaster recovery, disaster management policies can foster a more resilient society (Setiadi et al. 2023). Furthermore, the government's responsibility to implement disaster preparedness policies is crucial to the overall success of disaster management efforts (Ningtyas et al. 2021).

In the United States, disaster preparedness is a complex undertaking that requires collaboration between government agencies, local communities, and various stakeholders. By implementing comprehensive disaster management policies that emphasize community engagement, government commitment, public health readiness, and proactive disaster education, a country can improve its resilience and response capabilities in the face of disasters. Continuous investment in disaster preparedness is essential to safeguard lives, infrastructure, and the environment during emergencies.

COVID-19 Pandemic Preparedness in the United States

The global healthcare system has been compelled to recognize the significance of preparedness and response strategies due to the COVID-19 pandemic. A study by Knauer (2022), conducted in the United States between January and June 2020 emphasized the need for innovative approaches to hospital preparedness for mass-casualty events. This is especially crucial given the disparate levels of preparedness among states, as illustrated by Boyce (2023) in their examination of state-level preparedness indices and COVID-19-related mortality rates across all 50 states and the District of Columbia. These findings highlight the need for customized and responsive approaches to public health crises rather than relying on a standardized approach.

Community engagement has proven to be a critical element in pandemic preparedness efforts. According to Abayneh et al. (2022), the centrality of community involvement in preparedness activities cannot be overstated as it helps build trust and enhances the efficacy of

emergency responses. By involving communities in the planning and design of preparedness strategies, healthcare systems can cultivate a sense of ownership and collaboration, leading to stronger responses to public health emergencies (Abayneh et al. 2022). This highlights the importance of adopting inclusive and participatory approaches in planning pandemic preparedness.

Analyzing the reaction of the United States to the COVID-19 pandemic, Bearman et al. (2020) highlighted the importance of learning from effective models of pandemic response, such as those observed in Germany and South Korea. The authors examined how American exceptionalism, or belief in the uniqueness of the United States, may have influenced the country's response to the pandemic. By examining and adopting successful strategies from other countries, the United States can enhance its preparedness and response capabilities for future public health crises (Bearman et al. 2020). This emphasizes the value of cross-national learning and collaboration in improving pandemic preparedness.

The COVID-19 pandemic has highlighted the necessity of implementing community-, community-, and state-specific approaches to preparedness in the United States. By using localized strategies, fostering community engagement in preparedness activities, and adopting successful international models, a country can bolster its resilience and response capabilities to future public health emergencies. These observations emphasize the significance of ongoing assessments, adjustments, and partnerships in enhancing pandemic preparedness measures at the national level.

Key Factors Influencing Community Preparedness

Effective emergency management necessitates strong emphasis on community preparedness, which is essential for successful response and recovery efforts. Numerous studies have explored factors that promote or impede community involvement in public health emergency preparedness, as outlined by Ramsbottom et al. (2018). These studies underscore the significance of collaboration between communities and institutions to enhance preparedness. The roles of economic development, social capital, and exposure to disasters in shaping an individual's psychological resilience after a disaster have been well documented, demonstrating the interplay between personal and community-wide factors (Lowe et al. 2015).

Effective readiness within the community is heavily dependent on the preparedness of households, as local preparedness is crucial for an efficient response and recovery (Levac, Toal-Sullivan, & O`Sullivan 2012). Community resilience plays a significant role in disaster management and is influenced by a range of socioeconomic, political, and environmental factors that enable communities to adapt and make decisions towards resilience (Kelly et al. 2015). The concept of community resilience is multifaceted and encompasses various elements such as economic, institutional, social, cultural, and natural factors that contribute to a community's ability to withstand and recover from disasters (Leykin et al. 2013).

Self-efficacy and community advantages are crucial factors in promoting disaster preparedness behaviors and overall community resilience (Adams, Eisenman, & Glik 2019). A range of elements such as social capital, government aid, access to resources, and mental health

literacy have been identified as critical in shaping a community's capacity to adapt and respond to challenges (Hayes, Berry, and Ebi 2019). Demographic characteristics, prior disaster experience, psychosocial factors, and disaster preparedness knowledge are considered important predictors of personal disaster preparedness, underscoring the significance of individual-level factors in preparedness initiatives (Kim and Kim 2022).

The capacity of a community to withstand and recover from disasters is influenced by numerous factors including community capital, institutional aspects, and spatial structures (Meijer et al. 2023). Individual- and community-level elements, such as social capital, government assistance, and intersectoral cooperation, play a significant role in enhancing community resilience (Rahayu et al. 2021). Understanding and addressing these factors can strengthen community preparedness and response mechanisms, improving their ability to withstand disasters (Cohen et al. 2020). It is important to consider community-level factors that interact with individual resilience to foster overall community preparedness (Shigemoto 2021).

Pandemic and Disaster Risk Perception

Recognizing the significance of pandemics and disaster risks is vital in the United States for effective risk management and disaster preparedness. Numerous studies have underscored the pivotal role of risk perception in shaping behaviors and responses to disasters (Bostrom et al. 2020; Rana et al. 2021). Risk perception studies facilitate the comprehension of risk attitudes, prediction of public reactions, prevention of conflicts, and enhancement of risk communication in disaster management processes (Çoban and İnal Önal 2022).

Research indicates that catastrophes can have enduring effects on individuals' perceptions of risk, potentially leading to increased risk perception in the future (Breznau 2021). This highlights the importance of continuous educational and promotional efforts to enhance risk perception and awareness in society. Moreover, assessing the public's perceptions of disaster risks can facilitate the development of appropriate risk-management approaches and educational programs that foster awareness and encourage behavior modification.

In the United States, comparative risk perceptions of the coronavirus pandemic and climate change have attracted attention, indicating the need to understand how different risks are perceived and managed (Bostrom et al. 2020). Studies have also highlighted the role of risk perception in disaster preparedness, emphasizing the importance of risk awareness and perception in developing effective disaster management strategies. Factors such as media exposure, disaster experience, and financial preparation have been identified as influencing disaster risk perception among households in earthquake-prone areas, highlighting the multifaceted nature of risk perception (Lee et al. 2015; Xu, Zhou, et al. 2020; Xu, Zhuang, et al. 2020). Additionally, studies have examined the impact of information credibility on disaster risk perception and willingness to evacuate, emphasizing the significance of reliable information in shaping risk perceptions (Xu, Zhou, et al. 2020).

Sociodemographic characteristics influence individuals' perceptions and understanding of climate change and their level of preparedness for disasters (Haq and Ahmed 2020). Carlton and Jacobson (2013), indicated that women perceive climate change as a more significant threat than

men and are more likely to be worried about its consequences, a finding that is consistent with that of (Brody et al. 2008).

