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Bouncing back and bouncing forward: coping strategies used by the social workers during COVID-19 pandemic

Alexandra Tamiolaki^{a,b}, Argyroula Kalaitzaki^{a,b,c} and George Tsouvelas^{b,d}

^aSocial Work Department, Health Sciences Faculty, Hellenic Mediterranean University, Heraklion, Greece;

^bLaboratory of Interdisciplinary Approaches to the Enhancement of Quality of Life, Hellenic Mediterranean University, Heraklion, Greece; ^cUniversity Research Centre 'Institute of AgriFood and Life Sciences', Hellenic Mediterranean University, Heraklion, Greece; ^dDepartment of Nursing, University of West Attica, Aigaleo, Greece

ABSTRACT

Studies have suggested that social workers being indirectly exposed to their patients' COVID-19-related traumatic experiences may have both negative (i.e. secondary traumatic stress symptoms; STS) and positive psychological consequences (i.e. resilience and vicarious post-traumatic growth (VPTG)). However, less is known about the coping strategies that they use to effectively respond to COVID-19-related challenges. The purpose of this study is to examine the coping strategies that social workers use and their differential association with VPTG, resilience, and STS. A cross-sectional survey was conducted in a sample of 133 social workers (86.7% women, mean age 38.1 ± 9.4 years). They completed the Brief COPE, the Secondary Traumatic Stress Scale (STSS), the Brief Resilience Scale (BRS), and the Post-Traumatic Growth Inventory (PTGI) to measure coping strategies, STS, resilience, and VPTG, respectively. Social workers demonstrated moderate levels of STS, VPTG, and resilience. Denial was associated with STS, positive reframing, planning, and self-blame (inversely) were associated with resilience, and instrumental support and religious coping were associated with VPTG. The results of this study provide insights on how healthcare policies and interventions can best support professionals during current and future pandemics by alleviating levels of STS and enhancing resilience and VPTG.

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Introduction

On 11 March 2020, WHO officially declared coronavirus disease (COVID-19) as a pandemic. The first case in Greece was reported on 27 February 2019, and 1 month later, the Greek government enforced strict confinement measures (e.g. physical distancing recommendations, cease of public activities, stay-at-home orders/social constraints, and lockdown) to inhibit the rapid and uncontrollable spreading of the virus and prevent the collapse of the healthcare system (A. Kalaitzaki et al., 2021). Since the onset of COVID-19, social workers and other healthcare professionals have been called to action to deal with a range of complex psycho-social needs of

CONTACT Alexandra Tamiolaki  alexandratmk93@gmail.com  Social Work Department, Health Sciences Faculty, Hellenic Mediterranean University, Estavromenos, Heraklion, Crete 71410, Greece

individuals and communities (Bern-Klug & Beaulieu, 2020). They have been called upon to provide care, psychosocial support, and empowerment to vulnerable populations such as infected patients and quarantined individuals and their families, create awareness, and combat pandemic-related myths, fear, and stigma that have risen tremendously during the present crisis (Okafor & Walla 2021). These roles and responsibilities are crucial to address healthcare issues and create resource opportunities to advance the mental health of individuals, families, and communities.

Emerging evidence indicates that proffering social work services to vulnerable populations during COVID-19 (Alqahtani, 2022; Amadasun, 2020; Golightley & Holloway, 2020), not to mention the unprecedented repercussions of the pandemic, such as personal challenges (e.g. fear of contamination and contagion), workplace adversities (e.g. shortage of personnel, work overload, and employment insecurity), work-related losses, and changes (e.g. loss of the work/life divide, working mostly remotely/virtual service delivery) (Davies & Cheung, 2022; A. Kalaitzaki et al., 2021; Miller & Grise-Owens, 2022; Ruden, 2021) may come at a cost for social workers (Bern-Klug & Beaulieu, 2020; Peretz et al., 2020) more than any other profession (Amadasun, 2020). Studies have also shown that these COVID-19-related personal, professional, and organizational challenges may have negative mental health effects such as distress/post-traumatic stress disorder, anxiety, depression, and burnout among healthcare workers (HCWs) (Karagöl & Törenli Kaya, 2022; Rovithis et al., 2022), and social workers in particular (Altungy et al., 2022; Ben-Ezra & Hamama-Raz, 2020; Guadalupe et al., 2021; Huang et al., 2022; Levi-Belz & Zerach, 2022; Xie et al., 2021).

