

COVID-19: THE AFTERMATH - A QUALITATIVE CASE STUDY

Dr. Giselle A. Castillo, PhD

Higher Education Advocate, Faculty, Researcher

Abstract: In May – June 2020, Dr. Castillo conducted and published a study titled *COVID-19: THE DISEASE, EXPOSURE, DIAGNOSIS, CONCERN AND RETURN TO WORK*. That study was conducted to establish awareness of the science of SARS-CoV-2 (COVID-19). For the purpose of the initial study the researcher used a Qualitative Case Study approach to discuss its origins/background, clinical signs and symptoms, testing, canvassing of individuals exposed, diagnosed, and those non-affected by the virus, mental health concerns, and a collective overview of the participants recommendations for those returning to the workforce. Because of the prevalence of this pandemic; the researcher's intent was solely to provide a basic overview and promote further interest and understanding on the disease, and to better assist individuals in their support of preventing the pandemic.

Today this study is presented as Part II; *COVID-19: THE AFTERMATH* and its purpose is to discuss the events that have transpired to the participants of the initial study throughout the year/ after this deadly pandemic began.

Keywords: COVID-19; Pandemic; Health; Safety; Vaccine.

1. INTRODUCTION

The epicenter of the COVID-19 disease outbreak took place in Wuhan, Hubei Province, China. Since its inception in December of 2019; The pandemic has reached and touched every corner of the globe.

2. PURPOSE STATEMENT

This study is geared to afford a positive and negative result status within a delicate and very serious situation, through a personal and unique perspective.

3. METHODOLOGICAL APPROACH AND RESEARCH DESIGN

Alike the initial study, this study was conducted by utilizing a case study approach. Although the induction of case studies is not visibly stated in research, the approach has existed for quite some time. According to Castillo (2020), case studies are used in various disciplines; for example, psychology, education, social sciences, and medical science to name a few. Case studies are also known as a source of recollection of data; record and observation analysis (Cooper & Schindler, 2011). This case study uses a collective approach.

Because the approach used in case studies is to examine situations as they occur; case studies are typically socially constructed and structured between the researcher, and the respondent (participant) to provide a deep understanding of a complex situation. Crowe, Cresswell, Robertson, Huby, Avery, and Sheikh (2011) argue that case studies are often used to understand events and their effects and processes by emphasizing on contextual analysis of the event(s) or condition(s), and their interrelations when there is a need to obtain a comprehensive appreciation of a concern of interest in its natural every day setting.

International Journal of Novel Research in Interdisciplinary Studies

Vol. 8, Issue 2, pp: (14-22), Month: March – April 2021, Available at: www.noveltyjournals.com

4. SOURCES OF INFORMATION AND LITERATURE REVIEW

The literature review consisted of present medical research and findings, and those dated back to March of 2020. All of which is focused on COVID-19 disease. The works reviewed for the purpose of this study encompass the core foundations and theories relevant to COVID-19 disease. These methodological approaches have greatly influenced research and theory in the field of Infectious Disease Epidemiology which is a branch of medicine that deals with the prevention, diagnosis, and treatment of infections and viruses.

DATA COLLECTION PLAN

The purpose of the study was to gain a better understanding of the lived experiences of the initial participants throughout the past year, a concrete description was the most appropriate for expressive purposes (Seamon, 2000).

SIGNIFICANCE AND POTENTIAL CONTRIBUTIONS

Awareness of the significance of this medical condition is essential for building a well-developed understanding of the virus and the aftermath.

ETHICAL CONSIDERATIONS

This research concentrated on the sensitive issue related to COVID-19 disease. In this study, the researcher was aware of the possibility of demonstrating an uncomfortable and personal experience.

EXPECTED OUTCOME

This study was intended to afford its audience with the lived experiences of the initial participants a year later.

SETTING, POPULATION, SAMPLE

The sample size for the initial study consisted of 4,234 participants nationwide. The intent of the study was to examine COVID-19 disease through the eyes of the participants who have either been exposed and or diagnosed with the virus or know someone who has been.

Presently, the sample size for this study was 2,351 participants. Once again, participants were contacted via the use of SurveyMonkey recall, and was monitored continuously for saturation purposes. Saturation was met at 2,351 responses.

