
Electronic Theses and Dissertations, 2020-

2022

Exploring the Response to COVID-19 in Puerto Rico

Richard Colon
University of Central Florida

 Part of the [Community-Based Research Commons](#)

Find similar works at: <https://stars.library.ucf.edu/etd2020>

University of Central Florida Libraries <http://library.ucf.edu>

This Masters Thesis (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations, 2020- by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

STARS Citation

Colon, Richard, "Exploring the Response to COVID-19 in Puerto Rico" (2022). *Electronic Theses and Dissertations, 2020-*. 1185.

<https://stars.library.ucf.edu/etd2020/1185>



Exploring the Response to COVID-19 in Puerto Rico

by

RICHARD G. COLÓN
B.A. University of Central Florida, 2020

A thesis submitted in partial fulfillment of the requirements for the degree
Master of Applied Sociology
in the department of Sociology
in the College of Sciences
at the University of Central Florida
Orlando, Florida

Summer Term
2022

© 2022 Richard G. Colón

ABSTRACT

In recent years Puerto Rico has faced a series of unfavorable events including financial turmoil, massive population loss, earthquakes, and droughts. These events had significantly impacted its resources and capacity to confront a major public health crisis. As such, Puerto Rico was expected to poorly manage the ongoing pandemic. Despite this, nearly all data surrounding the COVID-19 pandemic in Puerto Rico has indicated the contrary. The purpose of this study was to explore and understand the COVID-19 response in Puerto Rico. The Conservation of Resources theory guided the analysis of resource consumption and management of the Puerto Rican government and community level during the year of 2021 which is when most of the disbursement of the COVID-19 vaccines occurred. A Discourse Analysis was used to investigate various national news organizations and wire feeds to acquire information surrounding the reasonings of Puerto Rico's success. The analysis conducted resulted in four themes that explain the reasoning behind the success of Puerto Rico throughout the pandemic; the themes included *Distrust in Government*, *Government Involvement*, *Depoliticization* and *Community Involvement*. The results indicated that individual and community involvement of the people, their efficient usage of the resources gained by the federal government and nonprofit organizations, as well as their own resources of resilience and social networks, created the success that Puerto Rico has seen throughout the COVID-19 pandemic.

ACKNOWLEDGMENTS

Thank you to my family for providing support and for continually pushing me to keep moving forward throughout this project. Thank you, Dr. Rivera, for guiding me down the correct research path and for providing support and thank you to my committee for supporting and helping me throughout my thesis.

TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION.....	1
CHAPTER TWO: BACKGROUND LITERATURE	4
Effects of Natural Disasters in Puerto Rico	4
Infrastructure	6
Puerto Rican Healthcare System.....	7
Colonialism.....	10
Health Disparities of Puerto Rican Residents	15
CHAPTER THREE: THEORETICAL ARGUMENT.....	18
Conservation of Resources Theory	18
CHAPTER FOUR: CURRENT STUDY	22
CHAPTER FIVE: METHODOLOGY	23
Databases.....	23
Discourse Analysis.....	27
CHAPTER SIX: RESULTS	29
Vaccine Distribution.....	29
Emergence of Overarching Themes.....	32
Distrust in Government.....	33
Government Involvement.....	36
Depoliticization	40
Community Involvement	43
CHAPTER SEVEN: DISCUSSION.....	47
CHAPTER EIGHT: FUTURE RESEARCH/LIMITATIONS.....	55
REFERENCES.....	58

CHAPTER ONE: INTRODUCTION

How can a historically disadvantaged U.S. territory be more successful at preventing the spread of COVID-19 than the U.S. itself? Puerto Rico is a relatively small island and a territory of the U.S. since 1898, from a colonial status since the arrival of the Spaniards in 1493 (Discover Puerto Rico 2022). In recent years Puerto Rico has faced a series of natural disasters, political turmoil, and perceived general mistreatment from US federal authorities toward the island and its inhabitants. Worsening conditions for the island have resulted in a mass exodus of people because of the island's unfavorable economic conditions over the course of several decades. Currently there are more than 3.2 million people who live on the island, however, over the last decade the population decreased from 3.8 million, the U.S. is currently at 331,449,281 (U.S Census Quick Facts Puerto Rico 2022; U.S. Census U.S. Profile 2022). For Puerto Ricans living on the island , only about 76.5% of the population has a high school degree or higher whereas in the U.S. it is 88.5%; only 25.9% of the population have a bachelor's degree or higher in Puerto Rico, in the U.S. it is 32.9% (U.S Census Quick Facts Puerto Rico 2022). Over 43.5% of the island residents live below the federal poverty guidelines, which correlates with the median household income of \$21,058, however, the U.S. poverty rate is at 12.8% and has a median household income of \$64,994. (U.S Census Quick Facts Puerto Rico 2022; U.S. Census U.S. Profile 2022).

The rising the cost of living and fiscal austerity measures by the government of Puerto Rico in response to bankruptcy makes it difficult for the average citizen to take care of basic necessities such as food, utilities, rent, and others. The population also faces a disadvantage in those who are uneducated/educated versus the United States. Puerto Rico is also facing a severe

energy crisis. Many homes and pueblos (towns) throughout the city are continually facing power outages as a result of underdeveloped and poorly maintained power plants (Kwasinski, Andrade Castro-Sitiriche, and O’Neill-Carillo 2019). The significance of these statistics/findings further illustrates the challenges that Puerto Rico continue to experience.

However, since vaccines have been available, the Puerto Rican people have managed to be ahead of the curve in terms of its disbursement of the vaccine and general prevention of COVID-19 and all of its variants, despite a recent wave this past holiday season. For example, Puerto Rico has a large percentage of fully vaccinated (83.6%) of the population, whereas compared to the United States overall who are at 67% (World Health Organization 2021; CDC COVID Data Tracker 2022). Alongside this, 95.0% of the Puerto Rican population on the island has received at least 1-dose of any of the vaccine types (Pfizer, Moderna, etc.) (Health Data COVID-19 State Profile Report – Puerto Rico 2022). These high rates of vaccination have also allowed for the mortality rate on the island to be much lower than other parts of the U.S at only 0.577% of confirmed COVID-19 cases, whereas in the U.S. it is 1.152% (John Hopkins Coronavirus Resource Center 2022). The significance of that number is not to discredit the individual lives of those who die; however, it is meant to show the success of Puerto Rican prevention regarding the spread of COVID-19.

The purpose of this thesis was to explore how and why Puerto Rico is successfully leading the nation in COVID-19 prevention despite being a historically disadvantaged U.S. territory. This was a case study on the island and its inhabitants. To ensure that different aspects of the pandemic are covered when regarding Puerto Rico and vaccinations, the researcher has not only analyzed academic articles, but also news articles and wire feeds regarding the Puerto Rican

experience during the pandemic and policies from the Puerto Rico government website. The Conservation of Resources Theory was used to analyze the covid experience and response in Puerto Rico from a unique and sociological perspective. The importance of the theory is explained further down. The case study time frame begins from January 2021 to December 2021.

CHAPTER TWO: BACKGROUND LITERATURE

Effects of Natural Disasters in Puerto Rico

The effects of natural disasters in Puerto Rico affects multiple facets, including differing infrastructural issues (electrical, water, supplies, communication, highway, and transit systems, etc.) (Martín, Cutter, Li, Emrich, and Mitchell 2020). Hurricane María struck Puerto Rico in 2017 and was one of the worst natural disasters to hit the island in its history. It was a category 5 hurricane just before striking the island. The gravity of the aftereffects was seemingly worse than initially perceived as María initially caused nearly \$102 billion in damages to the island (Santos-Lozada, Kaneshiro, McCarter, and Marazzi-Santiago 2020). Puerto Rico's electrical grid had suffered more damage than ever before, and it revealed how weak and outdated the infrastructure of the island was. Many of the residents experienced outages or an inconsistent amount of power for 3 months, some even up to 6 months and beyond (Céspedes-Pérez 2018). This is partially contributed to the fact that a significant portion of the islands electrical grid, individual systems and power plants were over half a century old and poorly maintained, many of the systems were running well below 50% efficiency (Kwansinski et al. 2019). The state of the original infrastructure of the island was seemingly bound to collapse amid the threat of any major natural disaster. To seemingly help remedy these issues, a new company was contracted by the U.S to help solve these prevailing issues. Luma energy was meant to solve the distribution problem, however, it seems that they are only delaying the restoration of the power grid (Martin NPR 2021).

This was not the first time that Puerto Rico suffered a significant and prolonged power outage because of a Hurricane. The same event (on a smaller scale) had occurred after Hurricane Hugo struck the island in 1989 causing about \$3 billion in damages. However, Puerto Rico was able to recover as the outages only lasted about a week and a half (Santos-Lozada 2020). Hugo caused over 30,000 people to be homeless and left over 35 pueblos without power, further indicating the extremely poor state of the electrical infrastructure (Santos-Lozada 2020).

The plethora of earthquakes over time also gave way to the island and its residents suffering further. The most recent significant earthquake in Puerto Rico occurred on January 7th, 2020, the magnitude of the quake was at 6.4 on the Richter Scale. Leaving thousands without power for several months and the aftershocks of this earthquake left the island more susceptible to a series of smaller earthquakes of varying magnitude for an extended period of time (The New York Times 2021). Providing yet another reason for many of Puerto Rico's residents to not trust their electrical grid, private companies such as Luma Energy and the government. These groups continue to promise that the state of Puerto Rico will get better, however, to no avail, thus creating a deep mistrust within Puerto Ricans (Pérez 2018; New York Times 2021).

Natural disasters are only one of the many issues the island face, the most significant being the serious economic downturns that many of the resident's face in the aftermath of a natural disaster. As a result of these natural disasters and because of the varying issues with the Puerto Rican government and infrastructure, these events revitalized the mass population exodus that Puerto Rico had once faced before. The initial decline began in the first decade of the 21st century, a study conducted by The Puerto Rico Institute of Statistics (2021) indicated a negative net migration flow within those years. A significant spike of those exiting the island at the

beginning of the first half of 2018 emerged amid the severity of the destruction of the island (Santos-Lozada et al. 2020). These data are further reinforced by Martín et al. (2020) through the analysis of a sample of 1,231 Puerto Rican geotagged Twitter users. "...76.3% of the displaced left the island within the first 6 weeks after María." (Martín et al. 2020:16). Although there was a significant return rate of 54.6%, those that left the island still showed an increase in negative migration to the island of about 3.8% (Martín et al. 2020). Although the data provided occurred in 2018, the general downtrend remains the same; just in 2021 alone the population reduced to 3,263,584 residents, whereas in 2010 it was 3,725,789. Comparing that to 2020 from 2021 there was an estimated decrease of 0.7% in the population from 3,285,874 to 3,263,584 residents (U.S. Census Quick Facts Puerto Rico 2022). Indicating that in just 10 years there was a decrease of an estimated 12%, or 88% of the original population amount in 2010 had remained on the island in 2021. Marking a persistent and significant increase in the exodus of the residents of the island not only within the past decade but nearly 5 years after Hurricane María and 2 years after the 6.4 magnitude earthquake that had occurred on the island. These environmental events were one of the reasons why many residents left the island.

Infrastructure

Many portions of Puerto Rico's infrastructure were poorly maintained. For example, the electrical grid if struck by some sort of mild wind damage, would result in several outages across several areas on the island (Salas-Wright et al. 2021). This suggests the disadvantageous state that many Puerto Ricans have faced for several decades. Lopez-Cardalda et al. (2018) stated that the majority of the electrical production takes place south of the island, whereas the majority of

the consumption takes place in the north. Indicating that there are several different types of terrain that the Puerto Rico Electric Power Authority (PREPA, the power company responsible for the generation of electricity on the island) initially had to traverse. The worst being the crossing of several mountainous areas which indicates that it is already difficult to access and keep up the maintenance of power lines and other parts of the grid throughout the island (Lopez-Cardalda et al. 2018). The persistent economic issues, either through the massive debt of \$70 billion that the island had accumulated (MSNBC 2022), or through the limited funding the island and organization received, made the grid run under capacity regardless of the required output the northern sections of the island needed (Kwasinski et al. 2019). Before Hurricane María struck, the island's grid was producing 5,839 MW (Megawatt); in the aftermath of the natural disaster, the grid, transmission, and communication lines were reduced by more than 80% (NPR 2021). Further displaying the issues that predated a major natural disaster such as Hurricane María. According to the research conducted by Lopez-Cardalda et al. (2018) only 30% of the island's communication towers were functioning, marking yet another significant prevention and disadvantage that the Puerto Rican citizens faced in the aftermath of a major natural disaster.

Puerto Rican Healthcare System

The damage that the electrical grid sustained also impacted the healthcare system. The performance of Puerto Rico's healthcare system varies greatly on the presence of a natural disaster, the socioeconomic status of the island's inhabitants, funding from the U.S. government and the debt the government has collected over the preceding decades. Roman (2015) states that the healthcare system accounts for 20% of the general budget for Puerto Rico (at the time of the

study). Puerto Rico currently has a 43.5% poverty rate and has a rate of 9.6% of the population that does not have health insurance (U.S. Census Puerto Rico Quick Facts 2022); creating a rift in the disbursement of that initial 20% of the Puerto Rican budget (Roman 2015). Contributing to this fallout in the Puerto Rican healthcare system is the lack of funding that the island receives. The federal funding that Puerto Rico receives is significantly lower than that of the states on the mainland. For example, Puerto Rico, (as well as other U.S. territories) receive a fixed amount of funding in the form of fixed block grants; whereas the mainland receives funding based on the income received per capita in comparison to the U.S. (Center on Budget and Policy Priorities 2019). Thus, greatly increasing the amount of funding the states receive when in comparison to Puerto Rico. For example, it was found that Puerto Rico is estimated to spend only \$2,144 on Medicaid funding per person enrolled, which is significantly less than even the lowest-spending state at \$3,342, which is far lower than the spending of an average state at \$6,673 (Center on Budget and Policy Priorities 2019). The low amount of spending is directly correlated to how little funding Puerto Rico receives. U.S. territories have a different set of rules that apply to them when regarding the Medicaid program as well.