Notwithstanding the importance of supporting social workers in dealing with COVID-19, not much is known about how social workers are affected by the practice of their own work during the pandemic (i.e. working with patients with COVID-19-related traumatic experiences), either positively or negatively. Secondary traumatic stress (STS) has been defined as the stress resulting from helping people who are suffering and includes symptoms of intrusion (i.e. reexperiencing of the traumatic event through dreams, flashbacks, and distressing thoughts), avoidance (i.e. avoidance of trauma reminders), and hyperarousal (i.e. difficulties sleeping and concentrating, irritability, and hypervigilance) similarly to those of post-traumatic stress disorder (Davies & Cheung, 2022; Figley et al., 1999; Morrison & Joy, 2016). Despite the proliferation of research on the negative mental health outcomes in HCWs in general (Chutiyami et al., 2022, Fernandez et al., 2020; Mosolova et al., 2021), scarce empirical evidence exists in social workers. To the authors' knowledge, only one study has shown that social workers suffer from both symptoms of post-traumatic stress and secondary trauma (Holmes et al., 2021). Being personally exposed directly to COVID-19-related stress and trauma, social workers are also professionally exposed indirectly through their patients' experiences; being vulnerable themselves and needing to attend to their own needs are concurrently invited to address the needs of the vulnerable populations (Huang et al., 2022; Kahambing, 2021). Thus, they could be well considered double traumatized.

Interestingly, positive reactions to COVID-19-related stress are also likely (Chen et al., 2021; A. Kalaitzaki et al., 2020). Resilience has been considered the ability to bounce back from emotionally negative experiences (Carver, 1997), or else the capacity to return to the pre-exposed psychological functioning and recover from stress (Hu et al., 2015; Smith et

al., 2008). If ‘bouncing back’ is what resilience is all about, vicarious post-traumatic growth (VPTG) could be understood as ‘bouncing forward’ (A. Kalaitzaki et al., 2020). VPTG is people’s capacity to achieve a higher level of functioning than that existed prior to the event (Arnold et al., 2005). It is a form of positive transformation in one or several domains: relations with others, new possibilities, personal strength, spiritual changes, and appreciation of life (Tedeschi & Calhoun, 1996). In the aftermath of a challenging situation, positive changes may occur after a period of rumination and meaning making, which ends once the individual has felt that the event led to positive outcomes alongside the negative ones (Tedeschi & Calhoun, 1996).

Although there is an increasing surge of the research interest on the positive psychological outcomes among HCWs (i.e. resilience and post-traumatic growth) with studies mostly focusing on physicians and nurses (Finstad et al., 2021; Hannemann et al., 2022; Labrague, 2021), there have been far fewer studies on social workers (Finklestein & Laufer, 2021). Seng et al. (2021) examined resilience as a mitigating factor if frontline social worker’s psychological distress during the pandemic and A. E. Kalaitzaki et al. (2023) found increased PTG in medical HCWs (i.e. physicians and nurses) compared to non-medical HCWs (i.e. psychologists and social workers) at two timepoints. Only one study so far has examined post-traumatic stress, resilience, and post-traumatic growth by social workers but in relation to their exposure to rocket attacks and not COVID-19 (Finklestein & Laufer, 2021).