Studies conducted in the United States have underlined the critical role that risk perception plays in shaping behaviors, responses, and preparedness strategies during pandemics and disasters. It is essential to comprehend the public's perception of risks, the several factors that affect risk perception, and the need for continuous education and communication to effectively manage disaster risks.

Importance Understanding Pandemic Risk Perception

The profound consequences of the COVID-19 pandemic have highlighted the critical importance of comprehending the public's perception of pandemic risk. A person's perception of risk influences their behavior and responses to public health measures, making it a crucial area of study for effective pandemic preparedness and response. Comprehending the public's perception of pandemic risks is crucial for the creation and implementation of effective public health policies. Research has established that individuals' perceptions of risk impact their compliance with recommended health behaviors such as social distancing, mask-wearing, and vaccination. For instance, a study conducted by Dryhurst et al., (2022) revealed that a higher perceived risk of COVID-19 was correlated with greater adherence to preventive measures. This finding suggests that public health policies must consider and address public risk perceptions to enhance their effectiveness and ensure widespread compliance.

Effective communication is critical for managing public perception during a pandemic. Miscommunication or misinformation can result in confusion, fear, and non-compliance with health guidelines. Studies have emphasized the significance of transparent, consistent, and culturally sensitive communication in shaping public risk perception. For instance, van der Weerd et al., (2011) discovered that clear and consistent communication from trusted sources significantly improved public understanding of and adherence to health measures during the H1N1 pandemic. This highlights the need for tailored communication strategies to address public concerns and provide accurate information to mitigate the spread of misinformation.

Enhancing societal resilience is crucial in the face of pandemics as it pertains to communities' ability to withstand and recover from adverse events. Comprehending risk perception plays a significant role in promoting resilience because communities with heightened pandemic risk perceptions are more likely to engage in collective actions that foster resilience, such as community support networks and mutual aid. For instance, Paek & Hove (2021), discovered that communities with greater risk perceptions were more proactive in organizing community responses to COVID-19, demonstrating the correlation between risk perception and collective resilience.

The insights gained from studying pandemic risk perception can inform targeted interventions to promote public health. Understanding the psychological and social factors that influence risk perception can aid in identifying barriers to compliance and devising strategies to overcome them. Brewer et al., (2007) research on the Health Belief Model reveals that perceptions of severity, susceptibility, benefits, and barriers play a vital role in health-related

decision-making. By applying these insights, public health authorities can design interventions that effectively address perceived barriers and enhance perceived benefits of compliance with health measures.

Understanding pandemic risk perception is crucial for effective public health management, as it informs the development of public health policies, enhances communication strategies, promotes societal resilience, and provides valuable behavioral insights. The COVID-19 pandemic has emphasized the need for continuous research in this area to better prepare for future public health emergencies. By prioritizing the study of risk perception, policymakers and health professionals can develop more effective strategies to safeguard public health and ensure societal well-being during pandemics.

CHAPTER III

DATA AND METHODS

Purpose of the Study

The Study seeks to examine the association between the number of confirmed COVID-19 pandemic and the degree of individual preparedness in the United States.

Study Area

The study focuses on the United States, examining pandemic preparedness and COVID-19 positive rates by county. It evaluates a wide range of counties, considering various demographic, socioeconomic, and geographic characteristics across the country. By examining these characteristics at the county level, the study hopes to identify regional variations in preparedness and their impact on pandemic outcomes. This method allows for a more thorough understanding of how localized preparedness measures can influence bigger public health responses.

Figure 1. Study Area, U.S. County Map

Study Design

The Study utilized secondary data from two primary avenues:

(I) National Household Survey (NHS): Conducted annually by FEMA, this survey gauges the preparedness levels of the American public. It collects data on hazard preparedness, subjective experiences with hazards, demographic details, and so on with the data from 2021.

(II) Center for Disease Control and Prevention (CDC) COVID-19 County-Level Data: Confirmed Cases of COVID-19 at the county level provided by the John Hopkins Coronavirus Resource Center.

The study focused on the following hypotheses:

Hypothesis 1: There is a negative association between the level of pandemic preparedness and COVID-19 positivity rates.

Hypothesis 2: There is a negative association between the risk perception of the pandemic and COVID-19 positivity rates.

Hypothesis 3: There is a negative association between motivation for pandemic preparedness and COVID-19 positivity rates.

Research Questions

Table 1. Research Hypotheses and Associated Questions

Hypothesis	**Research Question**
There is a negative association between the level of pandemic preparedness and COVID-19 positivity rates.	1: Have you considered preparing for a disaster? 2: Thinking about preparing yourself for a disaster, which of the following best represents your degree of preparedness?
There is a negative association between the risk perception of the pandemic and COVID-19 positivity rates.	1: How likely do you think it is that you will be affected by a disaster in the next five years? 2: How concerned are you about the impacts of COVID-19 on your community in the next six months?
There is a negative association between motivation for pandemic preparedness and COVID-19 positivity rates.	1: In the past year, what information have you read, seen, or heard about how to get better prepared for a disaster? 2: Have you taken any steps to prepare for a disaster in the past year?

Variables

Dependent Variable: COVID-19 Positivity Cases

Independent Variable: Risk Perception, Motivation to Prepare, Pandemic Preparedness, and Socioeconomic Characteristics.

Data Analysis

The Study employed multiple regression analysis using Stata version 17.0.