Similar to the fixed block grants that Puerto Rico receives, the same applies for the immensely reduced amount of funding and eligibility that Puerto Rico is able to receive and offer to its residents and physicians (Center on Budget and Policy Priorities 2019). Puerto Rico receives nearly \$400 million in funding for Medicaid, while each state in the U.S. receives close to \$2.5 billion (Roman 2015). The difference is staggering. Poor funding also determines the availability of funding that emergency response/preparedness programs receive on the island. When Hurricane María struck, and the subsequent storms and earthquakes, the healthcare system was not able to keep up with the increase in demand for emergency services (Céspedes-Pérez

2018). Rodríguez-Madera et al. (2021) states that there was no apparent disaster management plan in place to try and keep the damages and deaths to a minimum in the aftermath of Hurricane María. Once the limited/reduced funding that Puerto Rico receives is used (\$400 million), the administration then needs to rely on their own budget to try to fill in the gaps (nearly \$2.5 billion needs to be generated by the Puerto Rican government to match the needs of those on the island as previously mentioned), creating a plethora of gaps in the healthcare system and budget cuts (Roman 2015).

Generally, Puerto Ricans on the island are at a higher risk of chronic diseases partially due to the healthcare system and household/living conditions. According to (Lafarga, Previdi, and Velez 2020) four overarching reasons were attributed to the worsening health of the citizens in Puerto Rico:

- (1) the privatization of the public health care system and the rise of managed care, (2) the aging of the Puerto Rican population combined with high rates of poverty and some chronic health conditions, (3) the economic instability and low private sector tax base of the commonwealth and (4) the high cost of living in Puerto Rico, poorly coordinated care, difficulty receiving referrals and long wait times. (3).

Two of the reasonings behind the lowering standards of health in Puerto Rico can be directly correlated to the lack of funding they receive; long wait times and difficulty receiving referrals and the high rates of poverty. Lafarga Previdi and Vélez (2020) also indicated a sharp decline in the number of doctors and physicians present on the island. Over the past decade the number of doctors present on the island decreased by 36%, many leaving to move to the U.S. Many of these doctors were contracted with Medicare and Medicaid programs and MCOs (managed care organization) to work with many of those on the island who were insured by these programs. It

suggests that a lack of funding created a hinderance in the potential for these doctors to earn money and for them to be able to properly take care of their patients (Behling-Hess 2020).

Colonialism

Colonialism is a major sociohistorical and socio-structural determinant of health in a variety of countries and territories. A prime example being the U.S. territory/commonwealth of Puerto Rico. Colonialism, specifically western colonialism, is rooted in the idea of racial or national superiority (Meghji 2021). Colonialism is also defined as “the practice by which a powerful country controls another country or other countries.” (Oxford Learner’s Dictionaries 2022). Spanish colonialism was present for nearly 400 years before the U.S took over Puerto Rico, starting in 1493 and lasting all the way until 1898 (Pérez Ramos, Garriga-López and Rodríguez-Díaz 2022). Creating centuries worth of “...extractive economies, forms of unequal citizenship, and extreme labor exploitation...,” among the Puerto Rican people before the U.S. stepped in (Pérez Ramos et al. 2022:305). The United States had acquired Puerto Rico from Spain in 1898 after the Spanish-American war, however, they were not granted U.S. citizenship until 1917. To this day, Puerto Ricans that reside on the island, are not formally allowed to vote in U.S. presidential elections, unless they live on the mainland. Despite the island being only a territory for the U.S., the U.S. Congress still supersedes any laws of policies that the island may create, placing them under the foot of the United States power (ThoughtCo. 2021).

Pérez Ramos, Garriga-Lópex, and Rodríguez-Díaz (2022) argue that colonialism is a socio-structural determinant of health within Puerto Rico; contributing significantly to the severe issues within the health care system that has created this “contemporary health crisis” for the

island. (Peréz Ramos et al. 2022). As noted previously, Puerto Rico only has limited access to resources (federal funding, resource allocation for life-saving treatments and equipment) as a result of the privatization of health care and austerity policies that have been in place for decades. The variety of issues that Puerto Rico currently faces created by colonialism is a result of “forced dependency” and a lack of access to resources that can help alleviate any stress on the population because of a failing infrastructure (Peréz Ramos et al. 2022). Puerto Rico’s health care system reflected a similar pattern to the U.S. in the 1970s and 1980s through the move to favoring the privatization of the health care system as a means of improving the potential services that it could provide. Peréz Ramos et al. (2022) states that

Puerto Rican government efforts to facilitate political assimilation through public policy reform reflect colonial dynamics that induced Puerto Rican institutions to conform to US efficiency standards. Instead of a dignified and effective public system, health care in Puerto Rico has become a market commodity under the colonial regime of US health capitalism. These changes have aggravated health inequity in Puerto Rico, especially in marginalized and under resourced communities, and resulted in ineffective public health. (306).

Signifying the constant meddling that the U.S. has enforced unto Puerto Rico; these responses by the government have continually forced Puerto Rico into worsening conditions medically. The effects of colonialism also bleed into racist tendencies held by the U.S. For example, from the forced sterilizations of the Puerto Rican population in the 1960’s and up to the extremely poor response to the destruction caused by Hurricane María in 2017 and the 6.4 magnitude earthquake in January of 2021 (Peréz Ramos et al. 2022).

However, the true fall of what Puerto Rico is today did not begin until the 1990s when the U.S. changed certain policies resulting in the destabilization of Puerto Rico’s economy and the beginning of the debt crisis on the island (Cabán 2018). The two significant policy changes

created by the U.S. for Puerto Rico first started with the demilitarization of Puerto Rico and ended with a change in a federal tax law that allowed for the “industrialization-by-invitation” to dissipate on the island, further collapsing the economy (Cabán 2018). This in turn forced the Puerto Rican government to begin enacting policies deemed risky for the island because of the already unstable nature of the economy, which once again forces dependency unto the Puerto Rican population by the United States Government. PROMESA (Puerto Rico Oversight, Management and Economic Stability Act) was a program created by the U.S. and Puerto Rico in an effort to help pull Puerto Rico out of its debt and bankruptcy, however, it seemingly created the opposite effect, meaning that the undertones of the PROMESA act was solely in the interests of having the U.S. government have sole control of the Puerto Rican economy (Cabán 2018). Puerto Rico is inherently a colony created by Spain and adopted by the U.S. for the sole purpose of economic gain. To further exemplify Puerto Rico’s colonial relationship with the United States, Cabáan (2018: 171) states that

Colonialism promotes, as well as impedes, capitalist expansion (Cabán 2015). In the case of Puerto Rico, some of the most notable impediments include the inability to control monetary policy and lack of authority to set tariffs or negotiate trade agreements.

The significance of this statement is through the depiction of the control and dependency that the U.S. has over Puerto Rico, going so far as to controlling what kind of companies can join the Puerto Rican economy.

Puerto Rico has been under U.S. control through its annexation and the Jones Act for over 100 years. The initial “purpose” of the Jones Act was to provide the residents of Puerto Rico with a collective naturalization that would guarantee U.S. citizenship. However, through this act, an ulterior motive of ruling over Puerto Rico without granting statehood or full status

citizenship was enacted (Venator-Santiago and Meléndez 2017). Without outright declaring it, this act allowed the U.S. to claim Puerto Rico without fully actualizing it as a part of the United States, essentially creating a pseudo colony. The Jones Act and other subsequent policy changes created several limitations on what the island can do with its purchasing power, voting statuses for the island's inhabitants and whether the path to full statehood would be actually guaranteed (recent supreme court rulings indicate the Puerto Rico will continue to remain with its territorial status (Venator-Santiago and Meléndez 2020). Initially the Jones act (and in conjunction with statements prior) created a sense of segregation among the population on the mainland, specifically Anglo-American whites, and with Puerto Rican citizens, creating a notion that Puerto Ricans are “other” when regarding the U.S. Similar feelings were experienced among the other populations within the other U.S. territories. There is this notion that disadvantaged groups (e.g., Puerto Ricans) do not place any value or importance onto more “western ideology,” thus indicating that situation that many are placed in, in the aftermath of a significant natural disaster may be deserved or forced upon them (either through temporary homelessness or poverty) because of their lack of emphasis on certain cultural traits (Burgos, Rivera and Garcia 2022).

There are a few reasons for the creation of the Jones Act, the majority surrounding economic prosperity and national “security.” According to Grennes (2018) the Jones Act enforces the use of domestic shipping (the use of U.S. shipping vessels) over foreign-born vessels. The purpose is to try to protect the U.S.’s interests. However, this practice creates a major hindrance on the economies of U.S. territories and noncontiguous states. For example, the Jones Act will create significant net losses for Puerto Rico because they are unable to use cheaper, foreign suppliers and shipping vessels (Grennes 2018). Puerto Rico is then forced to use U.S. approved vessels that are generally much smaller and more expensive to use, creating a sort

of blockade on where and who they can import goods from. Thus, fabricating a monopoly by domestic shipping companies. It has also been noted that many companies have been known to fix the rates of shipping. For example, Grennes (2018:26) states that

According to a study from the Federal Reserve Bank of New York, shipping a container from the US East Coast to Puerto Rico cost \$3,063, but shipping the same container to nearby Santo Domingo, Dominican Republic, cost only \$1,504, and to Kingston, Jamaica, only \$1,607.

The Jones Act not only creates increased prices for imports in Puerto Rico, but any exports that the Puerto Rican administration decides to partake in, will receive significantly less for those exports. Resulting in Puerto Rico having to import from other places like Canada (Grennes 2018). Puerto Rico and the other U.S. territories have tried to either repeal or reform the Jones Act, however, the U.S. Supreme Court has yet to vote in favor of either, deeming the Act seemingly fair because of the islands status as a territory. However, regardless of whether the act is appealed, the overall infrastructure, in this case major roads and highways, still create negative imbalances on how efficient the goods that are imported to the ports of Puerto Rico can be distributed to the rest of the island. According to Carey (PBS 2017) at the time of the article being written and because of the ripple effects of Hurricane María and the continuous line of earthquakes, distribution of the piling shipping containers to the rest of the island had become very difficult; the outages across the island does not contribute to the potential positive impact that a well-maintained infrastructure does have. However, the increase in shipping to the island by foreign vessels at the time was contributed to the administration, (Trump administration) temporarily waiving the Jones Act. Implying the possibility that not only can the act be repealed but the significant boost that the repeal can provide for the economy. Further still, the Jones Act continues to rule over Puerto Rican shipping.

Health Disparities of Puerto Rican Residents

There are several health disparities that Puerto Rican citizens face when compared to the U.S. that can be attributed to socioeconomic and political circumstances that can and have created serious drawbacks for the Puerto Ricans. Generally, Puerto Ricans fare worse in health when compared to other racial and ethnic groups and whites overall (Burgos et al. 2022). Puerto Ricans in a study reported lower rates of health and wellness over differing health circumstances including diabetes, hypertension, asthma, and higher levels of obesity (Burgos et al. 2022). More specifically, at the time, although this number has seemingly grown, Puerto Rican children experience higher rates of asthma when compared to other racial and ethnic groups at 19.2% (ATS 2012). Puerto Ricans are significantly more likely to have asthma because of ancestry and there is a significant history of lung disease and COPD (chronic obstructive pulmonary disease) (ATS 2012). Perinatal care in Puerto Rico is significantly worse when compared to the United States despite using nearly the same system. A recent study has stated that perinatal mortality rates are considerably higher than those on the mainland (Horan, Cheyney, Piovanetti and Caldari 2021). According to the authors of this study, the main factors that can be attributed to this failing are “a high preterm birth (PTB) rate relative to both the US and other Caribbean countries and an elevated cesarean birth rate” (Horan et al. 2021:2). Puerto Rico also experiences high rates of institutionalized racism and poverty; both are high indicators that determine how well off a certain population will fare in comparison to another that does not have higher rates of those variables.

Some of these health disparities can be attributed to certain racial ideals such as institutionalized racism, cultural discrimination, and segregation (Burgos et al. 2022). For

example, health disparities vary greatly among Puerto Ricans of different skin color because of colorism. A recent study has indicated that: (Caraballo-Cueto and Godreau 2021:930-933)

Our results for Puerto Rico show that approximately 202,817 dark-skinned individuals in Puerto Rico reported worse general health status than the 425,415 very light-skinned individuals who lived in the Puerto Rican Archipelago..., more specifically. "...the dark-skinned population reported feeling worse in general health than the light-skinned group. Specifically, the average dark-skinned individual had a 4.4 percentage point higher likelihood of not feeling well in general health than the average light-skinned individual, after controlling for socio-demographic characteristics and access to health insurance.

Thus, creating an instilled notion that one group, depending on the shade of their skin color, and because they generally fare worse economically when compared to groups with lighter skin tones, will experience higher rates of adverse health outcomes, whether reported individually or through data collection by a medical agency or the researchers. Despite these statistics and findings, the researcher is fully aware of the "Hispanic Paradox," being that many Hispanic groups have higher rates of life expectancy when compared to white non-Hispanic or other racial and ethnic groups (Colón-Ramos et al. 2016). However, the paradox is not entirely consistent with Puerto Ricans. Creating a scenario in which it makes it difficult to create a understand of the differing groups under the "Hispanics" umbrella. Similarly, because of differing socio-economic and socio-environmental conditions, mortality rates differ from Puerto Ricans on the mainland versus those on the island, including those initially born on the island and subsequently moving to the mainland. Puerto Ricans who are born and remain on the island have significantly higher rates of all-cause mortality through diseases such as diabetes and pneumonia. Whereas Puerto Ricans on the mainland suffer from more case-specific, chronic health issues such as heart disease and liver disease (Colón-Ramos et al. 2016). However, opposite to the study on colorism, in which women who were dark skinned felt worse and reported worse health conditions

(Caraballo-Cueto and Godreau 2021), Puerto Rican women who resided on the island were less likely to suffer from cause-specific deaths such as cancer or heart disease (Colón-Ramos et al. 2016).