The mental health literature has already acknowledged that one of the most examined personal resources that have been associated with VPTG, resilience, and STS are coping strategies (A. Kalaitzaki et al., 2021; Ogińska-Bulik & Zadworna-Cieślak, 2018; Tsouvelas et al., 2022). Coping strategies can be defined as cognitive and behavioral efforts people make to deal with specific external and/or internal demands (Lazarus & Folkman, 1984). Kalliath and Kalliath (2013) have shown that, before COVID-19 pandemic, social workers were using a range of adaptive coping strategies such as cognitive reframing, timely communication, setting clear expectations, time management, job flexibility, and developing personal hobbies to deal with the competing demands emanating from their work. Similarly, Kabunga and Muya (2014) have found spirituality, planning, goal-setting, time-management, and positive thinking as the strategies used by social workers to mitigate work stress. Although there is abundant research on the study of the coping strategies that HCWs use to deal with pandemic-related stressors and preserve mental health (A. Kalaitzaki et al., 2021; A. E. Kalaitzaki et al., 2023; Labrague, 2021; Ogińska-Bulik & Zadworna-Cieślak, 2018), there is a shortage of research to date on social workers. In line with findings indicating the use of both adaptive and maladaptive coping strategies in HCWs after the onset of COVID-19 (A. Kalaitzaki, Tsouvelas, & Tamiolaki, 2022; A. Kalaitzaki, Tsouvelas, Tamiolaki, & Konstantakopoulos, 2022), Kahambing (2021) found a range of healthy (e.g. healthy eating, avoiding substance use, exercising or meditating, connecting to others, practicing social distancing) and unhealthy strategies (e.g. self-blame, denial, self-distraction, worry/overthinking, and humoring of serious situations) to be used by social workers. Ben-Ezra and Hamama-Raz (2020) found that emotion-focused coping strategies, specifically venting, mediated the relationship between job demands and psychological distress in social workers, leading to more stress. However, the few available research findings on the coping strategies that social workers use are still inconclusive.

Coping strategies have been largely debated in the literature related to HCWs. Presumable reasons for inconsistent findings (i.e. showing either adaptive strategies or both adaptive and maladaptive to predict VPTG; A. Kalaitzaki et al., 2021; A. E. Kalaitzaki et al., 2023) are differences in the categorization of the coping strategies and their variability depending on the specific stressor/condition, the timepoint of their use and the short- or long-term outcomes (Folkman, 2013; A. E. Kalaitzaki et al., 2023; Kavčič et al., 2022; Ziarko et al., 2021). It has been suggested that the emotion-focused strategies (so-called maladaptive) might be more effective in dealing with uncontrollable stressors, such as a pandemic, whereas the problem-focused (so-called adaptive) might be more effective in dealing with controllable stressors (Ben-Ezra & Hamama-Raz, 2020; Kalaitzaki, 2021; A. Kalaitzaki et al., 2021; A. Kalaitzaki, Tsouvelas, Tamiolaki, & Konstantakopoulos, 2022; Main et al., 2011). However, emotion-focused coping strategies may be less effective in the long run than problem-focused strategies (e.g. A. Kalaitzaki et al., 2021; Ziarko et al., 2021). Therefore, the authors have suggested alternatives terms to the traditional adaptive (e.g. positive reframing, religious coping, and use of emotional support) vs. maladaptive categorization (e.g. self-blame, denial, and substance use) (Meyer, 2001), such as healthy vs. unhealthy (Kahambing, 2021), beneficial vs. detrimental or effective vs. ineffective (A. E. Kalaitzaki et al., 2023; A. Kalaitzaki et al., 2024).

By the writing of this paper, no study has yet examined both the negative (i.e. STS) and positive aspects (i.e. resilience and VPTG) of the mental health among social workers during COVID-19 and notably, their differential association with certain coping strategies. Therefore, the aim of the present study was to examine the coping strategies that social workers use during the current pandemic in Greece and their differential association with VPTG, resilience, and STS. Increased understanding of the coping strategies that social workers use during the COVID-19 is vital for maintaining their psychological well-being (by increasing resilience and VPTG and decreasing STS) and has important implications in informing policies and implementing evidence-based therapeutic interventions.

Material and methods

Participants

A total of 133 social workers completed an online questionnaire during COVID-19 lockdown measures. The participants' mean age was 38.1 (SD = 9.4) years. They were mostly females (86.7%), married (45.1%), childless (60.2%), with postgraduate degree (52.2%), and had up to five years of work experience (36.3%). Table 1 displays detailed sociodemographic characteristics of the social workers.