CHAPTER IV

RESULTS AND DISCUSSION

Demographics

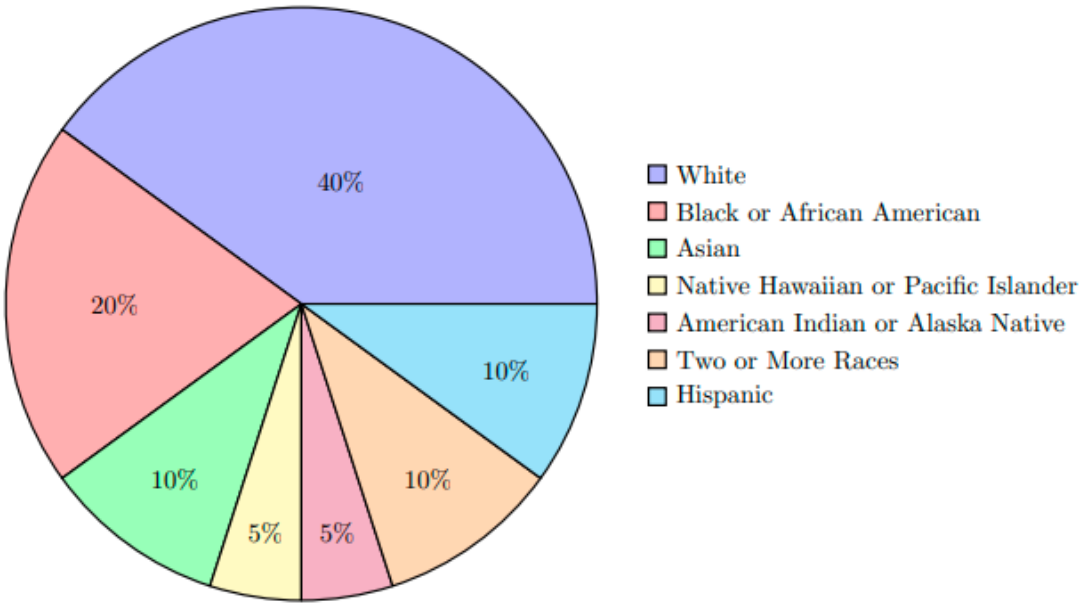

Figure 2: Demographic Breakdown Sample Population

The sample consisted of the following proportions: 40% White, 20% Black or African American, 10% Asian, 5% Native Hawaiian or Pacific Islander, 5% American Indian or Alaska Native, 10% identifying as Two or More Races, and 10% Hispanic. This varied composition guarantees an exhaustive analysis of pandemic preparedness across various racial and ethnic groups in the United States.

This study intends to recognize potential disparities in preparedness and their subsequent impact on COVID-19 positivity rates by employing a diverse demographic sample. The incorporation of numerous racial and ethnic groups has enabled a comprehensive understanding of how distinct communities experience and react to health emergencies. This methodology is crucial for emphasizing any prevalent inequalities in access to resources and information that may affect pandemic readiness and response outcomes.

Table 2. Outcome of Multivariate Regression Analysis

Variable	**Coefficient**	**Standard Error**
Confirmed COVID-19 Cases Per 10,000 Population		
Pandemic preparedness		
Do not know	-0.7	(1.16)
I am NOT prepared, and I do NOT intend to prepare in the next year	-27.16	(1.09)
I am NOT prepared, but I intend to start preparing in the next year	-30.26	(1.14)
I am NOT prepared, but I intend to get prepared in the next six months	-38.54	(1.18)
I have been prepared for the last year	-31.12	(1.16)
I have been prepared for MORE than a year and I continue preparing	-31.10	(1.09)
Pandemic impact now		
Prefer not to answer/Don't Know	-0.64	(1.16)
Unlikely	-9.40	(0.87)
Likely	1.38	(0.87)
Very likely	-1.07	(1.16)
Pandemic impact in the Future		
Prefer not to answer/Don't Know	-2.09	(1.22)
Unlikely	2.62	(1.13)
Likely	1.46	(0.99)
Very likely	-14.76	(1.12)
Motivated		
Prefer not to answer/Don't know	-0.20	(1.16)
Unmotivated	-8.48	(0.84)

Table 2 continued

Variable	Coefficient	Standard Error
Less motivated	-2.89	(1.03)
More motivated	-1.07	(0.98)
Age		
18 to 29	0.88	(–)
30 to 39	0.66	(–)
40 to 49	0.85	(–)
50 to 59	-0.55	(–)
60 to 69	-1.73	(–)
70 to 79	-4.05	(–)
Over 80	-13.50	(–)
Gender		
Male	0.14	(–)
Female	-	(–)
Third Gender/Others	-30.42	(0.99)
Income		
Less than $10,000	-	(–)
$10,000 to $19,999	10.5	(–)
$20,000 to $29,999	9.8	(–)
$30,000 to $39,999	15.5	(–)
$40,000 to $49,999	27.35	(–)
$50,000 to $59,999	8.75	(–)
$60,000 to $99,999	12.45	(–)
$100,000 to $149,999	7.95	(–)
Education		
Less than high school diploma	-	(–)
High school diploma	-32.40*	(1.18)
Some college, no degree	-38.02**	(1.04)
Associate's degree	-40.07***	(1.11)
Bachelor's degree	-56.61***	(1.12)
Postgraduate work/degree or professional degree	-59.47***	(1.09)
Race		
White	-	(–)
Black or African American	-16.67	(1.51)
Asian	-67.42***	(2.74)
Native Hawaiian or Pacific Islander	-186.79***	(7.49)
American Indian or Alaska Native	-20.70	(3.36)
Two or More Races	-36.53*	(1.11)

Table 2 continued

Variable	Coefficient	Standard Error
Others	-	(–)
Ethnicity		
Non-Hispanic/Latino	-	(–)
Hispanic/Latino	-48.32***	(4.46)
English Speaking		
No	-	(–)
Yes	11.56	(–)
Cons	770.54***	(26.07)
N	659	

t statistics in parentheses
p < 0.5, ** p<0.01, *** p<0.001

Table 2 provides the results of a multivariate regression analysis assessing the impact of various demographic and socioeconomic factors, as well as pandemic preparedness and perceptions, on the number of confirmed COVID-19 cases per 10,000 people (about the seating capacity of Cameron basketball stadium at Duke University). The findings revealed that various levels of pandemic preparedness have varying effects on the number of confirmed COVID-19 cases. Compared to those who were unsure about their preparedness, respondents who were not prepared and did not plan to prepare within the next year exhibited a significant negative association with confirmed COVID-19 cases ($R = -27.16$, $p < .001$). Respondents who intended to start preparing within the next year or within six months showed negative coefficients, with values of -30.26 ($p < .001$) and -38.54 ($p < .001$), respectively. Those who had been prepared for more than a year also displayed negative associations ($R = -31.10$, $p < .001$), demonstrating a consistent pattern where better preparedness is linked to fewer confirmed cases.

The perception of the pandemic's impact now and in the future varies. Those who considered the pandemic impact unlikely showed a significant negative coefficient ($R = -9.40$, $p < .001$), suggesting fewer cases compared to those who were uncertain. Interestingly, perceiving the impact as highly likely resulted in a negative coefficient ($R = -1.07$, $p = .34$), although it was not statistically significant. Motivation level also plays a role in the number of confirmed cases. Unmotivated respondents had a significant negative association with confirmed COVID-19 cases ($R = -8.48$, $p < .001$). However, the coefficients for less- and more-motivated individuals, although negative, were not statistically significant.

Considering demographic and socioeconomic factors, age showed a clear gradient, with older age groups having a stronger negative association with confirmed COVID-19 cases. Notably, individuals over 80 years old had a significant and substantial negative coefficient ($R = -13.50$, $p < .001$), indicating a marked reduction in confirmed cases compared to the youngest age group (18-29 years). Gender differences were apparent, with males being slightly positively associated with the number of confirmed cases compared to females. The coefficient for third gender/others was notably negative and significant ($R = -30.42$, $p < .001$), reflecting a much lower number of confirmed cases in this group.