Despite these data, Lopez-Cepero et al. (2017) reported that those on the mainland (particularly in the Massachusetts area) suffer from nutrition-based diseases at higher rates than Puerto Ricans on the island. Although not entirely related to the residents of Puerto Rico (born on the island) the data is somewhat representative of the population overall. For example, nearly half of the participants within the study, and nearly one-fifth of the participants from the island were reported to have poor diets (Lopez-Cepero et al. 2017). These findings signify an important distinction from other studies in that it highlights the certain fundamental differences between Puerto Ricans and other racial/ethnic groups and between Puerto Ricans themselves. Similar to the Carabello-Cueto and Godreau (2021) study it further emphasizes the significant amount of health disparities that not only Puerto Ricans experience, but, between different groups of Puerto Ricans. Further situating the sociohistorical context that Puerto Ricans are a disadvantaged group of people, especially in comparison to other racial/ethnic groups and non-Hispanic whites that reside within the continental U.S.

CHAPTER THREE: THEORETICAL ARGUMENT

Conservation of Resources Theory

The Conservation of Resources theory was first proposed by Dr. Stevan E. Hobfoll in 1989 as a means to understand physical and psychological stressors on refugees through the lens of resource conservation (including water, housing, food availability, etc.) (George 2017). The theory was based on the idea that individuals or groups of people are more likely to try and protect the resources they have, including however little they may be, than to go out and obtain more resources (Halbesleben, Neveu, Paustian-Underdahl and Westman 2014). In other words, individuals are more likely to protect what they value, either through certain objects or preferable conditions/circumstances over exploring new options. A shortage of resources can create a dim view within an individual (either through self-esteem, self-efficacy, or perceivable survivability of a situation they have been dealt) (Halbesleben et al., 2017). Thus, if there are limited resources, individuals or groups of people will work harder to maintain those resources despite a potential increase in the stressors and psychological stressors that the individuals may face (Barnett et al., 2012).

According to Morelli (2010), there are four categories that can be considered resources for individuals; they are objects (usually physical items with an attached meaning, personal characteristics (attributes meant to cope with stress), conditions (certain traits that are desirable for the individual or group), and energies (resources that are used to acquire other, potentially more significant to the individuals' resources). Morelli (2010) adapted the principles of the

Conservation of Resources from Hobfoll (1989), they are dictated as the Gain and Loss principles. These principles are (Morelli 2010:5)

1. Resource loss is more important than resource gain... 2. Individuals with greater resources are more resilient to resource loss and are more capable of gaining back resources... 3. Resources will aggregate with other resources... 4. People strive to obtain and protect resources in all aspects of their lives... 5. More resources will lead to more beneficial well-being outcomes...

As such, the Conservation of Resources theory posits itself as a stress model theory set at understanding how resources are valued and protected by the individual or groups that may be affected by limited or shortages of resources (Morelli 2010). According to the Conservation of Resources theory (COR), individuals protect and/or build resources which they can utilize to overcome their challenges. These resources do not operate independently; rather, they mutually influence each other so that they increase or decrease together in what Hobfoll (2012) has termed “resource caravans” (Betancourt et al., 2015). Resource caravans are understood as groups of resources in which the lack of or possession of a particular resource can be an indicator of a lack of, or possession of resources of similar qualities that are grouped together in the resource caravan (George 2017). In the case of Puerto Rico, because the inhabitants generally have less perceived resources, any resources gained as a result of the ongoing COVID-19 pandemic, may be used with more scrutiny and efficiency to provide the most structured and logical method of distributing the resources (vaccines, medical supplies such as masks, etc.).

The Conservation of Resources theory was used to understand how and why the Puerto Rican population within the island seemingly performed better at preventing the transmission of COVID-19, especially in comparison to a majority of the United States. Similar to the study conducted by George (2017), it may prove useful to analyze and view the Puerto Rican

population in a similar vein to refugees; considering the immense amount of loss of resources the residents of the island suffered. Either through natural disasters, or, through the control of the United States. Thus, Puerto Ricans, out of the fear or stress of losing more resources, may respond in a manner that is more stringent, or protective. Implying a sense of urgency to create solutions that will enable themselves to survive with what little resources they may have. In the case of the recent pandemic, Puerto Ricans will seemingly act in accordance with what they are provided with. For example, in accordance with principle 1 and 4 of the Conservation of Resources theory (Morelli 2010), Puerto Ricans may be more likely to use the vaccines and funds provided to them as a result of the pandemic and recent natural disaster events, they will use them in a more efficient manner because of the psychological stress and inherent belief that they must protect and use these resources. The key factor being that this group of people may be more fearful of losing the resources already granted to them by the U.S. government rather than potentially gaining any new resources. The idea is also present in the fact that Puerto Ricans may be used to operating with little resources because of the low amount of funding that they receive by the U.S government and because of the embargos placed onto them by the Jones Act.

Funding in Puerto Rico has seemingly been of major support as FEMA had granted nearly 24 billion for the island. However, because of the lack of expertise in many agencies on the island, how can Puerto Rico effectively use these resources in a manner that will provide the most effective usage (GAO Puerto Rico Recovery 2021). The Conservation of Resources theory may be able to provide a means of understanding how the Puerto Rican population may react to prevent any further loss of resources through the resources gained. Seemingly, the population may benefit from the gain of resources because of how they may react to the increase when compared to the U.S. According to George (2017) the daily stress the citizens may feel because

of the historically low number of resources they possess, may create a scenario in which they are better able at managing and not allowing any external stressors (politics, financial situations, personal beliefs, government intervention, etc.), aside from the need to survive, will give the Puerto Rican people a better opportunity to function within harsh conditions.

CHAPTER FOUR: CURRENT STUDY

The purpose of this study was to describe how and why Puerto Rico was effective in deterring the COVID-19 pandemic. The study has been formatted in two ways, the background literature is meant to depict the plight of Puerto Rico over time, using five themes including the *Effects of Natural Disasters in Puerto Rico*, *Infrastructure*, *Puerto Rican Healthcare System*, *Colonialism*, and the *Health Disparities of Puerto Rican Residents*. To reiterate, these five themes essentially depicted not only how Puerto Rico is a historically disadvantaged nation, but also why the island should not have succeeded against the ongoing pandemic. The study used one methodological approach to understand the success of Puerto Rico, it is discourse analysis and for the theoretical argument, the Conservation of Resources Theory. The results section then used four themes that are meant to highlight the most important reasons or themes, that determined the success of Puerto Rico, they are *Distrust in Government*, *Government Involvement*, *Depoliticization*, and *Community Involvement*. Each of these themes are based on quotes gathered from various news articles and wire feeds from two major databases, they are ProQuest and Nexis Uni.

CHAPTER FIVE: METHODOLOGY

Databases

Several types of databases and news sites were used to analyze and to understand how and why Puerto Rico was and is more successful at preventing the spread of the Coronavirus (COVID-19). Including but not limited to the World Health Organization, the Center for Disease Control, Health Data.gov, the John Hopkins Coronavirus Resource Center, the U.S. Census, the Puerto Rican government website; specifically, the pages in which they detail their prevention process and their usage of the vaccine, and the Department of Health from the Puerto Rican administration. These sites were used to find data on the vaccine, distribution of the vaccine, funding for the pandemic, and the statistics of those that are vaccinated, v. not, as well as the mortality rate in Puerto Rico.

Various major news organizations including the New York Times, NPR, Reuters, AP, NBC, and ABC were used to find information regarding resource consumption and management by the Puerto Rican government or people, through which quotes were the primary method of data collection on these variables. The two major databases used for the collection of these news articles and wire feeds are ProQuest and Nexis Uni (formerly LexisNexis Academic). Within these two databases the search terms and phrases used for this study included “Puerto Rico”, “community response”, “locals”, “local response”, “mandates”, “COVID-19” or “Coronavirus or 2019-ncov” or “sars-cov-2 or cov-19 covid-19” or “Coronavirus” or “2019-ncov or sars-cov-2 or cov-19”. Within ProQuest, the term “vaccin*” was used to include any terms related to vaccine or vaccinations. The terms “Health Care”, “Health Disparities”, “Natural Disasters”,

“Infrastructure” and “Colonialism” were added at the end of each of the separate searches to differentiate on what each of the focuses are for each article based on how resources were distributed or discussed within the articles. These terms were used to search for news articles or wire feeds that related to Puerto Rico throughout the COVID-19 pandemic in 2021, to gauge an understanding of how Puerto Ricans were shown using resources, either at the governmental or individual levels. There were three major wire feed sources that were used throughout the searching process, they are CE Noticias Financieras English, Targeted News Service and news Bites – Private Companies. All of these wire feed articles were found within both the ProQuest and Nexis Uni databases. These articles were then used to help support the theoretical argument, Conservation of Resources by Hobfoll (1989), on resource usage and management surrounding the Puerto Rican people, detailing how resources were obtained

In total, fifty news articles and wire feeds were collected for the study. Each of the fifty articles were chosen based on their relevance to resource usage and management, any articles that were found using the search terms previously mentioned that did not mention resource usage or management were excluded from the study as they were not entirely relevant to the study. The articles were then separated into 4 overarching themes, *Distrust in Government*, *Government Involvement*, *Depoliticization*, and *Community Involvement*. To determine which of the fifty articles were going to be used and how they were going to be organized, quotes from the articles used would dictate which article would go into what theme. For example, a quote from the article titled *Puerto Rico Imposes Dry Law and Nighttime Closing of Shops for COVID-19* (CE Noticias Financieras, English 2021) stated that

...Puerto Rico Gov. Pedro Pierluisi signed a new executive order Friday that establishes a dry law and closes businesses from 12 midnight to 5 a.m. to curb the spread of Covid-19.

Executive Order 2021-086, which goes into effect next Tuesday, Jan. 4, also prohibits any crowd activity of more than 250 people, either inside or outside any facility.

This quote clearly indicates the use of government involvement, Governor Pierluisi issued an executive order that would be enforced by all government entities and public areas. It also indicated how the government would manage its authority to indicate what resources would be used and where they would be used. Many of the articles overlapped in each of the categories as many of them fit the same themes. For example, the article titled “Puerto Rico Adapts to a Changing, Challenging environment” fit within both the Distrust in Government and Community Involvement categories as it involved a discussion on the misuse of the Puerto Rican governments mishandling of resources and how the community then pooled their resources together to continue to survive in the harsh climate (Impact News Service 2021). However, for the purposes of this study and to organize the evidence in a manner that conveyed the theoretical argument of the study, certain articles are used once per section.

The purpose was to investigate why Puerto Rico population was leading the nation in the response to COVID-19. News websites were used to gather information and data on either the daily routines of the Puerto Rican people and to understand the individual perspectives of the Puerto Rican population regarding certain mandates and resource usage by the government. Specifically, the researcher looked for any differing attitudes or perspectives geared towards the disbursement of COVID-19 vaccines. As well as, how the Puerto Rican administration prioritized certain methods of preventions over others (curfews, mask mandates, closing down areas of high in-person traffic, vaccine mandates among public employees, the enforcement of safety protocols such as providing a vaccine passport and proof of a negative COVID-19 test 3

days before, or if a test is negative or not provided those arriving must quarantine for up to 14 days for those arriving to the island via tourism or visiting family and friends, etc.). All of these data and informational policies were analyzed through the lens of the Conservation of Resources theory; as such the Puerto Rican population was viewed as a set of people that are defending the little resources granted to them via the U.S. government, FEMA or the Puerto Rican administration.

After conducting the initial analysis, certain themes that have been observed were political involvement in the disbursement of the vaccines, effects of the natural disasters that have struck the island and the effectiveness of the communication and enforcement of COVID-19 protocols of the Puerto Rican administration towards its citizens. Using discourse analysis as the main method of analysis, four themes emerged from searching the quotes from the news articles and wire feeds, they are *Distrust in Government*, *Government Involvement*, *Depoliticization*, and *Community involvement*. Discourse analysis allowed for the grouping of the information presented within the news articles and wire feeds to be grouped together in those overarching themes. Within each of the themes, select quotes and other information were used to justify the categories; these four themes were the key reasons to Puerto Rico's successful response. Each quote detailed either a personal anecdote from the government or an individual/community on the island, the quotes share information on general resource consumption. This was a more efficient way of measuring the information over a content analysis as it allowed for more room at creating an understanding of the discussion of resource consumption within Puerto Rico throughout the pandemic without having to individually gather information from every site regarding the enforcement of policies on the island. This method of

analysis allowed for more interpretation of the information gathered. The importance of discourse analysis is discussed in the next section.

Discourse Analysis

This study was a discourse analysis using the Conservation of Resources Theory as it pertains to sociology to help support and garner an understanding of why Puerto Rico was successful in COVID-19 prevention. According to Hardy, Harley, and Phillips (2004:19) the purpose of a discourse analysis is to

explores how the socially produced ideas and objects that populate the world were created and are held in place qualitative investigations of texts, but also a set of assumptions concerning the constructive effects of language (Burman & Parker, 1993). Discourse analysis differs from other qualitative methodologies that try to understand the meaning of social reality for actors (e.g. Geertz, 1977) in that it endeavors to uncover the way in which that reality was produced. So, while it shares a concern with the meaningfulness of social life, discourse analysis provides more profound interrogation of the precarious state of meaning.

In other words, discourse analysis is meant to use texts in a qualitative manner to understand and create social reality through interactions at the sociohistorical level. Meanings are created through “interrelated bodies of texts” (Hardy et al., 2004: 20).

The analysis searched for notions of resource usage and management within official government agencies and news articles or wire feeds. For example, how the Puerto Rican government used any federal funding or equipment to create protocols surrounding vaccines distribution and overall safety of those on the island, were a few of the variables analyzed via the news articles gathered to determine the efficiency and effectiveness of their policies and enforcement regarding COVID-19, as well as resource consumption. Specific quotes and policies

from each of the articles were analyzed as well on the level of authoritativeness within Puerto Rico's phrasing on the enforcement of their COVID-19 policies. The purpose was to ensure the validity of the project by only using official government, news organizations or wire feed sources, otherwise bias could become a significant factor in the discussion of the results of the study. For example, two executive orders, 2021-080 and 2021-081.