Study design and procedure

This was a cross-sectional survey conducted online amid the first COVID-19 lockdown in Greece (March 23–3 May 2020). Approval of the study was obtained from the Ethics Committee of the Hellenic Mediterranean University. Participants were recruited using a convenience and snowball mixed sampling procedure. The web-based questionnaire, the

Table 1. Sociodemographic characteristics of the participants (N = 133).

	<i>f</i>	%
Gender		
Male	15	13.3
Female	98	86.7
Age	38.1	9.4
Marital status		
Single	51	45.1
Married	51	45.1
Other	11	9.7
fChildren		
0	68	60.2
1	18	15.9
2	18	15.9
3	7	6.2
4	2	1.8
Education level		
University	59	52.2
Master/PhD	54	47.8
Work experience		
Up to 5 years	41	36.3
6–10 years	25	22.1
11–15 years	19	16.8
16–20 years	15	13.3
21–25 years	7	6.2
26–30 years	1	.9
More than 31 years	5	4.4
Contact with COVID-19 positive patients		
No	59	52.2
Yes	54	47.8
Not at all satisfied	2	1.8
Satisfaction about COVID-19-related knowledge		
Little	10	8.8
Moderate	49	43.4
Quite	46	40.7
Very	6	5.3

Age is presented in Mean and standard deviation.

first page of which included an informed consent statement, was distributed through social networking sites and webpages, and was forwarded through e-mail to authors' contacts. Participants were asked to distribute it too similarly.

Measures

A self-report questionnaire was developed which consisted of a number of demographic questions (e.g. sex, age, marital status, and education; see Table 1), and instruments about the psychological impact of the COVID-19 and ways to cope with it.

The Greek version of the Post-Traumatic Growth Inventory (PTGI; A. Kalaitzaki et al., 2021; Tedeschi & Calhoun, 1996), consisting of 21 items, measured potential growth in five domains: personal strength, relating to others, new possibilities, appreciation of life and spiritual change. Items are scored on a 6-point scale, ranging from 0 (I did not experience this change) to 5 (I experienced this change to a very large extent). Participants were instructed to respond regarding the change that occurred following the COVID-19 lockdown. Example items are 'I changed my priorities about what is important in life' (appreciation of life) and 'I have a stronger religious faith' (spiritual

change). A total score and five subscale scores were produced, with higher scores indicating higher levels of growth. In the present study, the Cronbach's alpha reliabilities were acceptable (see Table 2). The Greek version of the Secondary Traumatic Stress Scale (STSS; Bride et al., 2004; A. Kalaitzaki et al., 2021), consisting of 17 items, allocated in three subscales (intrusions, avoidance, and hyperarousal), measured the intensity of secondary stress related to the COVID-19 lockdown experienced in the past 7 days. Items are scored on a 5-point scale, ranging from 1 (never), to 5 (very often). Example items are 'It seemed as if I was reliving the traumas experienced by my clients' (intrusion) and 'I avoided people, places, or things that reminded me of my work with clients' (avoidance). A total score and three subscale scores were produced, with higher scores indicating higher levels of secondary traumatic stress. In the present study, the Cronbach's alpha reliabilities were acceptable (see Table 2).

The Greek version of the Brief Resilience Scale (BRS; A. E. Kalaitzaki et al., 2023; Smith et al., 2008), consisting of 6-items, measured ability to bounce back or recover after stressors (such as the lockdown). Items are scored on a 5-point scale ranging from 0 (strongly disagree) to 5 (strongly agree). Example items are as follows: 'I have a hard time making it through stressful events' and 'It does not take me long to recover from a stressful event'. A mean score was produced, with higher scores indicating higher levels of psychological resilience. In the present study, the Cronbach's alpha reliabilities were acceptable (see Table 2).

