Using the Protection Motivation Theory to Understand the Mental Health Impact of Surviving COVID-19

Kaprea Johnson
johnson.9545@osu.edu

Angel Spence
Virginia Commonwealth University, Spencea2@vcu.edu

Yousef Sherif
Virginia Commonwealth University, Sherifya2@vcu.edu

Dana Brookover
brookoverdl@gmail.com

Adrienne White
Fort Valley State University, Adrienne.White@fvsu.edu

Follow this and additional works at: https://mds.marshall.edu/adsp

Part of the Mental and Social Health Commons

Using the Protection Motivation Theory to Understand the Mental Health Impact of Surviving COVID-19

Cover Page Footnote

Correspondence concerning this article should be addressed to Kaprea F. Johnson, 305 Annie and John Glenn Avenue, College of Education and Human Ecology, Columbus OH, 43210 (Johnson.9545@osu.edu)

Running head: COVID-19 SURVIVORS

Using the Protection Motivation Theory to Understand the Mental Health Impact of Surviving
COVID-19

Kaprea F. Johnson
Counseling and Special Education Department
Virginia Commonwealth University
Email: Johnsonkf@vcu.edu
Phone: (804) 828-0617
Orcid ID: https://orcid.org/0000-0001-7127-3370

Angel Spence
Psychology Department
Virginia Commonwealth University
Email: Spencea2@vcu.edu
Phone: (804) 828-1193
Orcid ID: https://orcid.org/0000-0002-6289-4832

Yousef Sherif
Biology Department
Virginia Commonwealth University
Email: sherifya2@vcu.edu
Phone: (804) 828-1562
Orcid ID: https://orcid.org/0000-0002-2790-5278

Dana L. Brookover
Counseling & Therapy Department
Manhattan College
Email: brookoverdl@gmail.com
Orcid ID: https://orcid.org/0000-0002-5534-4092

Adrienne D. White
Department of Counseling
Fort Valley State University
Email: Adrienne.White@fvsu.edu
Phone: (478) 825-6176
Orcid ID: https://orcid.org/0000-0002-6311-334X

Correspondence concerning this article should be addressed to Kaprea F. Johnson, 1015 W. Main
Street, School of Education, Richmond VA, 23231 (Johnsonkf@vcu.edu).

Abstract

Due to the widespread effects of COVID-19, mental health professionals need to understand the lived experiences of survivors. Data were collected from YouTube videos ($N = 52$), which contained firsthand perspectives from COVID-19 survivors. Survivors understood the high stakes of COVID-19, reported the dual threat to physical and mental health, entered "survival mode," and had both positive and negative reflections on the experience. Implications for mental health professionals and future research directions are included.

Keywords: COVID-19 Survivors, Coronavirus, Protection Motivation Theory, Mental Health, Thematic analysis

**Using the Protection Motivation Theory to Understand the Mental Health Impact of
Surviving COVID-19**

As of April 2021, there had been a total of 148 million cases of COVID-19, 85.7 million

people had recovered from COVID-19, and 3.12 million people had died from the virus

worldwide (Centers for Disease Control and Prevention [CDC], 2020). The number of cases is

staggering, but there are many survivors of COVID-19 globally and in the United States

(Osterweil, 2020). Mental health effects for those who have survived COVID-19 is a gap in the

current research literature and a necessary area to explore. In general, *The Heathline COVID-19*

pandemic tracker, shows that Americans are reporting a sustained increase in symptoms of

depression and anxiety attributed to COVID-19, but it does not reveal nuances related to being a

survivor of the disease (Holland, 2020; Xiang et al., 2020). Our study explored the lived

experiences related to mental health of persons surviving COVID-19. The research is intended to

inform evidence-based mental health approaches.

Effects of COVID-19 on Mental Health

Pandemics are known to cause mental health issues within populations. The severe acute

respiratory syndrome (SARS), Middle East Respiratory Syndrome (MERS), influenza, and Ebola

pandemics have all incited fear, anxiety, emotional distress, and post-traumatic stress symptoms

in the countries and communities they affected (Shah et al., 2020). Like other pandemics,

COVID-19 has caused anxiety, depression, and self-reported stress symptoms (Preis et al., 2020;

Xiang et al., 2020). However, the mental health effects of COVID-19 might be different from

other pandemics because of the number of life-altering changes in a short time period, and the

calculated loss surpassing that of other global pandemics (Lee, 2020). Mental health symptoms

can also vary by stage of adulthood (Martin, 2020). For example, young adults could feel

uncertain about their future, causing increased anxiety. Parents in midlife might need to uproot

their life because they lost their job, or they might be worried about their children's future

(Martin, 2020). Older adults might experience negative mental health consequences because the

pandemic might be reinforcing ageist stereotypes along with the reality of belonging to an at risk

group (Ayalon et al., 2020). To explore the mental health of survivors of COVID-19, the

Protection Motivation Theory (PMT) provides a framework for understanding behaviors and

resulting mental health outcomes.

