



Frequency and perceived effectiveness of mental health providers' coping strategies during COVID-19

Shannon E. Reilly¹ · Zachary A. Soulliard² · William T. McCuddy³ · James J. Mahoney III⁴

Accepted: 26 March 2021 / Published online: 13 April 2021

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2021

Abstract

There has been an emphasis on understanding the detrimental effects of coronavirus disease (COVID-19) on individuals' wellbeing. Healthcare workers, including mental health providers, may experience increased emotional and behavioral health concerns to a greater degree than the general public. The objective of the present study was to examine the frequency and the perceived effectiveness of various coping strategies implemented by mental health practitioners during the COVID-19 pandemic, as well as differences across career stages (i.e., trainees versus licensed practitioners [LPs]). Survey data were collected from mental health practitioners ($N = 888$) assessing the strategies they used to manage COVID-19-associated anxiety/distress and the perceived effectiveness of these strategies. Bonferroni-adjusted chi-square tests and t -tests were conducted to assess differences by career stage. Overall, respondents used various coping strategies, most commonly behavioral strategies such as distraction/engaging in an enjoyable activity (88.63%), spending time with loved ones (77.82%), and exercise (72.64%). Over one-quarter reported using alcohol to cope (28.27%). Respondents generally perceived their coping strategies as *somewhat to very effective*; no strategies were generally perceived as ineffective. Compared to LPs, trainees were significantly more likely to manage COVID-19-related anxiety/distress using supervision ($p < .001$) and substances other than alcohol or tobacco ($p < .001$). There were no significant differences in how effective trainees and LPs perceived each strategy. U.S. mental health practitioners' use of predominantly behavioral coping strategies, which were generally perceived as effective, during the first months of COVID-19 offers implications for interventions as the pandemic progresses.

Keywords COVID-19 · Coping strategies · Mental health · Survey

For over 8 months, the coronavirus disease (COVID-19) has threatened the health of individuals worldwide. As of March 7, 2021, more than 28.7 million cases and over 515,000 deaths in the United States were reported as a result of the COVID-19 pandemic (COVID Tracking Project,

2021). Along with physical health concerns, there has been an emphasis on understanding COVID-19's detrimental effects on individuals' mental health (Li et al., 2020; Xiang et al., 2020). Evidence from recent U.S. surveys and reviews indicates that since the beginning of the COVID-19 pandemic, there has been a significant increase in mental health concerns such as depression, stress, anxiety, and suicidality; sleep and appetite disturbance; and substance use (Czeisler et al., 2020; Daly et al., 2020; Kaiser Family Foundation, 2020; Sher, 2020; Son et al., 2020). Of note, there are individual differences in susceptibility to mental health issues, including affective (e.g., dysregulated temperament; Serafini et al., 2012) and physiological (e.g., sensory processing difficulties; Serafini et al., 2017) risk factors, as well as protective factors such as perceived social support, self-efficacy, and dispositional mindfulness (Sun et al., 2021).

Encouragingly, mental health practitioners throughout the United States have responded to this increased need for mental health services. A recent survey found that the majority of mental health providers across different professions and

✉ Shannon E. Reilly
shannon.reilly596@gmail.com

¹ Department of Neurology, University of Virginia Health, Charlottesville, VA 22911, USA

² Department of Social and Behavioral Sciences, Yale School of Public Health, 60 College Street, New Haven, CT 06520, USA

³ Rockefeller Neuroscience Institute, Department of Behavioral Medicine and Psychiatry, West Virginia University School of Medicine, Morgantown, WV 26505, USA

⁴ Rockefeller Neuroscience Institute, Department of Behavioral Medicine and Psychiatry, Department of Neuroscience, West Virginia University School of Medicine, Morgantown, WV 26505, USA

settings have made adjustments to their practice, particularly related to increased use of tele-mental health treatment, in response to the high demand for such services during the COVID-19 pandemic (Reilly et al., 2020). Similarly, psychiatric clinicians have made unprecedented adjustments and created protocols in their medical practice to adapt during this public health crisis (Bojdani et al., 2020).

Amidst increased mental health concerns during this global pandemic, it is understandable that healthcare workers themselves may experience increased emotional and behavioral health concerns (Vanhaecht et al., 2021), to a greater degree even than the general public (Pearman et al., 2020). Indeed, COVID-19 has been associated with increased psychological distress among healthcare workers broadly (Spoorthy et al., 2020), as well as specific subspecialties such as medical surgeons (Balasubramanian et al., 2020). A U.S. survey conducted in April 2020 among medical providers from a large medical center in New York City found that over half endorsed symptoms of an acute stress disorder, approximately half endorsed symptoms of depression, and one-third endorsed symptoms of anxiety related to the COVID-19 pandemic (Shechter et al., 2020). Even more recently, in Wuhan, China, a survey study found that compared to the general public, medical personnel endorsed higher levels of stress attributed to the COVID-19 pandemic (Chen et al., 2020). Furthermore, research indicates that the impact of COVID-19 on mental health symptoms, such as depression and anxiety, depends in part on individual characteristics, such as age, social support, and workplace setting (Spoorthy et al., 2020; Sun et al., 2021). For example, women have reported significantly greater concerns of depression, stress, and burnout compared to men (Chen et al., 2020; Coleman et al., 2020). Lower supervisor support of family roles (and balancing this with work responsibilities) was associated with stress, anxiety, depression, burnout, work exhaustion, and decreased overall wellbeing among a sample of healthcare and other workers (Evanoff et al., 2020).