The Greek version of the Brief Coping Orientation to Problems Experienced Inventory (COPE; Carver, 1997; Kapsou et al., 2010), consisting of 28 items, allocated in 14 subscales, assessed coping strategies during lockdown. Example items are as follows: 'I've been

Table 2. Descriptive statistics and internal consistency of secondary traumatic stress (STS), vicarious post-traumatic growth (VPTG), resilience, and coping strategies.

	Min	Max	M	SD	Cronbach's α
STS Avoidance	7	35	15.19	5.70	0.81
STS Intrusion	5	25	11.92	4.76	0.82
STS Arousal	5	25	11.46	4.90	0.83
STS Total	17	79	38.58	14.14	0.93
VPTG Relating to Others	0	35	17.63	10.14	0.92
VPTG New Possibilities	0	25	12.00	6.66	0.86
VPTG Personal Strength	0	20	11.05	5.80	0.88
VPTG Appreciation of Life	0	15	8.74	4.29	0.84
VPTG Spiritual Change	0	10	4.08	3.33	0.79
VPTG Total	0	105	53.50	27.06	0.96
BRS (Resilience)	11	30	22.23	4.45	0.81
COPE Self-Distraction	2	8	6.22	1.39	0.55
COPE Planning	2	8	6.48	1.62	0.77
COPE Positive Reframing	2	8	6.44	1.65	0.81
COPE Active Coping	2	8	6.29	1.67	0.74
COPE Acceptance	2	8	6.22	1.39	0.55
COPE Venting	2	8	5.40	1.61	0.57
COPE Use Instrumental Support	2	8	5.36	1.76	0.82
COPE Use Emotional Support	2	8	5.29	1.79	0.76
COPE Humor	2	8	4.36	1.56	0.51
COPE Self-Blame	2	8	4.27	1.67	0.61
COPE Religion	2	8	4.19	1.99	0.87
COPE Denial	2	8	3.66	1.44	0.49
COPE Behavioral Disengagement	2	6	2.64	1.03	0.54
COPE Substance Use	2	6	2.26	0.86	0.96

STS: secondary traumatic stress; VPTG: vicarious post-traumatic growth. * $p < .05$, ** $p < .01$, *** $p < .001$.

looking for something good in what is happening' (positive reframing) and 'I've been getting help and advice from other people' (use of instrumental support). The participants indicated how often they were using each strategy to deal with COVID-19 lockdown, using a 4-point scale, ranging from 1 (I haven't been doing this at all) to 4 (I've been doing this a lot). Subscale scores are produced by summing the respective two items. The higher the score the higher the frequency of using the particular coping strategy. In the present study, the Cronbach's alpha reliabilities were acceptable (see Table 2).

Statistical analyses

The statistical analysis included descriptive statistics (means, SDs, and percentages) to describe the sample and the main study variables. Pearson r correlation was used to evaluate the relationship of sociodemographic factors with VPTG, STS, and Resilience. Three hierarchical multiple regression analyses (using stepwise method) were conducted to investigate the effect of potential association of the coping strategies on STS, VPTG, and resilience. Variables with significance levels of .05 or less were retained in the final model. All data analyses were conducted using IBM SPSS 23.0 software, and the significance level was set on $p < .05$.

Results

Levels of VPTG, STS, and resilience

Table 2 displays descriptive statistics and reliabilities (Cronbach's α) for STS, VPTG, resilience, and coping strategies. Applying the cutoff score criteria, the majority of the participants presented medium to high VPTG scores (64.6%) and STS (54%) and medium levels of resilience ($M = 3.71$, $SD = 0.74$). The three most frequently coping strategies that they used were self-distraction, planning, and positive reframing, and the three least frequently coping strategies were Denial, Behavioural Disengagement, and Substance Use.

Correlation of sociodemographic variables with VPTG, STS, and resilience

Resilience correlated positively with both work experience and satisfaction with Covid-19-related knowledge, with the more work experience and the higher satisfaction reporting the higher resilience, and negatively with gender, with women presenting higher resilience. However, all correlations were weak (.19–.27) (see Table 3). Correlations between VPTG, STS, and resilience showed only one significant correlation between STS and resilience ($r = -.24$).