Income levels had varied effects, with the highest coefficient observed in the $40,000 to $49,999 income bracket ($R = 27.35$). Education showed a strong inverse relationship with confirmed cases; higher educational attainment corresponded to significantly lower cases, especially among those with postgraduate or professional degrees ($R = -59.47$, $p < .001$). The racial and ethnic disparities were also statistically significant. Asian respondents and Native

Hawaiian or Pacific Islander respondents exhibited the strongest negative associations, with coefficients of -67.42 ($p < .001$) and -186.79 ($p < .001$), respectively. Hispanic/Latino ethnicity showed a significant negative coefficient ($R = -48.32$, $p < .001$), indicating fewer confirmed cases in these groups compared to non-Hispanic/Latino individuals.

Table 3. Correlation among Study Variables

	Variables	1	2	3	4	5	6	7	8	9	10	11	12
1	Confirmed Cases	1.00											
2	Preparedness	-0.030**	1.000										
3	Impact	0.016	0.202***	1.000									
4	Future Impact	-0.009	0.200***	0.374***	1.000								
5	Motivation	0.008	0.32***	0.265***	0.229***	1.000							
6	Age	-0.022*	0.044***	-0.052***	-0.062***	-0.021*	1.000						
7	Gender	0.003	-0.074***	-0.008	-0.107***	-0.037***	-0.055***	1.000					
8	Income	-0.050***	0.140***	0.086***	0.082***	0.082***	0.071***	-0.154***	1.000				
9	Education	-0.083***	0.165***	0.103***	0.133***	0.089***	0.066***	-0.185***	0.427***	1.000			
10	Race	-0.039***	-0.017	-0.015	-0.021*	-0.018	-0.192***	0.056***	-0.063***	-0.077***	1.000		
11	Ethnicity	-0.076***	0.014	-0.029**	-0.043***	-0.034***	0.272***	-0.042***	0.096***	0.106***	-0.122***	1.000	
12	English	-0.015	-0.004	0.003	-0.001	0.005	-0.184***	0.049***	-0.075***	-0.024**	0.076***	-0.439***	1.000

*** p<0.01, **p<0.05, *p<0.1

Table 3 presents a correlation matrix detailing the relationships among confirmed COVID-19 cases, preparedness, impact perceptions, motivation, and various demographic and socioeconomic factors. A notable observation is the negative correlation between confirmed COVID-19 cases and preparedness ($r = -0.030$, $p < 0.05$), indicating that increased levels of preparedness are associated with a reduced number of confirmed cases. The relationship between confirmed cases and impact perception ($r = 0.016$) was positive, but not statistically significant, suggesting no strong linear relationship. Additionally, a slight negative correlation exists between confirmed cases and future impact perception ($r = -0.009$), though it lacks statistical significance. Motivation showed a weak positive correlation ($r = 0.008$) with confirmed cases, which was also not statistically significant. Age is weakly negatively correlated with confirmed cases ($r = -0.022$, $p < 0.1$), hinting that older age groups may have fewer confirmed cases, although the significance level is marginal. The correlations

between gender, income, and English proficiency with confirmed cases are weak and not statistically significant. Education ($r = -0.083$, $p < 0.01$), race ($r = -0.039$, $p < 0.01$), and ethnicity ($r = -0.076$, $p < 0.01$) exhibit stronger negative correlations, suggesting that higher education levels, specific racial groups, and Hispanic/Latino ethnicity are linked to fewer confirmed cases.

Preparedness demonstrates positive correlations with impact perception ($r = 0.202$, $p < 0.01$) and future impact perception ($r = 0.200$, $p < 0.01$), indicating that individuals who are more prepared tend to perceive the pandemic's impact more significantly. Motivation is moderately positively correlated with preparedness ($r = 0.32$, $p < 0.01$), suggesting that higher motivation levels are associated with better preparedness. Age ($r = 0.044$, $p < 0.01$) and income ($r = 0.140$, $p < 0.01$) also show positive correlations with preparedness, whereas gender shows a negative correlation ($r = -0.074$, $p < 0.01$), indicating gender differences in preparedness levels. Education also positively correlates with preparedness ($r = 0.165$, $p < 0.01$), reflecting that higher educational attainment is associated with better preparedness.