Protection Motivation Theory

PMT was originally used to explain behaviors people engage in to protect themselves

from a disease (i.e., perceived threat); it has been expanded to explain intentions, actual

behavior, effective remedial actions, and outcomes (Rogers, 1975). The specific outcomes under

investigation in the current study were mental health symptoms. We investigated these outcomes

using the PMT framework, which consists of four parts: (a) perceived severity of a threat, (b)

perceived likelihood of the threat occurring, (c) perceived effectiveness and availability of

protective measures, and (d) perceived self-efficacy of the individual to protect oneself (Westcott

et al., 2017).

A survivor's *perceived severity of the threat* is affected by how severe their illness was

(Sadique et al., 2007). The division between mild and severe symptoms as well as morbidity and

mortality have been linked with age, ethnicity, and preexisting conditions (Pareek et al., 2020).

Understanding the mental health needs of people based on their perceived severity of the disease,

can help providers tailor interventions and mental health responses (Taylor, 2020). The *perceived*

likelihood of the threat occurring is affected by what protective or risky behaviors were

exercised prior to contraction of COVID-19 (Weinstein et al., 2007). People who traveled or did

not practice social distancing are likely to evaluate their risk of contracting COVID-19 as high according to the theory.

The *perceived effectiveness and availability of protective measures* is influenced by available medical interventions and access to treatment (Williams & Cooper, 2020). Access to treatment has been a discussion at the national level, and many people have felt frustration because of lack of testing, access to care, and vaccines, which can have a negative effect on mental health (Williams & Cooper, 2020). The *perceived self-efficacy of an individual to protect themselves* is influenced by the individual's health, available social support during their illness, and perceived access to resources (Pareek et al., 2020).

The goal of this research endeavor is to better inform mental health providers' understanding of survivors' experiences with COVID-19 and improve mental health approaches. In a systematic review of COVID-19 research, 43 studies were found, but only two focused on people who had survived COVID-19 (Vindegaard & Benros, 2020); more research is needed on survivors' experiences. Three research questions guided our study, which sought to understand COVID-19 survivors' mental health: (1) How do survivors describe the threat of COVID-19?; (2) How do survivors describe coping with COVID-19?; (3) How do survivors describe emotional and/or mental health symptoms related to surviving COVID-19?

Method

We used a phenomenological constructivist lens to conceptualize the research study. Constructivism establishes the ontological tenet of the nonexistence of an objective reality; its epistemology is that individuals create knowledge and experience through social interaction (Costantino, 2012). Phenomenology focuses on the exploration of lived experiences. A phenomenological constructivist approach is fitting for the data source of YouTube videos,

because video creators disseminate knowledge through sharing their lived experiences (i.e.,

content).

Procedure

We explored the experiences of survivors of COVID-19 related to the perceived threat of

the disease, coping, and mental health by accessing the vlogs of participants who shared their

stories on YouTube in the summer of 2020. Publicly shared YouTube vlogs were used because

of safety precautions, access to the population, and the ability to understand sensitive phenomena

among vulnerable populations without retraumatizing them (Kellner & Kim, 2010; Naslund et

al., 2014). We followed all ethical guidelines and best practices for using digital data, online

publicly available personal archives, and the use of YouTube vlogs as research data (Lomborg,

2013). Specifically, we used publicly available YouTube content that can be accessed without a

password or subscription, applied participant pseudonyms (or the term person/survivor),

excluded any information about the vlogger's YouTube profile, and excluded the web link from

videos and images, consistent with ethical use guidelines (Markham, 2012).

Sample and Inclusion Criteria

YouTube videos from COVID-19 survivors provided the sample for the current study.

Inclusion criteria consisted of videos that contained firsthand accounts of people in the United

States who survived COVID-19. People who identified as health care workers were excluded

from the sample. Demographic information was collected through observation by two research

team members using direct quotations from the participants (e.g., "I'm only 21, I thought I would

be fine"). The location of participants was collected through information found in the video title

or explicit statements by the participants about their location. A cross section of society was

included in the study. In terms of race/ethnicity, participants included White ($n = 28$), Black ($n =$

14), Hispanic or Latinx (*n* = 3), Asian (*n* = 4), and did not disclose (*n* = 3) vloggers. The sample included 27 men and 32 women. Participants' ages ranged from young adult 18-39 (*n* = 32), to midlife 40-64 (*n* = 15), and older adults 65+ (*n* = 5).