5. MATERIALS AND INSTRUMENTS

The material and instruments used were SurveyMonkey and the NVivo 12 software. NVivo 12 is software that supports qualitative research by allowing the researcher to collect, organize, and analyze survey content. The following steps were taken to ensure proper handling of data and analysis.

1. First step consisted of labeling of each question as it was answered.
2. Second step involved reviewing the data.
3. Third step entailed that the data be reviewed a second time and compared with the survey output for accuracy.
4. Last, themes were created; these themes were analyzed and compared to find commonalities through the use of NVivo 12.

As Ehrich (2005) suggests, these measures permit a strict method of data collection and data analysis, which was indispensable in obtaining thorough, reliable, and authentic information from participants.

6. WHAT IS COVID-19 DISEASE

COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. COVID-19 is now a pandemic affecting many countries globally (World Health Organization, 2019).

SYMPTOMS

The Mayo Clinic (2020) states that the COVID-19 disease signs and symptoms may appear two to 14 days after exposure. This time after exposure and before having symptoms is called the incubation period. Common signs and symptoms can include:

Minor	Severe
Fever	Shortness of breath or difficulty breathing
Cough	Chest pain
Tiredness	Loss of taste or smell
Sore throat	Chills
Headache	Muscle aches

This list is not all inclusive. Other less common symptoms have been reported, such as nausea, vomiting and diarrhea. Children have similar symptoms to adults and generally have mild illness (Mayo Clinic, 2020).

The severity of COVID-19 disease symptoms can range from very mild to severe. Some people may have only a few symptoms, and some people may have no symptoms at all. The Mayo Clinic (2020) urges that people who are older or who have existing chronic medical conditions, such as heart disease, lung disease, diabetes, severe obesity, chronic kidney or liver disease, or who have compromised immune systems may be at higher risk of serious illness.

This is similar to what is seen with other respiratory illnesses, such as influenza. Some people may experience worsened symptoms, such as worsened shortness of breath and pneumonia, about a week after symptoms start.

RISKS

- Several individuals are at much higher risk for having severe disease. In particular, older adults who are over the age of 65 are much more likely to have severe COVID-19 disease than others.
- People who are obese also have an increased risk of severe disease.
- some people who are severely ill with COVID-19 disease are young and perfectly healthy. Sometimes young, perfectly healthy people can also become severely ill. That's rare. It's a small proportion of infections.
- children are very unlikely to be severely ill. But it does happen sometimes.
- Other existing medical conditions that increase the risk of severe disease in COVID-19 disease include diabetes, hypertension, any kind of lung disease such as asthma or emphysema or Chronic Obstructive Pulmonary Disorder (COPD).
- People who have heart disease, liver disease, any kind of kidney disease are also at increased risk for severe COVID-19 disease.
- People who have weakened immune systems are also at increased risk. And some people have weakened immune systems because they're taking certain medications like steroids or others that affect their immune function.
- If someone has Human Immunodeficiency Virus (HIV) and they are on medication and their HIV infection is controlled, they are not at substantial increased risk for COVID-19 severe disease (Johns Hopkins University, 2020).

7. TRANSMISSION/SPREAD

According to Gavi (2021), During the early months of the COVID-19 pandemic, the virus was thought to be spread predominantly by respiratory droplets – produced when we cough, speak, or sneeze – or by those droplets contaminating objects and surfaces. Concerned that people might touch these contaminated surfaces (fomites), and then infect themselves by touching their eyes, mouth or nose, some health agencies advised people to frequently wash their hands, as well as disinfect or quarantine grocery deliveries.

International Journal of Novel Research in Interdisciplinary Studies

Vol. 8, Issue 2, pp: (14-22), Month: March – April 2021, Available at: www.noveltyjournals.com

This is why social distancing and hand washing and cleaning are so crucial for preventing transmission, because many people can get infected through their hands.

INITIAL (BLACK) AND PRESENT (BLUE) STUDY QUESTIONS AND FINDINGS

There were 4,234 participants in the study. Note: Saturation was met at 3,613 responses.

*2,351 participants responded to second call.

The following are the Research Questions and their findings:

1. Were you or someone you know exposed or diagnosed with COVID19 disease.

This question was fundamental, the overall consensus was that:

37% were exposed to the virus (not tested).

42% received positive results

21% received negative results

**Of the 2,351 participants that responded to the second call; 466 responses were received by someone other than original participant, of these responses there were 354 deaths reported and 1,997 alive and well considering the circumstances. Of the 1,997, 47% reported to have been vaccinated; 31% are awaiting vaccination, and 22% do not want to be vaccinated.

