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Experiences of Pandemic Coping During the Initial Phase of the COVID-19 Outbreak and Among College Students in the United States

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Counseling, Clinical, School Psychology

By

Margaret P. Boyer

Committee in charge:

Professor Steven Smith, Chair

Professor Shelly Gable

Professor Heidi Zetzer

September 2021

The dissertation of Margaret P. Boyer is approved.

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Professor Shelly Gable

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Professor Heidi Zetzer

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Professor Steven Smith, Committee Chair

March 2021

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Acknowledging in appreciation the individuals named below and so many more who helped me reach this point.

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Tommy for your loving support.
Mom and Dad for all of the above and infinitely more.

My gratitude is endless.

Acknowledging in grief the hundreds of thousands of Americans and more than one million humans who have lost their lives to COVID-19 since the start of this pandemic.

Our loss is profound.

CIRRICULUM VITA OF MARGARET P. BOYER
DECEMBER 2020

EDUCATION

Sept. 2021	**Doctorate in Counseling, Clinical, and School Psychology** University of California, Santa Barbara (APA Accredited) *Advisor:* Steve Smith, Ph.D.
June 2017	**Master of Arts in Counseling Psychology** University of California, Santa Barbara (APA Accredited) *Advisor:* Collie Conoley, Ph.D.
May 2014	**Bachelor of Arts in Psychology** Haverford College, Haverford, PA *Advisor*: Ben Le, Ph.D.

CLINICAL EXPERIENCE

Aug. 2020 – Aug. 2021	**Doctoral Intern in Psychology** Counseling & Psychological Services, Northwestern University *Clinical Supervisors:* Eileen Biagi, Ph.D. & Keaton Muzika, Ph.D.
Sept. 2019 – Mar. 2020	**Substance Counseling Practicum Student** Alcohol and Drug Program, UCSB *Clinical Supervisor:* Jennifer Taylor, LMFT
July 2019 – Aug. 2019	**Group Co-Leader** Koegle Autism Center Parent Education and Communal Experience (PEACE) Group *Group Supervisor:* Anna Krasno, Ph.D.
Jan. 2019 – June 2019	**Co-Supervisor for Basic Practicum** Hosford Counseling & Psychological Services Clinic *Supervision-of-Supervision Director*: Heidi Zetzer, Ph.D.
Aug. 2018 – Aug. 2019	**Advanced Practicum Student** Student Health & Wellness Center, Santa Barbara City College *Clinical Supervisor:* Alyson Bostwick, LMFT
Aug. 2018 – Aug. 2019	**Group Developer and Co-Leader** The Well, Santa Barbara City College Positive Psychotherapy Empowerment Group *Clinical Supervisor:* Alyson Bostwick, LMFT

Sept. 2018 – June 2019	**Assessment Clinic Coordinator & Student Supervisor** Psychological Assessment Center, UCSB *Clinical Director:* Ron Brooks, Ph.D.
Sept. 2017 – June 2018	**Assessment Practicum Student** Psychological Assessment Center, UCSB *Assessment Supervisor:* Ron Brooks, Ph.D.
Sept. 2017 – June 2018	**Advanced Practicum Student** Counseling & Psychological Services, UCSB *Clinical Supervisors:* Clayton Hartmann, M.A.& Juan Riker, Ph.D.
Sept. 2017 – June 2018	**Career Counseling Practicum Student** Career Services, UCSB *Supervisors:* Molly Steen, M.A. & Maddie Foster, M.A.
Sept. 2016 – June 2017	**Basic Practicum Student** Hosford Counseling & Psychological Services Clinic *Clinical Supervisor:* Ron Brooks, Ph.D.

TEACHING EXPERIENCE

Summer Quarter 2019	**Teaching Associate, Undergraduate Course** *Instructor of Record:* Meg Boyer, M.A. Department of Counseling, Clinical, & School Psychology, UCSB CNCSP 112: Positive Psychology Across the Lifespan
2018-19 Academic Year	**Teaching Assistant, Graduate Course** *Instructor of Record:* Ron Brooks, Ph.D. Department of Counseling, Clinical, & School Psychology, UCSB CNCSP 271B: Integrated Psychological Assessment,
Spring Quarter 2019	**Teaching Assistant, Graduate Course** *Instructor of Record:* Steve Smith, Ph.D. Department of Counseling, Clinical, & School Psychology, UCSB CNCSP 251: Foundations of Personality Assessment
Spring Quarter 2018	**Teaching Assistant, Undergraduate Course** *Instructor of Record:* Hunter Gehlbach, Ph.D. Department of Education, UCSB ED 126: Motivation, Social Connectedness, & Emotion Regulation
Winter Quarter 2017	**Teaching Assistant, Undergraduate Course** *Instructor of Record:* Melissa Morgan-Consoli, Ph.D. Department of Counseling, Clinical, & School Psychology, UCSB CNCSP 110: Introduction to Vocational Guidance

RESEARCH EXPERIENCE

Sept. 2018 – Present **Dissertation Student Researcher**
Clinical, Counseling, School Psychology Department, UCSB
Committee Members: Steve Smith, Ph.D., Shelly Gable, Ph.D., Heidi Zetzer, Ph.D.

- Developed, proposed, and initiated original research project using physiological measurement to explore the role of cardiac vagal tone and social connection in psychotherapy
- Developed and executed a new research project on coping with COVID-19 after the global pandemic disrupted original data collection and necessitated a change of project

Oct. 2016 – June 2020 **Graduate Student Researcher**
Emotion, Motivation, Behavior, and Relationships Lab, UCSB
Principal Investigator: Shelly Gable, Ph.D.

- Collaboratively conducted research projects investigating interpersonal emotion regulation and developing a measure of the regulation of others' feelings

June 2015 – Sept. 2017 **Graduate Student Researcher**
Social Psychology in Education & the Environment Lab, UCSB
Principal Investigator: Hunter Gehlbach, Ph.D.

- Collaboratively conducted research projects evaluating strategies for improving student-instructor relationships and exploring persuasive messaging to boost pro-environmental attitudes

Sept. 2015 – Sept. 2018 **Graduate Student Researcher**
Counseling, Positive, and Multicultural Psychology Lab, UCSB
Advisor: Collie Conoley, Ph.D.

- Collaboratively conducted research exploring positive psychotherapy elements, including the flexible use of a values affirmation exercise as a positive emotion induction

Sept. 2015 – Sept. 2018 **Laboratory Manager**
Emotion Regulation & Self-Control Lab, University of Michigan
Principal Investigator: Ethan Kross, Ph.D.

- Coordinated large-scale research projects, including implementation of self-control interventions; managed lab grants and finances; supervised a large team of undergraduate researchers and provided administrative assistance to graduate students

PUBLICATIONS

Kross, E., Verduyn, P., Boyer, M., Drake, B., Gainsburg, I., Vickers, B., Ybarra, O., & Jonides, J. (2018). Does counting emotion words on online social networks provide a

window into people's subjective experience of emotion? A case study on Facebook. Emotion.

Kross, E., Vickers, B. D., Orvell, A., Gainsburg, I., Moran, T. P., Boyer, M., Jonides, J., Moser, J., & Ayduk, O. (2017). Third-person self-talk reduces Ebola worry and risk perception by enhancing rational thinking. Applied Psychology: Health and Well-Being.

Menon-Mariano, J., Damiani, T. & Boyer, M. P., (2019) Self- and Other-reported Virtues of Young Purpose Exemplars. Youth & Society.

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Wardecker, B. M., Chopik, W. J., Boyer, M., & Edelstein, R. S. (2016). Individual differences in attachment are associated with usage and perceived intimacy of different communication media. Computers in Human Behavior.

Winter Plumb, E.I., Hawley, K.J., Boyer, M.P., Scheel, M.J., & Conoley, C.W. (2018) Goal Focused Positive Psychotherapy: An Integration of Positive Psychology and Psychotherapy. British Journal of Guidance and Counselling.

PROFESSIONAL PRESENTATIONS

Chu, K. A., & Boyer, M. P. Examining College Students' Reactions to Racial Microaggression Vignettes. Poster presentation at the American Psychological Association annual conference, August 2021. Virtual Conference.

Beylin, N. & Boyer, M. P. Self-Compassion Increases Hope after Failure. Poster presentation at the annual meeting for the Society of Personality and Social Psychology Convention, February 2021. Virtual Conference.

Boyer, M. P. Viewing psychological assessment through a Hope Theory lens: A case study illustration. Poster presentation at the Society for Personality Assessment annual convention, March 2019. New Orleans, LA.

Reed, L., Boyer, M.P., Meskunas, H., Tolman, R., & Ward, M. How do adolescents experience sexting in dating relationships? Motivations to sext and responses to sexting requests. Symposium presentation at the Society for Research on Adolescents Biennial Conference, March 2020. San Diego, CA.

Boyer, M. P. Adkins, C., & Gable, S., The regulation of emotions by close others across the temporal spectrum. Presented as part of the "New perspectives on the social function of emotions" symposium at the annual meeting for the Society of Personality and Social Psychology, March 2018. Atlanta, GA.

Reed, L., Boyer, M. P., & Meskunas, H., & Reed, L. Fun and games until someone gets hurt: Sexting, gender, and dating relationships. Podium presentation at the Council on Social work Education, Violence Against Women and Their Children Track annual program meeting, October 2017. Dallas, TX.

Boyer, M. P., Hawley, K. J., & Conoley, C. Examining the affective response toward and the influence of priming questions on goal related terms. Poster presentation at the annual American Psychological Association conference, August 2017. Washington D.C.

Boyer, M. P., Damiani, T. & Menon-Mariano, J. Strengths of Young Purpose Exemplars: Views of Self and Others. Accepted for podium presentation, Fifth World Congress on Positive Psychology, July 2017. Montreal, Quebec, Canada.

Boyer, M., Wardecker, B. M., Chopik, W. J., Lin, N. J., Moors, A. C., Kean, E. L., & Edelstein, R. S. Thank goodness for gratitude: Dyadic effects of adult attachment on gratitude during the transition to parenthood. Poster presented at the meeting for the Society of Personality and Social Psychology, January 2013. New Orleans, LA.

SELECTED LEADERSHIP & SERVICE

Jan. 2019 – Aug. 2020	**Clinic Graduate Assistant & CAPPC Website Creator** Carol Ackerman Positive Psychology Center
April 2019 – Dec. 2020	**APA Reaccreditation Team Member** Counseling, Clinical, and School Psychology Department, UCSB
Sept. 2018 – Sept. 2019	**GGSE Strategic Planning Committee Member** Gevirtz Graduate School of Education, UCSB
Sept. 2018 – June 2019	**Subject Pool Coordinator & Sona Systems Administrator** Gevirtz Graduate School of Education, UCSB
Sept. 2016 – June 2018	**CCSP Associated Students Committee Co-President** Counseling, Clinical, and School Psychology Department, UCSB

SELECTED HONORS & AWARDS

July 2019	**Charles J. Gelso, Ph.D. Psychotherapy Research Grant,** *for innovative study of psychotherapy processes and outcomes* Society for the Advancement of Psychotherapy
June 2019	**Hosford Memorial Research Award** UCSB Hosford Counseling & Psychological Services Clinic
May 2018	**Donald Atkinson Diversity Enhancement Award**, *for contributions to multicultural psychology* UCSB Hosford Counseling & Psychological Services Clinic
Aug. 2017	**Positive Psychology Student Research Award** APA Division 17, Section on Positive Psychology
June 2017	**Ray E. Hosford Award for Excellence in Clinical Dedication** UCSB Hosford Counseling & Psychological Services Clinic
March 2017	**Family Strengths Fellowship** UCSB Clinical, Counseling, School Psychology Department

AUTHOR'S NOTE

On November 27 of 2019, I successfully defended my dissertation proposal entitled, *Exploring the Role of Vagal Tone and Social Engagement in Psychotherapeutic Processes*. My proposed project integrated my passion for psychotherapeutic work, fascination with polyvagal theory, and love of positive psychology. The project was funded through grants awarded by the Society for the Advancement of Psychotherapy and the Hosford Memorial Research Fund. It felt like a true culmination of my years of schooling.

In late February of 2020, I was nearly halfway through data collection for the study. My wonderful participants were coming to our lab space to wear the physiological monitors needed to measure their cardiac vagal tone and were dutifully completing brief surveys about their daily experiences over a usual six-week period of their lives. Everything was going according to plan.

On March 10 of 2020, as our university announced an indefinite shift to remote operations and the World Health Organization prepared to officially declare COVID-19 a global pandemic, I called my advisor about the apparent need to end in-person data collection and potentially develop an alternative project. After our call, I took some time to grieve my precious brainchild of an original dissertation and then I got to work on something new.

I will always be grateful to the people who made this pivot possible; my committee members for their flexibility, Melissa at the IRB for her heroic turn-around time, and every single one of my participants who agreed to share their pandemic experiences with me.

Truly, the best dissertation is a finished dissertation.

ABSTRACT

Experiences of Pandemic Coping During the Initial Phase of the COVID-19 Outbreak and Among College Students in the United States

by

Margaret P. Boyer

Over the past year, the novel coronavirus disease, also called SARS-COV-2 or COVID-19, has plunged the world into a period of upheaval and tragedy. Throughout the uncertainty, psychologists have attempted to stay abreast of the tidal wave of potential psychological impacts of the pandemic. Some scholars contributed predictions of what mental health consequences we might expect based on learnings from past viral outbreaks or on understandings of human sensibilities and behavior. Others studied the psychological outcomes in real time, allowing people to share their experiences of the COVID-19 pandemic as it unfolded. This dissertation contributes two texts to our growing base of pandemic knowledge.

Part I includes a longitudinal study with surveys sent on March 18 and April 15 of 2020, two of the very first months of the COVID-19 outbreak in the United States. During this unique period of time, participants offered insight into their experiences of psychological distress and pandemic coping. Descriptive analyses showed widespread disruption to participants' lives and high rates of distress. Hierarchical linear regression analyses revealed reported use of Socially Supported Coping strategies was related to less loneliness, while use of Avoidant Coping strategies was associated with more loneliness and greater psychological distress overall. Methodological limitations – including use of a non-representative sample

and adapted measures – are considered and implications for pandemic coping and adjustment are discussed. This study is one of relatively few conducted during this unique time period and holds both empirical and historical value as a look at the coping experiences of a subset of Americans during the initial stage of the COVID-19 outbreak.

Part II includes a review of the current literature regarding the mental health impacts of the COVID-19 pandemic on college students in the United States. Also discussed are empirically based recommendations for coping, including helping students cultivate social support, locate identity affirming spaces, build healthy routines, hold flexible mindsets and engage in positive coping, utilize psychotherapy, and access instrumental support.

Together, these two texts comprise novel research findings, synthesis of scholarship, and clinical recommendations that may be useful to researchers, clinicians, historians, or any human interested in better understanding and navigating the psychological consequences of the COVID-19 pandemic.

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INTRODUCTION

The first cases of the novel coronavirus disease, also called SARS-COV-2 or COVID-19, was recorded in Wuhan, China in December of 2019 (WHO, 2020a). Since that time, COVID-19 has spread to nearly every country in the world and was officially declared a global pandemic by the World Health Organization on March 11, 2020 (WHO, 2020b). In the past year, 75 million people worldwide have been infected with COVID-19 and more than a million people have died from the virus (WHO, 2020c). Alongside this staggering loss, the pandemic has disrupted nearly every aspect of daily life for billions of humans worldwide. Shopping for groceries, socializing with friends, attending work and school, completing dissertation projects, making holiday plans – COVID-19 has necessitated changes to each of these activities and countless others. Words such as "unprecedented" and "uncertain" have become staples of news headlines over the past twelve months as we have attempted to adapt to the ever-changing landscape of a global pandemic.

At the time of writing on December 10, 2020, COVID-19 cases are once again rising in the United States, with record numbers of new cases, hospitalizations, and deaths reported every day. This surge of cases has been described as the third wave of the pandemic, with the first wave having peaked in mid-April and the second wave, much larger than the first, having peaked in mid-July (JHU, 2020b). The current wave is projected to be the largest and most deadly of the three, as viral spread is uncontained throughout the contiguous U.S. and hospital intensive care units are forecasted to be stretched to capacity (CDC 2020b; Leatherby et al., 2020). Hopeful news is being reported each week of soon-to-be distributed vaccines, but the coming months are projected to be grim (Reynolds, 2020).

Throughout this year of uncertainty and loss, psychologists have attempted to stay abreast of the tidal wave of potential psychological impacts of the COVID-19 pandemic. Much of what we will come to understand about the pandemic and its influence on our psyches will be learned in retrospect; it is still too soon to know how large the long-term influence of sustained social isolation, elevated health anxiety, and loss of lives and livelihood might be. However, since the first months of the pandemic, researchers have made valiant attempts to prepare us for the psychological consequences we might expect to see. Reviews were published that synthesized the mental health impacts of past pandemics and viral outbreaks (e.g., Shah et al., 2020), and experts in social, clinical, and other branches of psychology discussed their predictions of outcomes based on their understandings of human sensibilities and behavior (e.g., Van Bavel et al., 2020). Other researchers attempted to explore psychology in process, studying the mental health outcomes as the different phases of the pandemic unfolded.

This dissertation contributes to the growing base of knowledge about the psychological impacts of the COVID-19 pandemic in two ways; Part I includes a study of reported coping experiences during the initial phase of the outbreak in the United States, while Part II comprises a review of the mental health impacts of the pandemic for college students in the United States to this point and recommendations for supporting their coping moving forward.

Part I of this project includes a longitudinal study that took place online during the initial stage of the COVID-19 pandemic in the United States, a phase marked by rising case numbers, uncertainty, and initial efforts to contain the spread of the virus. Participants completed two surveys four weeks apart, the first on March 18 and the second on April 15,

2020. A total of 147 participants – predominantly identifying as White, female, and living California – completed the first survey and 124 completed the second survey as well. Descriptive analyses revealed widespread disruption to participants lives and high rates of psychological distress during this time, while paired samples t-tests showed increases in depressive symptoms, stress symptoms, and loneliness between the start and end of the study. Hierarchical linear regression analyses revealed reported use of Socially Supported Coping strategies was related to less loneliness, while use of Avoidant Coping strategies was associated with more loneliness and greater psychological distress overall. Methodological limitations, including use of a non-representative sample and adapted measures, are considered and implications for pandemic coping and adjustment are discussed. This study is one of relatively few conducted during this unique time period and holds both empirical and historical value as a look at the coping experiences of a subset of Americans during the initial stage of the COVID-19 outbreak.

Part II of this dissertation includes a review of the mental health impacts of the COVID-19 pandemic for college students in the United States. Students face many of the same challenges as the general population, including pervasive uncertainty and grief. Concurrently, they are contending with unique college-specific stressors, such as adjusting to an online learning environment, navigating ambiguous social environments, and, for some, struggling to meet their basic needs. Current recommendations are also discussed for supporting students' coping, including cultivating and maintaining social support, locating identity affirming spaces, building healthy routines, holding flexible mindsets and engaging in positive coping, seeking psychotherapy, and accessing instrumental support. This paper serves as a synthesis of what we know and of what we might do as we work to help students

navigate the psychological consequences of this difficult – and hopefully singular – academic year.

Together, the two pieces of this dissertation comprise novel research findings, synthesis of scholarship, and clinical recommendations that may be useful to researchers, clinicians, or any human interested in better understanding and navigating the psychological consequences of the COVID-19 pandemic. As will be discussed in both parts of this project, the psychological impact of this collective crisis is profound. Let us look through these texts at where we have been, where we are now, and where we might go from here.

PART I:

Coping with the Initial Stage of the COVID-19 Pandemic in the United States

Abstract

This study was designed to explore the strategies people used to cope with the COVID-19 pandemic between March 18 and April 15, 2020, a unique period of time marked by the first escalation in infection rates and initial efforts to limit the spread of the virus in the United States. Participants completed two online surveys on the start and end date of the study assessing their experiences of pandemic impacts and concern, psychological distress, loneliness, life satisfaction, and coping. A total of 147 participants completed the March 18 survey and 124 participants completed the April 15 survey. Descriptive analyses revealed widespread disruption to participants lives and high rates of psychological distress, while paired samples t-tests showed increases in depression symptoms, stress symptoms, and loneliness between the first and second survey. Hierarchical linear regression analyses revealed reported use of Socially Supported Coping strategies was associated with less loneliness, while use of Avoidant Coping strategies was related to more loneliness and greater psychological distress overall. Methodological limitations are considered and implications for pandemic coping and adjustment are discussed. This study is one of relatively few conducted during this unique time period and holds both empirical and anthropological value as a look at the coping experiences of a subset of Americans during the initial stage of the COVID-19 outbreak.

Coping with the Initial Stage of the COVID-19 Pandemic in the United States

The novel coronavirus disease 2019, or COVID-19, was officially declared a global pandemic (WHO, 2020) on March 11, 2020. On March 18, 2020 the United States reported approximately 7,000 confirmed cases and less than 100 deaths from COVID-19 (CDC, 2020a). By April 15, those numbers had reached more than 570,000 and 22,000, respectively (CDC, 2020b). These four weeks reflect the early stage of the COVID-19 pandemic in the United States, a time when national attention focused on the escalating spread of the virus and communities took action to slow its transmission. During this period, state governments issued recommendations that residents stay at home except for essential activities and many state and local officials ordered temporary closure of non-essential businesses and a shift to online education for public schooling (JHU, 2020). Whether furloughed, fired, working from home, or deemed "essential" and placed on the pandemic front lines, American workers experienced rapidly and dramatically reshaped employment. In April, the unemployment rate in the United States stood at an astonishing 14.7%, the worst since the Great Depression (Schwartz et al., 2020). At an individual level, many people attempted to engage in "social-distancing" efforts, limiting contact with others outside of their homes and cancelling or postponing personal events from playdates to weddings ceremonies to funeral memorial services (Ingravallo, 2020). Simply put, the U.S. entered a period of widespread life-disruption and semi-lockdown as scientists and public health officials scrambled to understand and contain the outbreak.

Mental Health Impact

In the nine months since March 2020, we have learned at great deal about COVID-19. At time of writing on December 10, 2020, we now understand that the virus is spread largely

from person to person through respiratory droplets or aerosols (CDC, 2020c) and that effective methods for slowing transmission include, among other actions, avoidance of congregating with other people in unventilated spaces and wearing of face masks that cover the mouth and nose (CDC, 2020d). We are also now painfully aware that more than 1.5 million Americans have become infected by COVID-19 and more than 200,000 have lost their lives since the start of the outbreak (CDC, 2020e), with a disproportionate share of these infections and losses born by our Black, Indigenous, and Latino/a/x communities (Alcendor, 2020; Millet et al., 2020). We are witnessing in real time heart-wrenching reactions of complicated grief (Bertuccio & Runion, 2020) and the emotional toll of sustained fear, uncertainty, and disconnection. At this point psychologists in general tend to agree that the COVID-19 pandemic is causing both the onset new psychological distress and the exacerbation of pre-existing mental health difficulties (Bhattacharjee & Acharya, 2020; Brooks et al., 2020).

Initial Stage Impacts. Although we could not know in March and April all that would be in store, even in those early spring months of 2020 expert predictions of the mental health impact of the COVID-19 pandemic painted a worrisome picture. Scholars synthesizing extant literature at that time on the psychological outcomes of past infection diseases forecast increases in symptoms of anxiety, depression, and PTSD, as well as experiences of stigmatization and isolation (Chew et al., 2020; Shah et al., 2020). An early review of the predicted social and behavioral science implications of COVID-19 included perceived threat, social inequity, and relational strain as potential exacerbators of distress (Van Bavel et al., 2020).

In general, research on the psychological impacts during the initial stage of the pandemic has tended to mirror these predictions. In China, where COVID-19 originated and whose citizens were first affected, more than half of respondents in a general population study conducted in the early months of the pandemic reported that they perceived moderate to severe psychological impact of the pandemic, with more than a fourth reporting moderate to severe symptoms of anxiety (Wang et al., 2020). In another part of the world, Rodríguez-Rey and colleagues (2020) investigating the psychological impact of the initial stage of the COVID-19 pandemic in Spain found that about 36% of the participants reported moderate to severe psychological impact, 25% showed mild to severe levels of anxiety, 41% reported depression symptoms, and 41% felt stressed. Furthermore, the majority of the sample felt that the COVID-19 crisis had greatly impacted their lives, including necessitating cancellation of important events and disrupting their daily routines (Rodríguez-Rey et al., 2020).

Overall, initial meta-analyses of COVID-19 impacts suggested symptoms of anxiety, depression, stress, and disturbed sleep were common psychological reactions to the early stage of pandemic (Kar et al., 2020; Rajkumar, 2020). Although we did not yet know the staggering scale of the losses we were to endure in the ensuing year, the initial phase of the COVID-19 pandemic was marked by momentous upheaval and valiant efforts by individuals to adjust and cope.

Pandemic Coping

Psychological coping has been defined in various ways but generally refers to the processes by which people deal with situations appraised as stressful or distressing (Biggs et al., 2017; Lazarus & Folkman, 1984). Coping is a dynamic process that can include many diverse strategies and look different for people based on their personalities and dispositions,

the context of the problem, and the intrapersonal and interpersonal resources available to them (Biggs et al., 2017). From the start, the COVID-19 pandemic has presented unique coping challenges and we are still in the process of understanding how individuals and communities have risen to the task.

Chew and colleagues (2020), in an early synthesis paper, reviewed lessons learned from coping with past viral outbreaks, such as the 2009 severe acute respiratory syndrome (SARS) outbreak, the 2012 H1N1 influenza pandemic, the 2012 Middle East respiratory syndrome (MERS) outbreak, and the Ebola epidemic. The researchers highlighted a variety of strategies – including problem solving, social support seeking, distraction, denial, and avoidance – as common pandemic coping responses (Chew et al., 2020). Early scholarship also highlighted pandemic coping strategies likely to be useful for preserving well-being and mitigating distress, such as prioritizing healthy social connections, maintaining physical wellness, utilizing mindfulness and acceptance techniques, and holding optimistic and flexible mindsets (Chew et al., 2020; Kar et al., 2020; Polizzi et al., 2020; Van Bavel et al., 2020).

Initial Stage Coping. Global efforts have been made to understand the psychological impacts of the initial stage of the COVID-19 pandemic in different countries and, although limited, some of this research has also included exploration of how people were coping with the stress of these early days.

In Poland, Chwaszcz and colleagues (2020) found that high global quality of life during an early month of the outbreak was associated with use of coping strategies of planning, positive reframing, and seeking emotional support, and with low reliance on helplessness-based coping strategies such as substance use, self-blame, and disengagement.

In China, researchers studying people in their third day of a fourteen-day self-isolation suggested that increases in social capital reduced anxiety and stress levels for these individuals, which in turn improved their quality of sleep (Xiao et al., 2020). A large-scale study of changes in subjective well-being during the early stage of the COVID-19 pandemic in Germany found that, on average, life satisfaction, positive affect, and negative affect declined among participants between March and May of 2020 (Zacher & Rudolph, 2020). During this time, positive affect was related to greater use of active coping, emotional support seeking, and religiosity, and lower use of humor. Negative affect, on the other hand, was related to greater use of denial, substance use, and self-blame, and lower use of emotional support seeking (Zacher & Rudolph, 2020). Finally, a study conducted in April the United States found that college students were more likely than the general population to cope with COVID-19 stress by using avoidant coping strategies and humor, and less likely to cope using acceptance (Munsell et al., 2020).

Together, these studies provide a valuable look at some early pandemic coping experiences around the world. In general, however, research that explores the strategies people were using to cope with the disruptions caused by the initial phase of the COVID-19 pandemic is still limited and even less work has included investigation of this question during the initial phase of the pandemic in the United States.

The Current Study

The current study was designed as a longitudinal, online survey study meant to explore how people in the United States were coping with the COVID-19 pandemic between March 18 and April 15, a period of time characterized by widespread life-disruption and pervasive uncertainty. The study was designed to explore two questions:

1) How were people in the sample experiencing the initial phase of the COVID-19 pandemic in the United States? Specifically, what were their experiences of pandemic impacts, psychological distress, loneliness, and life satisfaction at this time?
2) How were people in the sample coping with the initial phase of the COVID-19 pandemic in the United States? Specifically, what types of coping strategies (i.e., Self-Sufficient, Socially Supported, or Avoidant) did people report using over the four-week study period? How was use of these strategies associated with their experiences of psychological distress, loneliness, and life satisfaction?

Method

Participants

One hundred and forty-seven participants completed the March 18 survey within the 24-hour timeframe. The full sample of participants ranged in age from 18 to 78 years old (M = 31.15, SD = 14.33), with 85.6% identifying as female, 13.7% as male, and 0.7% as genderfluid non-binary. On the open-ended item for participants to share the race(s) and or ethnicity(ies) that best described them, 53.1% identified as White or Caucasian, 15.6% as of Asian American (including as of Chinese, Japanese, Taiwanese, Filipino, and Vietnamese descent), 13.0% as Latino/a/x, Chicano/a/x, and/or Hispanic, 6.1% as Multi-ethnic or Mixed, 3.4% as Middle Eastern, and 2.7% as Black or African American, with another 6.1% choosing not to respond to the item. Regarding participants' locations during the study period, 72.8% reported being in California, 8.2% reported being in the Northeast, 7.5% in the Midwest, 6.8% in the Pacific Northwest, and 4.7% chose not to respond. Finally, participants' reported socio-economic status ranged from the bottom of the scale at a "1" to

the top of the scale at a "9", averaging a little above the mid-point; M = 5.73, SD = 1.90. Of the original 147 participants, 124 also completed the April 15 survey within the eligible timeframe.

Measures

COVID-19 Exposures and Impacts. To understand how the COVID-19 pandemic affected people in the sample, the second survey included an Exposures and Impacts Checklist in which participants were asked to select any of the exposure to the virus and impacts of the pandemic that applied to them at the time. The list was adapted from Conway III and colleagues (2020) and comprised 27 items, such as "*I have been diagnosed with the virus*" and "*I had to cancel an event I had planned to host*." See Table 1 for full items.

COVID-19 Concern. A measure of participants' current state of concern about the spread of COVID-19 was created by adapting an H1N1 pandemic anxiety measure developed by clinicians and researchers experienced in treating anxiety and somatization disorders (Wheaton et al., 2011). The measure included 10 items such as "*To what extent are you concerned about COVID-19*", measured on a 5-point scale from 0 ("*very little*") to 4 ("*very much*"). The COVID-19 Concern measure demonstrated good internal consistency; T1 α = .73; T2 α = .73. See Table 2 for specific item content. Participants completed this measure during both surveys.

Life Satisfaction. The Satisfaction with Life Scale (SWLS; Diener et al., 1985) was included in both surveys to measure participants' subjective well-being. The SWLS demonstrated excellent internal consistency (T1 α = .90, T2 α = .90) and included five items inquiring about participants' perceptions of their lives, using a 7-point scale from 1 ("*strongly disagree*") to 7 ("*strongly agree*").

Psychological Distress. To measure participants' experiences of psychological distress, the 21-item version of the Depression Anxiety Stress Scale (DASS-21; Antony et al. 1998) was included in both surveys. Participants indicated the extent to which 21 statements applied to them over the past two weeks on a 4-point scale from 0 ("*never, did not apply to me at all*") to 3 ("*almost always, applied to me very much or most of the time*"). The DASS-21 includes three subscales: Depression (internal consistency, T1 $\alpha = .85$, T2 $\alpha = .88$), Anxiety (T1 $\alpha = .72$, T2 $\alpha = .76$), and Stress (T1 $\alpha = .79$, T2 $\alpha = .80$). For the stepwise linear regression analyses, all three subscales were combined into a general measure of state distress (internal consistency T1 $\alpha = .88$, T2 $\alpha = .90$).

During the second survey, after completing the DASS-21 participants also responded to a single question about their perceived change in distress since the start of the pandemic. Specifically, participants responded to the item "*In general, have you perceived an increase or decrease in distress since the beginning of this pandemic?"* on a 7-point scale from 1 ("*large decrease*") to 7 ("*large increase*") with a neutral point at 4 ("*no change*").

Loneliness. Participants completed the Revised UCLA Loneliness scale during both surveys to measure state loneliness and perceived social isolation (Russell et al., 1980). Participants were asked to respond to 20 statements about their experiences of loneliness over the past two weeks using a 4-point scale from 1 ("*I never feel this way*") to 4 ("*I often feel this way*"). The scale demonstrated excellent internal consistency (T1 $\alpha = .94$, T2 $\alpha = .95$).

Coping. The brief situational version of the COPE scale (Carver, 1997) was administered during both surveys to assess what strategies people are using to deal with the COVID-19 pandemic. The scale is designed to assess a range of coping responses among

adults and has been used to efficiently assess coping strategies across a variety of stressful events and with a variety of populations, including med students, caregivers, cancer patients, and communities affected by natural disasters (Hagen et al., 2017; Valvano & Stepleman, 2013; Wang et al., 2016). More recently, it has been used in other research of COVID-19 pandemic coping (Munsell et al., 2020; Zacher & Rudolph, 2020).

The Brief COPE includes 28 items on a 4-point scale from 1 ("*I haven't been doing this at all*") to 4 ("*I have been doing this a lot*"). The instructions for the current study read "*Please indicate whether and to what extent you have used each of the following coping responses to deal with the current COVID-19 pandemic*." The items are organized into two-item subscales comprising the 14 different coping strategies of self-distraction, active coping, denial, substance use, emotional support seeking, instrumental support seeking, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame. These subscales can be further combined into three broader categories of coping: Self-Sufficient Coping, which includes strategies that are self-initiated and self-oriented; Socially Supported Coping, which includes strategies that necessarily involve other people for support; and Avoidant Coping, which includes strategies aimed at withdrawing from or otherwise avoiding painful experiences. This three-factor approach was originally posited by Litman (2006) and supported by a confirmatory factor analysis by Wang and colleagues (2016) with two groups of individuals experiencing different types of traumatic events.

Using this approach in this study, the Brief COPE subscales were combined into Self-Sufficient Coping (internal consistency T1 $\alpha = .75$, T2 $\alpha = .79$) comprised of distraction, positive reframing, planning, active coping, humor, religion, and acceptance; Socially-Supported Coping (internal consistency T1 $\alpha = .74$, T2 $\alpha = .82$), comprised of venting,

emotional support seeking, and instrumental support seeking; and Avoidant Coping (internal consistency T1 $\alpha = .67$, T2 $\alpha = .57$) comprised of denial, alcohol/drug use, self-blame, and behavioral disengagement.

Procedures

Upon obtaining IRB approval, participants were recruited between March 11 and March 18, 2020 through website and email list serve postings asking them to share about how they were coping with the COVID-19 outbreak. The recruitment materials linked potential participants to a Qualtrics screening survey that included a handful of screening items, such as ensuring that participants had an active email address and were planning to be living in the United States for the duration of the study period. At the end of the screening survey, eligible individuals interested in participating were given the project email address to enroll in the study and receive the scheduled links for each of the surveys. Each time participants completed a survey they were entered into drawings to win one of three $150 Amazon gift cards.

Given the rapidly evolving nature of the COVID-19 pandemic at that time, all participants were sent the links to the surveys on the same days; the first survey (also referred to as Time 1 or T1 survey) was sent on the morning of March 18, 2020 and the second survey (also referred to as Time 2 or T2 survey) on the morning of April 15, 2020. Responses were only included in data-analysis if participants had completed the surveys by the end of the following day (i.e., before 11:59pm on March 19 and April 16, respectively). The surveys included measures of COVID-19 concern, psychological distress – including depression symptoms, anxiety symptoms, stress symptoms – loneliness, life satisfaction, coping strategy use, and demographic factors.

Results

This study was designed to understand how people in the United States were experiencing the initial phase of the COVID-19 pandemic. Given the exploratory nature of the study and relatively small sample size, all results were analyzed at the more conservatively adjusted 0.01 alpha level of significance.

COVID-19 Pandemic Exposures and Impacts

During the second survey, participants used checklist items to indicate the virus exposures and pandemic impacts that applied to them over the course of the study period. Frequency analyses revealed that no one in the sample reported having been diagnosed with COVID-19 and only two participants had experienced symptoms of the virus. However, 54.8% reported that at least one person in their local community had been diagnosed with the virus. A sizable minority of participants (21.8%) indicated that someone they care about had been diagnosed with the COVID-19 with 11.3% reporting that someone they care about had become seriously ill from the virus, with four people in the sample reporting that someone they care about died from COVID-19 during the study period.

Many participants indicated that they experienced significant disruptions to their lives due to the COVID-19 pandemic. The most common disruption, endorsed by 94.4% of participants, was some policy related to the virus affecting their community (e.g., closure of non-essential businesses). Most participants (83.9%) reported that their work or school had been moved to remote operations and 77.4% indicated that an event or trip they had planned to attend was canceled due to the pandemic. Nearly half (48.4%) of participants reported that the pandemic had affected them negatively from a financial point of view, with 37.1% indicating they had lost job-related income. One participant reported that they had lost their

home or place of shelter due to the pandemic during the study period and 6.5% indicated that someone close to them had lost theirs. Whether for financial reasons or supply shortages, 37.1% of participants reported that they had a hard time getting needed resources (e.g., food, toilet paper) due to the pandemic. Finally, 59.7% of participants reported that the outbreak had negative impacted their psychological health and more than a fifth (23.4%) reported that they felt they had become depressed as a result of the pandemic. See Table 1 for full results.

COVID-19 Concern

The COVID-19 concern measure was administered to participants during the Time 1 and Time 2 surveys. Descriptive analyses revealed that, on average, participants experienced moderately high COVID-19 concern at both timepoints (T1 M = 3.83, SD = 0.49; T2 M = 3.82, SD = 0.46) that did not significantly change between the first and second surveys; t (123) = -0.11, p = 0.92; see Table 3.

Bivariate correlations were used to explore associations between Time 2 COVID-19 concern with Time 2 distress, loneliness, and life satisfaction, and individual demographic variables; See Table 4. Significant associations were observed between COVID-19 concern and higher levels of anxiety and stress symptoms, as well as older age. Associations between COVID-19 concern and coping are explored in the coping results section below.

Psychological Distress, Loneliness, and Subjective Well-Being

Measures of psychological distress, loneliness, and subjective life satisfaction were administered to participants during both surveys. Frequency analyses were conducted for the DASS-21 distress subscales at both timepoints and assessed against the cut-offs for the DASS-21 (Lovibond & Lovibond, 1995), which do *not* provide categorical clinical diagnosis, but help characterize the degree of severity of distress relative to the general population.

Based on these benchmarks, 19.7% of participants endorsed at least moderate levels of depression symptoms on the first survey, while that number rose to 36.3% on the second survey. More than a third of the sample reported moderate or higher levels of anxiety symptoms at Time 1 (35.4%) and Time 2 (37.9%). Finally, 31.3% endorsed at least moderate levels of stress symptoms on the first survey, which rose to 39.5% on the second survey.

These results concur with the frequency analysis of the single-item measure of perceived change in distress administered at the second timepoint. Of the 79 participants who chose to respond to this question, 82.3% reported perceiving an increase in their distress since the start of the pandemic – 27.8% indicating a small increase in distress, 39.2% a moderate increase, and 15.2% a large increase. A small number of participants (5.1%) reported they perceived no change in distress since the beginning of the pandemic, while 12.7% actually perceived at least a small decrease in distress – 5.1% reporting a small decrease, 3.8% a moderate decrease and 3.8% a large decrease.

Measures of loneliness and life satisfaction were administered during both surveys. Descriptive analyses revealed that, on average, participants in the sample reported relatively low levels of loneliness (T1 M = 6.02, SD = 7.52; T2 M = 8.53, SD = 9.33) and moderate levels of life satisfaction (T1 M = 4.82, SD = 1.44; T2 M = 4.75, SD = 1.37) at both the start and end of the study.

Paired-samples *t*-tests were conducted to assess changes in variables of psychological distress, loneliness, and life satisfaction between the first and second surveys. Table 3 displays results showing no change in life satisfaction or anxious symptoms, but significant increases in reported loneliness and overall psychological distress, driven by increases in the depression symptoms and stress symptoms subscales.

Bivariate correlations were used to explore associations between Time 2 distress, loneliness, and life satisfaction variables with individual demographic factors. Greater overall stress and each of the depression, anxiety, and stress subscales were associated with less loneliness and lower life satisfaction; See Table 4. Each of the distress variables was also higher for younger participants, female participants, and those reporting lower socioeconomic status. Associations between distress variables and reported coping are explored in the coping following section on coping results.

Pandemic Coping

This study was also designed to understand how people in the United States were experiencing the initial phase of the COVID-19 pandemic. Given the exploratory nature of the study and relatively small sample size, all results were analyzed at the more conservatively adjusted 0.01 alpha level of significance.

Measurements of how participants were coping with the COVID-19 pandemic were administered during both surveys. Descriptive analyses revealed that, at both time points, use of Self-Sufficient Coping strategies were reported as the most common, followed by Socially Supported Coping, and then Avoidant Coping.

Paired-samples *t*-tests were conducted to assess changes in reported coping between the first and second surveys. Table 3 displays results showing no change in reported use of Self-Sufficient Coping, but a slight decrease in reported use of Socially Support Coping, and an increase in use of Avoidant Coping strategies.

Bivariate correlations were then used to explore associations between reported Time 2 coping with Time 2 COVID-19 concern, distress, loneliness, life satisfaction, and individual demographic variables; See Table 4. Greater reported use of Self-Sufficient

Coping was associated with lower depression symptoms, higher life satisfaction, and greater use of Socially Supported Coping. Greater reported use of Socially Supported Coping was in turn associated with more COVID-19 concern, higher stress symptoms, and less loneliness. Finally, Avoidant Coping was associated with higher distress overall and on all three distress subscales, greater loneliness, and lower life satisfaction. Reported use of Avoidant Coping was also higher among younger participants and those reporting lower socio-economic status.

Finally, regression analyses were conducted to explore the impact of pandemic coping on participants' final distress and well-being. Three hierarchical linear regressions were conducted with Time 2 psychological distress, loneliness, and life satisfaction as the dependent outcome variables. Predictor variables were entered as in the following order: Step 1 included the Time 1 measure of each respective outcome variable (e.g., Time 1 loneliness predicting Time 2 loneliness); Step 2 included the three demographic variables of age, female or male gender, and socioeconomic status; and Step 3 included participants Time 2 reported use of the three types of coping strategies.

As seen in Table 5, higher psychological distress at Time 2 when controlling for initial distress and demographic factors was significantly related to greater use of Avoidant Copings strategies, $R^2 = .61$; adjusted $R^2 = .59$, $F(3, 113) = 25.62$, $p < 001$. As seen in Table 6, greater loneliness at Time 2 when controlling for loneliness and demographic factors was significantly related to less use of Socially Supported coping and greater use of Avoidant Coping strategies, $R^2 = .73$; adjusted $R^2 = .72$, $F(3, 113) = 44.39$, $p < 001$. As seen in Table 7, life satisfaction at Time 2 when controlling for initial life satisfaction and demographic factors was not significantly associated with any type of coping strategy use, $R^2 = .78$; adjusted $R^2 = .77$, $F(3, 113) = 58.62$, $p = 08$.

Discussion

Pandemic Experiences and Psychological Outcomes

This study was designed to explore how participants were experiencing the early stage of the COVID-19 outbreak in the United States. At the time of the second survey sent on April 15, 2020 participants reported a variety of impacts and disruptions in their lives. The sample was limited in terms of diversity of locations, but nearly every participant endorsed having had some policy related to the virus affect their local community. Furthermore, large majorities of participants endorsed having had their work or school moved to remote operations or having experiences cancelations to planned events. Financial difficulties were a commonly endorsed impact of the pandemic, as were negative mental health consequences. Fortunately, no participant in the sample had personally been diagnosed with COVID-19 at the time of the study, but more than half of participants reported that at least one person in their local community had contracted the virus and more than a fifth of the sample indicated that someone they care about had been diagnosed with COVID-19. Tragically, a few participants had even lost loved ones to the COVID-19 since the start of the pandemic.

These impacts and experiences fit with a general understanding of the early stage of the COVID-19 outbreak and the initial attempts to control the virus spread as being highly disruptive to daily life. These disruptions appeared to result in elevated rates of psychological distress within the sample. At the April timepoint, more than a third of participants endorsed experiencing each of the three subscales of psychological distress – depression symptoms, anxiety symptoms, and stress symptoms – at moderate, severe, or very severe levels (Lovibond & Lovibond, 1995). Furthermore, depression symptoms, stress symptoms, and loneliness each increased between the first and second surveys. In general, psychological

distress was more prominent among younger participants, those identifying as female as compared to male, and those reporting lower socio-economic status. Overall, these findings are consistent with other research of initial-stage psychological outcomes showing elevated rates of acute psychological distress (Kar et al., 2020; Rajkumar, 2020; Zacher & Rudolph, 2020).

Unlike distress, participants' reported life satisfaction did not change significantly between the first and second surveys. As the life satisfaction measure captures a more global appraisal of one's life circumstances, a possible interpretation is that participants on average experienced the initial phase of the COVID-19 pandemic as disruptive and acutely distressing, but not in a way that fundamentally shifted the conditions of their lives. This generalization likely does not apply to the participants who reported losses of loved ones or livelihoods during this point in the pandemic. However, it fits with a resilience perspective on pandemic impacts, which frames likely psychological outcomes as acute but temporary increases in distress and potential adjustment disorders (Chen & Bonanno, 2020; Kazlauskas & Quero, 2020).

As with life satisfaction, concern about COVID-19 did not significantly increase or decrease between the surveys but instead remained moderately high at both study timepoints. COVID-19 concern was higher among participants reporting greater anxiety symptoms and stress symptoms. It was also higher among older participants – understandable finding given the well-established relationship between older age and virus lethality (Kang & Jung, 2020). Overall, many but not all participants appeared to experience the initial phase of the COVID-19 outbreak in the United States as both highly disruptive to their lives and as acutely distressing.

Pandemic Coping

This study was also designed to explore how participants were coping with the early stage of the COVID-19 outbreak in the United States. Participants reported highest use of Self-Sufficient Coping strategies, followed by use of Socially Supported Coping, and then use of Avoidant Coping strategies.

A slight decrease in reported use of Socially Supported Coping was observable between the March survey and April survey, coinciding with the reported increase in loneliness between the two time points. Indeed, less use of Socially Supported Coping strategies significantly related to Time 2 loneliness when controlling for Time 1 loneliness, demographic factors, and other types of coping. This finding is correlational such that we cannot be sure whether it is the result of increasingly socially isolated people being less likely to seek emotional and instrumental support from others or whether the under-utilization of these social coping strategies leads to an increase in loneliness. Either way, this result is useful in adding yet another drop to the stream of findings that show social connection is a crucial aspect of pandemic coping (e.g., Chen & Bonanno, 2020; Chew et al., 2020; Kar et al., 2020; Van Bavel et al., 2020).

The most robust finding of the current study is the clear relationship between use of Avoidant Coping strategies and greater psychological distress. Reported use of Avoidant Coping increased between the first and second surveys and was higher among younger participants and female as compared to male participants. At Time 2, greater use of Avoidant Coping over the course of the study period was associated with more depressive symptoms, anxiety symptoms, stress symptoms, loneliness, and with lower life satisfaction. Avoidant Coping also significantly related to greater psychological distress overall at Time 2 and more

loneliness at Time 2 when controlling for initial distress and loneliness, respectively, and for demographic factors and other types of coping.

The relationship between avoidant coping and negative psychological outcomes is well-established (e.g., Carver et al., 1989; Chao, 2011; Gutiérrez et al., 2007), including in extant research on initial-stage COVID-19 pandemic coping (Chwaszcez et al., Munsell et al., 2020; Zacher & Rudolph, 2020). The current study findings not only support the existing understanding of the detrimental role of avoidance in coping processes, but also point us to options for coping that might better mitigate distress. The Avoidant Coping category used in this study subsumes four coping strategies: behavioral disengagement, denial, self-blame, and substance use. Although not directly studied in this work, it is reasonable to hypothesize that engaging in the natural opposites of some of these strategies – namely, behavioral activation as opposed to disengagement, acceptance as opposed to denial, and self-compassion as opposed to self-blame – may contribute to preserving psychological well-being. Behavioral activation is an intervention familiar to cognitive behavioral therapists in which people are encouraged to actively plan and engage in pleasant activities, and has been shown to help treat depression, among other conditions (Cuijpers et al., 2007). Acceptance is a bedrock of acceptance and commitment therapy (Hayes et al., 2004) and has been highlighted as potentially useful in pandemic coping (e.g., Polizzi et al., 2020). Finally, self-compassion, a concept well-known to positive psychotherapists, is a way of relating to the self with understanding and kindness (Neff et al., 2007) and has been associated with myriad benefits including overall psychological well-being (Zessin et al., 2015).

Taken together, the coping findings in this study support extant research that highlights social support as crucial for mitigating pandemic loneliness and avoidance as likely to exacerbate pandemic distress.

Limitations and Future Directions

The primary limitation of this study is the relatively small and not nationally representative sample. Young people, White people, cis-gender females, and Californians were over-represented in the sample. This is a particularly important limitation as the COVID-19 pandemic has affected every corner of the United States and disproportionally affected Black, Indigenous, and Latino/a/x communities (Alcendor, 2020). Conclusions should be extrapolated with caution when applied beyond the study population.

The study is also correlational and descriptive. No interventions were included, and participants were not taught about coping strategies or how to use them. The benefit of this approach is that it provides insight into which coping strategies were naturally employed by participants during this period of the COVID-19 pandemic. The limitation, as previously mentioned, is uncertainty of causation. It is unclear, for instance, whether participants struggling with more depressive symptoms are less likely to use Self-Sufficient Coping strategies or whether underutilization of these strategies causes more depressive symptoms.

Finally, this study was designed to include online self-report surveys and, as is the case with all self-report studies, we cannot be sure how well participants' reports match reality. Social desirability may have influenced participants to under-report strategies they perceive to be "unhealthy" or lack of insight into their own coping processes may have influenced how accurately participants reported on their coping process.

Future research could address some of the above limitations by recruiting more representative samples and utilizing experimental methods to further study pandemic coping. Indeed, as new stages of the COVID-19 pandemic unfold in the United States, it will be important to capture Americans' pandemic coping experiences through each of these next phases. That said, the time-period captured in the current study is unique, as it encompasses a period of unprecedented disruption and semi-shutdown in the United States in an effort the slow the rapid spread of an infectious disease. Despite the limitations of the sample and the study, the findings provide valuable information for researchers, clinicians, public health official, and others for understanding the coping experiences of individuals during this unique early phase of the COVID-19 pandemic.

Conclusion

March and April of 2020 will forever be known as months that comprise the early stage of the COVID-19 pandemic. This initial phase of the outbreak was characterized by escalating case numbers, pervasive uncertainty, and significant life disruption, as individuals and communities attempted to understand and slow the viral spread. Participants in the current study completed two surveys, the first on March 18 and the second on April 15, about how they were experiencing and coping with the pandemic at that time. Results indicate that this initial period of the pandemic was highly disruptive and distressing for many participants. Participants responded to this distress using a variety of coping strategies, with varied in outcomes for their psychological distress, loneliness, and life satisfaction. Ultimately, the current study provides insight into the psychological experiences of Americans during a unique period of time, examines relationships between coping strategies and psychological outcomes, and contributes to the growing literature on COVID-19 coping.

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Appendix

Table 1. Percentage of sample endorsing each item of the COVID-19 impacts checklist

Variable	% (N = 124)
Some policy related to the virus has affected my community (e.g., non-essential businesses have been closed)	94.4
My work or school has been moved to remote operations	83.9
An event I had planned to attend was canceled by someone else (e.g., the organizer)	77.4
I have had to cancel a trip I planned to go on	66.9
The outbreak has impacted my psychological health negatively	59.7
At least one person in my local community has been diagnosed with the virus	54.8
The pandemic has impacted me negatively from a financial point of view	48.4
I have had to cancel an event I had planned to host	46.8
A trip I had planned to go on was canceled by someone else (e.g., an airline)	41.1
I watch a lot of news about COVID-19	38.7
I have lost job-related income due to the pandemic	37.9
I have had a hard time getting needed resources (food, toilet paper) due to the pandemic	37.1
Someone I care about had symptoms of the virus and has now recovered	25.0
Someone I care about has been diagnosed with the virus	21.8
I have become depressed because of the pandemic	23.4
I have been impacted in some other way not listed here	23.4
Someone I care about currently has symptoms of the virus	14.5
I have been in close proximity with someone who has had symptoms of the virus	13.7
I have been exposed in some other way not listed here	12.9
Someone I care about has become seriously ill from the virus	11.3
Someone close to me has lost their home or place of shelter because for the pandemic	6.5
Someone I care about has passed away from the virus	3.2
I have had symptoms of COVID-19, but now recovered	1.6
I have been in close proximity with someone diagnosed with the virus	0.8
I have lost my home or place of shelter because of the pandemic	0.8
I have been diagnosed with COVID-19	0.0
I currently have symptoms of COVID-19	0.0

Table 2. Item properties of the COVID-19 Concern Inventory

	Time 1 (N = 147)		Time 2 (N = 124)	
Item	*M* (SD)	Item-total	*M* (SD)	Item-total
1. To what extent are you concerned about COVID-19?	3.70 (0.82)	.46	3.70 (0.82)	.46
2. How likely is it that you could become infected with COVID-19?	2.77 (0.86)	.35	2.77 (0.86)	.35
3. How likely is it that someone you care about could become infected with COVID-19?	3.70 (0.97)	.46	3.70 (0.97)	.46
4. How quickly do you believe contamination from COVID-19 is spreading in the U.S.?	4.98 (0.78)	.41	4.98 (0.78)	.41
5. To what extent are you keeping up with information/news about COVID-19?	4.55 (0.86)	.33	4.55 (0.86)	.33
6. To what extent are you concerned that you will become severely ill if infected with COVID-19?	2.74 (1.04)	.42	2.74 (1.04)	.42
7. To what extent are you concerned that someone you care about will become severely ill if infected with COVID-19?	4.02 (0.99)	.46	4.02 (0.99)	.46
8. To what extent has the threat of COVID-19 influenced your decisions to be around other people?	4.62 (0.69)	.42	4.62 (0.69)	.42
9. To what extent has the threat of COVID-19 influenced your travel or event plans?	4.76 (0.59)	.25	4.76 (0.59)	.25
10. To what extent has the threat of COVID-19 influenced your use of safety behaviors (e.g., hand sanitizer)?	4.35 (0.78)	.36	4.35 (0.78)	.36

Item-total = Mean corrected item-total correlations

Table 3. Descriptives and paired samples t-tests for psychological outcome and coping variables

Variable (N = 124)	T1 Mean (SD)	T2Mean (SD)	*t*	*sig*	*d*
COVID-19 Concern	3.83 (0.49)	3.82 (0.46)	0.11	.912	0.02
Life Satisfaction	4.82 (1.44)	4.75 (1.37)	1.08	.283	0.05
Distress Composite	30.66(17.19)	35.60 (18.72)	-4.00	<.001	0.28
Depressive Symptoms	8.44 (6.67)	11.05 (7.61)	-5.50	<.001	0.37
Anxiety Symptoms	7.45 (6.46)	7.95 (6.59)	-1.07	.288	0.08
Stress Symptoms	14.77 (7.51)	16.60 (7.91)	-2.77	.006	0.24
Loneliness	6.02 (7.52)	8.53 (9.33)	-4.93	<.001	0.30
Self-Sufficient Coping	2.65 (0.43)	2.64 (0.46)	0.09	.926	0.02
Socially Supported Coping	2.57 (0.59)	2.46 (0.64)	2.73	.007	0.18
Avoidant Coping	1.33 (0.34)	1.43 (0.38)	-3.33	.001	0.28

Scale ranges for each variable: COVID-19 Concern, 1-5; Life Satisfaction, 1-7; Distress Composite: 0-126; Depression, Anxiety, and Stress Subscales, 0-42; Loneliness, 1-60; Coping Scales, 1-4

Table 4. Correlations of psychological outcomes, demographic, and coping variables at Time 2

Variable (N = 124).	1	2	3	4	5	6	7	8	9	10	11	12	13
1. COVID Concern	1	.20*	.12	.22*	.18*	.04	-.01	.07	.21*	.13	.12	.21*	.15
2. Distress Composite		1	.84**	.82**	.88**	.59**	-.53**	-.30**	-.29**	-.35**	-.04	.16	.58**
3. Depressive Symptoms			1	.52**	.59**	.69**	-.53**	-.26**	-.33**	-.34**	-.26**	-.02	.59**
4. Anxiety Symptoms				1	.61**	.37**	-.40**	-.22*	-.18*	-.29**	.10	.16	.37**
5. Stress Symptoms					1	.42**	-.41**	-.28**	-.21*	-.25**	.07	.25**	.50**
6. Loneliness						1	-.63**	-.22*	-.30**	-.31**	-.17	-.18*	.56**
7. Life Satisfaction							1	.28**	.25**	.46**	.21*	.13	-.40**
8. Female = 0, Male = 1								1	.24**	.11	.13	-.07	-.12
9. Age									1	.34**	.05	.01	-.23*
10. SES										1	.08	.00	-.22*
11. Self-Sufficient Coping											1	.45**	-.13
12. Socially Supported Coping												1	.10
13. Avoidant Coping													1

* < .01 , ** < .001

Table 5. Hierarchical linear regression predicting distress at Time 2

Step	Variable (N = 121)	B	*std. error*	β	*sig*	R^2	ΔR^2
1	Constant	4.95	9.28		.595	.50	.50
	Distress T1	0.55	0.08	0.51	<.001		
2	Age	0.03	0.08	0.02	.715	.55	.05
	Female = 0, Male = 1	-7.33	3.38	-0.14	.032		
	SES	-1.56	0.66	-0.15	.021		
3	Self-Sufficient Coping	1.43	2.66	0.04	.591	.61	.07
	Socially Support Coping	-0.75	2.00	-0.03	.710		
	Avoidant Coping	14.60	3.30	0.30	<.001		

Table 6. Hierarchical linear regression predicting loneliness at Time 2

Step	Variable (N = 121)	B	*std. error*	β	*sig*	R^2	ΔR^2
1	Constant	0.24	3.92		.951	.64	.64
	Loneliness T1	0.78	0.07	0.63	<.000		
2	Age	-0.01	0.04	-0.01	.826	.65	.02
	Female = 0, Male = 1	-2.56	1.41	-0.09	.072		
	SES	-0.25	0.28	-0.05	.381		
3	Self-Sufficient Coping	0.72	1.12	0.04	.521	.73	.08
	Socially Support Coping	-2.66	0.84	-0.18	.002		
	Avoidant Coping	7.12	1.35	0.29	<.000		

Table 7. Hierarchical linear regression predicting life satisfaction at Time 2

Step	Variable (N = 121)	B	*std. error*	β	*sig*	R^2	ΔR^2
1	Constant	1.07	0.54		.051	.75	.75
	Life Satisfaction T1	0.75	0.05	0.77	<.001		
2	Age	-0.01	0.01	-0.06	.205	.77	.02
	Female = 0, Male = 1	0.50	0.19	0.12	.010		
	SES	0.08	0.04	0.10	.052		
3	Self-Sufficient Coping	-0.05	0.15	-0.02	.735	.78	.01
	Socially Support Coping	0.17	0.11	0.08	.122		
	Avoidant Coping	-0.40	0.18	-0.11	.024		

PART II:

Supporting College Students During the COVID-19 Pandemic: A Review of Mental Health Impacts and Recommendations for Coping.

Abstract

The COVID-19 pandemic has caused an extraordinary level of disruption and upheaval to the lives of people around the world. Recent announcements of vaccine effectiveness have brough hope for an eventual end to the pandemic, but the virus is currently uncontained in the United States and university counselors and other individuals invested in the well-being of college students continue to confront an important question: How do we best support the mental health of our students as they navigate college life in the midst of an active global pandemic? To help address that question, this paper includes a review of the current available literature on the anticipated and observed mental health consequences of the COVID-19 outbreak in the United States and a discussion of recommendations for supporting college students pandemic coping during this unprecedented academic year.

Supporting College Students During the COVID-19 Pandemic: A Review of Mental Health Impacts and Recommendations for Coping

On March 11, 2020 the World Health Organization officially declared the novel coronavirus disease 2019 (COVID-19) a global pandemic (WHO, 2020). At time of writing, December 10, 2020, the United States has reported nearly 15 million cases and more than 280,000 deaths (CDC, 2020). Hopeful news about effective vaccines has recently been reported but roll-out of vaccination programs is expected to take months (Thomas & Drucker, 2020). In the meantime, COVID-19 cases, hospitalizations, and deaths in the United States are rising and public health officials have warned of difficult days ahead (CDC, 2020b; Reynolds, 2020).

With these somber realities as our backdrop, college educators in the United States have been facing a unique quandary this academic year: How do we safely educate our nations' students in the midst of an active global pandemic at a magnitude not seen since the influenza pandemic of 1918? University and college administrators have implemented a variety of approaches to the school year, from fully online experiences to "business as usual" in-person instruction, or a hybrid of the two. No matter which approaches were ultimately employed, psychologists faced a crucial and related question of their own: How do we best support the mental health of students as they navigate their pandemic college experience? This paper addresses this question by reviewing the available literature on the impact of COVID-19 on undergraduate college student's mental health and suggested interventions.

Mental Health Impact of COVID-19

Some of the earliest predictions about the mental health impact of COVID-19 have come from researchers who considered the consequences of past pandemics (Chew et al.,

2020; Shah et al., 2020). Chew and colleagues (2020) for instance, synthesized the extant literature on the psychological consequences of past infectious diseases and reported that increases in anxiety and somatic symptoms, depressive symptoms, post-traumatic stress symptoms, and experiences of stigmatization and isolation were common reactions to viral outbreaks (Chew et al., 2020). Worry about physical and financial well-being of self and loved ones, separation from social support, disruption of daily routines, and lack of information about disease transmission and treatment all tended to exacerbate symptoms of suffering during past pandemics (Chew et al., 2020). Other predictions of mental health outcomes include an increase in rates of adjustment disorders (Kazlauskas & Quero, 2020), paranoia and psychotic episodes (Lopes & Jaspal, 2020), as well as suicidality due to increases in the risk factors of financial strain and social isolation (Lennon, 2020). Overall, scholars tend to anticipate both the onset of new mental health disorders and the exacerbation of pre-existing psychological struggles (Bhattacharjee & Acharya, 2020; Brooks et al., 2020).

Initial research on the early effects of COVID-19 on mental health supports these worrisome predictions. At the height of the outbreak in China, more than half of the respondents in a general population study reported that they perceived a moderate to severe psychological impact of the pandemic, with nearly a third reporting moderate to severe symptoms of anxiety (Wang et al., 2020). General population distress was also apparent in a large, cross-sectional study by Huang and Zhao (2020), who found that, at a time when case numbers were still growing, the overall prevalence of anxiety symptoms was 35.1% in their respondents, with 20.1% reporting depressive symptoms and 18.2% impaired quality of sleep. Meta-analyses of early literature on the psychological impact of COVID-19 suggest

symptoms of anxiety, depression, stress, and disturbed sleep were common psychological reactions in early stages of the pandemic (Kar et al., 2020; Rajkumar, 2020).

Contributors to Distress

A variety of direct and indirect factors are likely to exacerbate the psychological distress caused by the COVID-19 pandemic (see Sanderson et al., 2020). A review of social and behavioral science discussed perceived threat, prejudice and discrimination, social inequity, political polarization, isolation, and relational strain as potential exacerbators of stress during the pandemic (Van Bavel et al., 2020). Other scholars have highlighted the deleterious effects of social isolation (Saltzman et al., 2020), uncertainty (Freeson et al., 2020; Rettie & Daniels, 2020), fear of the virus (Fitzpatrick et al., 2020), and economic hardships (Shigemura et al., 2020) as contributors to distress. “Safer-at-home” orders may not be safer for all, as the risk of domestic violence and various forms of intimate partner violence may escalate under the conditions of the COVID-19 crisis (Kaukinen, 2020). Finally, Fiorillo and Gorwood (2020) in their brief review of the consequences of the pandemic on mental health and implications for clinical practice predict more serious consequences for individuals directly impacted by the virus, specifically those with preexisting vulnerabilities to psychosocial stressors, health professionals, and individuals with a great deal of media exposure to the impacts of the virus.

Grief and Loss. Tragically, experiences of loss and grief can also be expected to increase during a deadly infectious disease outbreak. It is incredibly painful to attempt to comprehend the gravity of a reported death toll in the hundreds of thousands. It is difficult to recognize the fullness and preciousness of each life lost and heartbreaking know that every person who succumbed to the virus is mourned by loved ones whose lives are now

inescapably altered by grief. Beyond the shocking scale of our collective tragedy, Bertuccio and Runion (2020) describe how ambiguous loss, anticipatory grief and complicated grief may all arise during the COVID-19 pandemic. They and other scholars report that many individuals have been unable to be with their loved ones as they were dying or unable to hold burial services and other rituals of mourning due to fears of virus spread (Burke, 2020; Kramer, 2020), a heartbreaking complication to the bereavement process.

Inequity and Inequality. The mental health consequences of the pandemic in the United States have not been felt equally across all Americans. Rural communities, as compared to urban communities, are at higher risk of morbidity during COVID-19 and less likely to have access to good health care or a wide choice of mental health providers (Summers-Gabr, 2020). Women, especially women of color, are more likely to face unemployment at work and take on a larger portion of the caregiving and household responsibilities at home, as compared to men (Bahn et al., 2020). It is also now clear that Black, Latino/a/x, and Native communities are experiencing disproportionate rates of COVID-19 infection and deaths, as the pandemic has laid bare many of the health care disparities and inequities in the United States (Millet et al., 2020). Boyraz & Legros (2020) reported that risk factors for developing PTSD and chronic psychological distress related to COVID-19, such as level of exposure, loss of a loved one, hospitalization, isolation and quarantine, and social inequalities are all likely to influence individuals' long-term outcomes and disproportionately affect Latino/a/x, African American, and low-income populations.

Distress in Context

Although experts agree that the COVID-19 pandemic is currently and will likely continue to cause distress for many individuals, there is also a recognition among scholars

that this distress must be viewed in context and not over-pathologized (Bertuccio & Runion, 2020; Chen & Bonanno, 2020; Griffin, 2020; Miller, 2020). Asmundson and Taylor (2020), for instance, frame their discussion of COVID-19 consequences through the lens of health anxiety, which they note can be protective in everyday life but become excessive during a pandemic as people are inundated with infectious disease and death toll information. Bertuccio and Runion (2020) highlight the need to distinguish grief, a normal and common human response to a loss, from traumatic grief or other more severe reactions. Some amount of distress can be expected as people grabble with new realities, uncertainties, and upheavals. Such distress could be considered a natural response to abnormal circumstances (Griffin, 2020).

Relatedly, exposure to traumatic stimuli or experiences does not inevitably mean that an individual will become traumatized, and many individuals will respond to the COVID-19 pandemic with resilience (Chen & Bonanno, 2020; PeConga et al., 2020). Silver-lining consequences for survivors of past outbreaks have included post-traumatic growth, self-empowerment, and transcendence of victimhood, which included benefits like being present for others even when afraid, making efforts to educate others about the outbreak, and increases in compassion and empathy for others (Chew et al., 2020).

Overall, the long-term mental health impact of the ongoing COVID-19 pandemic remains unknown, but existing literature suggests that, in the short term, many people are likely to experience some degree of distress and difficulty. In the following sections, we turn to the challenges that are particularly salient to college students and strategies for supporting them during this time.

Mental Health Impact of COVID-19 for College Students

Even prior to arrival of the COVID-19 pandemic, college students reported experiencing anxiety and depression at high rates (Auerbach et al., 2018). Roughly one in five college students have a 12-month DSM-IV/ICID10 disorders, mostly onset before entering college (Auerbach et al., 2018), and three fourths of college students report experiencing at least one potentially traumatic event in their lifetimes (Khrapatina & Berman, 2017). Young adults in a typical college age range are also at elevated risk for serious suicidal ideation and attempts (Auerbach et al., 2018). These realities set the mental health backdrop for the diverse pandemic experiences that college students in the United States have been having and are having now.

The majority of studies published so far that focus on college students' pandemic experiences were conducted in the early stages of the United States outbreak, between approximately January and June of 2020. During this time, many schools around the world transitioned to remote learning and online education with the hope of slowing the spread of COVID-19. Similar to general public concerns, studies of Chinese university students revealed common psychological consequences of the uncontained outbreak to include sleep disturbances, depressive symptoms, anxiety symptoms, and somatic concerns, with distress exacerbated by isolation and buffered by financial security and greater social support (Cao et al., 2020; Tang et al., 2020).

In the United States, a survey student by Son and colleagues (2020) conducted in spring of 2020 and including 195 college students revealed increases in stress and anxiety due to the COVID-19 outbreak. A variety of stressors were found to exacerbate these students' anxieties and depressive thoughts, including disrupted sleep, increased social isolation, worry about their own and their family members' health, among others (Son et al.,

2020). Similarly, a study of 725 college students surveyed in April about their COVID-19 experiences revealed significant disruptions to many domains of students' lives at that time (Cohen et al., 2020). Students in that study reported feeling less stress and worry about their own health than about the health of their loved ones and the well-being of American society, generally.

Taken together, these findings reflect experiences of short-term distress similar to general population samples in the early stage of the pandemic. As we enter a new academic year, however, with the viral outbreak ongoing in the United States, new challenges arise that are unique to or particularly salient for college students.

Pandemic Concerns for College Students

Currently, there is no consensus among colleges and universities in the United States on pandemic procedures for the 2020-2021 academic school year. At time of writing, some institutions have implemented plans to have students return to campus for face-to-face instruction and campus-life activities, while others have followed procedures for a fully remote term, with classes taking place online with only a small number of students, often with special circumstances, permitted to live in dorms. Still others employed "hybrid" models that include some blend of in-person and remote instruction and campus activities. It is unclear at this point which plans will ultimately prove to be most effective for the health and well-being of students. At this point, the only guarantee for students, and university staff and faculty, is continued uncertainty and unpredictability (Rettie & Daniels, 2020).

Students returning to campus for in-person or hybrid instruction face a variety of potential stresses. Some students fear contracting or spreading COVID-19 by living in densely populated student housing. Others feel uncertainty regarding social norms of

pandemic college behavior, neither wanting to feel left out of social gatherings nor comfortable attending, and discomfort negotiating safety boundaries with roommates and friends (Bruner, 2020). For some, being on campus may activate an acute sense of loss as students experience the stark discrepancy between what life at college should be in their minds and what they are experiencing in reality.

Students not returning to campus and attending classes remotely face their own set of difficulties. Some desperately long for the opportunities for independence, exploration, and peer socialization that campus life often affords. Many report discontent with online learning or are finding keeping up with classwork difficult without the benefits of in-person instruction (Besser et al., 2020). In some cases, students may find themselves stuck in households they had hoped to escape. While many universities have allowed students in need to return to campus, some still remain at home in abusive, hungry, or insecure households (Caplan-Briker et al., 2020).

The dearth of opportunities to make and spend time with friends may be especially difficult for college students who are young adults because people in this age range often crave peer socialization and may be especially vulnerable to feeling lonely and isolated whether living on campus or attending remotely (Davey, 2016; Orben et al., 2020). First year students are mourning the college friendships they have yet to make (Fazio, 2020) while seniors grieve their final year on campus. Many athletic events, cultural groups, music clubs, and other organizations and activities that provide students opportunities for identity development and a sense of belonging have shifted online or are not being offered at all this year (Fazio, 2020). Some students, especially international students, are facing indefinite time away from loved ones (Cahapay, 2020).

Compounded with these acute losses are academic and financial stressors. Students are concerned about keeping up with their classwork and managing their studies in the midst of a viral outbreak (Cohen et al., 2020; Murphy et al., 2020). Online and zoom classes can be particularly difficult for students without the resources for high-speed internet or private spaces to work from home (Levin, 2020). Some students, disproportionately students of color and first-generation students, have reported delaying their graduations, switching majors, or otherwise changing their academic plans as a result of the pandemic (Cohen et al., 2020). Loss of campus jobs, internship opportunities, and post-graduation job prospects add to employment and financial uncertainty for students and their families. Survey data collected in April 2020 showed that approximately a quarter of students had their living arrangement directly impacted by the COVID-19 outbreak and over one half had their employment status directly impacted by the pandemic. Both of these groups were also more likely to be experiencing food insecurity (Owens et al., 2020).

Overlaying these unique college concerns on the experiences of loss, uncertainty, and distress that COVID-19 has wrought on the United States population as a whole, it is easy to feel concerned for the mental health and well-being of college students. The challenge psychologists, college counselors, and others who seek to buffer the potential deleterious effects of the pandemic now face is how to best support students as they confront the uncertainties of this year.

Supporting College Students' Pandemic Coping

Although research into how people are managing the COVID-19 crisis is limited, many researchers, clinicians, and other experts have offered recommendations for how people can best cope with the pandemic; that is, preserve their well-being, mitigate distress,

and respond with resilience. What follows is a brief review of the recommendations for which there is substantial support in the pandemic coping literature thus far as relevant for college populations.

Social Support

The most frequent and consensus recommendation made by experts for coping with the COVID-19 pandemic is to recruit and maintain social connections (Chen & Bonanno, 2020; Chew et al., 2020; Fiorillo & Gorwood, 2020; Fullana et al., 2020; Grubic et al. 2020; Kar et al., 2020; Polizzi et al., 2020; Van Bavel et al., 2020; Xiao et al., 2020). As social isolation and loneliness increase for many people during the pandemic, so does the risk of poor mental and physical health outcomes (Leigh-Hunt et al., 2017). Strengthening social and interpersonal resources, on the other hand, can buffer against stress and promote resilience and post-traumatic growth (Chen & Ponano, 2020; Saltzman et al., 2017). One study with adults in central China in their third day of a fourteen-day pandemic self-isolation found that increases in social support reduced anxiety and stress levels for these individuals, which in turn improved their quality of sleep (Xiao et al., 2020). However, it is not only receiving support that is beneficial. Providing social support can help individuals experience a sense of control and belonging in the midst of intense stress (Fredrickson et al., 2003; Polizzi et al., 2020).

College students, for whom loneliness and social isolation are an epidemic even in non-pandemic times (e.g., Davey, 2016), will likely benefit from any opportunity to cultivate a sense of connection and belonging. Szkody and colleagues (2020) conducted a survey study of 405 college students and found that perceived social support buffered the connection between COVID-19 stress and psychological health. Another study of college student

athletes indicated that social support and perceived connectedness with teammates helped students preserve their mental health, well-being, and sense of athletic identity (Graupensperger et al., 2020).

Numerous authors also discuss the potential for technology to play a crucial connecting role at this time (Chen & Bonanno, 2020; Saltzman et al., 2020; Yamaguchi et al., 2020). Van Bavel and colleagues (2020) discuss how loneliness can be ameliorated by receiving and giving support online, particularly when the online interactions are rich, dyadic, and temporally synchronous (Van Bavel et al., 2020). Students could be provided guidance as to what types of communication are likely to provide satisfaction (e.g., video chat, phone calls) and which ones may not (e.g., social media usage, asynchronous texting).

Clinicians should also be prepared for the ways in which these forms of connection are not a perfect panacea, as students may still long for in-person peer connectedness. At the same time, helping students find and maintain any sources of social connection and healthy relationships with close others is crucial for preserving their psychological wellness during this difficult phase. As PeConga and colleagues (2020) express, this pandemic is an opportunity for us to pull together and to reach out to the most vulnerable in our communities.

Identity Affirming Support

As mentioned already, the COVID-19 pandemic has laid bare many of the social disparities and health inequities in the United States, the impacts of which extend to college populations. Liu and Modir (2020) rightly title their discussion of racial trauma as "the outbreak that was always present." They and other scholars report that the COVID-19 crisis is disproportionately impacting communities of color across the nation and contributing to an

increased risk of developing more chronic and severe psychological distress for these individuals (Fortuna et al., 2020; Liu & Modir, 2020; Novacek et al., 2020; Singh & Koran, 2020; Sneed & Bailey, 2020). Due to higher rates of infection and mortality in their communities, Black, Indigenous, and Latino/a/x students may be dealing with escalated levels of fear and grief (Liu & Modir, 2020). Asian Americans students may also be dealing with distress related to increased discrimination and stigma due to the pandemic originating in China (Tavernise & Oppel, 2020).

When supporting students of color, it is recommended that clinicians take a trauma-informed social justice approach (Fortuna et al., 2020), practice from a space of cultural humility (Liu & Modir, 2020), and draw upon the strengths, sources of resilience, and healing practices of the individuals and their cultures (Novacek et al., 2020; Thompkins Jr. et al., 2020). Furthermore, as development of a positive cultural identity is crucial for protecting against racial trauma (Liu & Modir, 2020), clinicians and psychologists should advocate for greater access to student cultural organizations (Museus et al., 2017), even if offered in an online format, and help connect students with these groups in order to help enhance social support and increase a sense of belonging.

Identity-affirming spaces and student groups are also particularly important for LGBTQ students, especially at institutions where students are not returning to campus. Salerno and colleagues (2020) highlight that universities are a common gateway to mental health services for LGBTQ individuals, many of whom rely on their college mental health services for support with identity development, coming out, and dealing with family rejection. Not being able to live on campus leaves many students stuck at home with unsupportive parents, with whom they do not feel free to be their authentic selves (Fish et al.,

2020; Salerno et al., 2020). Affirming communities are crucial for LGBTQ students to buffer against the minority stress and social isolation they experience. Clinicians could consider connecting students with LGBTQ-affirming virtual communities both within the school environment and externally to maintain social support and community connectedness (Fish et al., 2020; Salerno et al., 2020). College and university administrators should also understand that LGBTQ campus resources centers provide essential services to students (Gilert et al., 2020) and must be provided with the funding and support they need to meet the needs of their students throughout the pandemic.

Although the available literature primarily discusses supporting students of color, LGBT students, and LGBT students of color, there are many other identities that are important to students (e.g. religiosity, disability status, etc.) and for which there is likely benefit by increasing access to affirming and supporting relationships. It is also important to remember that students may be existing at the intersection of multiple oppressive forces (Crenshaw, 1990). We must be mindful to honor the whole student, including all the richness and complexity of their identities.

Healthy Routines

Pandemic coping researchers have frequently highlighted the importance of building healthy routines for daily living, including preserving daily structure, getting sufficient sleep, engaging in physical exercise, spending time outdoors, and limiting exposure to COVID-19 media information (Chen & Bonanno, 2020; Diamond & Waite, 2020; Fullana et al., 2020; Kar et al., 2020). In a largescale study of adults in Spain during the height of the pandemic there, these lifestyle features were associated with lower levels of depressive symptoms (Fullana et al., 2020). Students may benefit from help with building structure and routine

around online learning and setting boundaries between work and relaxation times. They also may experience the common pandemic effects of disturbed sleep (Chew et al., 2020) and increased sedentary lifestyles (Huckins et al., 2020) and benefit from information on sleep hygiene and exercise motivation. Diamond and Waite (2020) specifically recommend integrating physical activity as a treatable target in therapy for improving symptoms across a broad range of diagnoses. Finally, students, especially students with high COVID-19 anxiety, may need assistance in setting limits on the consumption of pandemic media while still remaining informed (Chen & Bonanno, 2020; Kar et al., 2020).

Flexible Mindsets and Positive Coping

A significant portion of pandemic coping literature emphasizes the benefits of building mindfulness, optimism, self-compassion, and relaxation skills (Chew et al., 2020; Fullana et al., 2020; Kar et al., 2020; Polizzi et al., 2020; Van Bavel et al., 2020). Chen and Bonanno (2020), for instance, found that optimistic mindsets are associated with greater resilience (Chen & Bonanno, 2020), while Bertuccio and Runion (2020) recommend meaning making and dialectical thinking as potentially beneficial for individuals who are grieving. Acceptance and mindfulness-based coping strategies have been suggested helping individuals adopt strategies to manage a range of painful emotional and physiological states that arise during this difficult time (Polizzi et al., 2020).

Indeed, many scholars discuss the importance of cultivating positive emotional experiences, engaging in positive reappraisals, and finding situational meaning during the pandemic (Chen & Bonanno, 2020; Fiorillo & Gorwood, 2020; PeConga et al., 2020; Polizzi et al., 2020). Painful and positive emotions co-exist during even highly stressful periods of life, as reported in a recent qualitative study with nurses on the front-line of the COVID-19

pandemic (Sun et al. 2020), and the presence of moments of positive emotions during difficult times tends to be associated with improved mental health and positive long-term outcomes (Folkman & Moskowitz, 2000; Yamaguchi et al., 2020). Research has shown that individuals who seek out pleasurable activities and savor good feelings, engage in problem-focused coping, and foster appreciation of ordinary events tend to fair better psychologically during periods of chronic and severe stress (Folkman & Moskowitz, 2000; Yamaguchi and colleagues; 2020). Interventions that help individuals cultivate and engage with their positive emotions can also help mitigate depressive symptoms in these times (Layous et al., 2011). Clinicians may consider whether helping students reappraise the crisis situation as an opportunity for experiencing stress-related growth, deepening appreciation for life, and increasing toughness and resilience (Bertuccio & Runion, 2020; Polizzi et al., 2020; Van Bavel et al., 2020; Yamaguchi et al., 2020) would be a good intervention fit.

It is crucial that recommendations for positive coping not be mistaken for suggestions that students should minimize, repress, or deny their suffering. When practicing from a positive psychotherapy framework, for instance, therapy patients and clients need to feel and honor their painful emotions and know they are accepted, validated, and understood (Winter Plumb et al., 2020). The same is true when helping college students invite their full range of emotions and pandemic experiences.

Therapy and Professional Support

Although many students may experience acute distress in response to the COVID-19 pandemic, their distress will not always become chronic or rise to clinical levels, and their reactions should not be over-pathologized (Bertuccio & Runion, 2020; Chen & Bonanno, 2020; Griffin, 2020; Rosen et al., 2020). Not all students will need ongoing therapy as they

navigate their pandemic experiences. However, all students deserve support with their struggles. Rosen and colleagues (2020) encourage organizations to consider a tiered approach where each student can receive the type of support that is best for them. For individuals experiencing more manageable levels of distress, online resource hubs, workshops, or single sessions focusing on psychoeducation, normalization, and positive coping skills, may be appropriate and sufficient support. For other students, especially those experiencing more chronic or severe distress, psychotherapy may be an important part of their pandemic coping process (Rosen et al., 2020).

Once in psychotherapy, students may seek help with a variety of pandemic-related issues, including increasing their capacity for acceptance and tolerating uncertainty (Rettie & Daniels, 2020), managing their grief (Bertuccio & Runion, 2020), dealing with paranoia and psychosis (Lopes & Jaspal, 2020), managing trauma reactions (Bertuccio & Runion, 2020; Horesh and Brown, 2020) or other difficulties. Inchausti and colleagues (2020) state that therapists will need to balance addressing the acute distress arising from the COVID-19 pandemic reactions with the ongoing therapeutic work for patients and addressing their lifelong vulnerabilities. They stress the importance of validation and self-disclosure as therapists help clients balance accepting current realities and changing unhelpful patterns and coping strategies (Inchausti et al., 2020).

Clinicians and scholars have put forward a wealth of recommendations and resources for psychotherapy in this time, including using a brief transdiagnostic pandemic mental health maintenance intervention (Arnold et al., 2020), working with patients through the lens of Accelerated Experiential Dynamic Psychotherapy (McBride et al., 2020), addressing adjustment disorders (Kazlauskas & Quero, 2020), and using art therapy (Potash et al., 2020).

The key takeaway from many scholars, however, is the crucial role of flexibility at this time (Chen & Bonanno, 2020; Inchausti et al., 2020; Rosen et al., 2020). Chen and Bonnano (2020) define flexibility as paying attention to changing context and continuously evaluating the efficacy of coping plans and updating as needed. This flexibility is needed both on the part of the client in noticing what strategies work well for them and on the part of the clinician in shifting treatment to meet the client's shifting needs.

Tele-Mental Health Services. Since the start of the pandemic, there has been a rapid shift to providing tele-mental health services (also called telehealth, telepsychology, and telepsychotherapy, etc.), including in university counseling centers (Inchausti et al., 2020; Jobes et al., 2020; Pierce et al., 2020). Some scholars believe this may be a turning point for many therapists to provide services through tele-mental health routinely even after the pandemic ends (Jobes et al., 2020; Pierce et al., 2020). In a study of shifting tele-mental-health practices, more than two thirds of clinicians reported conducting all of their psychotherapy via tele-mental health and the clinicians surveyed predicted they will continue to do approximately one third of their clinical work via telepsychology after the pandemic has passed (Pierce et al., 2020).

The main benefit of tele-mental health is the ease of access for many patients (Inchausti et al., 2020; Rosen et al., 2020). However, implementation needs to be executed carefully to ensure that it does not exacerbate existing disparities in access to mental health services or threaten client privacy (Kannarka et al., 2020; Summer-Gabr, 2020). University counseling centers may consider expanding their referral processes and supports, as out-of-state or out-of-country students will require services in their home locations. Hames and colleagues (2020) provide a review of some of the ethical, legal, and practical considerations

for clinics making the switch to telepsychology services. In general, researchers have suggested that tele-mental health can be as effective as in-person therapy, appropriate even for risk management and suicidality, and considered a good fit for use with college students (Cheng et al., 2020; Inchausti et al., 2020; Jobes et al., 2020; Polietti et al., 2020; Watts et al., 2020). Clinicians should feel confident that, with proper training, tele-mental health services can be used to provide effective support throughout the COVID-19 pandemic to college students in need.

Instrumental Support

Compared to the recommendations presented thus far, relatively few papers have discussed the benefits of providing instrumental support to students. However, COVID-19 has taken a toll on students in many domains of their lives, including directly impacting student employment and housing circumstances and indirectly impacting their level of food security (Owens et al., 2020).

According to Maslow's hierarchy of needs (1943), an individual's physiological needs must be met first, followed by safety and security needs, before that individual can focus on higher-order concerns of love and belonging, self-esteem, and self-actualization, which includes academic performance. Silva and colleagues (2017), for instance, in their study of students in an urban university reported that high rates of housing instability negatively affected class attendance and school performance. Thus, one the best ways to support students through the pandemic may be connecting them to campus and community resources that help them meet their basic human needs.

Some university and colleges staff have already recognized their stake in supporting students experiencing food and housing insecurity and they have worked to make

instrumental support resources, such as housing offices, financial aid departments, and food pantries available (Broton & Goldrick-Rab, 2016; Gupton et al., 2020; Twill et al., 2016). Students for whom cost is a barrier to meeting their physiological needs or their fundamental safety and security needs should be provided financial support to allow them to focus on higher-order needs that their more affluent peers are able to prioritize without worry. Active collaboration between campus counseling centers and partner student services offices such as multicultural student centers, international student services, disability and accessibility offices, and others, may be particularly crucial at this time.

Unique to the COVID-19 situation and related to Maslow's second-level need for safety and security (Maslow, 1943), universities should also ensure that they have clear pandemic policies and procedures and enough personal protective equipment for employees and students, as perceived insufficiency of protective measures may relate to worsened mental health during the pandemic (Gold, 2020).

Although detailed recommendations for instrumental support and COVID-19 safety measures is beyond the scope of this paper, university leadership must consider basic physiological and safety needs of their students when designing and implementing policies for the academic year. Furthermore, clinicians and other individuals invested in supporting students should be aware of the resources available through their university connect students directly to those supports so that they can move their focus from their survival to their studies.

Conclusion

Undergraduate college students are a heterogeneous group of individuals who will have a diverse set of pandemic experiences. College students' pandemic coping will be

similarly varied; many will respond with resilience and some will enter a season of significant struggle. This paper includes a review of the current available literature on the anticipated and observed mental health consequences of the COVID-19 pandemic in the United States, with an emphasis on the psychological consequences for college students. Further, it includes a discussion of current recommendations for cultivating and maintaining social support, locating identity affirming spaces, building healthy routines, cultivating flexible mindsets and engaging in positive coping, using psychotherapy, and accessing instrumental support. As the COVID-19 pandemic continues to be a dangerous and disruptive force in the United States, the information collected here will likely be useful for clinicians, researchers, and any other persons dedicated to helping college students navigate the uncertainties of this academic year and beyond.

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CONCLUDING REMARKS

In early November of 2020 the first results were announced from a set of studies finding newly developed COVID-19 vaccines to be safe and effective (Grady, 2020). Rays of hope broke through the dark clouds that had settled on our collective consciousness, as we were able for envision for the first time an end to the pandemic. We have a great deal of storm left to weather until that day of relief. With numbers of cases and deaths surging, public health officials have made clear that there are grim days ahead. It is hard to know how we will look back on these days when the end finally does arrive. Surely, it will be different for every one of us. What is all but certain, however, is that researchers will continue striving to understand the impact of the pandemic on our psychology. This dissertation is my contribution to that effort and to our collective memory.

In Part I, the study of initial-stage pandemic coping revealed how individuals were experiencing and adapting to the widespread disruption characteristic of the first months of the COVID-19 outbreak in the United States. Nearly every participant in the sample reported being affected by policies related to the pandemic at that time, nearly half indicated being negatively financially impacted by the pandemic, and more than half endorsed experiencing negative psychological health impacts of the pandemic. By the end of the study period on April 15 of 2020, more than a third of participants were reporting moderate or higher levels of depressive symptoms, anxiety symptoms, and stress symptoms – even as ratings of the more global variable of overall life satisfaction remained, on average, moderately high. Three types of coping strategies were studied, with results suggesting that use of Socially Supported Coping strategies, such as emotional support seeking and instrumental support seeking, might help stave of the loneliness endemic to the pandemic, while avoiding Avoidant Coping

strategies, such as behavioral disengagement and self-blame, may be crucial for mitigating psychological distress.

Part II discussed the pandemic experiences of college students in the United States as they navigate to the best of their abilities an academic experience for which no one was prepared. Since the start of the pandemic, our college students have confronted many of the same challenges that most people in the U.S. have faced, such as unrelenting uncertainty and inescapable losses, in addition to navigating difficulties unique to being in college at this time. This review discusses how individuals and institutions looking to support college students through the end of the pandemic and beyond should take care not to over-pathologize distress that is an understandable reaction to the situation of the outbreak or overlook the resilience that many are likely to exhibit, nor to minimize the real struggles that some are certain to confront. College students are a diverse group of individuals and their pandemic will be varied, influenced by a variety of factors from social inequities to dispositional differences. Whenever possible, students must be offered support and resources that are similarly diverse to best support their coping, from helping students find opportunities to cultivate social connection and a sense of belonging to providing students with instrumental support to help meet their basic physiological and psychological needs.

Collectively, the parts of this dissertation comprise different methods of scholarship for a common aim; to better understand how people have experienced and coped with the pandemic to this point. The implications are expansive and may be valuable for a variety of potential readers; including researchers with interest in processes of coping, stress, or resilience; clinicians helping others navigate the psychological consequences of this crisis;

and any other human attentive to the historical significance or practical worth of knowing more about how people experienced the COVID-19 pandemic.

Much of the research cited throughout this project discussed what has been learned from past pandemics and outbreaks so that those lessons might be applied to the current crisis. It is my sincere hope that the world does not face another virus that makes this paper directly applicable to a repeat of this year in the future. Inevitably, though, there will come a day when we will again face disruptive forces and collective crises, troubled waters and stormy skies. In those times, it may help to recognize what we have lived through together before and to know that we tried to learn from it all we could.

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