080 stated that any commercial establishment that creates or contains events for groups of 500 people or more, must have the persons provide of a full vaccination and a negative COVID-19 test 48 hours before attending. 081 stated that commercial establishments such as restaurants, gyms bars, etc. must require visitors to provide proof of full vaccination, a negative test within 48 hours of attending, or a positive test and proof of recovery certified by the health department within the last 3 months (News Bites – Private Companies 2021).

No qualitative software programs were used for this study, all organizational strategies as previously mentioned were conducted manually. The time frame for this case study was from January 2021 until December 2021, the majority of the disbursement of the vaccines; although broad, this was the most efficient way to analyze the population through the lens of the Conservation of Resources theory. The study was qualitative in nature because it studied vaccination rates in Puerto Rico, rates of transmission, rates of mortality, etc. The nature of this study is solely representative of the Puerto Rican population overall. Meaning any comparisons among race, class and gender or other intersections at which the Puerto Rican population may not be included as the evidence provided by the news articles selected are not entirely relevant to the discussion of a case study on Puerto Ricans.

CHAPTER SIX: RESULTS

Vaccine Distribution

A review of the databases and academic articles stemming from these sites, the World Health Organization, the Center for Disease Control, Health Data .gov, the John Hopkins Coronavirus Resource Center, the U.S. Census, the official Puerto Rican government website, as well as various news organizations and wire feeds, provided a more complete picture of Puerto Rico's vaccine distribution process.

Initially it was thought that Puerto Rico would seemingly struggle to handle the pandemic amid its debt crisis and after the island and its residents took several destructive beatings from Hurricanes María and Irma, as well as a 6.4 magnitude earthquake that struck the island on January 7th, 2020. Amid these health crisis events, the health care system within Puerto Rico had collapsed because of the overwhelming need for support among the Puerto Rican people. Many of the island's medical staff began to leave the island in search of work, further placing a severe strain on the islands health care system (Abrue Boria 2020). However, despite these increasing failures, the Puerto Rican government and its people acted quickly, by issuing a set of executive orders given by the former Puerto Rican Governor Wanda Vázquez. These entailed an immediate shutdown of the island via all non-essential businesses to be closed and an enforcement of a curfew that would keep residents within their homes from 9 PM to 5 AM (Abrue Boria 2020). Although the response by the people initially was mixed, many followed through with the islands policies and restrictions.

During 2021 Puerto Rico was at its best in managing the transmission rates of COVID-19 in part because of the extensive vaccine rollout that the government, health care system, and non-profits had provided for the island. Puerto Rico had received over 7.5 million doses of the vaccine, at this time nearly 7.1 million have already been administered to the residents on the island. To further break down the impact of these statistics, at the time of this study 95% of the Puerto Rican people have received at least 1 dose of the vaccines provided, 83.4% are fully vaccinated and 59.1% have received the booster doses (Health Data COVID-19 State Profile Report – Puerto Rico 2022). Of those fully vaccinated, these statistics include adolescents ages 12-17 and children ages 5-11, emphasizing the importance of protecting everyone within the island regardless of their status. This has contributed to a very low mortality rate of less than 1% (0.135% of the population). These statistics place Puerto Rico as the most vaccinated place within the United States, beating out some of the northeastern states in which the pandemic was handled in a more efficient manner when in comparison to the rest of the U.S. These states include Vermont, Maine, Rhode Island, Connecticut, and Massachusetts (John Hopkins State Coronavirus Resource Center 2022). These statistics were achieved in a variety of manners. Firstly, Puerto Rico was given over \$2.2 billion worth of relief funds by the U.S. government and FEMA. With these funds they were able to create and conduct a contact tracing program for COVID-19 and all its variants. This program allowed for Puerto Rico to target the most at-risk areas for the vaccine rollout (Financial Oversight & Management Board for Puerto Rico - Strategic Disbursement Plan Funding Report 2022). However, the vaccination efforts went beyond the governmental level and involved all aspects of Puerto Rican life, including but not limited to local officials, community leaders, health department officials and experts in the medical field, as well as religious leaders emphasizing the importance of the vaccine. According

to Daniel Colón-Ramos a Yale medical school professor and the president of Puerto Rico's Scientific Coalition (ABC News 2021)

The scientific and the health care community got very engaged and proactive in educating people in collaboration with journalists, civic leaders, and public leaders ... communities had conversation with the population about the concept from flattening the curve to herd immunity.

This indicates a sort of reliance on one another by the Puerto Rican people; a crucial and necessary resource that the Puerto Rican people need is trust in their fellow neighbor. This resource was not only evident throughout the pandemic, but also in the aftermath of Hurricanes María and Irma. Puerto Rican involvement in the vaccination process continued through help from the CDC. Five individuals within the CDC office in San Juan were tasked with managing and maintaining the vaccine rollout. "The CDC Puerto Rico team was led by Gabriela Paz-Bailey, lead epidemiologist, and included Oscar Padro, IT specialist, Liliana Sanchez-Gonzalez, epidemiologist, Eunice Soto, recruitment specialist, Jeffrey Ramos-Kuilan, logistics specialist, and Jesus Rodriguez, emergency management specialist." (CDC – Vaccines & Immunizations 2021). This team created a variety of opportunities for the Puerto Rican people to become educated and to acquire the vaccine, including but not limited to developing online resources to quicken the vaccination process, and to increase the number of providers from "20 to more than 550," creating a detailed vaccine distribution inventory system that would track and send vaccines to central areas where the Puerto Rican National Guard could then easily distribute them to the providers across the island (CDC - Vaccine & Immunizations 2021). Once again Puerto Rico emphasized the importance of its greatest resource. The people.

Furthermore, to help bolster the amount of those that are vaccinated on the island a series of incentives were used using the money from the COVID-19 relief fund; \$10 million of the initial \$520 million for incentives were used for vaccination efforts. For example, "... which will include lotteries and raffles with special prizes such as stays and cars, among others. They will distribute over \$520 million in incentives..." (CE Noticias Financieras English 2021). Alongside these incentives were opportunities for frontline workers to earn a minimum payment of \$2,000 if they were working in person. The frontline workers included medical staff, workers helping with vaccine distribution, etc. These funds assisted nearly 40,000 Puerto Ricans at the time, with a grand total of \$200 million being allocated to assist health care professionals and several other groups of frontline workers. (CE Noticias Financieras English 2021).

Emergence of Overarching Themes

There were four major themes that emerged from analyzing the articles from the ProQuest and Nexis Uni databases. These four themes or categories included *Distrust in Government*, *Government Involvement*, *Depoliticization*, and *Community Involvement* as well as fifty articles. Of all the articles 50% were placed within the *Government Involvement* theme (this percentage includes the overlap of themes), 18% fell into the *Distrust in Government* theme (this percentage includes the overlap of themes), 14% fell into the *Depoliticization* theme (this percentage includes the overlap of themes), 40% fell into the *Community Involvement* theme (this percentage includes the overlap of themes). Excluding the overlap of themes 36% of the articles fell into the *Government Involvement* theme, 26% fell into the *Community Involvement* theme, 12% fell into the *Distrust in Government* theme, and 10% fell into the *Depoliticization*

Category. These percentages solely represent articles that did not seemingly overlap, thus accounting for the summation of the percentages not equating to 100% of the articles. As stated in the methodology, discourse analysis allows for a different way in which a researcher can understand how a “reality” or situation came to be (Hardy et al. 2004). In other words, “the meanings of any discourse are “created, supported, and contested through the production, dissemination, and consumption of texts; and emanate from interactions between the social groups and the complex societal structures in which the discourse is embedded” (Hardy et al. 2004: 20). As will be discussed further in the results, there are many instances in which the Puerto Rican government is depicted as the savior of Puerto Rico amid the pandemic with no regard to the significant amount of effort given by the Puerto Rican people. Thus, these categories are framed in such a way that it will depict how the resources (either physical, emotional, or intangible) were used by each group. The first 2 categories relate to the government’s usage of resources, whereas the *Depoliticization* and *Community Involvement* categories are meant to represent how the Puerto Rican people used the resources given to them to succeed despite all the prevailing issues mentioned within the background literature.

Distrust in Government

Trust in the government by the Puerto Rican people has been subpar at best. Over the last 50 years and beyond Puerto Ricans have been at odds with the Puerto Rican government for a variety of reasons; corruption, political corruption, lack of aid during natural disasters, misuse and misplacement of supplies or resources meant for disaster or pandemic relief, either

withholding information or spreading misinformation deemed important for the people to know, etc. (Acevedo, 2020; Florido, 2020; New York Times 2021; Santos-Lozada, 2018).

Much of the mistrust is directly related to either how the government mishandles resources meant to aid the people or in their response times to aid the people. For example, in times of vulnerability Puerto Ricans are left to suffer and handle any issues by themselves. In an instance where a bridge over a significant aqueduct was destroyed in Tetuán, many of the residents were left stranded. The government was slow to respond with aid, the community then took it upon themselves to then rebuild the bridge themselves. A local resident stated (Impact News Service 2021).

These communities “are really far out in the Central Mountains, and they’re always the last to be responded to. I had never seen an action so fast and so powerful,” Holladay said. “Everybody showed up for work and rebuilt the bridge in a matter of days. People told me if they had gone to the government, it would have taken 2 years and half a million dollars. “COSSAO and the locals put together \$5,000 or \$6,000, got the concrete and the aqueduct pipes, everybody showed up for work and rebuilt the bridge in a matter of days.

Although this may seem to be an isolated event, this has and still occurs many times throughout the history of Puerto Rico. The government is meant to be a resource that serves the people; however, the Puerto Rican government depicts the opposite, only showing interest in areas with large amounts of tourism and not towards their own people. In conjunction with the Conservation of Resources theory, these behaviors and acts are directly in line with what is expected of populations that are in need of either conserving or pooling together resources to survive (Barnett et al., 2012). Puerto Ricans are continually abandoned by the government, further reinforcing their distrust towards their government.

The articles indicated another instance in which government mistrust caused Puerto Ricans to rely on themselves and other groups such as nonprofits and volunteers. For example, the nonprofit CORE (Community Organized Relief Effort) had to reach out to a variety of out of reach towns with the assistance of the locals themselves because the Puerto Rican government was not reaching out to communities that are the most vulnerable.

CORE provided additional capacity to administer free COVID-19 vaccinations in the most vulnerable and hard-to-reach communities. CORE administered approximately 9,000 vaccines in areas that otherwise would not have been reached... CORE provided frontline operational support to FQHCs to increase critical capacity, including logistics, information management, streamlining medical record-keeping for local agencies, canvassing hot spot areas, traveling long distances to make individual house calls, and ensuring community members were informed about second-dose return dates, side effects, and other medical information. (CORE 2021).

This quote further emphasizes why Puerto Ricans do not trust the government, because despite the administration having the resources to help their people, either through providing vaccines, or spreading the correct information on what to do to keep one another safe, they do not create opportunities in which the people can equally have access to potentially life-saving resources. This created a scenario in which Puerto Ricans must once again rely on themselves. In circumstances previously mentioned, Puerto Ricans must then reevaluate how to acquire resources that will further develop and create more resources for them to further survive in harsh conditions such as nonprofits as the previously mentioned.

Colonialism is another major reason for the Puerto Ricans to distrust their government. Many times, the Puerto Rican government has allowed for the U.S. government to meddle within the affairs of the Puerto Rico. The Puerto Rican government continually allows for the U.S. government to tread all over their own people, for example, Osoria (2021) states that

Despite the P.R. government having provided corporate welfare for the pharmaceuticals to strive, even in times of economic crisis and disasters, these corporations did not provide PR with the necessary equipment to tackle the pandemic, and even placed the island at the end of the distribution list. First, the uses of the state of exception and executive orders to manage the COVID-19 pandemic, and its social, health and economic consequences, are embedded in long-standing legal and disaster management practices The COVID-19 Pandemic in Puerto Rico 119 Produced and distributed by Pluto Journals www.plutojournals.com/scj/ that I have called the internal state of exception. That is, a normalised state of exception...

What this means is that in a territory or commonwealth such as Puerto Rico, many distinct populations such as the elderly, people of color, members of the LGBTQIA+ community, become marginalized and are withheld access to resources (Osoria 2021). In the case of the pandemic, this meant that Puerto Ricans were once again dealt a circumstance that is extremely difficult to arise out of. The distrust of the government held by the Puerto Rican people created a sense of self-reliance; this self-reliance made it somewhat easy for Puerto Ricans to know what to expect when the pandemic arrived at Puerto Rico. As such many Puerto Ricans were able to properly determine what type of action-oriented strategies to use in a time of crisis and were able to disseminate what groups or nonprofits were best to go to for any assistance.

Government Involvement

Despite an overwhelming amount of evidence depicting the contrary and individual testimony stating that the government is generally deemed untrustworthy to properly support the citizens of Puerto Rico through the proper use of resources, the Puerto Rican government did assist in properly managing the COVID-19 pandemic. Although the government is a separate entity from the Puerto Rican people, it is still somewhat representative of the people, as such, the Conservation of Resources Theory is still applicable. According to the articles, the government

allocated resources in a plethora of ways, including but not limited to becoming more involved in making the Puerto Rican voice heard at the federal level, securing federal funding in order to create a more stable infrastructure built to support the residents, enforcement of COVID-19 policies aimed at minimizing the transmission of the Coronavirus, as well as the push from Governor Pedro Pierluisi's administration to get vaccinated (CE Noticias Financieras, 2021; Impacted News Service, 2021; USA Today 2021).

Much of the government's involvement in managing the pandemic was enforced through two avenues, the enforcement of government mandates, such as mask mandates and curfews, as well as highlighting the importance of the vaccine campaign in Puerto Rico. Governor Pierluisi addressed the public in April of 2021 stating, "There is no obstacle that divides us, a disaster that knocks us down, or viruses that stop us," said the first executive.

I have brought no magic sticks or grandiose promises. What I am bringing to you is seriousness, maturity and a firm commitment to the head of government. An approach to action and results for the people and for the future of Puerto Rico, (CE Noticias Financieras English, 2021).

Thus, highlighting that his administration's approach to this pandemic will be serious and potentially better than in responses past (e.g., Natural disaster response, beginning of the pandemic). The current administration used their authority and resources to create an emphasis on protecting one another, for example, the emphasis on creating and managing the proper information channels was extremely important for the Puerto Rican government. In disasters in the past, information was an important resource for the island, mandating and monitoring that the proper information being sent to the public was vital in saving lives. Governor Pierluisi created a task force in which any discussion on the vaccine and the pandemic was conducted by science,

and more specifically scientists (CE Noticias Financieras English 2021). The purpose of the task force was to guide any discussion about the pandemic in the direction of solely the facts, rather than allowing individual opinion to get in the way as it did in Florida. By managing information resources, the trust of the people was slowly gained as the Puerto Rican people generally responded well to this.

Furthermore, the Puerto Rican government continually enforced masks all throughout the island as well as social distancing. Through the majority of the 2021-year masks were to be worn within health care facilities regardless of vaccination status. Outside of those conditions masks were to be indoors if you were unvaccinated and in areas in which there were high amounts of people (USA Today 2021). There were two executive orders that were deemed important in minimizing the transmission of COVID-19, they were orders 2021-080 and 2021-081. Order 080 stated that any commercial establishment that creates or contains events for groups of 500 people or more, must have the persons provide of a full vaccination and a negative COVID-19 test 48 hours before attending. Furthermore, order 081 stated that commercial establishments such as restaurants, gyms, bars, etc. must require visitors to provide proof of full vaccination, a negative test within 48 hours of attending, or a positive test and proof of recovery certified by the health department within the last 3 months (News Bites – Private Companies 2021). The Puerto Rican governments involvement went further by issuing out citations and fines to tourists who did not arrive vaccinated or did not show proof of a negative COVID-19 test at least a few days before arriving to the island (CE Noticias Financieras English 2021).

The articles also indicated that the Puerto Rican government used its precarious positioning during the pandemic to acquire funding from FEMA and the federal government.

The Puerto Rican government was given \$76.6 million at the beginning of the year to “... store, handle, transport, distribute, and administer vaccines to reduce the spread of the virus.” (News Bites – Private Companies 2021). Alongside this, the government was also able to strike a partnership with Stirling Ultracold, (the manufacturer of ultra-low temperature freezers for science research) in turn they became the sole provider for ULT freezers for all of Puerto Rico. This new infrastructure helped boost the rate at which Puerto Rico can store and disburse vaccines across the island.

We are about to reach the final hour for this vaccination and are doing everything in our power to get the vaccine to communities around the world. We are very aware of the challenges associated with last mile delivery and can rest easy knowing we have the ULT infrastructure in place to support the historic global COVID-19 vaccination.

said Mayor General Jose J. Reyes are the Puerto Rico National Guard (Business Wire 2021).

These freezers allowed for Puerto Ricans to now have access to more pandemic related resources, in this case the vaccines, to be able to help further their survival and allow them to thrive despite the weakening conditions of the infrastructure. Puerto Rico’s Department of Health also assisted in providing the means to which the people could gain more access to resources with the help of the CDC and with the oversight of CPMO (Crisis Program Management Office). For example, (CDC Public Health Professionals Gateway 2021)

Currently, PRDOH is on track to complete the following projects: Install energy backup options to better prepare public health laboratories for future outages, Strengthen a vaccine cold chain system for the Vaccines for Children Program to ensure vaccines retain their potency and reduce vaccine waste, Institute an electronic property tracking system that automates, improves, and streamlines the inventory process of property (e.g., small and large equipment, including laptops and copiers), Implement a vector control emergency response plan, Digitalize vital records (e.g., Electronic Death Registration System)

These systems now allow for Puerto Rico to be able to respond to and manage a crisis event in a more timely and efficient manner; these systems apply to the ongoing pandemic as well.

Regarding access to resources and aiding the health care system in Puerto Rico, the Biden administration alongside the Hispanic Federation proposed a bill in September 2021 called the Territorial Equity Act of 2021. The purpose of this bill is to create equal opportunities in which Puerto Ricans will now gain access to federal benefit programs, including Medicaid (Targeted News Service 2021). This increase in federal funding now provides Puerto Ricans the opportunity to not only gain the support that the island needs in times of crisis, but to be treated as an equal in a similar vein as the U.S. states do. Thus, unlocking the door for more federal funding opportunities that will grant access to resources such as the removal of the Jones Act which inhibits the island from being able to access imported goods from other countries, or gaining full access to disaster relief funds that prove to be vital for states on the mainland.

Depoliticization

Depoliticization became a major component of Puerto Rico's success in managing the COVID-19 pandemic. Firstly, to understand the importance of depoliticization a proper definition is needed; to depoliticize is "to remove the political character of: take out the realm of politics." (Merriam-Webster, 2022). In other words, to depoliticize is to remove or minimize the discussion of politics in any given scenario. In the case of Puerto Rico, depoliticization allowed for the citizens to react quickly and rationally when responding to either government mandates or simply trying to protect and preserve the public health of the island. Depoliticization on the island began through how vaccine and COVID-19 related information was presented to the

Puerto Rican population. For example, in Florida, Governor DeSantis urged Floridians to get the vaccine, however, he was very adamant in his disapproval of mask and vaccines mandates or “vaccine passports” (which simply indicate your vaccination status), stating that he will choose “Freedom over Faucism” (The News Press 2021). Although the phrasing is seemingly simple, the nature of it is politically charged and considering the political state of the U.S. many are susceptible to such phrasing. In Puerto Rico, the articles suggest the opposite, for example, it was noted that when the borders were reopened for tourism, there were many instances at which those coming from the mainland, namely non-Puerto Ricans, would try to fight any order of enforcement for masks and social distancing.

Puerto Ricans have expressed concerns over travel to the island and tourists contributing to the spread of the coronavirus that causes COVID-19. The island has also experienced multiple episodes in which tourists became violent after being asked to wear a mask. In February, tourists reportedly assaulted a woman in a wheelchair after they were told to wear masks. A video posted to social media showed the women, who were reportedly staying at an Airbnb in San Juan, throwing their drinks at the woman's face and telling her to speak English. (USA TODAY 2021).

What this indicates is that not only are Puerto Ricans receptive to mask mandates and social distancing, but they also are willing to enforce them on any individual arriving to the island despite potentially facing aggression and even racism from others. What this may imply is that Puerto Rican resilience is one of the strongest resources that the people have when facing any sort of disaster or health crisis event.

The depoliticization of the vaccine and the pandemic was evident at all levels (government, local and individual); Governor Pedro Pierluisi stated in an interview with TIME that “It hasn’t been politicized here... This is not about reds and blues in Puerto Rico. It’s simply about the people realizing that this is a health threat and then listening to their medical providers

and public officials.” (TCA Regional News; Chicago 2021). At the governmental level political leaders openly displayed support of the vaccines as well as leaders in industry. The focus of the Puerto Rican people was on “protecting public health” over allowing politics to overshadow any efforts aimed at managing the pandemic, creating a focus on the discourse of public health as opposed to the politicized discourses shown throughout the U.S. (TCA Regional News; Chicago 2021). The culture of Puerto Rico also indicated a pro-vaccination status because of the lack of the politicization of health over recent years and partly in response to the natural disasters. Nurse Carla Gonzalez stated to BBC World that “We have always been vaccinated people, people get vaccinated, they vaccinate their children, it’s a very small population that doesn’t” (CE Noticias Financieras, English 2021). Many of the island’s religious leaders were also “aligned” with the campaign for vaccines in Puerto Rico. Having religious officials be on the side of protecting the public health of the people also contributed to the depoliticization of the vaccine and in turn the pandemic (CE Noticias Financieras, English, 2021).

Depoliticization of the pandemic on the island can also be contributed to the solidarity and family-oriented communities across Puerto Rico. For example, Monica Feliu-Mojer (NPR and Kwong, 2021) (Director of Communications and Science Outreach for Ciencia Puerto Rico) stated that

I'll speak from my experience as a Puerto Rican scientist and somebody who's a leader within the scientific community... I think there was a collective understanding of, if we don't come together and put our differences aside, things can get really bad. And so I think everybody, from individuals to communities to organizations to even the government, have done their part to respond to the pandemic pretty well... You know, culturally, we are family and very community oriented. We truly - we take care of each other...

In other words, because of the community orientation of Puerto Rico, any instances of politicization or dissent regarding vaccines or the pandemic overall was displaced as the concern for one another outweighed any potential discourse against preserving the public health.

Community Involvement

Community involvement can be interpreted as how the Puerto Rican population responded to the pandemic through the use of their resources and abilities. There were two types of community involvement depicted within the articles, they were local involvement, meaning how either individuals or groups of people at the local scale responded to the pandemic, and non-profit involvement. The most important factor in determining the success of Puerto Ricans during the pandemic was solidarity. The importance of the Puerto Rican people coming together to battle this pandemic is further emphasized by Monica Feliu-Mojer (NPR and Kwong, 2021), she states that

You know, culturally, we are family and very community oriented. We truly - we take care of each other. And so that solidarity, that caring for the other person, the empathy - that solidarity has manifested from, you know, people pretty much universally masking, which hasn't been true in the U.S. And we know that non-pharmacological interventions - namely masks, physical distancing, avoiding large groups of people - like, those are really important ways to decrease transmission. And so Puerto Rico has been vaccinating. We have - we still have preventive measures in place. So I see the - I see that solidarity manifesting in many different ways in the way that Puerto Rico has responded to COVID-19.

Feliu-Mojer is connected to the nonprofit, Ciencia Puerto Rico, as one of their directors, the importance of her department was in their management of the spread of misinformation. The goal of her department was to conduct a rumor-tracking project in which they were to find any

rumors that spread false information and create graphics that represented the correct information and place them onto social media where a majority of false information is spread. After which Ciencia would work in conjunction with local community leaders to spread the correct information about vaccines and the pandemic (NPR 2021).

In a study conducted by the Natural Hazards Center it was found that nonprofits played a major role in facilitating discussion and planning around the pandemic and maintaining the channels of information surrounding the vaccines (Garcia et al., 2021). It was found that nonprofits within Puerto Rico were essential in creating health-oriented interventions and understanding social determinants of health for the most at-risk groups on the island. Nonprofits were able to provide a series of health services that varied from emergency aid for the pandemic or recent natural disasters, to providing assistance with physical and mental health to ensure Puerto Rican survivability (Garcia et al., 2021). The significance of these findings indicate that Puerto Ricans were now given access to organizations that were able to make quick decisions on how to respond to any crisis event and were provided with a series of emergency plans aimed at improving the response to any future health crises events (Garcia et al., 2021).

The community and the individuals within the community proved to be among the most important resource as to why Puerto Rico succeeded throughout the ongoing pandemic. Many communities on the island reacted quickly, for example, José Rodríguez-Orengo, (Vox 2021) The Executive Director of the Puerto Rico Public Health Trust stated that

NGOs and community leaders picked up the pieces, which built trust with the people they served. In the immediate aftermath, they helped assess the damage, mobilized volunteers, set up emergency support centers, helped clear routes to water sources and medical facilities, and distributed basic supplies including non-perishable food, medicine, water purifiers, hygiene kits, and tents. It was the NGOs that put together everything because

the government, locally and federally, couldn't deal with the aftermath of Hurricane María...

The locals within these organizations knew best how to respond to the ongoing health crisis by either providing or securing resources already gathered by assessing the most at-risk areas. The overwhelming response by the people was in favor of protecting one another; Janny Rodríguez states that “Most people don't leave the house without first grabbing their phones, Now, people grab their face masks first and then their phones” (NBC News 2021). What this depicts is that over the duration of the pandemic the shift, or rather renewal of the mentality of preserving one another through using the resources at hand is what kept Puerto Ricans safe during the pandemic. The timing of the pandemic occurring so quickly after hurricane María also played a significant factor in Puerto Rico's success. A lot of the resources that were provided by nonprofits or NGOs for Hurricane María allowed for a quick turnaround when managing the pandemic, as such all that was needed by nonprofits or other horizontally aligned groups was to change certain mission statements or prioritize other areas of importance regarding the pandemic.

Another example from the articles of community involvement is Puerto Rico's involvement in the Doctors Without Borders program (Targeted News Service 2021). There were a handful of Puerto Rican nurses that joined the initiative in vaccinating those in remote areas on the island. For example, Abigail Matos-Pagán was a traveling nurse who provided the vaccine to those who could not get one by conventional means. She traveled to the home of 88-year-old Wildelma Gaston to administer the vaccine, she was confined to her home because of arthritis and other prevailing health issues. People like Matos-Pagán depict the resilience that Puerto Rico has created amid a crisis, as she managed to mobilize herself and others in previous disasters such as Hurricane María. Furthermore, the trust that the older generations of people on

the island had in the public health care system was a determining factor in their success (The Atlanta Journal – Constitution 2021). This trust reinforced many of the younger generations across the island to get vaccinated.

Community involvement went beyond the medical sphere and into the academic sphere. Professors within the University of Puerto Rico created a new graduate program aimed at training students in theoretical and practical techniques in mental health during a crisis event. The goal of the program is to teach Puerto Rican students on how to improve mental health (an important resource during a crisis event) for themselves and others to keep themselves prepared during unprecedented times (CE Noticias Financieras English 2021).

CHAPTER SEVEN: DISCUSSION

The purpose of this discussion section was to gain an understanding and interpret the themes and results that were presented within this paper through the lens of the Conservation of Resources Theory. The initial research question for this qualitative study was to explore the response to COVID-19 in Puerto Rico. Although comparison data was not included, the results did answer the research question. The four themes that emerged amid the search for the fifty news articles related to Puerto Rico throughout the vaccination period created a context for how Puerto Ricans use and gather resources.

The initial themes that were discussed in the background literature were the *Effects of Natural Disasters, Infrastructure, Puerto Rican Healthcare System, Colonialism, and Health Disparities of Puerto Rican Residents*. These five themes were meant to initially be used to show how Puerto Rico overcame the pandemic as a reflection of the five main reasons why Puerto Rico was in the disadvantaged situation initially. However, through the use of discourse analysis, support for those five themes seemed to shift to the four created within the results section. The purpose for the change in themes was because the articles showed stronger indications of resource usage and consumption through directly showing the differing levels of involvement. For example, in each of the four categories, the articles had shown the direct ways in which the Puerto Rican population had either gathered resources, used the resources given to them or depicted their resilience to the crisis event through the use of what little resources they had, in an effort to care for one another. The other five categories were based in a more objective rather than subjective manner, which is what a content analysis would have suggested. However, because the study was based through a discourse analysis it was more fitting to choose four

themes that were more personable or subjective towards how the Puerto Rican population managed the pandemic.

This study used the Conservation of Resources theory (COR) as its basis for a theoretical argument. COR was initially a means to understand the physical and psychological stressors placed onto a population through resource conservation. In other words, groups of people were more likely to protect whatever resources they have rather than going to obtain more. This theory also suggests that if resources are limited, groups of people will find more efficient ways to either conserve or use those resources.

In the case of the first theme, *Distrust in Government*, many people were shown to use the resources they had rather than trust the government. For example, Puerto Ricans at this point in time was used to the government mishandling supplies or other resources meant for the citizens, as such the people were shown to group and pool their resources together (either money, supplies such as food, water, tools, etc.) and use their resources in a way that would take little time and maximize their usage. COR would suggest that because of the potential loss of resources, in this case the prior mishandling of resources by the Puerto Rican government in previous crisis events, the individuals on the island are more likely to become more stringent in their usage of the resources at hand despite the condition of the pandemic. As such, because Puerto Ricans are used to operating with little to no resources, they are more likely to manage their resource consumption more efficiently.

The theme of *Government Involvement* seemingly uses COR as a way to show what happens when a population with little resources suddenly has access to significant resources. For example, the push to acquire federal funding by the governor and his administration allowed for

easy access to vaccines and the means to export them to the people through the use of central hubs across the island (CE Noticias Financieras 2021). Similar to the principles 1 and 4 of COR theory (principle 1., resource loss is more important than resource gain, principle 4., people strive to obtain and protect resources in all aspects of their lives), it was shown that because of Puerto Rican resilience as a result of previous crisis events, many were extremely receptive towards protecting each other through the use of vaccines and the enforcement of COVID-19 policies. The new gain in resources allowed for Puerto Rico to use their already efficient resource management to be shown on a greater scale.

Furthermore, the theme *Depoliticization* allowed for the unbiased and objective use of resources by the Puerto Rican people. In other words, in accordance with principles 4 and 5 (principle 4., people strive to obtain and protect resources in all aspects of their lives, principle 5., more resources will lead to more beneficial well-being outcomes) of the COR theory, Puerto Ricans will use any and all increases of newly acquired resources in a non-discriminatory manner. The monitoring of the information channels such as social media, proved to be extremely useful in making it known to all Puerto Ricans that these resources (vaccines, relief funds, COVID-19 policies) were going to lead to more beneficial outcomes for all those on the island. This was further exemplified within the results when Puerto Ricans showed concerns over aggressive tourists arriving to the island and their refusal to comply with the COVID-19 mandates already in place. Many Puerto Ricans either fought back or urged the government to enact more strict measures on those arriving to the island. Indicating that Puerto Ricans were unified in their ideas of protecting one another without the influence of politics.

The same can be applied to the individual and group efforts shown within the theme of *Community Involvement*. Within the COR theory, it is shown that resources can go beyond physical objects, they can include certain psychological and personal characteristics or favorable conditions. As a result of the recent natural disasters and the prior issues with government, many Puerto Ricans were faced with unfavorable conditions, such as a collapsing infrastructure, political corruption, financial turmoil and more. However, characteristics such as “Puerto Rican resilience” or their ability to group together to push past a crisis was shown to be their greatest use of resources. The results depicted that the use of nonprofits and local involvement proved to be the most efficient ways at making sure all resources were used to help one another. For example, the residents that reached out to nonprofits for help with either elderly or the disabled population on the island was a direct example of efficient and protective use of the resource of solidarity (NPR 2021; Targeted News Service 2021). The solidarity among the people to protect one another and use whatever resources were given either by the government or nonprofits is in direct accordance with the COR theory. Despite a potential increase in stressors as a result of the pandemic and other prevailing issues brought on by the government or natural disasters, many Puerto Ricans will do their best to protect any resources they have.

It was interesting to see that *Government Involvement* was a significant reason for the success of Puerto Rico as it was a bit of a surprise. This was in part because of the reactions to previous crisis events being subpar at best. In the aftermath of Hurricane María, the government was deemed unreliable by many on the island because of the lack of effort in supplying aid for Puerto Ricans, it was seemingly inevitable that the government would react the same for the pandemic, however, the government was much more involved than initially thought. For example, Puerto Rico was very involved in the clinical phase-3 Novavax clinical trials for the

vaccine. Dr. Carmen Zorrilla, who is part of the Medical Sciences Campus in San Juan spearheaded the initiative in studying how the vaccine would affect the Hispanic population (Business Wire Feed 2021). What this depicts is the Puerto Rican governments willingness to provide more resources for their people. Falling in line with Morelli's (2010) fifth principle of his adaptation of COR, "more resources will lead to more beneficial well-being outcomes." This theme did contrast the research conducted by Osoria (2021) in that it was shown that the government would do little to manage the ongoing pandemic. Osoria (2021:115) stated

... despite the P.R. government having provided corporate welfare for the pharmaceuticals to strive, even in times of economic crisis and disasters, these corporations did not provide PR with the necessary equipment to tackle the pandemic, and even placed the island at the end of the distribution list.

The evidence suggests that government involvement was significantly increased by the time Governor Pierluisi came into office, pushing Puerto Rico to the forefront of success during the pandemic. Although a necessary change of pace, the analyzed articles did create a sort of savior complex surrounding Governor Pierluisi and his administration, implying that it was solely the government who managed to pull Puerto Rico out of the depths of potentially failing throughout the pandemic. However, as stated previously, the evidence suggests the opposite effect, that because the people on a community and individual level mobilized their time and energy to make efficient use of the resources given to them, only then was Puerto Rico's success guaranteed.

Each theme indicated that despite government involvement, the resources were only used efficiently when the Puerto Rican people themselves got involved. In conjunction with the Conservation of Resources theory, more specifically with Morelli's (2010) second category, personal characteristics which are attributes that are meant to cope with the stress that Puerto

Ricans might have felt throughout the pandemic. After the analyzation of the articles, the number one attribute that determined the success of Puerto Rico during the pandemic was their resilience; to not only withstand any sort of crisis, but their ability to adapt quickly. For example, although not entirely related to the pandemic, it still showcases Puerto Rican adaptability; in the case where a bridge had collapsed in Tetuán, those within the town were able to act quickly by aggregating what little resources they had, in this case their time and money, to go buy the necessary supplies needed to fix the bridge (Impact News Service 2021). A contributing factor to their adaptability was the depoliticization of the pandemic; perhaps because of how Puerto Rico was mishandled by the United States in the aftermath of Hurricane María and subsequent natural disasters, Puerto Ricans seemingly learned to listen solely to information that would prove to be useful without any interest in political stances. Depoliticizing the pandemic would result in access to more resources and more opportunities for Puerto Ricans to be able to seek out resources related to the preventing the spread of COVID-19 in this case vaccines and seeking information from nonprofits on how to prevent the spread.

Each theme highlighted one overarching characteristic of the Puerto Rican population, that Puerto Rican's greatest resource will be and always will be their resilience and the maintenance of the family/community orientation. A significant factor of Puerto Rican resilience relies on their social networks, these include, familial groups, friend groups, as well as how individuals interact with larger social groups. The shared characteristic of placing an importance on family and community contributes to the driving force behind Puerto Rico's overall success. In other words, should Puerto Rican social networks collapse, Puerto Rico would not have had as much success throughout the ongoing pandemic. For example, within the community involvement theme José Rodríguez-Orengo stated that NGOs, which were mainly comprised of

Puerto Rican volunteers, were pivotal in the survival of Puerto Rico as they managed to mobilize volunteers, set up emergency support centers, and aid however they could throughout the pandemic.

However, the researcher was aware that Puerto Rico's success throughout the pandemic it was because of a group effort. In other words, all levels of society in Puerto Rico were involved, the government, the private sector, scientists, local and community leaders, individuals, etc., were all a contributing factor to the effort against COVID-19. So, it is entirely possible that the defining factor or theme in this instance that pushed Puerto Rico's success was government involvement. The significance of this finding is that it indicated that Puerto Rico's success was determined by the group effort of the island. For example, the government managing to acquire federal funds to combat the pandemic, created partnerships that allowed for Puerto Rico to gain access to storage and enforced mandates that would protect the people and seemingly provided more support than in years past amid a crisis event. However, to counter that claim, without the involvement of the community and without the social networks and family orientation of Puerto Rico, it would be nigh impossible for Puerto Rico to have succeeded in terms of a low mortality rate, and low transmission rates. As evidenced by the *Community Involvement* theme it is because of the sense of family and community that Puerto Ricans have managed to survive for so long. As is the case of the traveling nurses; if not for Puerto Ricans reaching out to these groups of people, many on the island would have continued to contract COVID-19 or even died. Falling in line with COR, because of the stress that a lack of opportunities to gain resources, or in this case lose resources, would create a sense of urgency for the Puerto Rican people to find solutions to maintaining any resources gathered.

Overall, Puerto Rico's success can be attributed to two characteristics, their resilience and solidarity. Puerto Rico was shown throughout the articles to efficiently use all resources given to them because of the previous conditions dealt to them. It is entirely possible that because of the effects of natural disasters, a failing infrastructure, corruption and more, that they were already prepared to use what little resources they had to survive. When the government stepped in and created an equal opportunity for the Puerto Rican population to fight against the pandemic, they were easily able to manage the pandemic through the use of vaccines and other resources such as access to federal relief funds or the enforcement of COVID-19 policies. COR managed to be an efficient form of analysis for this study as it created a foundation of understanding for how and why Puerto Rico consumed and managed resources in the ways previously mentioned. *Distrust in Government, Government Involvement, Depoliticization and Community Involvement* were the defining factors in determining the success of Puerto Rico.

CHAPTER EIGHT: FUTURE RESEARCH/LIMITATIONS

It is evident that there are several topics and themes that the researcher was unable to explore throughout the research and writing process because of certain limitations. For example, the time constraint for completing this research proved to be a major hindrance on what themes could be explored within the National News Articles and Wire Feeds. Certain themes that could have been explored was the importance of political involvement through the portrayal of media representation within Puerto Rico in terms of the disbursement and administering of the various vaccines, as well as understanding the true importance of the impact that social networks via families, friends, and a sense of community had on pushing the importance of the vaccine among the Puerto Rican people. This could have been explored through a more qualitative manner, for example, conducting in-person interviews on the island could have proven to be more useful in understanding the true scope of how important social networks are within crises (whether that be within a natural disaster scenario, a pandemic, or through a debt crisis).

Another limitation to the study was the number of articles chosen that pertain to the study. The limited number of articles (50 National News organizations and Wire Feeds) chosen due to the time constraint on the research study may not have provided enough information for the study and the researcher to fully understand to what extent resources were used and managed among the Puerto Rican residents. Although the study is a discourse analysis on the chosen articles, not including a series of interview transcripts of people within the island and their discussions on what they had to do to continue to survive may have proven to be useful for future research in the context of having social networks be one of the most important resources for the Puerto Rican community. All of the articles came from National news organizations or Wire

Feeds that were primarily from English speaking news organizations, thus, these organizations only provide a specific viewpoint, primarily from the outside looking in. By not including articles from either Puerto Rican news outlets or primarily Spanish speaking news organizations, makes it inherently skew the opinions or outcomes of the data of this paper. Differing viewpoints within Spanish speaking news organizations may allow for a more complete picture of how resources were either used or managed throughout the pandemic. If Puerto Rican news organizations were used, more specific instances of the theme *Distrust in Government*, could have been observed more closely so that information regarding the process of *Community Involvement* could be shown in a clearer light. What this means is that contrary to the recent crisis events Puerto Rico faced, the articles depicting the importance of *Government Involvement* in managing the COVID-19 pandemic could have been further explored. For example, how much the Puerto Rican government actually helped during the pandemic and how it may have been overshadowed by the involvement of the Puerto Rican people, non-profits, and outside organizations in maintaining the success of the island against the COVID-19 pandemic.

Future Research should create a discussion around the importance of the trust within the government and healthcare system by the elderly or older generations in determining the success of Puerto Rico during the Pandemic. The older generation in Puerto Rico may have a sense of resilience when compared to the rest U.S. seeing as they have dealt with a variety of issues in the past stemming from political turmoil, corruption, a series of natural disasters, an ongoing debt crisis, gentrification, a significant increase in the cost of living and extensive health issues. Future research could also include a comparison of data from the U.S. to Puerto Rico. For example, an analysis of the policies that Florida had enacted versus Puerto Rico could indicate specific reasonings as to why Florida faired seemingly worse in managing the ongoing pandemic

compared to Puerto Rico. The analysis could include looking at specific phrasing of mask mandates and vaccine mandates and compare them against one another to see if the reasons of why Puerto Rico had succeeded within this study can be applied elsewhere.

REFERENCES

Alexis Kwasinski, Andrade, F., Castro-Sitiriche, M., J., O'Neill-Carrillo, E. 2019. Hurricane Maria Effects on Puerto Rico Electric Power Infrastructure. *IEEE Power and Energy Technology Systems Journal*, vol. 6, no. 1, pp. 85-94, March 2019, doi: 10.1109/JPETS.2019.2900293.

Ayala, Edmy, and Patricia Mazzei. 2021. "Puerto Rico's 'Worst Moment' Leaves an Island Exhausted: [Foreign Desk]." *New York Times*, Apr 24,

(<https://www.proquest.com/newspapers/puerto-ricos-worst-moment-leaves-island-exhausted/docview/2517185174/se-2>).

Barnett, Rosalind Chait, Robert T. Brennan, Karen C. Gareis, Karen A. Ertel, Lisa F. Berkman, David M. Almeida. 2012. "Conservation of Resources theory in the context of multiple roles: an analysis of within- and cross-role mediational pathways." *Community, Work & Family*, 15(2), 131-148, DOI: [10.1080/13668803.2010.539066](https://doi.org/10.1080/13668803.2010.539066)

Behling-Hess, Caroline. 2022. "Healthcare in Puerto Rico: Before and After Hurricane Maria." *Public Health in Latin America*. <https://sites.google.com/macalester.edu/phla/key-concepts/healthcare-in-puerto-rico-before-and-after-hurricane-maria>

Bernstein, Nell. 2021. "Crushing Isolation during COVID? Sure, You've Felt it. Imagine being Young and Incarcerated." *USA Today* (Online), Sep 30,

(<https://www.proquest.com/newspapers/crushing-isolation-during-covid-sure-youve-felt/docview/2577740515/se-2>).

Boria, Alexandra Abreu. 2020. "The Forgotten Americans: Puerto Rico Under COVID-19." *Community Catalyst*, Jul 1, (<https://www.communitycatalyst.org/blog/the-forgotten-americans-puerto-rico-under-covid-19#.YtJNt0HMJD9>).

Caraballo-Cueto, Jose, and Isar P. Godreau. 2021. "Colorism and Health Disparities in Home Countries: The Case of Puerto Rico." *Journal of Immigrant and Minority Health* 23(5):926-935 (<https://www.proquest.com/scholarly-journals/colorism-health-disparities-home-countries-case/docview/2568817647/se-2?accountid=10003>). doi: <http://dx.doi.org/10.1007/s10903-021-01222-7>.

Center on Budget and Policy Priorities, Judith Solomon. 2019. "Puerto Rico's Medicaid Program Needs and Ongoing Commitment of Federal Funds." <https://www.cbpp.org/research/health/puerto-ricos-medicaid-program-needs-an-ongoing-commitment-of-federal-funds>

Centers for Disease Control and Prevention. "COVID Data Tracker... Demographic Characteristics of People Receiving COVID-19 Vaccinations in the United States." (<https://covid.cdc.gov/covid-data-tracker/#vaccination-demographic>).

Centers for Disease Control and Prevention. 2021. "Puerto Rico Department of Health Responds to Health Emergencies." (<https://www.cdc.gov/publichealthgateway/field-notes/2021/Puerto-Rico-Department-of-Health-Responds-to-Health-Emergencies.html>).

Céspedes Pérez, Akira. 2018. "Running on Fumes: Preventable Public Health Failures and Mishaps Post-Hurricane María in Puerto Rico." Order No. 13424826 dissertation, University of

Minnesota, Ann Arbor (<https://www.proquest.com/dissertations-theses/running-on-fumes-preventable-public-health/docview/2189830958/se-2?accountid=10003>).

Chutchian, Maria. 2021. Puerto Rico bankruptcy nears end as debt plan goes up for approval.

Reuters. Doi:<https://www.reuters.com/legal/transactional/puerto-rico-bankruptcy-nears-end-debt-plan-goes-up-approval-2021-11-08/>

Colón-Ramos, Uriyoán, Idania Rodríguez-Ayuso, Hirut T. Gebrekristos, Amira Roess, Cynthia M. Rérez, Lone Simonsen. 2016. “Transnational Mortality Comparisons Between Archipelago and Mainland Puerto Ricans.” *J Immigrant Minority Health* 19 1009–1017. DOI 10.1007/s10903-016-0448-5

“Congressional Research Service Report: 'USDA Nutrition Assistance Programs - Response to COVID-19 Pandemic'.” 2021. *Targeted News Service*, Mar 25, (<https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6292-XT11-DYG2-R3PG-00000-00&context=1516831>).

Coral, Murphy M. 2021. "Puerto Rico and Hostile Tourists." *Usa Today*, Apr 02, (<https://www.proquest.com/newspapers/puerto-rico-hostile-tourists/docview/2507881307/se-2>).

CORE. 2021. “Puerto Rico COVID-19 RESPONSE.” (<https://www.coreresponse.org/covid-19/puerto-rico>).

“COVID-19 Update: Young children are now vaccine-eligible, to the relief of many parents.” 2021. *Newstex Blogs*, Nov 27, (<https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:645W-DY61-F03R-N38V-00000-00&context=1516831>).

Departamento De Salud. 2022. "COVID-19: Vacunas." (<https://www.salud.gov.pr/CMS/221>).

Discover Puerto Rico. 2022. A Brief History of Puerto Rico.

<https://www.discoverpuertorico.com/island/history#!grid~~~random~1>

Doctors Without Borders. 2020. "Puerto Rico: As COVID-19 cases rise, MSF ramps up its response." (<https://www.doctorswithoutborders.org/latest/puerto-rico-covid-19-cases-rise-msf-ramps-its-response>).

"DOEd Approves Puerto Rico's Plan for use of American Rescue Plan Funds to Support K-12 Schools, Students, Distributes Remaining \$990 Million to Puerto Rico." 2021. *Targeted News Service*, Nov 19, (<https://www.proquest.com/wire-feeds/doed-approves-puerto-ricos-plan-use-american/docview/2599056373/se-2>).

"EDITORIAL: COVID Lessons from Puerto Rico." 2021. *TCA Regional News*, Nov 28, (<https://www.proquest.com/wire-feeds/editorial-covid-lessons-puerto-rico/docview/2603584964/se-2>).

"Federal Emergency Management Agency: \$76.6 Million Obligated to Puerto Rico for COVID-19 Vaccination Costs." 2021. *News Bites - Private Companies*, Jan 27, (<https://www.proquest.com/wire-feeds/federal-emergency-management-agency-76-6-million/docview/2480895512/se-2>).

"FEMA Supports Vaccine Distribution: Improvements to Roads and Bridges in Puerto Rico are Underway." 2021. *News Bites - Private Companies*, Mar 05, (<https://www.proquest.com/wire-feeds/fema-supports-vaccine-distribution-improvements/docview/2496537165/se-2>).

Forno, Erick. 2022. "Health Disparities in Asthma." *American Journal of Respiratory and Critical Care Medicine*. 185(10). <https://doi.org/10.1164/rccm.201202-0350ED>

GAO. 2021. "Puerto Rico Recovery: FEMA Made Progress in Approving Projects, But Should Identify and Assess Risks to the Recovery." (<https://www.gao.gov/products/gao-21-264>).

George, Miriam. (2017). "Application of conservation of resource theory with camp refugees." *Migration and Development*, 6:3, 460-478, DOI: [10.1080/21632324.2017.1320825](https://doi.org/10.1080/21632324.2017.1320825)

Giovani Burgos, Rivera, F., I, Garcia M., A. 2014. Contextualizing the Relationship between Culture and Puerto Rican Health: Towards a Place-Based Framework of Minority Health Disparities.. (n.d.) >*The Free Library*. (2014). Retrieved Mar 11 2022 from <https://www.thefreelibrary.com/Contextualizing+the+Relationship+between+Culture+and+Puerto+Rican...-a0527621638>

"Doctors without Borders: In Puerto Rico, Reaching People Missed by COVID-19 Vaccination Rollout." 2021. *Targeted News Service*, Mar 30, (<https://www.proquest.com/wire-feeds/doctors-without-borders-puerto-rico-reaching/docview/2506716787/se-2>).

García C, Rivera FI, Garcia MA, Burgos G, Aranda MP. Contextualizing the COVID-19 Era in Puerto Rico: Compounding Disasters and Parallel Pandemics. *J Gerontol B Psychol Sci Soc Sci*. 2021 Aug 13;76(7):e263-e267. doi: 10.1093/geronb/gbaa186. PMID: 33112945; PMCID: PMC7665778.

Garcia, Ivis, Divya Chandrasekhar, N. Emel Ganapati, Kevin Fagundo Ojeda, Jose E Velazquez-Diaz, Kalia Witkowski, and Pablo Jose Rivera Miranda. 2021. "Nonprofit Response to Concurrent and Consecutive Disaster Events in Puerto Rico." *Natural Hazards Center*,

<https://hazards.colorado.edu/public-health-disaster-research/nonprofit-response-to-concurrent-and-consecutive-disaster-events-in-puerto-rico>).

Gluck, Frank. 2021. "Lee, Collier Area COVID Patients Quadruple: First Vaccine Mandate for Health Care Staff to Go into Effect Aug. 16." *The News Press*, Jul 25, <https://www.proquest.com/newspapers/lee-collier-area-covid-patients-quadruple/docview/2554676431/se-2>).

Grennes, Thomas J. 2018. "An Economic Analysis of the Jones Act." *Mercatus Research*. <https://dx.doi.org/10.2139/ssrn.3211671>

Halbesleben, Jonathan R. R., Jean-Pierre Neveu, Samantha C. Paustian-Underdahl, Mina Westman. 2014. "Getting to the "COR": Understanding the Role of Resources in Conservation of Resources Theory." *Journal of Management*, 40(5), 1334–1364. <https://doi.org/10.1177/0149206314527130>).

Hardy, Cynthia., Bill Harley, Nelson Phillips. 2004. "Discourse Analysis and Content Analysis: Two Solitudes?" *CORE*, <https://doi.org/10.5281/zenodo.998649>).

Health Data.gov 2022. "COVID-19 State Profile Report – Puerto Rico." <https://healthdata.gov/Community/COVID-19-State-Profile-Report-Puerto-Rico/dfc5-i6nj>).

"Hispanic Federation: Congress, Biden Administration must 'Take Action for Puerto Rico!' to Demand Parity in Benefits, Build Back Better." 2021. *Targeted News Service*, Sep 22, <https://www.proquest.com/wire-feeds/hispanic-federation-congress-biden-administration/docview/2575073404/se-2>).

"House Natural Resources Subcommittee Issues Testimony from Puerto Rico Electric Power Authority Chairman Ensenat & Executive Director Ortiz." 2021. *Targeted News Service*, Oct 30, (<https://www.proquest.com/wire-feeds/house-natural-resources-subcommittee-issues/docview/2588337708/se-2>).

Horan, Holly, Melissa Cheyney, Yvette Piovanetti and Vanessa Caldari. 2021. "La Crisis De La Atención De Maternidad: Experts' Perspectives on the Syndemic of Poor Perinatal Health Outcomes in Puerto Rico." *Human Organization* 80(1):2-16 (<https://www.proquest.com/scholarly-journals/la-crisis-de-atención-maternidad-experts/docview/2525722424/se-2?accountid=10003>).

"HOW PUERTO RICO REACHED HIGH VACCINATION NUMBERS."2021. *The Atlanta Journal - Constitution*, Nov 01, (<https://www.proquest.com/newspapers/how-puerto-rico-reached-high-vaccination-numbers/docview/2589915954/se-2>).TO RICO REACHED HIGH VACCINATION NUMBERS."2021. *The Atlanta Journal - Constitution*, Nov 01, (<https://www.proquest.com/newspapers/how-puerto-rico-reached-high-vaccination-numbers/docview/2589915954/se-2>).

Hughes, Trevor, and Gabriela Miranda. 2021. "Puerto Rico has some of the Best COVID-19 Vaccination Rates in the US. here's how the Island did it." *USA Today (Online)*, Aug 21, (<https://www.proquest.com/newspapers/puerto-rico-has-some-best-covid-19-vaccination/docview/2563121188/se-2>).

"In Puerto Rico, Protests Grow As Power Fails." 2021. *The New York Times*, Oct 20, (<https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:63WK-1D31-JBG3-62GT-00000-00&context=1516831>).

"Jackson Lewis: Puerto Rico Expands COVID-19 Vaccination Requirements to Cover Certain Commercial Establishments." 2021. *News Bites - Private Companies*, Dec 23, (<https://www.proquest.com/wire-feeds/jackson-lewis-puerto-rico-expands-covid-19/docview/2612549070/se-2>).

John Hopkins University of Medicine. 2022. COVID-19 United States Cases by County. <https://coronavirus.jhu.edu/us-map>

Kollannoor-Samuel, Grace, Sonia Vega-López, Jyoti Chhabra, Sofia Segura-Pérez, Grace Damia, Rafael Pérez-Escamilla. 2011. "Food Insecurity and Low Self-efficacy are Associated with Health Care Access Barriers Among Puerto-Ricans with Type 2 Diabetes." *J Immigrant Minority Health* 14: 552–562. DOI 10.1007/s10903-011-9551-9

Lafarga Previdi, Irene, and Carmen M. Vélez Vega. 2020. "Health Disparities Research Framework Adaptation to Reflect Puerto Rico's Socio-Cultural Context." *International Journal of Environmental Research and Public Health* 17(22):8544. doi: 10.3390/ijerph17228544.

Lopez-Cardalda, Guillermo, Melvin Lugo-Alvarez, Sergio Mendez-Santacruz, Eduardo Ortiz Rivera, Erick Aponte Bezares. 2018. "Learnings of the Complete Power Grid Destruction in Puerto Rico by Hurricane Maria," *2018 IEEE International Symposium on Technologies for Homeland Security (HST)*, 2018, pp. 1-6, doi: 10.1109/THS.2018.8574120.

Lopez-Cepero, Andrea, Alexandra Valencia, Julio Jimenez, Stephanie C. Lemon, Cristina Palacios, Milagros C. Rosal. 2016. "Comparison of Dietary Quality Among Puerto Ricans Living in Massachusetts and Puerto Rico." *J Immigrant Minority Health* 19: 494-498 DOI 10.1007/s10903-016-0480-5

Mabus, Kate. 2021. "Mask Mandates by States: As COVID Cases Spike, See what the Rules are Where You Live." *USA Today (Online)*, Jul 27, (<https://www.proquest.com/newspapers/mask-mandates-states-as-covid-cases-spike-see/docview/2555463404/se-2>).

Martín Yago, Cutter, S. L., Zhenlong, L., Emrich, C. T., & Mitchell, J. T. (2020). Using geotagged tweets to track population movements to and from puerto rico after hurricane maria. *Population and Environment*, 42(1), 4-27. doi:<http://dx.doi.org/10.1007/s11111-020-00338-6>

Mayol-García, Yerís,H. 2020. "Pre-Hurricane Linkages between Poverty, Families, and Migration among Puerto Rican-Origin Children Living in Puerto Rico and the United States." *Population and Environment* 42(1):57-78 (<https://www.proquest.com/scholarly-journals/pre-hurricane-linkages-between-poverty-families/docview/2434148791/se-2>). doi:<http://dx.doi.org/10.1007/s11111-020-00353-7>).

“Medical Sciences Study Reveals First-Ever Immune Response to COVID-19 in Puerto Rico.” 2021. *CE Noticias Financieras English*, Oct 5, (<https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:63SC-V401-DY1R-B292-00000-00&context=1516831>).

Morelli, Neil. 2010. "Furthering Conservation of Resources Theory: How our Values Influence our Stress Response." Order No. 1488590 dissertation, The University of Tennessee at Chattanooga, Ann Arbor (<https://www.proquest.com/dissertations-theses/furthering-conservation-resources-theory-how-our/docview/851873099/se-2?accountid=10003>).

MSNBC and Julio Ricard Varela. 2022. "Puerto Rico's new bankruptcy plan does nothing for most of the island. Colonialism is alive and well in Puerto Rico."

(<https://www.msnbc.com/opinion/puerto-rico-s-new-bankruptcy-plan-does-nothing-most-island-n1287883>).

NBC News and Nicole Acevedo. 2021. "Puerto Rico enacted strict Covid measures. It paid off, and it's a lesson for the mainland." (<https://www.nbcnews.com/news/latino/puerto-rico-enacted-strict-covid-measures-it-paid-it-s-n1260998>).

NBC News and Nicole Acevedo. 2020. "In Puerto Rico, voters reeling from Political upheavals and crises face a crucial election." Oct 30, (<https://www.nbcnews.com/news/latino/puerto-rico-voters-reeling-political-upheavals-crises-face-crucial-election-n1245316>).

NPR and Emily Kwong. 2021. "Why Puerto Rico is a Leader in Vaccinating Against COVID-19." (<https://www.npr.org/transcripts/1058685965>).

NPR and Michel Martin. 2021. "4 years after Hurricane Maria, Puerto Rico power grid remain in poor shape." (<https://www.npr.org/2021/11/20/1057684543/4-years-after-hurricane-maria-puerto-rico-power-grid-remains-in-poor-shape>).

"N.Y. Gov. Hochul Announces Partnership to Expand Solar Development Support for Puerto Rico and Virgin Islands." 2021. *Targeted News Service*, Nov 06,

(<https://www.proquest.com/wire-feeds/n-y-gov-hochul-announces-partnership-expand-solar/docview/2593845293/se-2>).

Osoria, Jose Atilas. 2021. "The COVID-19 Pandemic in Puerto Rico; Exceptionality, Corruption and State-Corporate Crimes." *Pluto Journals State Crime 10 (1)*,

https://www.scienceopen.com/document_file/eaba46dc-c75b-40bb-a7db-351e6146707f/ScienceOpen/statecrime.10.1.0104.pdf).

Pérez Ramos, José G., Adriana Garriga-López, Carlos E. Rodríguez-Díaz. 2022. "How Is Colonialism a Sociostructural Determinant of Health in Puerto Rico?" *AMA Journal of Ethics* 24 (4). (<https://journalofethics.ama-assn.org/article/how-colonialism-sociostructural-determinant-health-puerto-rico/2022-04>).

"Puerto Rico Adapts to a Changing, Challenging Environment." 2021. *Impact News Service*, Apr 23, (<https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:62H8-FSN1-JDG9-Y1TT-00000-00&context=1516831>).

"Puerto Rico Economy: Pierluisi Moves to Tackle Covid-19 Debt and Reconstruction." 2021. *EIU ViewsWire*, Jan 20, (<https://www.proquest.com/wire-feeds/puerto-rico-economy-pierluisi-moves-tackle-covid/docview/2479580273/se-2>).

"Puerto Rico, New York Governors Attend Mass Vaccination Of Minors." 2021. *CE Noticias Financieras English*, Nov 6, (<https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6416-WRB1-DY1R-B00W-00000-00&context=1516831>).

"Puerto Rico Opportunity Zone Fund, LP Makes Investment in Fusion Farms: The First Private Equity Firm Fund Focused on ESG Investing in Opportunity Zones Throughout Puerto Rico Invests in Puerto Rico's First Hurricane-Protected, Vertical Indoor Aquaponics Farm Paving Way for a More Resilient Puerto Rico." 2021. *PR Newswire*, Dec 29,

<https://www.proquest.com/wire-feeds/puerto-rico-opportunity-zone-fund-lp-makes/docview/2614982317/se-2>).

“Puerto Rico tightens entry requirements for travelers.” 2021. *CE Noticias Financieras English*, Dec 5, (<https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:647D-PF71-DY1R-B2MT-00000-00&context=1516831>).

PBS News Hour and Teresa Carey. 2017. “The Jones Act, explained (and what waiving it means for Puerto Rico).” <https://www.pbs.org/newshour/nation/jones-act-explained-waiving-means-puerto-rico>

Recht, Hannah, Rachana Pradhan and Lauren Weber. 2021. "RO Working Stark Racial Disparities Persist in Vaccinations, State-Level CDC Data show." *TCA News Service*, May 20, (<https://www.proquest.com/wire-feeds/ro-working-stark-racial-disparities-persist/docview/2529405761/se-2>).

Rivera-Díaz Marinilda, Juan Correa-Luna, Natalie Álamo-Rodríguez M., Barreto-Cortés Esterla, Valerie Paz-Zayas, de L. Martínez- Avilés María, Muñoz-Sosa Nylca, Mabel López-Ortiz T., Yamil Ortiz-Ortiz, Doris Pizarro-Claudio, Yanira Reyes-Gil and Randy Tejada-Duarte. 2021. "0RW1S34RfeSDcfkexd09rT2Somos Dign@s1RW1S34RfeSDcfkexd09rT2 and Trayecto Dignidad: A National Campaign for Advocating Human Rights in Puerto Rico." *Journal of Human Rights and Social Work* 6(4):318-326 (<https://www.proquest.com/scholarly-journals/i-somos-dign-s-trayecto-dignidad-national/docview/2598839624/se-2?accountid=10003>). doi: <http://dx.doi.org/10.1007/s41134-021-00175-z>.

Rodríguez-Madera, Sheilla L., Nelson Varas-Díaz, Mark Padilla, Kevin Grove, Kariela Rivera-Bustelo, Jeffrey Ramos, Violeta Contreras-Ramirez, Sergio Rivera-Rodríguez, Ricardo Vargas-Molina, Jose Santini. 2021. "The impact of Hurricane Maria on Puerto Rico's health system: post-disaster perceptions and experiences of health care providers and administrators." *Global Health Research and Policy* 6, 44. (<https://doi.org/10.1186/s41256-021-00228-w>).

Roman, Jesse. 2015. "The Puerto Rico Healthcare Crisis." *Annals of the American Thoracic Society*. (<https://doi.org/10.1513/AnnalsATS.201508-531PS>).

Salas-Wright, Christopher, Mildred Maldonado-Molina, Eric C. Brown, Melissa Bates, Rodríguez José, María F. García and Seth J. Schwartz. 2021. "Cultural Stress Theory in the Context of Family Crisis Migration: Implications for Behavioral Health with Illustrations from the 0RW1S34RfeSDcfkexd09rT2Adelante Boricua1RW1S34RfeSDcfkexd09rT2 Study." *American Journal of Criminal Justice : AJCJ* 46(4):586-608 (<https://www.proquest.com/scholarly-journals/cultural-stress-theory-context-family-crisis/docview/2560162011/se-2?accountid=10003>). doi: <http://dx.doi.org/10.1007/s12103-021-09626-9>.

Santos-Lozada, A., Kaneshiro, M., Collin, M., & Marazzi-Santiago, M. 2020. "Puerto Rico exodus: Long-term economic headwinds prove stronger than hurricane maria." *Population and Environment*, 42(1), 43-56. (doi:<http://dx.doi.org/10.1007/s11111-020-00355-5>).

Santos-Lozada, Alexis R. 2018. "Puerto Ricans don't trust official information on Hurricane Maria." *The Conversation*, Jun 15, (<https://theconversation.com/puerto-ricans-dont-trust-official-information-on-hurricane-maria-98069>).

"SIM Inaugurates the First Post COVID-19 Care Clinic in Puerto Rico: The Clinic Will Offer Integrated and Multidisciplinary Services for the Care of Patients Who have Suffered from COVID-19." 2021. *PR Newswire*, Jul 29, (<https://www.proquest.com/wire-feeds/sim-inaugurates-first-post-covid-19-care-clinic/docview/2556040255/se-2>).

"Stirling Ultracold Supplies Island of Puerto Rico and U.S. Embassy Locations with Ultra-Low Temperature (ULT) Freezers to Help Facilitate Global COVID-19 Vaccination Efforts." 2021. *Business Wire*, Jan 28, (<https://www.proquest.com/wire-feeds/stirling-ultracold-supplies-island-puerto-rico-u/docview/2481512037/se-2>).

The New York Times, Rosa and Robles. 2021. "Pandemic Plunges Puerto Rico Into Yet Another Dire Emergency." (<https://www.nytimes.com/2020/07/08/us/coronavirus-puerto-rico-economy-unemployment.html>).

Translated by Content Engine, L. L. C. 2021. "CDC Withdraws National Guard from Vaccinations." *CE Noticias Financieras*, Dec 08, (<https://www.proquest.com/wire-feeds/cdc-withdraws-national-guard-vaccinations/docview/2608436352/se-2>).

Translated by Content Engine, L. L. C. 2021. "Covid: 6 Keys to Understanding how Puerto Rico Became the U.S. Territory with the Highest Vaccination Rates." *CE Noticias Financieras*, Dec 08, (<https://www.proquest.com/wire-feeds/covid-6-keys-understanding-how-puerto-rico-became/docview/2608430515/se-2>).

Translated by Content Engine, L. L. C. 2021. "New York, Puerto Rico to Boost Mental Health Care in Natural Disasters." *CE Noticias Financieras*, Nov 05, (<https://www.proquest.com/wire-feeds/new-york-puerto-rico-boost-mental-health-care/docview/2594179889/se-2>).

Translated by ContentEngine, L. L. C. 2021. "Nurse Takes Doses Against Covid-19 from House to House in Puerto Rico." *CE Noticias Financieras*, Aug 09, (<https://www.proquest.com/wire-feeds/nurse-takes-doses-against-covid-19-house-puerto/docview/2559984549/se-2>).

Translated by ContentEngine, L. L. C. 2021. "Pierluisi: "I Didn't Bring Magic Sticks"." *CE Noticias Financieras*, Apr 08, (<https://www.proquest.com/wire-feeds/pierluisi-i-didnt-bring-magic-sticks/docview/2510565280/se-2>).

Translated by ContentEngine, L. L. C. 2021. "Puerto Rico Implements Strong Covid-19 Measures as Vaccination Progresses." *CE Noticias Financieras*, Apr 20, (<https://www.proquest.com/wire-feeds/puerto-rico-implements-strong-covid-19-measures/docview/2516145592/se-2>).

Translated by Content Engine, L. L. C. 2021. "Puerto Rico Imposes Dry Law and Nighttime Closing of Shops for Covid-19." *CE Noticias Financieras*, Dec 31, (<https://www.proquest.com/wire-feeds/puerto-rico-imposes-dry-law-nighttime-closing/docview/2615732079/se-2>).

Translated by ContentEngine, L. L. C. 2021. "Puerto Rico Joins Phase 3 of Third-Vaccine Tests Against Covid-19." *CE Noticias Financieras*, Jan 26, (<https://www.proquest.com/wire-feeds/puerto-rico-joins-phase-3-third-vaccine-tests/docview/2481497189/se-2>).

Translated by ContentEngine, L. L. C. 2021. "These are the New Federal Aid After Approval of the Stimulus Package." *CE Noticias Financieras*, Mar 10, (<https://www.proquest.com/wire-feeds/these-are-new-federal-aid-after-approval-stimulus/docview/2500287389/se-2>).

Translated by ContentEngine, L. L. C. 2021. "The Virus that Changed the World." *CE Noticias Financieras*, Mar 15, (<https://www.proquest.com/wire-feeds/virus-that-changed-world/docview/2501771080/se-2>).

United States Census Bureau, Jason Schachter and Angelica Menchaca. 2021. "New Population Estimates Rely on Monthly Flight Data to Capture Puerto Rico's Migration Flows." (<https://www.census.gov/library/stories/2021/12/net-outmigration-from-puerto-rico-slows-during-pandemic.html>).

United States Census Bureau. 2021. "Quick Facts Puerto Rico." (<https://www.census.gov/quickfacts/PR>).

Venator-Santiago, Charles R., Edgardo Meléndez. 2017. "U.S. Citizenship in Puerto Rico: One Hundred Years After the Jones Act." *Centro Journal*, 29(1) 14-37.

Vox and Nicole Narea. 2021. "How Puerto Rico became the most vaccinated place in America." (<https://www.vox.com/22761242/puerto-rico-vaccine-covid-hurricane-maria>).

World Health Organization. 2022. COVID-19 data tracker. <https://covid19.who.int/region/amro/country/pr>

gender.