With the increase in mental health symptoms and acute stress among healthcare workers, there has been a call to understand how this subgroup may be coping during the current global pandemic (Pfefferbaum & North, 2020), including using behavioral and cognitive strategies (Wills, 1997). Of concern, healthcare workers have been found to enact lower levels of coping compared to the general public (Pearman et al., 2020), despite other research findings suggesting that medical staff are interested in addressing their concerns about pandemic-related stress (Chen et al., 2020). Among a diverse sample of medical professionals, 59% endorsed physical exercise as their top coping strategy (Shechter et al., 2020). Although endorsed less frequently, these professionals also reported coping behaviors of talk therapy, yoga, faith-based practices, meditation, and virtual support groups. However, based on this study, it is unclear to what extent these coping

strategies were perceived as effective among the medical professionals (Shechter et al., 2020), which would be useful to guide targeted interventions.

Moreover, although research has captured the impact on mental health and subsequent use of various coping strategies among healthcare workers, a gap in the COVID-19 literature exists regarding to what extent *mental health* providers specifically are engaging in different types of coping behaviors in response to the current COVID-19 pandemic. Given the increase in mental health concerns (Kaiser Family Foundation, 2020) and expectation of increased need for mental health services (Xiang et al., 2020), it is important to understand how mental health practitioners themselves are coping during the pandemic. Increased mental health symptoms and burnout could lead mental health practitioners to leave the field (Acker, 2012; Scanlan & Still, 2019), thereby decreasing the supply of mental health services as the demand is increasing. Assessing mental health practitioners' own coping strategies – as well as their perceived effectiveness of these strategies in managing distress – would help to inform organizational or institutional efforts to support their wellbeing on a personal level (Coleman et al., 2020; Evanoff et al., 2020), thus potentially reducing the mental health supply-and-demand imbalance on a systemic level.

The purpose of the present study was to descriptively examine the frequency with which U.S. mental health practitioners endorsed using various coping strategies, as well as to what extent they perceived these strategies to be effective in managing COVID-19-related anxiety and distress. It was hypothesized that respondents would use a variety of strategies to cope with COVID-19-related anxiety/distress, and that overall respondents would rate the strategies they have employed as effective. Additionally, the study explored to what extent coping strategy use and effectiveness differed for mental health providers at different career stages (i.e., trainees versus licensed practitioners [LPs]). It was hypothesized that LPs would report greater use of therapeutic strategies and their professional networks to mitigate distress compared to trainees.

Method

Participants and Procedure

This study received exempt approval from research ethics review by the Institutional Review Board affiliated with the co-authors' university at the time of survey data collection. Inclusion criteria consisted of adult participants (i.e., 18 years of age or older) who were fluent in reading English and currently working in a behavioral/mental health field. Participants were recruited via a Qualtrics survey link disseminated to relevant professional listservs (e.g., American Psychological

Association, National Academy of Neuropsychology, state psychology boards), departmental listservs, mental health practitioner colleagues, and social media platforms, such as Facebook. The recruitment email included a request for participants to forward the email to colleagues if willing (i.e., snowball sampling). Online Qualtrics survey data were collected from 03/30/2020 to 04/28/2020 as part of a larger study surveying mental health practitioners' response to the COVID-19 pandemic (Reilly et al., 2020). Participants were asked as part of the larger survey about the strategies they were employing to manage COVID-19-associated anxiety/distress and how effective they perceived each chosen strategy to be (1 = *very ineffective* to 5 = *very effective*). Participants could select all applicable strategies (i.e., strategies were not mutually exclusive). Eligible individuals consented to participate by submitting their responses.

Of the 1302 individuals who initiated the survey, the final sample consisted of 888 participants. Data were excluded based on the following criteria: completion of less than 90% of the survey (i.e., did not provide information on variables of interest in this study; $n = 403$); younger than 18 years of age ($n = 1$); and not currently working in the behavioral or mental health field (e.g., gym owner, retired; $n = 4$). Given the extremely small number and the aim to examine practices within the U.S. sociopolitical context, respondents from countries outside of the United States ($n = 6$) were not included in analyses. Table 1 displays demographic characteristics for the analytic sample ($N = 888$).

Data Analysis

Analyses were conducted in SPSS Version 26 (IBM Corp) and Stata Version 14.2 (StataCorp). The first and senior authors determined the list of coping strategies based on previous coping strategies research in various populations (e.g., Carver et al., 1989; Corbin et al., 2013; Ito & Brotheridge, 2003; Sharon-David & Tenenbaum, 2017). These coping strategies were presented to co-authors for review, as well as to other mental health professionals (e.g., clinical psychologists, social workers, psychiatrists) in the senior author's department who were not part of this research study. Feedback and suggestions were compiled and incorporated, thus yielding a total of 14 coping strategies. In order to capture additional coping strategies, the authors provided an open-ended response option for participants to identify coping strategies not listed. Three additional strategies (therapeutic strategies, religion/faith/spirituality, and education/information) were added post-hoc because several participants wrote in responses fitting these categories when they specified an "other" strategy (e.g., "cognitive reframing to take a more mindful, positive approach to things beyond our control"; "prayer"; and "education about COVID-19, keeping up with the news," respectively). "Other" strategies were recoded as one of the 17

strategies when appropriate based on consensus coding of two coauthors using qualitative conventional content analysis (Hsieh & Shannon, 2005). The 17 strategies were grouped into four descriptive categories: behavioral (e.g., spending time with loved ones, exercise), cognitive (e.g., rationalizing, therapeutic strategies such as mindfulness), professional (e.g., peer consultation, individual therapy), and substance use (e.g., alcohol, tobacco). Table 2 presents all coping strategies examined in this study.

Descriptive statistics regarding the frequency and perceived effectiveness of coping strategies were recorded for the full sample and by provider level. Trainees (i.e., graduate-level practicum students, pre-doctoral interns, and postdoctoral fellows) were compared to LPs (including those who were also board-certified in a specialty area). Chi-square tests were used to assess frequency of coping strategy use (yes = 1), and t -tests were used to assess differences in perceived effectiveness by career stage. Bonferroni corrections (for comparing 17 strategies, cutoff for statistical significance: $p < .003$) were employed in all analyses to reduce Type I error. Hedge's g (Hedges, 1981) provided measures of practical significance (.20 = small effect size, .50 = medium effect size, .80 = large effect size; Kirk, 2007).