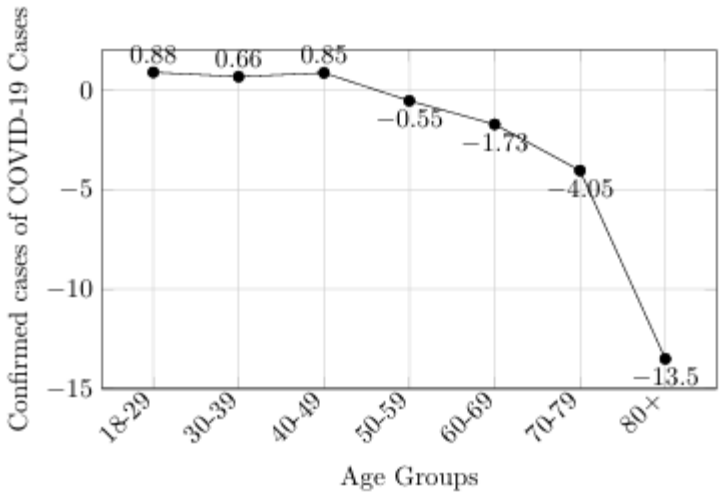

Figure 3: Age groups vs Confirmed Cases of COVID-19

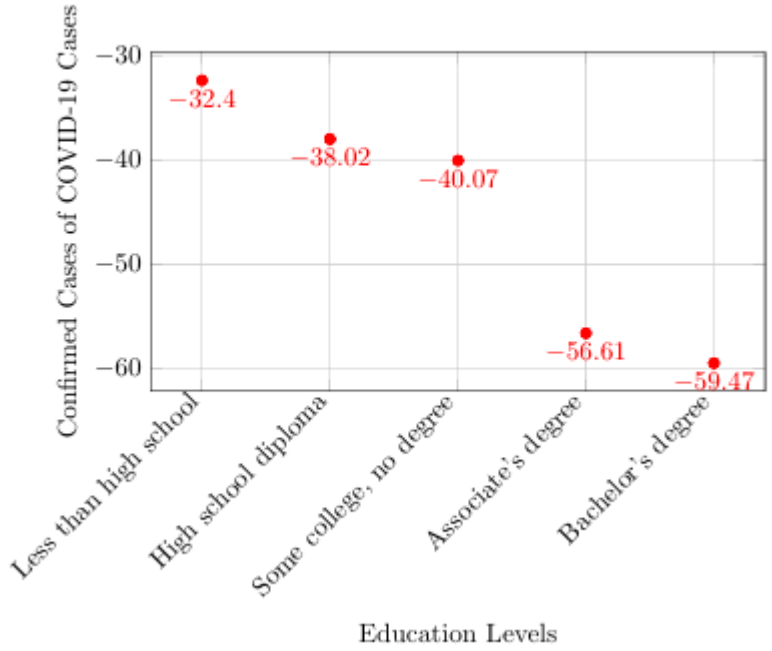

Figure 4: Education vs Confirmed Cases of COVID-19

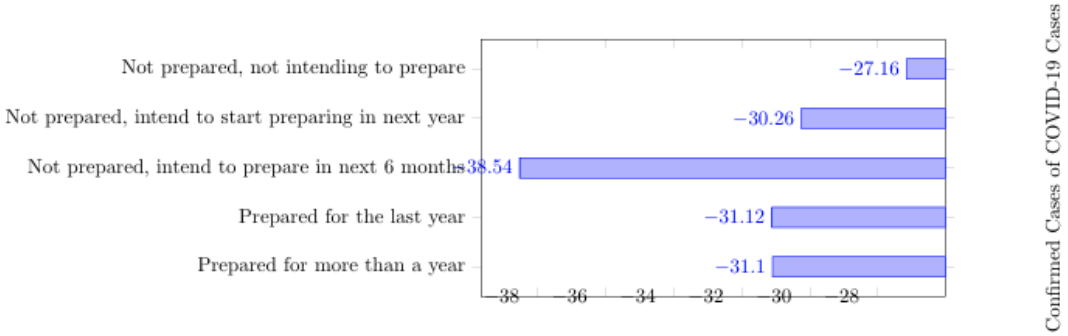

Figure 5: Preparedness Levels vs Confirmed Cases of COVID-19

The graph in Figure 3 presents the relationship between age and number of confirmed COVID-19 cases per 10,000 people (about the seating capacity of Cameron basketball stadium at Duke University). The data indicate a discernible pattern: as age increased, the number of confirmed COVID-19 cases decreased substantially. The age group of 18-29 years has a positive coefficient, implying a higher incidence of confirmed cases, whereas those aged 80 and above display a significantly negative coefficient of -13.5, signifying much lower confirmed cases in this age range.

The graph in Figure 4 shows the correlation between various levels of pandemic preparedness and the number of confirmed COVID-19 cases per 10,000 people (about the seating capacity of Cameron basketball stadium at Duke University). The data indicated that higher levels of preparedness consistently correlated with fewer confirmed cases. For instance, individuals who are unprepared and do not intend to prepare exhibit a negative coefficient of -27.16, whereas those who have been prepared for over a year display an even stronger negative coefficient of -31.10. It is important to mention that those who are

unprepared but plan to prepare within the next six months demonstrate the strongest negative association at -38.54.

Figure 5 illustrates the relationship between educational attainment and the number of verified COVID-19 cases per 10,000 individuals (about the seating capacity of Cameron basketball stadium at Duke University). The data indicates a noticeable inverse correlation between these two variables. Those with a high school diploma or lower have a coefficient of -32.4, indicating a negative relationship, while those with a high school diploma have a coefficient of -38.02, which is more negative. This trend continues with higher levels of education, with individuals holding a bachelor's degree having a coefficient of -56.61 and those with postgraduate or professional degrees showing the most substantial negative association at -59.47.

The relationship between current impact and future impact perceptions is shown to be strongly positive, with a correlation coefficient of 0.374 and a p-value of less than 0.01. Furthermore, both current impact and future impact perceptions exhibit positive correlations with motivation and preparedness, but they are negatively related to age, gender, and race. It is worth noting that motivation is positively associated with preparedness, impact perceptions, and future impact perceptions, indicating that individuals who are motivated are more likely to be prepared and perceive the pandemic's impact more seriously. On the other hand, motivation is negatively correlated with age ($r = -0.021$, $p < 0.1$), gender ($r = -0.037$, $p < 0.01$), and ethnicity ($r = -0.034$, $p < 0.01$), which suggests that there are demographic differences in motivation levels.

The correlations between demographic and socioeconomic variables exhibit diverse relationships. Age reveals negative associations with most factors, except for ethnicity, implying that older individuals might perceive a diminished impact and be less motivated or prepared. Gender displays a negative correlation with preparedness and impact perceptions, while it exhibits a positive correlation with confirmed cases. Income and education display positive associations with preparedness, motivation, and impact perceptions, but exhibit a negative correlation with race and ethnicity. Race demonstrates significant negative correlations with confirmed cases, suggesting disparities in COVID-19 case numbers along racial lines.

Why sociodemographic characteristics such as race, age, educational attainment among other, may exhibit no statistical significance with a negative correlation, vulnerable communities, such as Black and Hispanic minorities, the poor, disabled people, women, and children, confront severe disaster and emergency preparedness obstacles, despite their best efforts and positive attitudes. Studies have found that these populations frequently lack access to critical tools and knowledge required for effective preparation. For example, Davidson et al. (2013) claim that racial and ethnic minorities typically face challenges such as limited access to transportation, inadequate financial resources, and poor health care facilities, all of which impede their ability to plan for catastrophes. These systemic gaps are exacerbated by a lack of focused public health messaging and preparedness initiatives that cater directly to the needs of these groups, making them even more vulnerable during emergencies.

In addition, individuals' socioeconomic situation influences their ability to plan for and respond to disasters. According to Stough & Kelman (2018), low-income households frequently have fewer financial resources to devote to emergency preparedness goods and are less likely to have insurance coverage that can aid in disaster recovery efforts. Disabled people, women, and children all confront distinct problems. For example, disabled people may suffer physical and communication barriers while seeking emergency services, whereas women and children may lack the autonomy or finances to make required preparations. various interconnected vulnerabilities emphasize the need for more inclusive and accessible disaster preparedness methods that address the individual needs of various communities, ensuring that no group is disproportionately harmed by calamities.

The purpose of this research is to investigate the relationship between the number of confirmed COVID-19 pandemic cases and the level of individual preparedness at the county level in the United States. The research findings shed light on how factors such as preparation, perceptions, motivation, and demographic and socioeconomic features influence the number of verified COVID-19 cases. The negative relationship between readiness and confirmed cases emphasizes the importance of preemptive steps in slowing the spread of the infection. This shows that increasing public awareness and readiness can drastically reduce infection rates. However, it is critical to note that individual preparation is not sufficient; structural assistance from healthcare authorities and policymakers is required to provide equitable access to resources and information. The different effects of pandemic views on confirmed cases highlight the complexities of public health discourse. Perceiving the pandemic's impact as unlikely was associated with fewer instances, although perception of a

highly likely impact did not reveal a significant association. This shows that fear or overestimation of risk may not always result in more protective responses. Public health measures should focus on giving fair and reliable information that fosters readiness without raising excessive worry.