Association of the coping strategies with VPTG, STS, and resilience

VPTG was predicted ($R^2 = 0.23$, $F^2 = 0.30$) by the coping strategies a) religion ($\beta = 0.37$, $t = 4.09$, $p = .001$, $\Delta R^2 = 0.20$) and b) use of instrumental support ($\beta = 0.19$, $t = 2.10$, $p = .038$, $\Delta R^2 = 0.03$). STS was predicted ($R^2 = 0.20$, $F^2 = 0.25$) by denial ($\beta = 0.44$, $t = 5.18$, $p = .001$, $\Delta R^2 = 0.20$). The magnitude of effect sizes for VPTG and STS were moderate. Resilience was predicted ($R^2 = 0.30$, $F^2 = 0.43$) by the coping strategies a) positive

Table 3. Pearson *r* correlations of the sociodemographic variables with secondary traumatic stress (STS), vicarious post-traumatic growth (VPTG), and resilience.

	VPTG	STS	Resilience
Gender	-.15	-.10	-.20*
Age	.04	-.06	.15
Number of children	-.08	-.06	.00
Education level	-.03	.03	.03
Work experience	-.02	-.16	.19*
Contact with COVID-19 positive patients	.00	.19	-.04
Satisfaction with Covid-19-related knowledge	.09	-.14	.27**

p* < .05, *p* < .01, ****p* < .001. For gender 1 = male, 0 = female; For educational level 0 = University, 1 = Master/PhD; for contact with COVID-19 positive patients 1= Yes and 0 = No; for satisfaction regarding knowledge about COVID-19 1 = Not at all, 2 = a little bit, 3 = moderate 4 = enough 5 = very.

Table 4. Predictors of vicarious post-traumatic growth (VPTG), resilience, and secondary traumatic stress (STS) by coping strategies.

	VPTG				Resilience				STS			
	Step (ΔR^2)	<i>B</i>	<i>SE</i>	β	Step (ΔR^2)	<i>B</i>	<i>SE</i>	β	Step (ΔR^2)	<i>B</i>	<i>SE</i>	<i>B</i>
COPE Self-Distraction												
COPE Planning					3(0.06)	0.80	0.26	0.29**				
COPE Positive Reframing					1(0.12)	0.65	0.24	0.24**				
COPE Active Coping												
COPE Acceptance												
COPE Venting												
COPE Use Instrumental Support	2(0.03)	2.94	1.40	0.19*								
COPE Use Emotional Support												
COPE Humor												
COPE Self-Blame					2(0.12)	-1.15	0.23	-0.43***				
COPE Religion	1(0.20)	5.06	1.24	0.37***								
COPE Denial									1(0.20)	4.34	0.84	0.44***
COPE Behavioral Disengagement												
COPE Substance Use												
<i>R</i> ²		0.23				0.30				0.20		
<i>F</i> ²		0.30				0.43				0.25		

VPTG: Vicarious post-traumatic growth; STS: Secondary traumatic stress. **p* < .05, ***p* < .01, ****p* < .001. ΔR^2 is the incremental increase in the model *R*² resulting from one step to another. The indicators in the table are those of the final regression model.

reframing ($\beta = 0.24, t = 2.71, p = .008, \Delta R^2 = 0.12$), b) self-blame (inversely) ($\beta = -0.43, t = -5.05, p = .001, \Delta R^2 = 0.12$) and c) planning ($\beta = 0.29, t = 3.10, p = .002, \Delta R^2 = 0.06$). The magnitude of effect size for resilience was large (see Table 4).