Data Collection

Data collection took place over a 7-day timespan in steps in 2020. First, the second and third authors independently searched YouTube using search terms and the filter "relevance." The search terms used were: (a) COVID-19 Survivor Stories, (b) COVID-19 Survivor, (c) COVID-19 Personal stories of survival, (d) Coronavirus Survivor Stories, (e) Coronavirus Survivor, and (f) Coronavirus Personal stories of survival. YouTube links and descriptive statistics were catalogued on an Excel sheet originally containing 60 videos; after accounting for duplication (*n* = 8) the total was reduced to 52. The YouTube descriptive data categories (adapted from Basch et al., 2017) were: (a) exposure (i.e., views, comments, likes, dislikes, verified status); (b) publisher category (e.g., news, people/blogs, education, etc.); (c) year published; and (d) video length (Table 1).

Table 1
YouTube Video Descriptive Data

Category	n	M(*SD*)
Exposure		
Views	11,830,323	227,506.212 (492,301.916)
Comments	38,171	734.058 (894.324)
Likes	213,411	4104.057 (9,319.904)
Dislikes	11430	219.808 (441.030)
Publisher Category		
Education	5	
News and Politics	27	
Entertainment	6	
Travel & Events	1	
People & Blogs	9	
How-to & Style	1	
Non-profits & Activism	1	
Science & Technology	1	

Film & amination	1
Year Published	
2020	52
Video length (min)	
0-5	24
5.01-30	28
Total length of videos (min)	467.95
Total number of videos	**52**

Data Analysis

We reviewed each video with the accompanying transcript. Thematic analysis is a qualitative analysis method for identifying, organizing, and reporting patterns of meaning in a dataset (Braun & Clarke, 2006). Within thematic analysis, qualitative data are organized into themes: a theme "captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set" (Braun & Clarke, 2006, p 10). We used theoretical thematic analysis, a deductive approach, which allowed for PMT to guide the data analysis (Braun & Clarke, 2006; Rogers, 1975). We followed a six-phase approach to thematic analysis (Braun & Clarke, 2006).

**Researchers and Trustworthiness**

The research team included an expert-level qualitative doctoral researcher, who is a counselor educator with over a decade of experience engaging in qualitative studies. The second and third authors are advanced-level undergraduate research students. The fourth author is a doctoral level qualitative researcher who served as the auditor. The auditor's role included reviewing our reflexive journals, transcripts, emerging and final themes, and checking assumptions made by the research team during data analysis. The first three members of the research team engaged in data collection, analysis, and bracketing using reflexive journaling and discussions throughout the study. Bracketing was focused on expressing preconceived notions

regarding COVID-19, mental health and wellness, and who is affected and how. Triangulation

was also used for credibility and validity (Padgett, 2011). The team collected data from multiple

sources (e.g., news outlets, entertainment outlets, personal vlogs) on YouTube to ensure various

perspectives were represented.

Results

The data analysis process resulted in four emerging themes consistent among survivors of

COVID-19. In line with the PMT framework, the themes are related to the perceived risk of the

threat (i.e., Themes 1 and 2); motivation to cope with the disease (i.e., Theme 3); and resulting

outcomes (i.e., Theme 4). Our focus was on mental and emotional responses (Rogers, 1975). See

Figure 1 for the final thematic map, which is an overview of how the themes and subthemes fit

within the theoretical framework of PMT.

Figure 1
Final Thematic Map
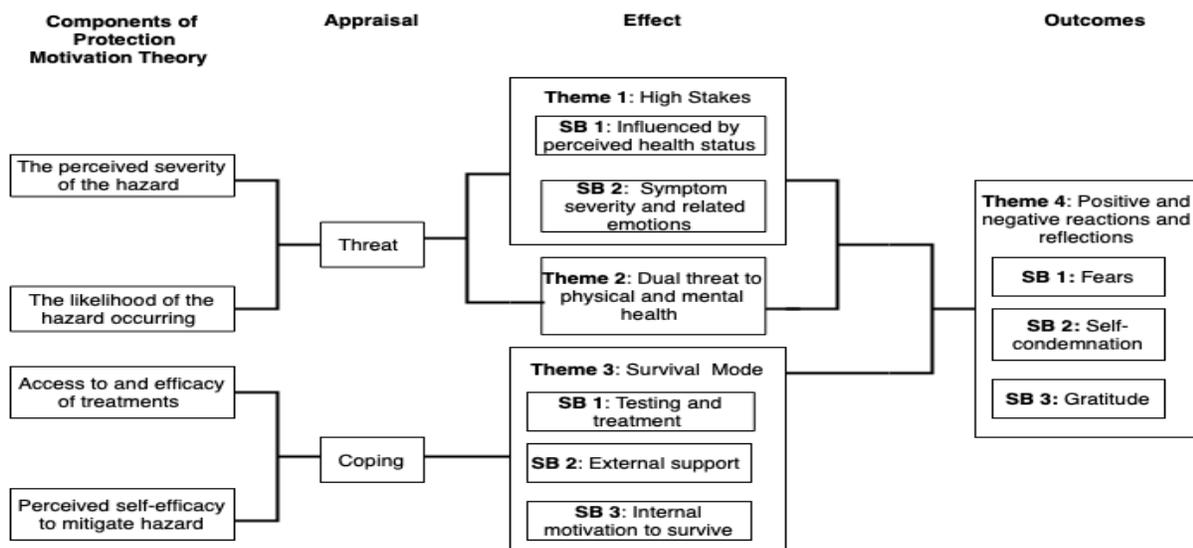
Theme 1: High Stakes—"This virus is no joke"