Results

Table 2 displays results of the frequencies and perceived effectiveness of the 17 coping strategies for the full sample. Overall, respondents used a variety of coping strategies to manage distress/anxiety related to COVID-19. Behavioral strategies tended to be the most common, particularly distraction/engaging in an enjoyable activity (88.63%), spending time with loved ones (77.82%), and exercise (72.64%). Respondents reported engaging professionals both for work-related matters (e.g., peer consultation; 56.76%) and, to a lesser extent, personal matters (e.g., individual therapy or counseling; 16.10%). Over one-quarter of the sample reported using alcohol to cope (28.27%). Overall, respondents generally perceived the strategies they employed as *somewhat* to *very effective* in managing their COVID-19-related anxiety/distress; no strategies on average were perceived as ineffective.

Table 3 displays group differences by provider level. Compared to LPs, trainees were significantly more likely to manage COVID-19-related anxiety/distress using supervision, $\chi^2(1, N = 804) = 131.10, p < .001, g = 1.12$, and other substances (i.e., not alcohol or tobacco; other substances not specified by respondents), $\chi^2(1, N = 804) = 10.25, p < .001, g = .29$. There were no statistically significant differences in how effective trainees and LPs perceived each strategy to be.

Table 1 Demographic characteristics of the full sample ($N = 888$)

Characteristic	Participants
Age, mean (SD)	39.39 (11.44)
Gender Identity, n (%)	
Cisgender man	147 (16.57)
Cisgender woman	736 (82.98)
Transgender man	2 (0.23)
Genderqueer/gender non-conforming	2 (0.23)
Race/Ethnicity, n (%)	
American Indian/Alaska Native	1 (0.11)
Asian/Asian American	32 (3.62)
Black/African American	29 (3.28)
Hispanic/Latinx	33 (3.73)
White	763 (86.31)
Multi-racial	24 (2.71)
Different racial identity (i.e., Arab, Jewish, Mestiza)	2 (0.23)
Sexual Orientation, n (%)	
Bisexual	56 (6.33)
Gay	21 (2.38)
Heterosexual	753 (85.18)
Lesbian	23 (2.60)
Queer	18 (2.04)
Different sexual orientation (i.e., asexual, fluid, pansexual, questioning)	13 (1.47)
Region, n (%)	
Midwest	173 (19.57)
Northeast	130 (14.71)
South	416 (47.06)
West	165 (18.67)
Provider Level, n (%)	
Graduate-level practicum student	58 (6.55)
Pre-doctoral intern	36 (4.07)
Postdoctoral fellow	58 (6.55)
Unlicensed practitioner	38 (4.29)
Licensed practitioner	535 (60.45)
Licensed practitioner and board-certified in specialty area	117 (13.22)
N/A ^a (e.g., support staff)	43 (4.86)
Provider Type, n (%)	
Bachelor's level therapist/counselor	10 (1.13)
Social worker/master's level therapist/counselor	149 (16.78)
Psychologist/doctoral level therapist/counselor	359 (40.43)
Neuropsychologist	140 (15.77)
Trainee	152 (17.12)
Psychiatrist	23 (2.59)
Other medical provider ^b	12 (1.35)

Table 1 (continued)

Characteristic	Participants
Support staff ^c	37 (4.17)
Other ^d	6 (0.68)
Setting, n (%)	
Private practice	187 (21.08)
Academic medical center	173 (19.50)
Veterans hospital or military hospital/clinic (VA ^e)	89 (10.03)
Community mental health setting	72 (8.12)
Psychiatric hospital or facility	51 (5.75)
General hospital	46 (5.19)
Rehabilitation hospital or setting	30 (3.38)
University counseling center	23 (2.59)
Department/graduate training clinic	21 (2.37)
Outpatient clinic	15 (1.69)
School	8 (0.90)
Primary care	7 (0.79)
Prison	5 (0.56)
Other setting ^f	15 (1.69)
Multiple practice settings	145 (16.35)

The number of respondents who did not provide information about demographic characteristics were as follows: age ($n = 1$), gender identity ($n = 1$), race/ethnicity ($n = 4$), sexual orientation ($n = 4$), region ($n = 4$), provider level ($n = 3$), setting ($n = 1$)

^a N/A: Not applicable

^b e.g., other physician, psychiatric nurse practitioner/physician assistant

^c e.g., case manager, medical assistant, psychometrist

^d e.g., mental health specialist, peer recovery, research project manager

^e VA: Veterans Affairs

^f e.g., cancer center, employee assistance program, non-profit organization, intensive outpatient/partial hospitalization program

Discussion

The current study surveyed a large sample of U.S. mental health practitioners to assess personal coping strategies for managing COVID-19 related anxiety and distress, as well as the general perceived effectiveness of those strategies. Consistent with hypotheses, results from this study found that mental health practitioners primarily reported using a variety of informal strategies that they perceived as generally effective in managing their distress. Use of alcohol as a coping strategy was also reported by a sizable portion of the sample, particularly among trainees. Respondents generally did not engage in formal individual or group therapy. Somewhat contrary to hypotheses, trainees were more likely to rely on professional resources (e.g., supervision) as a means of coping than LPs.