Motivational factors significantly influence the number of COVID-19 cases. The strong negative link between unmotivated people and verified cases suggests that motivational factors play a key role in encouraging preventative activities. As a result, public health campaigns should include components that increase motivation, such as stressing community benefits, providing rewards, and making preparatory activities more accessible and engaging. The demographic and socioeconomic discrepancies identified in this study illustrate the underlying structural inequities that influence pandemic outcomes. The higher negative link between older age groups and confirmed cases shows that older people are more likely to adhere to preventive measures. However, the positive association with male gender and the large negative correlation with third gender/others point to gender disparities that must be addressed. Customized interventions that consider gender are critical for ensuring comprehensive pandemic response efforts.

The relationship between income and education level revealed inconsistent results. Notably, middle-income groups may be at a higher risk, whereas people with higher education levels typically have fewer confirmed cases. This discovery emphasizes the preventive function of education, which is due to improved access to health-related information and resources. To address these findings, public health programs should attempt

to remove barriers to education while also providing specialized support to middle-income groups who may face distinct occupational and social risks. Furthermore, discrepancies in confirmed cases across racial and ethnic groups, with Asian, Native Hawaiian or Pacific Islander, and Hispanic/Latino individuals having fewer cases, highlight the need for culturally responsive public health interventions. Such strategies should recognize and address the individual needs and challenges faced by diverse racial and ethnic groups to ensure equitable access to healthcare and effective preventive measures.

The study emphasizes the various components of pandemic readiness and management. To get the best results, it is critical to combine individual-focused measures with institutional support, pay attention to demographic and socioeconomic differences, and distribute credible and balanced information to increase motivation and preparedness across all populations. If these issues are adequately addressed, policymakers will be able to devise more effective and equitable responses to future public health emergencies.

CHAPTER V

CONCLUSION

Limitations

The research has several limitations, including constraints on the data sources. For instance, the primary data sources, the National Household Survey (NHS), rely on self-reported data, which can be influenced by recall bias and social desirability bias. Furthermore, the data from the CDC and NHS is limited to specific times. The pandemic health conditions and responses have evolved, which may not be fully captured in the datasets used.

The study examines county-level data, which may not be representative of all regions in the United States. The variations in local policies, healthcare infrastructure, and community behavior could affect the results. Additionally, there may be unmeasured important variables, such as media influence, local health policies, and political climate, which could impact the relationships being investigated.

Therefore, these limitations should be carefully considered to provide a balanced view of the study's contributions and the caution needed when interpreting the findings.

Conclusion

This study provides substantial information about the intricate connections between pandemic preparedness, perceptions, motivation, and a range of demographic and socioeconomic variables in the context of the COVID-19 pandemic at the county level in the United States. Overall, the findings demonstrate that heightened levels of preparedness and effective risk communication are linked to lower COVID-19 positivity rates. These results underscore the importance of readiness and public health measures for reducing the impact of pandemics.

Based on these findings, it is recommended that public health initiatives focus on enhancing public awareness and preparedness. By educating communities on the importance of readiness and offering clear, practical measures, the number of infections can be significantly minimized. Effective risk communication is vital; thus, public health officials must develop coherent messages that accurately convey risks and essential precautions without triggering unnecessary panic. It is critical to implement customized interventions that consider regional disparities and socioeconomic differences to guarantee that preparedness efforts are fair and effective across diverse communities.

Ensuring equitable access to resources and information is of utmost importance in addressing the structural inequities that affect pandemic outcomes. To achieve this, policymakers and healthcare authorities must prioritize providing such access, particularly to underrepresented and vulnerable populations. Encouraging preparedness activities and supporting community-based initiatives can significantly increase motivation to prepare,

improving overall readiness. Moreover, public health measures should aim to eliminate barriers to education and offer targeted support to middle-income groups that may face unique occupational and social risks. Implementing culturally responsive interventions that recognize and address the needs of different racial and ethnic groups is essential for ensuring equitable access to healthcare and effective preventive measures. By following these recommendations, we can enhance community resilience and strengthen the capacity to respond to future public health emergencies.

REFERENCES

Abayneh, Aschalew, Sileshi Demelash Sasie, Fantu Mamo Aragaw, Muluken Azage, Selamawit Mengesha, and Mark Spigt. 2022. “Community Participation for COVID-19 Pandemic Preparedness and Response: A Systematic Revie.”

Adams, Rachel M., David P. Eisenman, and Deborah Glik. 2019. “Community Advantage and Individual Self-Efficacy Promote Disaster Preparedness: A Multilevel Model among Persons with Disabilities.” *International Journal of Environmental Research and Public Health* 16(15):2779. doi: 10.3390/ijerph16152779.

Alexander, David (David E.). n.d. “Confronting Catastrophe : New Perspecitives on Natural Disasters.” *(No Title)*.

Azad, M. Abul Kalam, M. Salim Uddin, Sabrina Zaman, and Mirza Ali Ashraf. 2019. “Community-Based Disaster Management and Its Salient Features: A Policy Approach to People-Centred Risk Reduction in Bangladesh.” *Asia-Pacific Journal of Rural Development* 29(2):135–60. doi: 10.1177/1018529119898036.

Basolo, Victoria, Laura J. Steinberg, Raymond J. Burby, Joyce Levine, Ana Maria Cruz, and Chihyen Huang. 2009. “The Effects of Confidence in Government and Information on Perceived and Actual Preparedness for Disasters.” *Environment and Behavior* 41(3):338–64. doi: 10.1177/0013916508317222.

Bearman, Gonzalo, Rachel Pryor, Rebecca Vokes, Kaila Cooper, Michelle Doll, Emily J. Godbout, and Michael P. Stevens. 2020. “Reflections on the COVID-19 Pandemic in the USA: Will We Be Better Prepared next Time?” *International Journal of Infectious Diseases* 96:610–13. doi: 10.1016/j.ijid.2020.05.059.

Bostrom, Ann, Gisela Böhm, Adam L. Hayes, and Robert E. O’Connor. 2020. “Credible Threat: Perceptions of Pandemic Coronavirus, Climate Change and the Morality and Management of Global Risks.” *Frontiers in Psychology* 11. doi: 10.3389/fpsyg.2020.578562.

Boyce, Matthew R. 2023. “State-Level Public Health Preparedness Indices as Predictors of COVID-19 Mortality Outcomes: Results from the United States of America in 2020.” *Frontiers in Epidemiology* 3. doi: 10.3389/fepid.2023.1229718.