Theme 1 is how participants perceived and described their thoughts about the seriousness of a COVID-19 diagnosis. Theme 1 includes two subthemes: (a) influenced by age and perceived health status, and (b) symptom severity and related emotions.

Subthemes

Influenced by Age and Perceived Health Status. The first subtheme described participants' perceived threat based on their thoughts of their risk factors. For example, people who believed that they were in the high-risk category due to age were more likely to be anxious and fearful. A participant who identified as an older adult (i.e., over 55) discussed knowing the risk for people in their age group and the feelings and thoughts that occurred after receiving the diagnosis: "sure I felt like it could be fatal because I'm 63." A 90-year-old participant doubted her ability to survive, stating that she had started saying her "good-byes" to loved ones. The 90-year-old participant also shared following thoughts: "I knew that I was leaving them. But I was leaving them with peace."

In contrast, younger survivors expressed fewer concerns about how harmful the virus could be for them. A participant in their 20s stated, "I definitely didn't think of myself as part of one of these vulnerable populations." Survivors also perceived themselves as low-risk because of their health status and behaviors. One person stated, "In my opinion, I'm healthy, I eat very well, I'm [on] a plant-based diet, vegan—so I don't know if that has helped, but I definitely can tell you it has not hurt." Another COVID-19 survivor emphasized her healthy lifestyle, "I have no pre-existing conditions, no autoimmune disorders, and no respiratory issues. I work out 6 times a week; I'm a yoga teacher. I work in wellness."

Symptom Severity and Related Emotions. The second subtheme described participants' experiences of COVID-19 symptoms, which ranged from mild to severe. A

participant who had severe symptoms described the emotional toll, saying "my fever went back up, I was depressed, I was anxious, and I thought I might not get over this." Some participants with milder symptoms acknowledged how "lucky" they were:

> I don't know how to explain. It was just so different, you know… It wasn't as bad as, like, having the flu, and it wasn't as bad as having strep throat, and that's just for me. A lot of people have been getting very severe cases, but this is just my personal case of COVID-19…I got very lucky.

Theme 2: Dual Threat to Physical and Mental Health

Theme 2 contains the reflections of participants who discussed how the experience of COVID-19 affected their physical health and mental health. One person described their experience as follows:

> My anxiety was like taking over me, even though my anxiety is usually under control, and that's not a big deal…And I finally understood when people say, it feels like you have an elephant sitting on your chest, or you're breathing through a straw, because that's what I felt like.

Others emphasized the effects of loss. Loss of freedom, family, friends, and now social isolation with a deadly disease. One survivor stated:

> I called my mom actually and I couldn't even lift my arms above my head, and so it was, you know with my anxiety …I felt, and I think it was like…having to be so sick, and being separated from my loved ones, and not having that human touch available to me.

This person described the isolation as severely affecting her mental health, and specifically increasing her anxiety and limiting her ability to cope with the anxiety.

Other survivors reflected on fears associated with pre-existing physical conditions. One person stated, "One of my biggest fears was me getting an asthma attack, which I did. I started to get an anxiety attack with that as well and I was just scared like, this was like the end for me," resulting in feelings of hopelessness.

Theme 3: Survival Mode—"A process that includes frustration and self-determination"

Theme 3 included three subthemes: (a) testing and treatment, (b) external support, and (c) internal motivation to survive. Many described surviving COVID as a process that is determined by the disease and your will to survive. In a remark similar to other survivors, one person noted, "You just wake up and say 'tomorrow is going to be different,' and that's what I did. I just thought I'm gonna make it through this. I just kept plugging on." Sheer self-determination and a will to live assisted this participant in surviving COVID.

Subthemes

Testing and Treatment. The first subtheme described people's experiences with trying to get tested because they were experiencing symptoms. Unlike what people saw and heard on TV, it was very difficult for some to gain access to testing, which was extremely frustrating. A young woman in her 20s described her experience:

How you see these celebrities getting tested, and that was a bit of a shock to me, to see that they were turning normal people away from it. And when I went to the doctor initially, they said, we're not testing people for COVID-19. You just have to go home, and quarantine yourself and act like you have it, treat yourself like you have it. It was a little bit disheartening because what does that mean to somebody whose never heard of it?