Discussion

This is one of the few studies that examined the toll that the pandemic has on the mental health of social workers and the coping strategies that are necessary to cope with it. Moderate levels of resilience were found in the social workers of this sample, consistent with other findings (Aafjes Van Doorn et al., 2021; Cui et al., 2021; Smith et al., 2013) that

have shown high resilience in psychotherapists during the initial months of COVID-19. Women, the more experienced and the more satisfied with their Covid-19-related knowledge reported higher levels of resilience than men, the less experienced, and the less knowledgeable (Finstad et al., 2021). Finstad et al. (2021) review has shown that female gender was associated with lower levels of resilience, whereas professional experience with higher resilience (and PTG). COVID-19-related training and education has repeatedly been associated with higher resilience (Cheng et al., 2022; Cui et al., 2021; Huey & Palaganas, 2020) and lower risk of mental health problems (Chutiyami et al., 2022). Arguably, knowledge and experience are resources to cope with stressors and protect from being overwhelmed (Finstad et al., 2021). Moderate to high PTG scores and STS were also reported by nearly two-thirds and above half of the participants, respectively. These findings are in line with others supporting the idea that PTG is possible among HCWs in times of stress, such as the COVID-19 pandemic (Finstad et al., 2021; A. E. Kalaitzaki et al., 2023), and in fact, above-normal level distress have been found to be necessary for PTG (Fino et al., 2021; A. Kalaitzaki et al., 2021). Aafjes Van Doorn et al. (2021) found that although low levels of PTG were reported by psychotherapists, the more traumatized ones experienced more post-traumatic growth.

Social workers in this study frequently used a compilation of both so-called adaptive and maladaptive (or elsewhere referred to as effective vs. ineffective; A. Kalaitzaki et al., 2024) coping strategies (i.e. self-distraction, planning, positive reframing, active coping, acceptance, venting, use of instrumental and emotional support) in line with other findings in HCWs (A. Kalaitzaki et al., 2021; Labrague, 2021; Romate & Rajkumar, 2022). It has been repeatedly suggested that maladaptive coping strategies are effective in dealing with uncontrollable stressors, notwithstanding the fact that they could have long-term detrimental outcomes (Finstad et al., 2021; A. Kalaitzaki et al., 2021; Ziarko et al., 2021). Notwithstanding that escape and avoidance strategies (i.e. self-distraction) have been typically associated with adverse mental health outcomes (Finstad et al., 2021), it has also been suggested that they may be useful in abolishing hurtful thoughts and emotions (e.g. mortality; Kalaitzaki, Tsouvelas, & Tamiolaki, 2022; A. Kalaitzaki et al., 2021) thus buffering from long-term negative outcomes. After all, A. Kalaitzaki et al. (2024) have suggested that, although actively coping with the pandemic-related stressors contributes to higher VPTG, coping with avoidance strategies is better than not coping at all. Venting or sharing of emotions has also been found to be a frequent strategy by community social workers in response (among others) to the pandemic-related negative emotions (Feldman et al., 2022). Ben-Ezra and Hamama-Raz (2020) though they found that venting led to increased psychological distress, have quoted findings about its positive effects. It could be that when combined with many healthy or adaptive strategies, one or few unhealthy or maladaptive may not be detrimental (A. Kalaitzaki et al., 2024).

Given the work-related stress experienced by social workers during COVID-19 (i.e. STS symptoms) and the potential to obtain positive outcomes (i.e. resilience and PTG), it was considered important to examine which coping strategies contribute to stress release and which ones promote PTG and resilience. Different coping strategies predicted PTG, STS, and resilience. Rather expectedly, denial predicted STS. As previously referred, escape-avoidance strategies, such as denial, have been associated with higher levels of stress and worse mental outcomes (Finstad et al., 2021; A. Kalaitzaki & Rovithis, 2021). However, using avoidance-type coping strategies presupposes acknowledging the

stressful situation, and as such, it has been suggested to have also positive outcomes in relieving stress in the short run. On the other hand, denial may have negative outcomes in averting one to accept and eventually cope with the stressful situation.

In keeping with other findings in HCWs (A. Kalaitzaki & Rovithis, 2021; A. E. Kalaitzaki et al., 2023; Li et al., 2021), PTG was predicted by religion and use of instrumental support. Whereas inconsistent findings on the association of spirituality/religious practices with reduced stress have been reported in HCWs (Finstad et al., 2021), social support has been consistently found to be an effective coping strategy during the pandemic in reducing stress (Frenkel et al., 2022; Nowicki et al., 2020) and increasing resilience (Finstad et al., 2021) and VPTG (Fino et al., 2021; A. E. Kalaitzaki et al., 2023; Laurent et al., 2022). Resilience was predicted by positive reframing and planning, and inversely by self-blame (Szabo et al., 2021). These findings are in line with others showing that both active (e.g. planning) and positive coping strategies (e.g. a positive attitude toward the problem) were associated with reduced stress and increased resilience (Finstad et al., 2021; Lin et al., 2020).