2. What type of signs and or symptoms were experienced.

This question focused on establishing the participants' signs and or symptoms; the following is the breakdown of signs and or symptoms:

47% 26 % Mild

31% 51 % Severe

22% 23 % None

3. Duration of time ill.

12% 7 % 2-5 days

41% 10% 6-14 days

9% 34 % 14 or more

38% 49% None

4. What emotional and or psychological issues were experienced.

29% 40% Anxiety (i.e., Generalized Anxiety, Social Anxiety, etc.).

31% 31% Depression (i.e., Major, Persistent, Situational Depression, etc.).

15% 17% Obsessive Compulsive Disorder (i.e., Compulsive hand washing, Fear of Contamination, etc.).

20% 10% Other (i.e., Agoraphobia, Germaphobia, Thanatophobia, etc.).

5% 2% None

International Journal of Novel Research in Interdisciplinary Studies

Vol. 8, Issue 2, pp: (14-22), Month: March – April 2021, Available at: www.noveltyjournals.com

5. Are you (or affected person) presently employed; specifically, are you or he/she reporting to work.

64% 71% Yes

36% 29% No

6. If participant “will be” reporting to work; what concerns regarding COVID-19 disease do you, he/she have.

48% Exposure (i.e., contracting the virus, etc.).

36% Safety (i.e., not having proper Personal Protective Equipment (PPE), etc).

16% Other (i.e., child care, elder care, etc.).

Note: This question was not addressed in this study

7. Despite the Health Insurance Portability and Accountability Act (HIPAA) of 1996 which protects the confidentiality, integrity, and availability of protected health information (PHI).

Does the subject believe screening/testing for COVID-19 disease should be required by employers upon return to work.

72% Yes

28% No

Note: This question was not addressed in this study

8. What measures should employers take upon reopening.

64% Stated, it is too soon to return

24% Mandatory PPE (i.e., 6 ft Social Distancing, masks, face/eye protection, etc.).

10% Altered workspace (i.e., No person-to-person contact, etc.).

2% None

Note: This question was not addressed in this study

8. TESTING

According to Johns Hopkins University (2020), the Polymerase Chain Reaction (PCR), is the diagnostic test that identifies the COVID-19 virus in the body. SARS-CoV-2 has DNA and RNA sequences that are unique and specific to the virus - that is, no other virus or organism has these sequences. The SARS-CoV-2 PCR test assesses for these sequences. If they are present, the test is positive. It is important to recognize that this is not a culture; these tests just assess for the nucleic acid sequences. PCR tests for SARS-CoV-2 are usually done from swabs taken from the back of the throat or nose (Johns Hopkins University, 2020).

9. TREATMENT

In March of 2020, Johns Hopkins University (2020) advised that we did not have any specific treatment to cure COVID-19 DISEASE. Although scientists were working very, very hard and as quickly as possible to find treatments.

Vaccines

COVID-19 vaccines help our bodies develop immunity to the virus that causes COVID-19 without us having to get the illness.

Different types of vaccines work in different ways to offer protection. But with all types of vaccines, the body is left with a supply of “memory” T-lymphocytes as well as B-lymphocytes that will remember how to fight that virus in the future.

It typically takes a few weeks after vaccination for the body to produce T-lymphocytes and B-lymphocytes. Therefore, it is possible that a person could be infected with the virus that causes COVID-19 just before or just after vaccination and then get sick because the vaccine did not have enough time to provide protection.

Sometimes after vaccination, the process of building immunity can cause symptoms, such as fever. These symptoms are normal and are signs that the body is building immunity (Centers for Disease Control and Prevention (CDC) (2021).

Types of Vaccines

Presently, there are three types of COVID-19 vaccines that are authorized and recommended, or undergoing large-scale (Phase 3) clinical trials in the United States.