Another person discussed the experience of attempting to get a test because they were not feeling well and the frustrating response:

> They kept me in there for like 4 hours/5 hours, and then they did a bunch of tests, and they all came back negative. They didn't test me for COVID-19, though, because they just said that they had to keep that for people who really needed it and there wasn't really much they could do.

This experience of struggling to get tested was a source of frustration, despair, and anxiety.

External Support. The second subtheme described people's acknowledgement of having social support and how beneficial support is to the entire process of surviving the disease. Many mentioned the support from loved ones: "I really think the most important thing is to have a support network around you of people that can help you and check in on you." Another survivor said: "thankfully, I had really, really great friends and family members who have been, like, going out and getting us groceries and whatever, we need for the most part." Some people also mentioned the support they received from hospital staff, both medical and emotional, as a positive influence on their recovery. One man who overcame COVID-19 described the hospital staff: "I mean everybody was very good to me…they're very caring people rooting for you all the time. The nurse is happy, cheering you on, so a lot of support."

Internal Motivation to Survive. The third subtheme described participants' will to survive and how they coped with the disease through positivity and internal coping mechanisms like faith. One survivor centered maintaining positivity as key to his survival:

> Best medicine may be a positive attitude. The more likely that your body will respond in a physical way, respond to that positivity, and hopefully help to fight off the virus, and I

do feel like my positivity probably helped. It probably helped me to stay calm more than

anything.

Many people discussed the importance of having a positive mindset. Others spoke about having

faith that they would survive and noted their spirituality as a source of hope. A survivor

described how he thinks he made it through: "I couldn't breathe at all, and then all of a sudden, I

felt the Lord. His presence was there. I felt him blow air in my lungs." It was a common

occurrence in the data for participants to note a divine presence assisting them through the

disease.

Theme 4: Positive and Negative Reactions

Theme 4 included three subthemes: (a) fears, (b) self-condemnation, and (c) gratitude.

This theme described the mix of emotions that most people discussed as it related to going

through COVID-19.

Subthemes

Fear. The first subtheme is related to fear that some experienced based on perception of

the illness and general fear of being diagnosed with COVID-19. One person described the fear

they experienced as their symptoms worsened and news coverage of COVID-19 increased:

The news coverage caused fear, and I think that was the worst part of the whole virus. I

was watching the news, seeing what could happen, and what has happened around the

world, and it instilled fear in me, and that just grew as my symptoms continued.

Many describe fear related to the stigma of having COVID-19. One survivor reflected, "we have

heard about others being harassed by people, so I think that's…that's really the bigger fear for

us, is this stigma of, we've had the virus."

Self-Condemnation. The second subtheme is connected to the feelings of regret or guilt for not being responsible enough with social distancing and staying at home. Some survivors felt guilt connected to the thought that they could have gotten family or friends sick with COVID-19. One person discussed putting themselves at risk to socialize saying, "I contracted the coronavirus from a house party. We had a great time. We were socializing and chatting, listening to music. Three days later I woke up in the morning and I felt ill." They went on to note that ignoring the risk was not worth it.

A grandfather discussed his fear that he might have unintentionally infected his grandson, "That scared me tremendously. I love that little guy and I would never do anything to hurt him." Another survivor, did not direct their guilt at any one person they might have infected but felt generalized guilt about the possibility: "the thing that keeps me up at night, the worst part of this experience, is the anxiety of wondering whether I exposed someone."

Gratitude. The third subtheme included feelings of gratitude and appreciation for those who helped them survive COVID-19. One person exclaimed, "Well, to the doctors, nurses, physician assistants at [the hospital], I'd say, 'thank you for saving my life, and I really appreciate everything you are doing.'" Quotations such as these were echoed throughout people's story of survival. A survivor who beat all the odds, having five pre-existing conditions, identifying as an older adult, and entering the hospital with pneumonia, proclaimed, "Of course we could not have done it without the hospital's outstanding efforts and the grace of God."

Discussion

Results provided the researchers with a description of how people perceive COVID-19, their coping mechanisms, and the related mental and emotional health ramifications. In line with the Protection Motivation Theory (PMT; Rogers, 1975), Theme 1 (i.e., High stakes: This virus is

no joke) and Theme 2 (i.e., Dual threat to physical and mental health) are related to the concept of a "perceived threat" shaping behavior. Theme 3 (i.e., Survival mode: A process that includes frustration and self-determination) is related to the tenet of PMT outlining how a person is coping with a perceived threat. Lastly, Theme 4 (i.e., Positive and negative reactions) describes how a person manages a perceived threat, copes with the threat, and the related mental/emotional health outcomes.