The most frequently employed coping tactics, which were identified by >70% of the sample, included distraction/

Table 2 Frequencies and perceived effectiveness of coping strategies for the full sample ($N = 888$)

Coping Strategies ^a	Frequency, n (%)	Perceived Effectiveness ^b , mean (SD)
Behavioral		
Distraction/engaging in an enjoyable activity	787 (88.63)	4.29 (0.73)
Spending time with loved ones	691 (77.82)	4.44 (0.79)
Exercise		
Media/social media restrictions	645 (72.64)	4.43 (0.73)
Relaxation/relaxation apps	443 (49.89)	4.03 (0.88)
Religion/faith/spirituality ^c	219 (24.66)	4.03 (0.72)
Education/information ^c	19 (2.14)	4.89 (0.32)
	12 (1.35)	4.08 (0.79)
Cognitive		
Rationalizing	336 (37.84)	3.70 (0.91)
Avoiding feelings	151 (17.00)	3.14 (1.09)
Therapeutic strategies ^c	56 (6.31)	4.59 (0.63)
Professional		
Peer consultation	504 (56.76)	4.17 (0.77)
Supervision	163 (18.36)	3.97 (0.82)
Individual therapy or counseling	143 (16.10)	4.15 (0.78)
Group therapy or counseling	11 (1.24)	4.36 (0.50)
Substance Use		
Alcohol	251 (28.27)	3.24 (0.92)
Tobacco	19 (2.14)	3.31 (0.95)
Other substances	37 (4.17)	3.59 (1.21)
Other strategy	15 (1.69)	4.13 (0.64)

^a Not mutually exclusive (i.e., participants could select all that applied)

^b 5-point Likert-scaled question (1 = *very ineffective* to 5 = *very effective*)

^c This category was added post-hoc based on write-in “other” responses

engaging in enjoyable activities, spending time with loved ones, and engaging in physical exercise. This is consistent with previous work indicating the frequent use of these self-care practices among psychologists (Dorociak et al., 2017; Stevanovic & Rupert, 2004) and a preference for coping through engaging social supports rather than professional help (e.g., psychotherapy; Muller et al., 2020). Results were somewhat distinct from those in a sample of medical providers, who reported using physical exercise as their top strategy, as well as yoga, therapy, virtual support groups, meditation, and faith-based practices (Shechter et al., 2020). It is encouraging that the strategies reported by the vast majority of mental health practitioners in this study have consistently been shown to reduce stress and improve quality of life in similar samples (Posluns & Gall, 2020). More than half of the sample also reported limiting their exposure to traditional and social media

as a way to cope. This may be an effective strategy based on historical findings of associations between adverse mental health consequences and repeated exposure to media after tragic events such as the 9/11 terrorist attacks (Otto et al., 2007) and the 2013 Boston Marathon bombing (Holman et al., 2014), as well as recent data linking increased social media use with increased depression during the COVID-19 pandemic (Holingue et al., 2020; Sun et al., 2021; Zhao & Zhou, 2020). In sum, the fact that the overwhelming majority of respondents reported engaging in adaptive and effective coping strategies is encouraging and suggests both awareness and practice of multiple empirically supported behavioral approaches for managing stress (e.g., Posluns & Gall, 2020).

Approximately one quarter of respondents reported using alcohol as a coping strategy, and they generally perceived this to be effective. Although examination of optional write-in responses suggested that alcohol was used in moderation and often in the context of virtual social gatherings, the high endorsement rate and perceived effectiveness of consuming alcohol as a coping strategy may have significant implications. Mental health practitioners are no less likely than the average person to experience problematic substance use, with some reports actually indicating greater risk (Barnett & Cooper, 2009; Phillips, 2011). While it is not unusual to gravitate toward increased alcohol consumption during stressful times (Sillaber & Henniger, 2004), it is important that mental health practitioners remain mindful of potential negative outcomes associated with using alcohol as a coping strategy. For example, a survey of Chinese healthcare workers during the COVID-19 pandemic indicated that drinking six glasses of beer per week was independently associated with increased psychological problems (Que et al., 2020). Our findings indicated that using alcohol as a coping strategy was qualitatively somewhat more prevalent in trainees (~38%) compared to LPs (~28%). This is consistent with national age-related trends in alcohol consumption (Moore et al., 2005), as well as increased alcohol consumption among U.K. mental health trainees in recent years (Galvin & Smith, 2015). Together, these findings suggest a possible need for greater substance use education and intervention, particularly for mental health trainees and especially in the context of a pandemic.

Approximately half of trainees used supervision to cope during this stressful time, and those who did so found it to be effective. This highlights the important role that clinical supervisors play in the lives of mental health trainees, which for many goes beyond providing education and professional development. In contrast, LPs were understandably more likely to seek support from peers in consultation rather than supervision; similarly, they generally considered this to effectively alleviate anxiety/distress. These findings indicate that in addition to strategies that respondents can enact in their personal lives (e.g., physical exercise, spending time with loved ones), the majority are using their professional networks to cope with mental health effects of the pandemic. Results from

Table 3 Frequencies and perceived effectiveness of coping strategies by provider level

Coping Strategies ^a	Trainee ^b (<i>n</i> =152)	LP ^c (<i>n</i> =652)	<i>P</i> value	Hedge's <i>g</i> ^d
Behavioral				
Distraction/engaging in an enjoyable activity				
Frequency, <i>n</i> (%)	141 (92.76)	574 (88.04)	.09	0.15
Perceived Effectiveness ^e , mean (SD)	4.35 (.62)	4.28 (.75)	.32	0.09
Spending time with loved ones				
Frequency, <i>n</i> (%)	122 (80.26)	512 (78.53)	.64	0.04
Perceived Effectiveness, mean (SD)	4.56 (.53)	4.42 (.84)	.02	0.19
Exercise				
Frequency, <i>n</i> (%)	116 (76.32)	471 (72.24)	.31	0.09
Perceived Effectiveness, mean (SD)	4.43 (.58)	4.43 (.76)	.96	0.01
Media/social media restrictions				
Frequency, <i>n</i> (%)	76 (50.00)	326 (50.00)	1.00	< .01
Perceived Effectiveness, mean (SD)	4.03 (.88)	4.03 (.89)	.99	< .01
Relaxation/relaxation apps				
Frequency, <i>n</i> (%)	33 (21.71)	169 (25.92)	.28	0.10
Perceived Effectiveness, mean (SD)	3.91 (.88)	4.04 (.70)	.42	0.18
Religion/faith/spirituality^f				
Frequency, <i>n</i> (%)	3 (1.97)	13 (1.99)	.99	< .01
Perceived Effectiveness, mean (SD)	4.67 (.58)	5 (0)	.42	1.44
Education/information^f				
Frequency, <i>n</i> (%)	1 (0.66)	10 (1.53)	.40	0.08
Perceived Effectiveness, mean (SD)	4 (0)	4.3 (.48)	–	–
Cognitive				
Rationalizing				
Frequency, <i>n</i> (%)	64 (42.11)	232 (35.58)	.13	0.14
Perceived Effectiveness, mean (SD)	3.52 (.96)	3.76 (.88)	.05	0.27
Avoiding feelings				
Frequency, <i>n</i> (%)	37 (24.34)	95 (14.57)	.003	0.26
Perceived Effectiveness, mean (SD)	2.92 (1.21)	3.21 (1.04)	.17	0.27
Therapeutic strategies ^f				
Frequency, <i>n</i> (%)	8 (5.26)	44 (6.75)	.50	0.06
Perceived Effectiveness, mean (SD)	4.25 (1.04)	4.66 (.53)	.31	0.65
Professional				
Peer consultation				
Frequency, <i>n</i> (%)	91 (59.87)	380 (58.28)	.72	0.03
Perceived Effectiveness, mean (SD)	4.13 (.75)	4.18 (.76)	.61	0.06
Supervision				
Frequency, <i>n</i> (%)	75 (49.34)	66 (10.12)	< .001*	1.12
Perceived Effectiveness, mean (SD)	3.88 (.96)	4.09 (.61)	.11	0.26
Individual therapy or counseling				
Frequency, <i>n</i> (%)	27 (17.76)	106 (16.26)	.65	0.04
Perceived Effectiveness, mean (SD)	4.30 (.61)	4.13 (.81)	.32	0.21
Group therapy or counseling				
Frequency, <i>n</i> (%)	4 (2.63)	5 (0.77)	.05	0.18
Perceived Effectiveness, mean (SD)	4.25 (.50)	4.4 (.55)	.68	0.25

Table 3 (continued)

Coping Strategies ^a	Trainee ^b (<i>n</i> = 152)	LP ^c (<i>n</i> = 652)	<i>P</i> value	Hedge's <i>g</i> ^d
Substance use				
Alcohol				
Frequency, <i>n</i> (%)	58 (38.16)	180 (27.61)	.01	0.23
Perceived Effectiveness, mean (SD)	3.17 (.96)	3.26 (.92)	.53	0.10
Tobacco				
Frequency, <i>n</i> (%)	3 (1.97)	11 (1.69)	0.81	0.02
Perceived Effectiveness, mean (SD)	3 (1)	3.36 (1.03)	.60	0.33
Other substances				
Frequency, <i>n</i> (%)	13 (8.55)	19 (2.91)	<.001*	0.29
Perceived Effectiveness, mean (SD)	3.23 (1.24)	3.84 (1.21)	.18	0.49
Other strategy				
Frequency, <i>n</i> (%)	1 (0.66)	12 (1.84)	0.30	0.09
Perceived Effectiveness, mean (SD)	4 (0)	4.08 (.67)	–	–

*Statistically significant based on Bonferroni-adjusted *p* value (cutoff < .003)

^aNot mutually exclusive (i.e., participants could select all that applied)

^bTrainee includes graduate-level practicum students, pre-doctoral interns, and postdoctoral fellows

^cLP: Licensed practitioner

^dMeasure of practical significance with the following magnitudes: .20 = small effect size, .50 = medium effect size, .80 = large effect size

^e5-point Likert-scaled question (1 = very ineffective to 5 = very effective)

^fThis category was added post-hoc based on write-in “other” responses

the present study are not dissimilar from research conducted prior to the COVID-19 pandemic, which found that psychologists at various stages of their career seek interpersonal support (Sim et al., 2016). This underscores the importance of checking in on colleagues and trainees during this time.

Mental health practitioners are not immune to psychological distress or dysfunction and at the same time have an ethical imperative to maintain their wellbeing. Thus, during the stressful and uncertain times produced by the global COVID-19 pandemic, the notions of self-care and effective coping strategies for mental health practitioners are particularly salient. Overall, findings from this study have important implications about how institutions and organizations may support the wellbeing of mental health practitioners during and after the COVID-19 pandemic, with the goal of reducing mental health symptoms and burnout. This could subsequently maintain or improve patient care and reduce turnover. In this sample, strong preferences for informal strategies (e.g., exercise, spending time with loved ones) suggest that institutions may benefit from building opportunities for these strategies into the workday. This may be accomplished through provision of peer support groups (Acker, 2012), informal social support opportunities (Labrague & de los Santos, 2020; Muller et al., 2020), and/or interventions that involve exercise, in addition to formal psychological interventions that may be provided by an institution (e.g., counseling through Faculty and Employee Assistance Programs). Indeed, in a sample of mental health practitioners,

both yoga-based and cognitive-behaviorally based, time-limited (i.e., eight weeks) stress management programs have been shown to be effective in improving mental health (e.g., decreased depression, stress, and burnout) and decreasing alcohol consumption (Riley et al., 2017), both of which may be particularly beneficial given results of this study.

Despite these informative findings, limitations should be noted. Although a relatively large number of mental health practitioners participated in the online survey, the sample was comprised of primarily White, cisgender women and to a lesser extent men, thus limiting generalizability of findings. The results were based on self-report, which may have increased self-assessment bias (Walfish et al., 2012). Readers should also be mindful that data were collected cross-sectionally during the early months of the COVID-19 pandemic in the United States (i.e., March to April 2020); as such, results cannot inform how individuals' coping strategies or their perceived effectiveness might have changed over time. Limitations specifically related to the coping strategies questions should also be noted, including that the questions had not previously been psychometrically validated, no option for “no coping strategy used” was provided, and respondents who selected “other substance use” were not prompted to specify the other substance(s) used to cope.

Additional studies are needed to explore the longitudinal trajectories of coping strategies among mental health practitioners as the COVID-19 pandemic continues to progress and

steps toward large-scale rollout of a publicly accessible vaccine continue to be pursued. Future work should also focus on coping strategies among marginalized groups (e.g., sexual minorities of color), who are at increased risk of adverse stress-related health effects (Ramirez & Galupo, 2019). Finally, given the prevalence of alcohol use as a coping strategy during this pandemic, detailed examination of its frequency and implications, particularly in trainees, may be beneficial going forward.

In conclusion, a vast majority of mental health practitioners – trainees and LPs alike – reported using predominantly behavioral coping strategies, which they perceived to be effective, during the first months of the COVID-19 pandemic. During and after the pandemic, it will be important for mental health providers to continue to practice effective coping strategies and other forms of self-care in order to provide optimal services to their clients, as well as to reduce burnout. Results of the present study could inform targeted steps institutions and employers could take to help mental health practitioners during this stressful time in ways that align with their coping preferences. Some ideas include promoting opportunities for informal social support and supervisory support, providing exercise-based interventions, and offering substance use education, particularly to trainees.

Data Availability The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of Interest The co-authors state that there are no conflicts of interest.

Ethical Approval The Institutional Review Board of the coauthors' university (specific institution removed for the blind review process) granted this study exempt approval from research ethics review. Specifically, the approval was as follows: "This research study was granted an exemption because the Research involves educational tests, survey procedures, interview procedures or observation of public behavior and (i) information obtained is recorded in such a manner that human subjects cannot be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects responses outside the research could not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects financial standing, employability, or reputation [45 CFR 46.101(2)]."

Informed Consent Informed consent to participate and informed consent for the authors to report findings based on aggregated, de-identified data were obtained from all individual participants included in the study by virtue of their submission of survey data.

References

- Acker, G. M. (2012). Burnout among mental health care providers. *Journal of Social Work, 12*(5), 475–490. <https://doi.org/10.1177/1468017310392418>.
- Balasubramanian, A., Paleri, V., Bennett, R., & Paleri, V. (2020). Impact of COVID-19 on the mental health of surgeons and coping strategies. *Head & Neck, 42*, 1638–1644. <https://doi.org/10.1002/hed.26291>.
- Barnett, J. E., & Cooper, N. (2009). Creating a culture of self-care. *Clinical Psychology: Science and Practice, 16*(1), 16–20. <https://doi.org/10.1111/j.1468-2850.2009.01138.x>.
- Bojdani, E., Rajagopalan, A., Chen, A., Gearin, P., Olcott, W., Shankar, V., ... DeLisi, L. E. (2020). COVID-19 pandemic: Impact on psychiatric care in the United States. *Psychiatry Times, 289*, 113069. <https://doi.org/10.1016/j.psychres.2020.113069>.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267–283. <https://doi.org/10.1037//0022-3514.56.2.267>.
- Chen, B., Li, Q. X., Zhang, H., Zhu, J. Y., Yang, X., Wu, Y. H., Xiong, J., Li, F., Wang, H., & Chen, Z. T. (2020). The psychological impact of COVID-19 outbreak on medical staff and the general public. *Current Psychology, 1–9*. Advance online publication. <https://doi.org/10.1007/s12144-020-01109-0>.
- Coleman, J. R., Abdelsattar, J. M., Glocker, R. J., Vigneshwar, N. G., Ryan, R., Qiu, Q., et al. (2020). COVID-19 pandemic and the lived experience of surgical residents, fellows, and early-career surgeons in the American College of Surgeons. *Journal of the American College of Surgeons, 232*, 119–135.e20. <https://doi.org/10.1016/j.jamcollsurg.2020.09.026>.
- Corbin, W. R., Farmer, N. M., & Nolen-Hoekesma, S. (2013). Relations among stress, coping strategies, coping motives, alcohol consumption and related problems: A mediated moderation model. *Addictive Behaviors, 38*(4), 1912–1919. <https://doi.org/10.1016/j.addbeh.2012.12.005>.
- COVID Tracking Project. (2021). *Our data: U.S. historical data*. Retrieved January 3, 2021, from <https://covidtracking.com/data/national>
- Czeisler, M. É., Lane, R. I., Petrosky, E., Wiley, J. F., Christensen, A., Njai, R., ... & Czeisler, C. A. (2020). Mental health, substance use, and suicidal ideation during the COVID-19 pandemic—United States, June 24–30, 2020. *Morbidity and Mortality Weekly Report, 69*(32), 1049. <https://doi.org/10.15585/mmwr.mm6932a1>
- Daly, M., Sutin, A., & Robinson, E. (2020). Depression reported by US adults in 2017–2018 and March and April 2020. *Journal of Affective Disorders, 278*, 131–135. <https://doi.org/10.1016/j.jad.2020.09.065>.
- Dorociak, K. E., Rupert, P. A., & Zahniser, E. (2017). Work life, well-being, and self-care across the professional lifespan of psychologists. *Professional Psychology: Research and Practice, 48*(6), 429–437. <https://doi.org/10.1037/pro0000160>.
- Evanoff, B. A., Strickland, J. R., Dale, A. M., Hayibor, L., Page, E., Duncan, J. G., Kannampallil, T., & Gray, D. L. (2020). Work-related and personal factors associated with mental well-being during the COVID-19 response: Survey of health care and other workers. *Journal of Medical Internet Research, 22*(8), e21366. <https://doi.org/10.2196/21366>.
- Galvin, J., & Smith, A. P. (2015). Stress in UK mental health training: A multi-dimensional comparison study. *British Journal of Education, Society & Behavioural Science, 9*(3), 161–175. <https://doi.org/10.9734/BJESBS/2015/18519>.
- Hedges, L. V. (1981). Distribution theory for Glass's estimator of effect size and related estimators. *Journal of Educational Statistics, 6*, 107–128. <https://doi.org/10.2307/1164588>.
- Holingue, C., Badillo-Goicoechea, E., Riehm, K. E., Veldhuis, C. B., Thurl, J., Johnson, R. M., Fallin, M. D., Kreuter, F., Stuart, E. A., & Kalb, L. G. (2020). Mental distress during the COVID-19 pandemic among US adults without a pre-existing mental health condition: Findings from American trend panel survey. *Preventive*

- Medicine*, 139, 106231. <https://doi.org/10.1016/j.yjmed.2020.106231>.
- Holman, E. A., Garfin, D. R., & Silver, R. C. (2014). Media's role in broadcasting acute stress following the Boston Marathon bombings. *Proceedings of the National Academy of Sciences*, 111(1), 93–98. <https://doi.org/10.1073/pnas.1316265110>.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. <https://doi.org/10.1177/1049732305276687>.
- Ito, J. K., & Brotheridge, C. M. (2003). Resources, coping strategies, and emotional exhaustion: A conservation of resources perspective. *Journal of Vocational Behavior*, 63(3), 490–509. [https://doi.org/10.1016/S0001-8791\(02\)00033-7](https://doi.org/10.1016/S0001-8791(02)00033-7).
- Kaiser Family Foundation (2020). *The implications of COVID-19 for mental health and substance abuse*. Retrieved August 30, 2020, from <https://www.kff.org/coronavirus-covid-19/report/kff-health-tracking-poll-july-2020/>
- Kirk, R. E. (2007). Effect magnitude: A different focus. *Journal of Statistical Planning and Inference*, 137, 1634–1646. <https://doi.org/10.1016/j.jspi.2006.09.011>.
- Labrague, L. J., & de los Santos, J. A. A. (2020). COVID-19 anxiety among front-line nurses: Predictive role of organisational support, personal resilience and social support. *Journal of Nursing Management*, 28(7), 1653–1661. <https://doi.org/10.1111/jonm.13121>.
- Li, W., Yang, Y., Liu, Z.-H., Zhao, Y.-J., Zhang, Q., Zhang, L., Cheung, T., & Xiang, Y.-T. (2020). Progression of mental health services during the COVID-19 outbreak in China. *International Journal of Biological Sciences*, 16, 1732–1738. <https://doi.org/10.7150/ijbs.451205>.
- Moore, A. A., Gould, R., Reuben, D. B., Greendale, G. A., Carter, M. K., Zhou, K., & Karlamangla, A. (2005). Longitudinal patterns and predictors of alcohol consumption in the United States. *American Journal of Public Health*, 95(3), 458–464. <https://doi.org/10.2105/AJPH.2003.019471>.
- Muller, R. A. E., Stensland, R. S. Ø., & van de Velde, R. S. (2020). The mental health impact of the Covid-19 pandemic on healthcare workers, and interventions to help them: A rapid systematic review. *Psychiatry Research*, 113441. <https://doi.org/10.1016/j.psychres.2020.113441>.
- Otto, M. W., Henin, A., Hirshfeld-Becker, D. R., Pollack, M. H., Biederman, J., & Rosenbaum, J. F. (2007). Posttraumatic stress disorder symptoms following media exposure to tragic events: Impact of 9/11 on children at risk for anxiety disorders. *Journal of Anxiety Disorders*, 21(7), 888–902. <https://doi.org/10.1016/j.janxdis.2006.10.008>.
- Pearman, A., Hughes, M. L., Smith, E. L., & Neupert, S. D. (2020). Mental health challenges of United States healthcare professionals during COVID-19. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.02065>.
- Pfefferbaum, B., & North, C. S. (2020). Mental health and the Covid-19 pandemic. *The New England Journal of Medicine*, 383, 510–512. <https://doi.org/10.1056/NEJMp2008017>.
- Phillips, S. B. (2011). Up close and personal: A consideration of the role of personal therapy in the development of a psychotherapist. In R. H. Klein, H. S. Bernard, & V. L. Schermer (Eds.), *On becoming a psychotherapist: The personal and professional journey* (pp. 144–164). Oxford University Press, Inc..
- Posluns, K., & Gall, T. L. (2020). Dear mental health practitioners, take care of yourselves: A literature review on self-care. *International Journal for the Advancement of Counselling*, 42(1), 1–20. <https://doi.org/10.1007/s10447-019-09382-w>.
- Que, J., Le Shi, J. D., Liu, J., Zhang, L., Wu, S., Gong, Y., ... & Ran, M. (2020). Psychological impact of the COVID-19 pandemic on healthcare workers: A cross-sectional study in China. *General Psychiatry*, 33(3). <https://doi.org/10.1136/gpsych-2020-100259>.
- Ramirez, J. L., & Galupo, M. P. (2019). Multiple minority stress: The role of proximal and distal stress on mental health outcomes among lesbian, gay, and bisexual people of color. *Journal of Gay & Lesbian Mental Health*, 23(2), 145–167. <https://doi.org/10.1080/19359705.2019.1568946>.
- Reilly, S., Zane, K., McCuddy, W., Soulliard, Z., Scarisbrick, D., Miller, L., & Mahoney, J. (2020). A-15 mental health practitioners' immediate practical response to the COVID-19 pandemic. *Archives of Clinical Neuropsychology*, 35(6), 788–789. <https://doi.org/10.1093/acclin/aca067.15>.
- Riley, K. E., Park, C. L., Wilson, A., Sabo, A. N., Antoni, M. H., Braun, T. D., Harrington, J., Reiss, J., Pasalis, E., Harris, A. D., & Cope, S. (2017). Improving physical and mental health in frontline mental health care providers: Yoga-based stress management versus cognitive behavioral stress management. *Journal of Workplace Behavioral Health*, 32(1), 26–48. <https://doi.org/10.1080/1555240.2016.1261254>.
- Scanlan, J. N., & Still, M. (2019). Relationships between burnout, turnover intention, job satisfaction, job demands and job resources for mental health personnel in an Australian mental health service. *BMC Health Services Research*, 19(1), 1–11. <https://doi.org/10.1186/s12913-018-3841-z>.
- Serafini, G., Gonda, X., Canepa, G., Pompili, M., Rihmer, Z., Amore, M., & Engel-Yeger, B. (2017). Extreme sensory processing patterns show a complex association with depression, and impulsivity, alexithymia, and hopelessness. *Journal of Affective Disorders*, 210, 249–257. <https://doi.org/10.1016/j.jad.2016.12.019>.
- Serafini, G., Pompili, M., Innamorati, M., Gentile, G., Borro, M., Lamis, D. A., Lala, N., Negro, A., Simmaco, M., Girardi, P., & Martelletti, P. (2012). Gene variants with suicidal risk in a sample of subjects with chronic migraine and affective temperamental dysregulation. *European Review for Medical and Pharmacological Sciences*, 16(10), 1389–1398.
- Sharon-David, H., & Tenenbaum, G. (2017). The effectiveness of exercise interventions on coping with stress: Research synthesis. *Studies in Sport Humanities*, 21, 19–29. <https://doi.org/10.5604/01.3001.0012.6520>.
- Shechter, A., Diaz, F., Moise, N., Anstey, D. E., Ye, S., Agarwal, S., Birk, J. L., Brodie, D., Cannone, D. E., Chang, B., Claassen, J., Cornelius, T., Derby, L., Dong, M., Givens, R. C., Hochman, B., Homma, S., Kronish, I. M., Lee, S. A. J., Manzano, W., Mayer, L. E. S., McMurry, C. L., Moitra, V., Pham, P., Rabbani, L. R., Rivera, R. R., Schwartz, A., Schwartz, J. E., Shapiro, P. A., Shaw, K., Sullivan, A. M., Vose, C., Wasson, L., Edmondson, D., & Abdalla, M. (2020). Psychological distress, coping behaviors, and preferences for support among New York healthcare workers during the COVID-19 pandemic. *General Hospital Psychiatry*, 66, 1–8. <https://doi.org/10.1016/j.genhosppsych.2020.06.007>.
- Sher, L. (2020). The impact of the COVID-19 pandemic on suicide rates. *QJM: An International Journal of Medicine*, 113(10), 707–712. <https://doi.org/10.1093/qjmed/hcaa202>.
- Sillaber, I., & Henniger, M. S. (2004). Stress and alcohol drinking. *Annals of Medicine*, 36(8), 596–605. <https://doi.org/10.1080/07853890410018862>.
- Sim, W., Zanardelli, G., Loughran, M. J., Mannarino, M. B., & Hill, C. E. (2016). Thriving, burnout, and coping strategies of early and later career counseling center psychologists in the United States. *Counselling Psychology Quarterly*, 29(4), 382–404. <https://doi.org/10.1080/09515070.2015.1121135>.
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, 22(9), e21279. <https://doi.org/10.2196/21279>.
- Spoorthy, M. S., Pratapa, S. K., & Mahant, S. (2020). Mental health problems faced by healthcare workers due to the COVID-19

- pandemic – A review. *Asian Journal of Psychiatry*, 51, 102119. <https://doi.org/10.1016/j.ajp.2020.102119>.
- Stevanovic, P., & Rupert, P. A. (2004). Career-sustaining behaviors, satisfactions, and stresses of professional psychologists. *Psychotherapy: Theory, Research, Practice, Training*, 41(3), 301. <https://doi.org/10.1037/0033-3204.41.3.301>.
- Sun, S., Goldberg, S. B., Lin, D., Qiao, S., & Operario, D. (2021). Psychiatric symptoms, risk, and protective factors among university students in quarantine during the COVID-19 pandemic in China. *Globalization and Health*, 17(1), 1–14. <https://doi.org/10.1186/s12992-021-00663-x>.
- Vanhaecht, K., Seys, D., Bruyneel, L., Cox, B., Kaesemans, G., Cloet, M., ... & Claes, S. (2021). COVID-19 is having a destructive impact on health-care workers' mental well-being. *International Journal for Quality in Health Care*, 33(1), mzaa158. <https://doi.org/10.1093/intqhc/mzaa158>
- Walfish, S., McAlister, B., O'Donnell, P., & Lambert, M. J. (2012). An investigation of self-assessment bias in mental health providers. *Psychological Reports*, 110(2), 639–644. <https://doi.org/10.2466/02.07.17.PR0.110.2.639-644>.
- Wills, T. A. (1997). Modes and families of coping: An analysis of downward comparison in the structure of other cognitive and behavioral mechanisms. *Health, coping, and well-being: Perspectives from social comparison theory*, 167–193.
- Xiang, Y. T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., & Ng, C. H. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The Lancet Psychiatry*, 7, 228–229. [https://doi.org/10.1016/S2215-0366\(20\)30046-8](https://doi.org/10.1016/S2215-0366(20)30046-8).
- Zhao, N., & Zhou, G. (2020). Social media use and mental health during the COVID-19 pandemic: Moderator role of disaster stressor and mediator role of negative affect. *Applied Psychology: Health and Well-Being*, 12, 1019–1038. <https://doi.org/10.1111/aphw.12226>.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.