Brewer, Noel T., Gretchen B. Chapman, Frederick X. Gibbons, Meg Gerrard, Kevin D. McCaul, and Neil D. Weinstein. 2007. "Meta-Analysis of the Relationship between Risk Perception and Health Behavior: The Example of Vaccination." *Health Psychology* 26(2):136–45. doi: 10.1037/0278-6133.26.2.136.Breznau, Nate. 2021. "The Welfare State and Risk Perceptions: The Novel Coronavirus Pandemic and Public Concern in 70 Countries." *European Societies* 23(sup1):S33–46. doi: 10.1080/14616696.2020.1793215.

Brody, Samuel D., Sammy Zahran, Arnold Vedlitz, and Himanshu Grover. 2008. "Examining the Relationship Between Physical Vulnerability and Public Perceptions of Global Climate Change in the United States." *Environment and Behavior* 40(1):72–95. doi: 10.1177/0013916506298800.

Carlton, Stuart J., and Susan K. Jacobson. 2013. "Climate Change and Coastal Environmental Risk Perceptions in Florida." *Journal of Environmental Management* 130:32–39. doi: 10.1016/j.jenvman.2013.08.038.

Çoban, Büşra Nur, and Ebru İnal Önal. 2022. "Determination of Health Workers' Perceptions of the Disaster Management Process and Gender Inequality: The Case of a State Hospital in Turkey." *International Journal of Emergency Services* 12(2):186–96. doi: 10.1108/IJES-08-2022-0044.

Cohen, Odeya, Alaa Mahagna, Asmaa Shamia, and Ortal Slobodin. 2020. "Health-Care Services as a Platform for Building Community Resilience among Minority Communities: An Israeli Pilot Study during the COVID-19 Outbreak." *International Journal of Environmental Research and Public Health* 17(20):7523. doi: 10.3390/ijerph17207523.

Comfort, Louise K. 2005. "Risk, Security, and Disaster Management." *Annual Review of Political Science* 8(1):335–56. doi: 10.1146/annurev.polisci.8.081404.075608.

Davidson, T. M., Price, M., McCauley, J. L., & Ruggiero, K. J. (2013). Disaster impact across cultural groups: Comparison of Whites, African Americans, and Latinos. American journal of community psychology, 52, 97-105.

Dryhurst, Sarah, Claudia R. Schneider, John Kerr, Alexandra L. J. Freeman, Gabriel Recchia, Anne Marthe van der Bles, David Spiegelhalter, and Sander van der Linden. 2022. "Risk Perceptions of COVID-19 around the World." in *COVID-19*. Routledge.

Ferreira, M. L., De Luca, K., Haile, L. M., Steinmetz, J. D., Culbreth, G. T., Cross, M., ... & Mahmoodpoor, A. (2023). Global, regional, and national burden of low back pain, 1990–2020, its attributable risk factors, and projections to 2050: a systematic analysis of the Global Burden of Disease Study 2021. The Lancet Rheumatology, 5(6), e316-e329.

Fowler, James H., Seth J. Hill, Remy Levin, and Nick Obradovich. 2020. "The Effect of Stay-at-Home Orders on COVID-19 Cases and Fatalities in the United States."

Haq, Shah Md Atiqul, and Khandaker Jafor Ahmed. 2020. “Perceptions about Climate Change among University Students in Bangladesh.” *Natural Hazards* 103(3):3683–3713. doi: 10.1007/s11069-020-04151-0.

Hayes, Katie, Peter Berry, and Kristie L. Ebi. 2019. “Factors Influencing the Mental Health Consequences of Climate Change in Canada.” *International Journal of Environmental Research and Public Health* 16(9):1583. doi: 10.3390/ijerph16091583.

Kelly, Claire, Agostino Ferrara, Geoff A. Wilson, Francesco Ripullone, Angelo Nolè, Nichola Harmer, and Luca Salvati. 2015. “Community Resilience and Land Degradation in Forest and Shrubland Socio-Ecological Systems: Evidence from Gorgoglione, Basilicata, Italy.” *Land Use Policy* 46:11–20. doi: 10.1016/j.landusepol.2015.01.026.

Kim, Yujeong, and Mi Young Kim. 2022. “Factors Affecting Household Disaster Preparedness in South Korea.” *PLOS ONE* 17(10):e0275540. doi: 10.1371/journal.pone.0275540.

Knauer, Nancy J. n.d. “The Federal Response to COVID-19: Lessons from the Pandemic.” *HASTINGS LAW JOURNAL* 73.

Kohn, Sivan, Jennifer Lipkowitz Eaton, Saad Feroz, Andrea A. Bainbridge, Jordan Hoolachan, and Daniel J. Barnett. 2012. “Personal Disaster Preparedness: An Integrative Review of the Literature.” *Disaster Medicine and Public Health Preparedness* 6(3):217–31. doi: 10.1001/dmp.2012.47.

Kusumasari, Bevaola, Quamrul Alam, and Kamal Siddiqui. 2010. “Resource Capability for Local Government in Managing Disaster.” *Disaster Prevention and Management: An International Journal* 19(4):438–51. doi: 10.1108/09653561011070367.

Lee, Tien Ming, Ezra M. Markowitz, Peter D. Howe, Chia-Ying Ko, and Anthony A. Leiserowitz. 2015. “Predictors of Public Climate Change Awareness and Risk Perception around the World.” *Nature Climate Change* 5(11):1014–20. doi: 10.1038/nclimate2728.

Levac, Joëlle, Darene Toal-Sullivan, and Tracey L. O`Sullivan. 2012. “Household Emergency Preparedness: A Literature Review.” *Journal of Community Health* 37(3):725–33. doi: 10.1007/s10900-011-9488-x.

Leykin, Dmitry, Mooli Lahad, Odeya Cohen, Avishay Goldberg, and Limor Aharonson-Daniel. 2013. “Conjoint Community Resiliency Assessment Measure-28/10 Items (CCRAM28 and CCRAM10): A Self-Report Tool for Assessing Community Resilience.” *American Journal of Community Psychology* 52(3):313–23. doi: 10.1007/s10464-013-9596-0.

Lowe, Sarah R., Laura Sampson, Oliver Gruebner, and Sandro Galea. 2015. “Psychological Resilience after Hurricane Sandy: The Influence of Individual- and Community-Level Factors on Mental Health after a Large-Scale Natural Disaster.” *PLOS ONE* 10(5):e0125761. doi: 10.1371/journal.pone.0125761.

Meijer, Judith E. M., Anja Machielse, Geert E. Smid, Winnie Schats, and Miek C. Jong. 2023. "The Resilience of Jewish Communities Living in the Diaspora: A Scoping Review." *Frontiers in Psychology* 14. doi: 10.3389/fpsyg.2023.1215404.

Muriuki, Zachary K., Robert Kei Kei, and John Munderu Muchiri. 2022. "Level of Awareness on Disaster Risk Preparedness in Informal Settlements of Nyeri Town, Nyeri County, Kenya." *International Journal of Health Sciences* 5(3):41–63. doi: 10.47941/ijhs.1053.

Ningtyas, Trimurti, Endang Larasati, Hardi Warsono, and Hartuti Purnaweni. 2021. "Optimization of Destana Policies (Resilience Disaster Village) to Improve Community Preparedness for Flood Disaster in Bojonegoro District, Indonesia." *Management and Entrepreneurship: Trends of Development* 1(15):113–26. doi: 10.26661/2522-1566/2021-1/15-08.

Paek, Hye-Jin, and Thomas Hove. 2021. "Information Communication Technologies (ICTs), Crisis Communication Principles and the COVID-19 Response in South Korea." *Journal of Creative Communications* 16(2):213–21. doi: 10.1177/0973258620981170.

Polcarová, Eliška, and Jana Pupíková. 2022. "Analysis of Socially Vulnerable Communities and Factors Affecting Their Safety and Resilience in Disaster Risk Reduction." *Sustainability* 14(18):11380. doi: 10.3390/su141811380.

Rafii, Aminkun Imam. 2021. "Harmonization of Disaster Management Policies in Disaster-Prone Areas (Study of Policy Implementation Based on Regional Regulation of East Java Province Number 3 of 2010 on Disaster Management in East Java Province, Indonesia)." *International Journal of Advances in Scientific Research and Engineering* 07(08):01–16. doi: 10.31695/IJASRE.2021.34051.

Rahayu, Harkunti Pertiwi, Devina Khoirunnisa, Deri Syaeful Rohman, Andi Idham Asman, and Benedictus Kombaitan. 2021. "What Are the Essentials for Community Resilience against Recurring Floods?" *International Journal on Advanced Science, Engineering, and Information Technology* 11(6):2233. doi: 10.18517/ijaseit.11.6.14208.

Ramsbottom, Anna, Eleanor O'Brien, Lucrezio Ciotti, and Judit Takacs. 2018. "Enablers and Barriers to Community Engagement in Public Health Emergency Preparedness: A Literature Review." *Journal of Community Health* 43(2):412–20. doi: 10.1007/s10900-017-0415-7.

Rana, Irfan Ahmad, Saad Saleem Bhatti, Atif Bilal Aslam, Ali Jamshed, Junaid Ahmad, and Ashfaq Ahmad Shah. 2021. "COVID-19 Risk Perception and Coping Mechanisms: Does Gender Make a Difference?" *International Journal of Disaster Risk Reduction* 55:102096. doi: 10.1016/j.ijdrr.2021.102096.

Serrao-Neumann, Silvia, Florence Crick, and Darryl Low Choy. 2018. "Post-Disaster Social Recovery: Disaster Governance Lessons Learnt from Tropical Cyclone Yasi." *Natural Hazards* 93(3):1163–80. doi: 10.1007/s11069-018-3345-5.

Setiadi, Setiadi, Asep Sumaryana, Herijanto Bekti, and Dedi Sukarno. 2023. “Public Policy Communication for Flood Management.” *The Journal of Society and Media* 7(2):300–312. doi: 10.26740/jsm.v7n2.p300-312.

Shigemoto, Yuki. 2021. “Influence of Community-Level Factors on Relation between Community Resilience and Posttraumatic Growth.” *Traumatology* 27(3):326–32. doi: 10.1037/trm0000285.

Stough, L. M., & Kelman, I. (2018). People with disabilities and disasters. Handbook of disaster research, 225-242.

Syadzily, Tb. Ace. 2020. “Analysis of Government Policy on Disaster Management System.” in *Proceedings of The International Conference on Environmental and Technology of Law, Business and Education on Post Covid 19, ICETLAWBE 2020, 26 September 2020, Bandar Lampung, Indonesia*. Bandar Lampung, Indonesia: EAI.

Thywissen, Katharina. 2006. *Components of Risk: A Comparative Glossary*. Bonn: United Nations University Institute for Environment and Human Security.

VanDevanter, Nancy, Perri Leviss, David Abramson, Joyce Moon Howard, and Peggy A. Honoré. 2010. “Emergency Response and Public Health in Hurricane Katrina: What Does It Mean to Be a Public Health Emergency Responder?” *Journal of Public Health Management and Practice* 16(6):E16. doi: 10.1097/PHH.0b013e3181d8bbb2.

van der Weerd, Willemien, Daniëlle RM Timmermans, Desirée JMA Beaujean, Jurriaan Oudhoff, and Jim E. van Steenbergen. 2011. “Monitoring the Level of Government Trust, Risk Perception and Intention of the General Public to Adopt Protective Measures during the Influenza A (H1N1) Pandemic in the Netherlands.” *BMC Public Health* 11(1):575. doi: 10.1186/1471-2458-11-575.

Xu, Dingde, Wenfeng Zhou, Xin Deng, Zhixing Ma, Zhuolin Yong, and Cheng Qin. 2020. “Information Credibility, Disaster Risk Perception and Evacuation Willingness of Rural Households in China.” *Natural Hazards* 103(3):2865–82. doi: 10.1007/s11069-020-04106-5.

Xu, Dingde, Linmei Zhuang, Xin Deng, Cheng Qing, and Zhuolin Yong. 2020. “Media Exposure, Disaster Experience, and Risk Perception of Rural Households in Earthquake-Stricken Areas: Evidence from Rural China.” *International Journal of Environmental Research and Public Health* 17(9):3246. doi: 10.3390/ijerph17093246.

BIOGRAPHICAL SKETCH

Jessy Rugeyo earned his Master of Arts in Disaster Studies with a focus on Public Health from the University of Texas Rio Grande Valley in August 2024. He also holds a bachelor's degree in healthcare management (Public Health), with a focus on Global Perspectives, awarded in December 2021 from Kepler College Rwanda with affiliation to Southern New Hampshire University. Since Fall 2022, Jessy has been working as a Graduate Research Assistant in the Sociology Department at the University of Texas Rio Grande Valley. He has also collaborated with the Rwanda Biomedical Center, playing a key role in the vaccination program during the global fight against the COVID-19 pandemic. His research interests lie at the intersection of Public Health, Disaster and Emergency Management, Medical Sociology, Social Epidemiology, Demography, Population Health, and Data Analytics. In Fall 2024, Jessy will join the University of Texas at San Antonio to pursue a Ph.D. in Applied Demography, focusing on health disparities.

Contact Information

Jessyrugeyo123@gmail.com