Theme 1, *High stakes: This virus is no joke*, aligns with previous findings that people perceive COVID-19 as a severe threat with a high risk of dying (Pragholapati, 2020). This perception is not in itself problematic; however, the resulting emotional and mental health toll is detrimental. For instance, depression and hopelessness can complicate survival and recovery because they affect people's willingness and ability to follow treatment protocols and overall adherence (Pragholapati, 2020). Unique in our current study is the finding that perceived severity of COVID-19 was related to how people perceived their overall health or risk category (i.e., Subtheme 1, *Influenced by age and perceived health status*). In line with PMT (Rogers, 1975), participants in our study who were in "high risk categories" perceived the threat of COVID-19 as more severe and deadly; people in "low risk categories" or who considered themselves healthy perceived the threat of COVID-19 as mild or had confidence that they would surely survive. Age played a significant role in participant's perceptions of COVID-19, because younger participants felt more optimistic about their chances of survival and midlife, or older adult participants expressed more fear and anxiety about surviving the coronavirus. Additionally, there were distinctions among people who had very severe versus mild symptoms in terms of how they assessed the threat of COVID-19 (i.e., Subtheme 2, *Symptom severity and related emotions*). Symptom severity also influenced people's perception of how dangerous COVID-19 is. For

example, people who discussed very severe symptoms often disclosed that they thought they

might die, or they did not think they were going to make it.

Theme 2, *Dual threat to physical and mental health*, is related to the connection people

drew to how their physical health affected their mental health. Researchers have established the

relationship between physical and mental health. In our study, COVID-19 survivors discussed

how the diagnosis changed their life, and they started to feel depressed, overly anxious, and

worried. The feelings survivors experienced are similar to feelings found in other studies of

people affected by humanitarian emergencies (Mukdarut et al., 2017). Some survivors noted that

the physical breakdown of their body occurred parallel to their mental breakdown, but there was

no acknowledgement or treatment for their deteriorating mental health. This is not unusual,

because providers might see the physical manifestation of disease as a more pressing concern

than the mental state of the patient (Xiang et al., 2020). Unique to COVID-19 is the immediate

isolation that comes with a diagnosis and that lingers even after the disease cycle is over,

triggering depressive symptoms and related thoughts of giving up (Xiang et al., 2020).

Theme 3, *Survival mode: A process that includes frustration and self-determination*, is a

finding that is not yet reflected in the current research literature, perhaps due to the limited

studies on survivors of COVID-19 (Vindegaard & Benros, 2020). Frustration at the lack of

access to treatment increased worry and panic for many (i.e., Subtheme 1); if unmonitored or

persistent, these could become a challenging mental health situation (Mukdarut et al., 2017;

Pragholapati, 2020). Although frustration increased with some survivors, others discussed

external and internal motivation to survive, which is consistent with PMT (Rogers, 1975). The

theory states that people will manage a threat through coping and actions to support coping. In

the current study, people overwhelmingly noted the importance of their support system and

caring hospital staff (i.e., Subtheme 2, *external support*). In cases of severe illnesses, a person's

social support and internal motivation (i.e., Subtheme 3) can positively affect recovery (Wills &

Ainette, 2012).

Theme 4, *Positive and negative reactions*, is related to similar research on how people

cope with severe diseases, in that they often describe a range of emotions. Fear (i.e., Subtheme 1)

is related to the interwoven nature of PMT theory; if the perceived severity of the threat and the

likelihood of it occurring are both high to an individual, and the perceived effectiveness and

availability of outside protective measures and self-efficacy to protect oneself are low, then fear

is expected (Westcott et al., 2017). Additionally, there is a stigma associated with a COVID-19

diagnosis, which can lead to fear of discrimination (Duan et al., 2020), as the participants

mentioned. Unique to COVID-19 survivors is that some also discuss regret for not taking more

precautions and even guilt (i.e., Subtheme 2, *self-condemnation*), which is a new finding in the

literature on coping with COVID-19. This is consistent with previous research about individuals

who have experiences with addiction and struggle with self-forgiveness (Webb et al., 2017).

Finally, one emotion many survivors noted was having gratitude (i.e., Subtheme 3), similar to

posttraumatic growth as a result of disasters (Zeligman et al., 2019).

Limitations

Researcher personal biases and interpretations are one limitation of conducting a

qualitative research study (Chenail, 2011). To balance this known limitation, we kept reflexive

journals and discussed assumptions, thoughts, and feelings as we engaged in data collection and

analysis. The data collection and analysis process were cumbersome because of the large amount

of data, leading to another potential limitation: the risk of missing nuances in the data (Holloway

& Todres, 2003). Lastly, using technology to gather data for a qualitative study can have benefits

and limitations. However, the method chosen was responsive to the current state of the world and sensitive to survivors' trauma because we did not ask them to recount their experiences for the sake of research, which is a culturally appropriate and sensitive approach.