Indisputably, research has not yet reached consistency on the relationship between resilience and PTG. Some studies have shown that these two concepts are interrelated (Finstad et al., 2021; Hyun et al., 2021; Liu et al., 2021) with potential reinforcement of one on the other (Lyu et al., 2021), whereas other studies have suggested that these two concepts do not relate (Ogińska-Bulik & Zadworna-Cieślak, 2018), and presumably they are conceptually different (Aafjes Van Doorn et al., 2021; A. E. Kalaitzaki et al., 2023). The latter assertion is strengthened by findings indicating that highly resilient individuals may not achieve PTG, since they may be extremely resistant to stressful or traumatic events (Tedeschi & Calhoun, 1996). In addition, A. E. Kalaitzaki et al. (2023) have shown that, although both concepts are dynamic and changeable/variable, and it could have been expected to relate at a later time, no relationship was found at a second timepoint of the pandemic. The absence of any association between resilience and VPTG in this study and the association of different coping strategies with VPTG suggest that resilience and PTG may be similar but rather distinct; different abilities may be needed to bounce back and different to bounce forward. Longitudinal examination of both concepts in larger samples is required to elucidate any potential relationship.

The limitations of this study should be acknowledged. The use of a convenience sample of predominantly female social workers, does not allow the generalizability of the findings. However, social work in Greece is still a woman predominated occupation (Paidousi, 2020). Resilience and VPTG were both examined as outcomes without knowing presumable preexisting levels before the stressful or traumatic event. Further longitudinal studies in large samples examining additional variables are required. Study of their presumable association with more sophisticated methods is suggested.

The strengths and implications of this study should be also acknowledged. This is one of the few studies that have examined the impact of the pandemic on social workers. As the pandemic continues to surge and COVID-19 cases continue to raise, social workers in health care facilities are required to attend the needs of vulnerable and traumatized people sometimes neglecting their own (Okafor & Walla, 2021). The impact that the pandemic-related challenges may have on social workers needs to be understood, and their own mental health needs should be timely addressed. Also understanding the coping strategies that contribute to both positive and negative psychological adjustment in this high-risk

group will offer insights that will enable interventions in both the current and future public health crises. The present study findings suggest that education/training programs about specific coping skills that mitigate STS and enable resilience and VPTG (Davies & Cheung, 2022; Dave & Taylor-Robinson, 2002), could be all useful. Although social workers may be aware of their professional and personal boundaries, it may not always be possible to keep their work pressures from affecting them. Social Work institutions need to support their students and graduates impacted by this pandemic professionally and personally. Webinars, seminars, and workshops should be provided to social workers in order to identify and activate those coping strategies that can lead them to positive growth and a more empowered self. Free online resources, videos, newsletters, and manuals should be provided with step-by-step instructions about healthcare practices. Mindfulness and character strengths practices could be incorporated into programs implemented to help social workers become aware of and improve their coping strategies and behaviors so as to decrease the negative effects of stress and achieve flourishing and personal development (Tamiolaki et al., 2024). Buffering social workers against the adverse effects of the pandemic and other crises will make them stronger to care about the vulnerable ones and provide them quality services.

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No potential conflict of interest was reported by the author(s).

Data accessibility statement

Data will be available upon request.

Author contributions

Conceptualization, methodology, and data collection: A.K., A.T., and G.T.; data analysis, G.T., A. K.; writing—original draft, A.K., A.T., and G.T.; supervision, A.K.; project administration, A.K.; writing—review and editing, A.K., A.T., and G.T. All authors have read and agreed to the published version of the manuscript.

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