1. mRNA vaccines contain material from the virus that causes COVID-19 that gives our cells instructions for how to make a harmless protein that is unique to the virus. After our cells make copies of the protein, they destroy the genetic material from the vaccine. Our bodies recognize that the protein should not be there and build T-lymphocytes and B-lymphocytes that will remember how to fight the virus that causes COVID-19 if we are infected in the future (CDC, 2021).
2. Protein subunit vaccines include harmless pieces (proteins) of the virus that causes COVID-19 instead of the entire germ. Once vaccinated, our bodies recognize that the protein should not be there and build T-lymphocytes and antibodies that will remember how to fight the virus that causes COVID-19 if we are infected in the future (CDC, 2021).
3. Vector vaccines contain a modified version of a different virus than the one that causes COVID-19. Inside the shell of the modified virus, there is material from the virus that causes COVID-19. This is called a “viral vector.” Once the viral vector is inside our cells, the genetic material gives cells instructions to make a protein that is unique to the virus that causes COVID-19. Using these instructions, our cells make copies of the protein. This prompts our bodies to build T-lymphocytes and B-lymphocytes that will remember how to fight that virus if we are infected in the future (CDC, 2021).

Multiple Shots

According to the CDC (2021), to be completely vaccinated, you will require two shots of the particular COVID-19 vaccine.

- *Two shots: If you get a COVID-19 vaccine that requires two shots, you are considered fully vaccinated two weeks after your second shot. Pfizer-BioNTech and Moderna COVID-19 vaccines require two shots.*
- *One Shot: If you get a COVID-19 vaccine that requires one shot, you are considered fully vaccinated two weeks after your shot. Johnson & Johnson's Janssen COVID-19 vaccine only requires one shot.*

How do Vaccine's work

Presently, there are vaccines available. According to the CDC (2021), it is important to understand how COVID-19 vaccines work, it helps to first look at how our bodies fight illness. When germs, such as the virus that causes COVID-19, invade our bodies, they attack and multiply. This invasion, called an infection, is what causes illness. Our immune system uses several tools to fight infection. Blood contains red cells, which carry oxygen to tissues and organs, and white or immune cells, which fight infection (CDC, 2021). Different types of white blood cells fight infection in different ways:

1. Macrophages are white blood cells that swallow up and digest germs and dead or dying cells. The macrophages leave behind parts of the invading germs, called “antigens”. The body identifies antigens as dangerous and stimulates antibodies to attack them.
2. B-lymphocytes are defensive white blood cells. They produce antibodies that attack the pieces of the virus left behind by the macrophages.
3. T-lymphocytes are another type of defensive white blood cell. They attack cells in the body that have already been infected.

International Journal of Novel Research in Interdisciplinary Studies

Vol. 8, Issue 2, pp: (14-22), Month: March – April 2021, Available at: www.noveltyjournals.com

The CDC (2021) suggests that the first time a person is infected with the virus that causes COVID-19, it can take several days or weeks for their body to make and use all the germ-fighting tools needed to get over the infection. After the infection, the person's immune system remembers what it learned about how to protect the body against that disease.

Additionally, data shows the body keeps a few T-lymphocytes, called "memory cells", that go into action quickly if the body encounters the same virus again. When the familiar antigens are detected, B-lymphocytes produce antibodies to attack them (CDC, 2021). Experts are still learning how long these memory cells protect a person against the virus that causes COVID-19.

Continued precautions

- Social distancing (6 ft)
- Mask wearing
- Washing and or sanitizing of hands
- Refrain from touching face after touching surfaces
- Vaccination

10. MENTAL HEALTH

Harvard University (2020) suggests that Managing Stress, Anxiety, and Fear are detrimental for your mental health during the pandemic, it is just as important as your physical health. Many Universities and Healthcare entities advise that as the information about COVID-19 disease unfolds and response plans are implemented, there can be a wide range of thoughts, feelings and reactions. Some helpful information and resources are below (Castillo, 2020):

Common Reactions

Castillo (2020) suggests that people pay attention to their mental health and recognize that there can be a wide range of reactions that you may experience, such as:

- Anxiety, worry or panic
- Social withdrawal
- Difficulty concentrating or sleeping
- Overexposure to media
- Feeling helpless or confused
- Hyper-vigilance to your health
- Anger
- Feelings of loss or grief
- Skepticism or bravado
- Excitement, relief, curiosity

Managing and Coping

Harvard University (2021) emphasizes that Public health authorities, advise people to not let their worry about this virus control their life. There are many simple and effective ways to manage your fears and anxieties. Many of them are ingredients for a healthy mental and physical lifestyle:

- Anxiety is an emotion that tends to seek out confirmation
- Be aware of how your body can reinforce anxiety
- Be aware of ruminating with catastrophic thoughts and language