Implications and Future Research

COVID-19 impacted the global community and is expected to influence economic, social, and emotional outcomes for years to come. It is important to recognize that each survivor has a unique experience, but there were shared patterns. Perceived threat of COVID-19 and survival was almost always related to health status, age, and severity of symptoms. For mental health professionals, a pre-assessment of individual characteristics can link to the underlying severity of mental health symptoms. A key question that should be considered is, "How severe were your COVID-19 symptoms?" Using information about age from the intake form and health status could also provide information about someone's experience. In addition, traditional mental health assessments for anxiety and depression might not capture the full experience of surviving COVID-19; mental health professionals can consider the 5-item Coronavirus Anxiety Scale (Lee, 2020). Future researchers can investigate whether the nuances of COVID-19 induced anxiety and depression are better captured in a specific COVID-19 measure. It might also be worthwhile to investigate whether anxiety and depression are experienced differently by ethnic/racial background, age range, or gender in large quantitative studies. Lastly, integrated care, in which a mental health professional works collaboratively with a primary care provider, is an important area of development with COVID-19 survivors.

In conclusion, due to the widespread effects of COVID-19, mental health professionals should be prepared to work with clients who are initiating counseling after surviving the virus.

The experiences of survivors of COVID-19 ranged and it will be important in the coming years

to factor in the differing experiences when developing treatment plans with survivors.

References

Ayalon, L., Chasteen, A., Diehl, M., Levy, B., Neupert, S. D., Rothermund, K., Tesch-Romer,

C., & Wahl, H. W. (2020). Aging in times of the COVID-19 pandemic: Avoiding ageism

and fostering intergenerational solidarity. *The Journals of Gerontology, 76*(2), e49-e52.

https://doi.org/10.1093/geronb/gbaa051

Basch, C. H., Menafro, A., Mongiovi, J., Hillyer, G. C., & Basch, C. E. (2017). A content

analysis of YouTube™ videos related to prostate cancer. *American Journal of Men's

Health, 11*(1), 154-157. https://doi.org/10.1177/1557988316671459

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in

Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Centers for Disease Control and Prevention. (2020). *COVID data tracker*. U.S. Department of

Health and Human Services. https://covid.cdc.gov/covid-data-tracker/#datatracker-home.

Retrieval date: April 2020.

Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation

and researcher bias concerns in qualitative research. *Qualitative Report*, *16*(1), 255-262.

https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1051&context=tqr

Costantino, T. E. (2012). Constructivism. In L. M. Givens (Ed.), *The SAGE encyclopedia of

qualitative research methods* (pp. 116-120). SAGE.

Duan, W., Bu, H., & Chen, Z. (2020). COVID-19-related stigma profiles and risk factors among

people who are at high risk of contagion. *Social Science & Medicine, 266*(2020), Article

113425. https://doi.org/10.1016/j.socscimed.2020.113425

Flick, U. (2004). Triangulation in data collection. In U. Flick (Ed.), *A companion to qualitative

research* (pp. 527-544). SAGE. https://doi.org/10.4135/9781526416070.n34

Holland, K. (2020, May 8). What COVID-19 is doing to our mental health. *Healthline.*

　　https://www.healthline.com/health-news/what-covid-19-is-doing-to-our-mental-health

Holloway, I., & Todres, L. (2003). The status of method: Flexibility, consistency and coherence.

　　Qualitative Research, *3*(3), 345–357. https://doi.org/10.1177/1468794103033004

Kellner, D., & G. Kim. (2010). YouTube, critical pedagogy, and media activism. *Review of*

　　Education, Pedagogy, and Cultural Studies, 32(1), 3–36.

　　https://doi.org/10.1080/10714410903482658

Lomborg, S. (2013) Personal internet archives and ethics. *Research Ethics, 9*(1), 20–31.

　　https://doi.org/10.1177/1747016112459450

Markham, A. (2012) Fabrication as ethical practice: qualitative inquiry in ambiguous internet

　　contexts. *Information, Communication & Society, 15*(3), 334–353.

　　https://doi.org/10.1080/1369118X.2011.641993

Martin, P. (2020). The effect of a virus on adult development. *Journal of Adult Development*, *27*,

　　81–82. https://doi.org/10.1007/s10804-020-09353-1

Mukdarut, B., Chiumento, A., Dickson, K., & Felix, L. (2017). *The impact of mental health and*

　　psychosocial support interventions on people affected by humanitarian emergencies: A

　　systematic review. Oxfam. https://doi.org/10.21201/2017.8937

Naslund, J. A., Grande, S. W., Aschbrenner, K. A., & Elwyn, G. (2014). Naturally occurring

　　peer support through social media. *Public Library of Science One, 9*(10), Article

　　e110171. https://doi.org/10.1371/journal.pone.0110171

Osterweil, N. (2020). Case fatality rate for COVID-19 near 1.4%, increases with age. *Medscape*.

　　https://www.medscape.com/viewarticle/927870

Padgett, D. K. (2011) *Qualitative and mixed methods in public health*. Sage.

Pareek, M., Bangash, M. N., Pareek, N., Pan, D., Sze, S., Minhas, J. S., Hanif, W., & Khunti, K.

    (2020). Ethnicity and COVID-19: An urgent public health research priority. *Lancet*,

    395(10234), 1421–1422. https://doi.org/10.1016/S0140-6736(20)30922-3

Pragholapati, A. (2020). Mental health in pandemic COVID-19. *Social Science Research*

    Network, *May 2020,* 1-7. MENTAL_HEALTH_IN_COVID-1920200514-101394-

    1vh1m0f.pdf

Preis, H., Mahaffey, B., Heiselman, C., & Lobel, M. (2020). Vulnerability and resilience to

    pandemic-related stress among US women pregnant at the start of the COVID-19

    pandemic. *Social Science & Medicine, 266*(2020), Article 113348.

    https://doi.org/10.1016/j.socscimed.2020.113348

Rogers R. W. (1975). A Protection Motivation Theory of fear appeals and attitude change. *The*

    Journal of Psychology, 91(1), 93–114. https://doi.org/10.1080/00223980.1975.9915803

Sadique, M. Z., Edmunds, W. J., Smith, R. D., Meerding, W. J., de Zwart, O., Brug, J., &

    Beutels, P. (2007). Precautionary behavior in response to perceived threat of pandemic

    influenza. *Emerging Infectious Diseases*, *13*(9), 1307–1313.

    https://doi.org/10.3201/eid1309.070372

Shah, K., Kamrai, D., Mekala, H., Mann, B., Desai, K., & Patel, R. S. (2020). Focus on mental

    health during the Coronavirus (COVID-19) pandemic: Applying learnings from the past

    outbreaks. *Cureus*, *12*(3), Article e7405. https://doi.org/10.7759/cureus.7405

Lee, S.A. (2020) Coronavirus Anxiety Scale: A brief mental health screener for COVID-19

    related anxiety. *Death Studies*, *44*(7), 393-401.

    https://doi.org/10.1080/07481187.2020.1748481

Taylor, S. (2020). *Psychology of pandemics: Preparing for the next global outbreak of infectious disease.* Cambridge Scholars.

Vindegaard, N., & Benros, M. E. (2020). COVID-19 pandemic and mental health consequences: Systematic review of the current evidence. *Brain, Behavior, and Immunity, 89*(2020), 531–542. https://doi.org/10.1016/j.bbi.2020.05.048

Webb, J. R., Toussaint L. L., & Hirsch J. K. (2017). Self-forgiveness, addiction, and recovery. In L. Woodyatt., E. Worthington, Jr., M. Wenzel, & B. Griffin (Eds.), *Handbook of the psychology of self-forgiveness* (pp. 265-277). Springer. https://doi.org/10.1007/978-3-319-60573-9_19

Weinstein, N. D., Kwitel, A., McCaul, K. D., Magnan, R. E., Gerrard, M., & Gibbons, F. X. (2007). Risk perceptions: Assessment and relationship to influenza vaccination. *Health Psychology*, *26*(2), 146–151. https://doi.org/10.1037/0278-6133.26.2.146

Westcott, R., Ronan, K., Bambrick, H., & Taylor, M. (2017). Expanding Protection Motivation Theory: Investigating an application to animal owners and emergency responders in bushfire emergencies. *BioMed Central Psychology*, *5*(1), 1-14. https://doi.org/10.1186/s40359-017-0182-3

Wills, T. A., & Ainette, M. C. (2012). Social networks and social support. In A. Baum, T. A. Revenson, & J. Singer (Eds.), *Handbook of health psychology* (pp 465–492). Psychology Press.

Williams, D. R., & Cooper, L. A. (2020). COVID-19 and health equity: A new kind of "Herd Immunity." *The Journal of the American Medical Associations, 323*(24), 2478–2480. https://doi.org/10.1001/jama.2020.8051

Xiang, Y. T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., & Ng, C. H. (2020). Timely

mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The*

Lancet: Psychiatry, 7(3), 228–229. https://doi.org/10.1016/S2215-0366(20)30046-8

Zeligman, M., McElroy-Heltzel, S. E., Davis, E. B., Dispenza, F., Davis, D. E., & DeBlaere, C.

(2019). Posttraumatic growth and trauma in flood survivors: Contributions of attitudes

toward God. *Journal of Mental Health Counseling*, *41*(2), 127-143.

https://doi.org/10.17744/mehc.41.2.03