International Journal of Novel Research in Interdisciplinary Studies

 Vol. 8, Issue 2, pp: (14-22), Month: March – April 2021, Available at: www.noveltyjournals.com

- Be mindful of your assumptions about others
- Find activities that give you a sense of mastery
- Focus on rational rather than emotional responses and engage in active problem solving
- Get the facts.
- Keep connected
- Keep things in perspective
- Practice mindfulness and acceptance
- Rather than dwelling in thoughts and images of hopelessness, imagine yourself coping effectively
- Stay informed with the latest health information

11. DEATH

- COVID-19 disease causes death if the lungs are not able to recover-- if the virus damages the lungs too much and the patient is unable to breathe on their own, then that is one way that someone can die from COVID-19 disease. Another way is through lack of oxygen. Meaning, when the lungs are not functioning properly, then one cannot get enough oxygen in his/her body and that can damage many of his/her other organ systems.
- Additionally, roughly risk of death is generally associated on your health before you get sick and also access to care. If someone gets sick with COVID-19 disease, but is unable to seek care early in the illness, then they are at higher risk for death. It is important for people who develop severe disease to be able to get the supportive care they need quickly. Death from COVID-19 disease is rare among young and healthy people, but it can happen. Death among older adults who have COVID-19 disease is much more common and it increases with age (Johns Hopkins University, 2020).

12. CONCLUSION

In closing, the disease is a worldwide pandemic. Presently, it is urged that everyone follow Local, State, and Federal guidelines. Get vaccinated and continue to adhere to COVID-19 guidelines; continue to maintain social distancing, wear face masks, self-monitor yourselves and those around you that may not be able to, like children and elderly family members. Keep yourself educated on the disease through reliable sources, attend to your mental health which is very much important, as well, and stay safe. Should every single person “globally” adhere to the medical and safety recommendations bestowed by the healthcare and safety experts, we can help beat the transmission and spread of this vicious disease (Castillo, 2020).

DEDICATION

Sincerest sympathy to all the women, men, and children that have been and may be directly and indirectly affected by COVID-19 disease. May those that we have lost Rest in Peace, you are loved and missed. To the first responders, scientists, educators, medical suppliers, care-givers, medical facilities and all others that have continued to work throughout the pandemic. You are heroes and deeply appreciated!

REFERENCES

- [1] Castillo, G.A. (2020, May - June). COVID-19: THE DISEASE, EXPOSURE, DIAGNOSIS, CONCERN AND RETURN TO WORK - A QUALITATIVE CASE STUDY. *International Journal of Novel Research in Interdisciplinary Studies*, 7(3), 1-13.
- [2] Centers for Disease Control and Prevention. (2020). Coronavirus (COVID-19). Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- [3] Centers for Disease Control and Prevention. (2021). COVID-19 Vaccines. Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/how-they-work.html>
- [4] Cooper, C. R., & Schindler, P. S. (2011). *Business research methods* (11th ed.). Boston, MA: McGraw-Hill.

International Journal of Novel Research in Interdisciplinary StudiesVol. 8, Issue 2, pp: (14-22), Month: March – April 2021, Available at: www.noveltyjournals.com

- [5] Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC Medical Research Methodology*, 11(1), 100–108.
- [6] Ehrich, L. C. (2005). *Revisiting phenomenology: Its potential for management research*. British Academy of Management Conference Proceedings 2005: Challenges of Organizations in Global Markets, Said Business School, Oxford University, 1–13.
- [7] Gavi. (2021). COVID-19 . <https://www.gavi.org/programmes-impact/our-impact>
- [8] Johns Hopkins University. (2020). Coronavirus (COVID-19) Information and Updates. Retrieved from <https://www.hopkinsmedicine.org/coronavirus/>
- [9] Mayo Clinic. (2020). COVID-19. Retrieved from <https://www.mayoclinic.org/coronavirus-covid-19>
- [10] Seamon, D. (2000). *A Way of Seeing People and Place: Phenomenology in Environment-Behavior Research*. In S.Wapner, J. Demick, and C.T. Yamamoto, H. Minami (Eds.). *Theoretical perspectives in environment-behavior research: underlying assumptions, research problems, and methodologies*. (p. 157-178). New York, NY: Plenum.
- [11] World Health Organization. (2019). Q&A on coronaviruses (COVID-19). Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov>