


Perceived Coping Mitigates Anxiety Symptoms in the Context of COVID-19 Stress in an Urban University Student Sample

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Abstract

Perceived coping and its two subprocesses, trauma-focused coping (finding meaning in the details and memory of a potential trauma or stressor) and forward-focused coping (focusing on planning for the future) have been shown to be important in the context of potentially traumatic events. The COVID-19 pandemic and its associated stressors have negatively impacted population mental health, and preliminary investigations have demonstrated the importance of perceived abilities to cope during the pandemic. The current study sought to examine the potentially moderating role of each subprocess on the relationship between stress and anxiety symptoms in a low-income student sample during COVID-19 ($N = 2364$). We computed two hierarchical multiple linear regressions to assess for significant interactions between stress and perceived coping subprocess scores on anxiety outcomes. Our results demonstrated that both trauma-focused coping and forward-focused coping served as effect modifiers in the relationship between COVID-19-related stress and anxiety. Such findings highlight the importance of interventions that incorporate both forms of coping for low-income students during a chronic stressor.

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Introduction

Large-scale potentially traumatic events negatively affect the psychological health of populations (Boscarino et al., 2014; Davidson & McFarlane, 2006; Lê et al., 2013; Miller & Rasmussen, 2010; North & Pfefferbaum, 2013). Previous literature has demonstrated the impact that disasters such as floods, earthquakes, epidemics, and pandemics have on mental health indicators, and in particular on the development of post-traumatic stress (PTS), depression, and anxiety symptoms (Adams et al., 2014; Cortés-Álvarez et al., 2020; Kim et al., 2009; North et al., 2004; 2012; Rubin et al., 2012; Xiong et al., 2020). Although this research provides us with an understanding of what we might expect in populations after mass traumatic events, our understanding of what we might expect at the individual level after these events is much more limited (Gruebner et al., 2015; Sherchan et al., 2018; Zahran et al., 2011). The psychological construct of perceived coping, or one's perception of their capacity to withstand, persevere, ask for help, and remain flexible, during and after a stressful event, has been shown to strongly protect against negative psychological outcomes and can be an important determinant of mental health in the aftermath of mass traumatic events (Knowles & O'Connor, 2015; Park et al., 2015; Rodin et al., 2017).

Perceived coping has been investigated with samples of combat veterans, combat-exposed civilians, grieving partners, and trauma-exposed college students, among others (Bartholomew et al., 2017; Kibler & Lyons, 2004; Knowles & O'Connor, 2015; Mussa et al., 2018; Pinciotti et al., 2017). Different operationalizations of perceived coping capacities have identified two main subprocesses: trauma-focused meaning making, for example, finding meaning in the event and remembering its details, as well as forward-focused abilities to distract and look more optimistically into a post-trauma future (Bonanno et al., 2011; Bonanno, 2013). Research has shown that specific contexts determine which subprocess is more important for mental health outcomes and that an overall flexibility between the two helps to buffer against stress-related psychopathology (Bonanno, 2013; Saita et al., 2017).

Potentially traumatic events (PTEs) that are ongoing versus isolated incidents, are characterized by the occurrence of chronic stressors (Bromet, 2014; Cerdá et al., 2013; Hammen et al., 2009; Kopp et al., 2007; Lowe et al., 2016; Saleem et al., 2020). Chronic stress has been shown to be strongly associated with the development of anxiety symptoms (Dieleman et al., 2015; Hashoul-Andary et al., 2016; Liu et al., 2020; C. Overstreet et al., 2017; S. Overstreet & Mathews, 2011; Patriquin & Mathew, 2017; Radeef & Faisal, 2016; Roth et al., 2012; Stanton et al., 2020; Vrana & Lauterbach, 1994). Young adults, including university students, in particular, have been investigated as a population of importance in mapping out the long-term anxiety-related effects of PTE (Anders et al., 2014; S. Overstreet & Mathews, 2011; Vrana &

Lauterbach, 1994). Young adult students are at a sensitive life stage, whereby their potential to acquire vital psychological and material tools to withstand stress exposure may help to ensure improved psychological trajectories (Auerbach et al., 2018; Howard et al., 2010; Pedersen, 2012; Soet & Sevig, 2006; van Zyl et al., 2021). Such trajectories have been shown to be negatively affected by the onset of anxiety disorders (El-Gabalawy et al., 2011; Hendriks et al., 2016; Van Ameringen et al., 2003). One proposed link for the relationship between stress and long-term psychopathology lies in the findings of stress sensitization research, which demonstrates the long-term psychological and neurobiological effects of prolonged stress, and the ways in which earlier stressful experiences increase psychopathological vulnerabilities to anxiety disorders in the context of later stress exposure (Bandoli et al., 2017; Espejo et al., 2007; McLaughlin et al., 2010).

Additionally, PTEs, traumas, and their associated chronic stress exposure have been historically linked to increases in anxiety symptoms (Acierno et al., 2007; Grant et al., 2008; Vyas et al., 2004). Moreover, increases in generalized anxiety disorder have been thoroughly documented during the ongoing pandemic within diverse populations (Cordaro et al., 2021; Huang & Zhao, 2020; Rudenstine et al., 2020). Given the role of COVID-19 as a PTE and source of chronic stress, previous research has linked coping capacities to mental health outcomes, and specifically anxiety outcomes, during COVID-19 (Jordan et al., 2021; Zhou et al., 2020).

The COVID-19 pandemic, its ongoing stressors, its risks to both short- and long-term health outcomes, and its wider economic and social impacts constitutes a large-scale and chronic PTE (Borio, 2020; del Rio et al., 2020; Mattos dos Santos, 2020; Wallace et al., 2020). Robust investigations into the relationship between perceived coping and mental health outcomes have often occurred within the context of incident disasters with clear endpoints at which the psychological aftermath and consequences can be assessed (Adams et al., 2014; Rubin et al., 2012). The COVID-19 pandemic, however, constitutes a chronic stressor with continued detrimental effects on various levels of society. For example, the necessary social distancing measures instituted to address the COVID-19 contagion created major losses to social communities and networks broadly, and enacted particular harm for university student populations (Chen et al., 2020; Saltzman et al., 2020; Son et al., 2020; S. N. Williams et al., 2020). The pandemic has also contributed to fluctuations in employment and economic inequities, which have impacted student mental health and access to necessary resources for remote education as well as for lower-income populations more broadly (Ambrose, 2020; Cohen et al., 2020; Rudenstine et al., 2020; Wilson et al., 2020). Such social and economic stressors constitute a central aspect of the pandemic's harmful impact and thus need to be assessed in relation to psychological outcomes and potential mitigators of psychopathology for both lower SES and student populations.

The pandemic's everchanging nature, and its associated uncertainty, has required populations to frequently adjust expectations and behaviors (Godinić et al., 2020; Koffman et al., 2020). Given the emphasis within measurements of trauma-focused coping on in-depth understanding and tolerance for the pain inherent in stressful events,

it is important to investigate the role that trauma-focused coping may play in aiding individual's capacities for metabolizing COVID-19related stressors and thereby make sense of them amidst uncertainty and anxiety. Additionally, the initial Spring 2020 peak in viral cases fostered a sense of widespread fear about loss and mortality (Thompson, 2020). Research has demonstrated increased fear and hopelessness in relation to COVID-19related transmissions and health risks in various locations (Lee et al., 2020; Ustun, 2021). Experiences of uncertainty and fear, both apparent within this initial pandemic stage, are notable correlates for anxiety symptoms, therefore highlighting the potential role that such forward-focused coping, with its optimism and goal-oriented outlook, may play on the relationship between stress and anxiety during the pandemic (Grupe & Nitschke, 2013).

Preliminary research has demonstrated the broader role of coping constructs, as well as the specific differential role of trauma-focused and forward-focused perceived coping on psychological health during COVID-19 in the context of stress in the general population and in middle to older adults in particular (Budimir et al., 2021; Gurvich et al., 2021; Jordan et al., 2021; Rettie & Daniels, 2021; Zhou et al., 2020). Low-income young adults have been shown to have substantial levels of anxiety symptoms during COVID-19, but have not been utilized as samples in which to investigate the relation between perceived coping capacities and anxiety outcomes during the pandemic (Lee et al., 2021; Rudenstine et al., 2020). Coping has been operationalized with various measures, many of which have documented the significance of coping capacities during chronic stressors and in mitigating the harmful effects of life stress (Budimir et al., 2021; Cheng et al., 2014; Mahmoud et al., 2012; Rettie & Daniels, 2021). Perceived coping as it is defined presently, with trauma- and forward-focused subprocesses, has been used to document coping-related health outcomes in the context of distinct traumatic events and in the context of ongoing stress (Brivio et al., 2021; Jordan et al., 2021; Mussa et al., 2018). The present research is informed by the latter use of perceived coping and seeks to understand its role within the relationship of ongoing social and economic COVID-19related stressors and anxiety outcomes for student populations in particular.

The Current Study

The current study sought to assess if both trauma- and forward-focused coping buffered the negative effects of COVID-19related stressors on anxiety symptoms in a racially diverse, predominantly low-socioeconomic status (SES), urban sample of mostly young adult university students enrolled in at least one university-level course at the largest public university in the United States. It was hypothesized that both forms of coping would be associated with fewer anxiety symptoms in the context of COVID-19related stress. The analyses were conducted using data collected in April 2020, when viral transmission was at its initial peak in New York City. Given the importance of both perceived coping subtypes, and their varying protective roles within differing contexts,

we sought to understand the potentially moderating role of each type of coping on the relationship between COVID-19-related stress and anxiety outcomes.

Methods

Procedure

A Qualtrics self-report survey was sent out to all students at 6 City University of New York (CUNY) campuses via email by university administrators (i.e., dean of students and college president). The present sample constituted a sample of adults enrolled in at least one course at 6 CUNY campuses. All participants reported being at least 18 years old and were informed of the research criteria in the email as well as directed to a URL for the survey; there were no defined exclusion criteria. The survey took roughly 15 minutes to complete, and participants were not compensated for completion of the survey. Participants consented to the study by entering and completing the survey. The present study was approved by the Institutional Review Board at City College of New York.

Measures

Demographic Characteristics. Gender was defined with an item asking for endorsements of one of three exclusive categories: cisgender woman, cisgender man, or other (including other transgender and nonbinary identities). Ethnoracial group membership was categorized in five exclusive categories: non-Latinx white, non-Latinx Black, Latinx, non-Latinx Asian, and non-Latinx Indigenous (including American Indian or Alaska Native, and Native Hawaiian or Other Pacific Islander). As described above, we computed an index to ascertain the distribution of socioeconomic status, using scored levels of educational attainment, household and individual income and savings, and health insurance. The mean age of participants was 25.80 years ($SD = 8.94$).

Socioeconomic Status

The SES index was created using six variables: educational attainment (high school, college, and graduate school), household income (using \$65,000 as a cutoff for higher SES), household savings (using \$10,000 as a cutoff for higher SES), individual income (\$35,000 and over as a cutoff for higher SES), individual savings (\$5000 and over as a cutoff), and health insurance (categorized as private, scored highest, public, and no health insurance scored lowest), and our overall sample skewed on the lower end of the SES index, with a mean of 2.93 (1.80), within a range of 0–7, indicating lower levels of each component of the index. This index combines published indicators of SES and health outcomes stated in previous research. (Duncan et al., 2002; McMaughan et al., 2020; Smith, 1999). The mean SES index score of our sample was 2.93 ($SD = 1.80$).

Perceived Ability to Cope with Trauma (PACT)

The PACT scale is a 20-item scale that has been extensively used in research to examine coping processes in combat-exposed civilians, veterans, college students, and has been preliminarily used to assess the psychological impact of stress during COVID-19 (Bartholomew et al., 2017; Bonanno et al., 2011; Jordan et al., 2021; Kibler & Lyons, 2004; Knowles & O'Connor, 2015; Mussa et al., 2018; Pinciotti et al., 2017; Zhou et al., 2020). The scale has been shown to be a strong predictor of trauma-induced psychopathology (Bonanno et al., 2011). It has been validated against associated constructs of attachment anxiety, avoidance, resilience and emotion regulation (Bonanno et al., 2011). 12 items were associated with forward-focused coping and eight items were associated with trauma-focused coping. All items were ranked on a 1–7 scale, from “not at all able” to “extremely able.” The Cronbach’s alpha for forward-focusing coping for our sample was .91 and for trauma-focused coping was .79. The mean scores of each PACT subscale were as follows: $M = 38.35$ ($SD = 8.19$), for trauma-focused coping subscale, and $M = 55.34$ ($SD = 13.57$) for forward-focused coping.

COVID-19 Related Stress

Fifteen stressors were used to assess COVID-19 related stress: event cancellation due to COVID-19, seeing family in person less, seeing friends in person less, travel restrictions, death of a close relative or friend due to COVID-19, family or relationship problems, challenges finding childcare, feeling alone, not being able to get food due to shortages, not being able to get supplies due to shortages, losing a job, a member of the household losing a job, having financial problems, having difficulty paying rent, and being forced to leave campus. These stressors were adapted from previously used disaster-related stressor lists, have been researched in relation to pandemic-related psychological health outcomes, and include a range of pandemic-related social and economic stress experiences (Abdalla et al., 2021; Boardman et al., 2001; Ettman et al., 2020; Galea et al., 2008; Rudenstine et al., 2020). The question read “have any of the following affected your life as a result of the coronavirus or COVID-19 outbreak?” and participants were prompted to check off all stressors that affected them. Each endorsement was a score of one, and total scores were calculated by aggregating all of the endorsed stressors. Higher scores indicated greater number of total stressors endorsed. The mean total stressor score for our sample was 7.08 ($SD = 2.78$), with scores ranging from 0 to 16.

Generalized Anxiety Disorder-7 (GAD-7)

The GAD-7, a 7-item assessment tool scored on a binary yes/no scale was used to assess anxiety symptoms (Spitzer et al., 2006). Higher scores on the GAD-7 indicate greater severity of symptoms. The GAD-7 for our sample had strong reliability, as shown in the

Cronbach's alpha of .92. The scale has notable convergent, divergent, and procedural validity, as established in the literature and through correlations of related and divergent scales and modes of assessing anxiety symptoms (Spitzer et al., 2006). The mean GAD-7 score for our sample was 8.80 ($SD = 5.93$).

Data Analysis

Using SPSS for all analyses, we first ran descriptive statistics to check the prevalence of participant age, ethnoracial group membership, gender, and the mean and standard deviation of participant SES, as scored by our computed SES index, as well as mean scores for the COVID-19related stressors scale, PACT subscales, and GAD-7. Second, we ran simple linear regressions to assess for the relationships between stress and anxiety outcomes and each coping process and anxiety outcomes. To assess for the role of each coping process as effect modifiers on the relationship between stress and anxiety symptoms, we subsequently ran two multivariate hierarchical linear regressions and included the interaction of stress and each coping type as the final regression step. The first step of each of these regression analyses included socio-demographic predictors (age categories, ethnoracial categories, gender categories, and the SES index). The second step for the first regression involved the assessment of the main effects of COVID-19related stressor scores and PACT forward-focused coping scores, and the second step for the second regression involved the assessment of the main effects of COVID-19related stressor scores and PACT trauma-focused coping scores. Lastly, the third step for the first regression included the interaction of stressor and forward-focused scores, and the third regression step for our second analyses included the interaction of stressor and trauma-focused scores. Our use of separate regression analyses for each type of coping is in accordance with the literature on the PACT scale, and research on how each subscale should be measured separately, how each distinctly interacts with psychological outcomes and that the subscales should only be scored together in the context of assessing coping flexibility, which has a unique scoring procedure (Bonanno et al., 2011). We lastly probed any significant effect modifications to assess for significant gradient of slope t-tests. We imputed missing data for participants who did not complete less than half of a measure, and for participants who did not complete more than half of a measure, we recoded missing data and excluded from all analyses.

Results

Table 1 presents frequencies, means, and standard deviations for sample demographic characteristics, specifically for categorical ages, ethnoracial group membership, and gender, as well as continuous scores of the SES index, COVID-19related stressors, trauma-focused coping, forward-focused coping, and anxiety symptoms. The gender breakdown of our sample was 71.7% women; 27.0% men; and 1.3% endorsing another gender, including transgender and nonbinary. Ethnoracial group membership was

Table 1. Sample Demographic Characteristics.

Variable	<i>n</i>	%		
Total	2364	100		
Ethnoracial group membership				
Non-Latinx white	570	27.9		
Non-Latinx Black	303	14.8		
Non-Latinx Asian	498	24.4		
Non-Latinx Indigenous	31	1.5		
Latinx	640	21.9		
Gender				
Cisgender woman	1685	71.7		
Cisgender man	634	27.0		
Other (including transgender and nonbinary)	30	1.3		
	Mean	(SD)	Min	Max
Age	25.80	8.94	18	70
Socioeconomic status	2.93	1.80	0	7
COVID-19related stressors	7.08	2.78	0	16
Trauma-focused coping	38.35	8.19	8	56
Forward-focused coping	55.34	13.57	12	84
Anxiety symptoms	8.80	5.93	0	21

measured with seven exclusive categories, and 27.9% were non-Latinx white, 14.8% were non-Latinx Black, 21.9% were Latinx, 24.4% were non-Latinx Asian, and 1.5% were non-Latinx Other (including American Indian, Alaskan Native, Native Hawaiian, or other Pacific Islander). Our hypotheses regarding the role of both forms of coping on the relationship between stressors and anxiety symptoms were supported by the results of our computed multivariate hierarchical linear regressions, which yielded significant effect modifications. A multiple hierarchical linear regression assessing the relationship between step 1 (socio-demographics), step 2 (COVID-19related stressors and trauma-focused coping independently), and step 3 (stressors and interaction of trauma-focused coping), and anxiety symptoms, yielding the following results: socio-demographics accounted for 3.4% of the variance in anxiety symptoms, $\Delta R^2 = .034$, $F(4, 1445) = 13.93$, $p < .001$, COVID-19related stressor scores, $\beta = .37$, $t(6) = 15.14$, $p < .001$, and trauma-focused coping, $\beta = -.12$, $t(6) = -5.13$, $p < .001$, together accounted for 14.9% of the variance in anxiety symptoms, $\Delta R^2 = .149$, $F(6, 1443) = 54.88$, $p < .001$, and the interaction of stress and trauma-coping scores accounted for 0.2% of the variance in anxiety symptoms, $\Delta R^2 = .002$, $F(7, 1442) = 47.71$, $p < .001$. This significant interaction term, $\beta = -.01$, $t(7) = -2.00$, $p < .05$, was subsequently probed and yielded two significant slopes, gradient of slope = 1.22, $t(1449) = 5.68$, $p < .001$ for lower trauma-coping scores and gradient of slope = 1.21, $t(1449) = 5.78$, $p < .001$ for higher trauma-coping scores. This effect modification is demonstrated in [Figure 1](#).

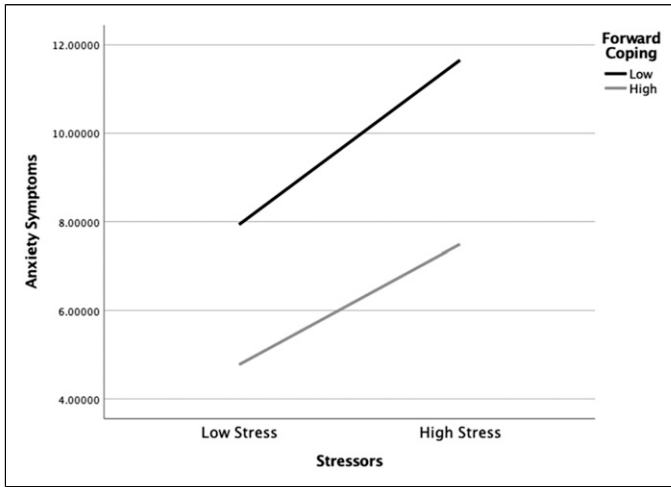


Figure 1. Modification of forward-focused coping on the relationship between stressors and anxiety symptoms. *Notes.* Forward-focused coping total scores were split at the median for graphing the effect modification.

Our second multiple hierarchical linear regression assessed the relationship between step 1 (socio-demographics), step 2 (COVID-19related stressors and forward-focused coping independently), and step 3 (interaction of stressors and forward-focused coping), and anxiety symptoms, yielding the following results: socio-demographics accounted for 3.4% of the variance in anxiety symptoms, $\Delta R^2 = .034$, $F(4, 1438) = 13.70$, $p < .001$, COVID-19related stressor scores, $\beta = .31$, $t(6) = 13.61$, $p < .001$, and forward-focused coping, $\beta = -.37$, $t(6) = -16.08$, $p < .001$, together accounted for 26.1% of the variance in anxiety symptoms, $\Delta R^2 = .261$, $F(6, 1436) = 101.63$, $p < .001$, and the interaction of stress and forward-coping scores accounted for 0.3% of the variance in anxiety symptoms, $\Delta R^2 = .003$, $F(7, 1435) = 88.49$, $p < .001$. This significant interaction term, $\beta = -.01$, $t(7) = -2.66$, $p = .008$ was subsequently probed and yielded two significant slopes, gradient of slope = 1.143, $t(1442) = 6.32$, $p < .001$ for lower identifying scores, and gradient of slope = 1.34, $t(1442) = 6.39$, $p < .001$ for higher identifying scores. This effect modification is demonstrated in [Figure 2](#).

Discussion

This study set out to assess the potential moderating role of each form of coping, trauma- and forward-focused coping on the relationship between COVID-19related stress and anxiety symptom outcomes. The present sample comprised ethnoracially and socioeconomically diverse individuals enrolled in university courses, which differs from many published university samples, where utilized student populations tend to endorse greater homogeneity in socio-demographic variables ([Richmond et al., 2015](#)).



Figure 2. Modification of trauma-focused coping on the relationship between stressors and anxiety symptoms. *Notes.* Trauma-focused coping total scores were split at the median for graphing the effect modification.

Our results yielded three notable findings. First, we found that socio-demographic variables, such as ethnoracial group membership and socioeconomic status, made significant contribution to the severity of anxiety symptoms. This finding is consistent with previous studies that have found that demographics and income levels are associated with variations in anxiety outcomes (Mahmoud et al., 2012; Rudenstine et al., 2020). In line with the study hypotheses, the two central findings in this study were that both forms of coping, trauma-focused and forward-focused, served as effect modifiers in the relationship between COVID-19-related stress and anxiety symptoms. These findings emphasize the importance of both coping processes on psychological health during the pandemic. Low-income urban populations report higher severity of stress exposure than higher SES populations (Gluck et al., 2021; Hatch & Dohrenwend, 2007; Myers et al., 2015). Low-income individuals attending university part- and/or full-time in particular are faced with compounded pressures involved in pursuing educational attainment while juggling greater economic responsibilities (Casey, 2020; Jury et al., 2017). Additionally, COVID-19 has enacted a greater toll on lower income urban neighborhoods, via greater mortality rates and decreased access to vital community spaces, among other substantial losses (Saltzman et al., 2020; D. R. Williams & Cooper, 2020). Such findings, therefore, point to the importance of documenting the effective forms of coping with chronic stress among low-SES communities. This knowledge can inform pathways for prevention to enhance the capacity to adapt PTEs and chronic stress. To the best of our knowledge, no work has been conducted thus far examining the role of each perceived coping process on anxiety outcomes, and specifically during

a chronic stressor such as the COVID-19 pandemic, among a low-income urban population enrolled in at least one university-level course.

The moderating role of trauma-focused coping on the relationship between COVID-19-related stress and anxiety symptoms can be understood in relation to previous research on anxiety symptom development. Trauma-focused coping emphasizes meaning making through experiences such as sitting with the pain of PTEs and stressors and remembering their details (Bonanno et al., 2011). Such an experience may increase clarity regarding the details of PTEs, and counteract the psychological uncertainty often associated with PTEs. Uncertainty is a core construct associated with anxiety symptoms and has been shown to be an important factor in increased anxiety (Carleton et al., 2012; Grupe & Nitschke, 2013; Hirsh et al., 2012; Miceli & Castelfranchi, 2005). Therefore, through targeting such experiences of uncertainty, trauma-focused coping may impact the relationship between stress and anxiety. These findings are in accordance with proposed theories on the uncertainty inherent in the pandemic, and the ways in which trauma-focused coping, with its emphasis on in-depth understanding and tolerance of painful aspects of stressful events, may perhaps offer individuals who are experiencing COVID-19-related stress greater capacities to process these experiences and make sense of them amidst increased uncertainty.

Relatedly, the moderating role of forward-focused coping on COVID-19 on the association between stress and anxiety can be understood in the context previous anxiety research. Forward-focused coping, in envisioning a post-PTE and hopeful future, may serve to buffer the fearful experience of anxiety symptoms. Anxiety is commonly associated with fears of the future and negative expectations regarding post-PTE life (Grupe & Nitschke, 2013; Reiss, 1991; Schulz et al., 2008; Shin & Liberzon, 2010; Tovote et al., 2015). Given the role of uncertainty and fear in anxiety and the role of fear within the initial Spring 2020 pandemic shutdowns and peak in COVID-19 mortality in New York City, our findings highlight the ways in which forward-focused coping may increase capacities for looking to the future in a more goal-oriented, optimistic, and broader sense. Together this perspective may have allowed individuals to imagine a world beyond the present dread of the worst peaks of the pandemic.

A few limitations of the present study are important to note. First, our sample was predominantly low-SES, majority women, enrolled in at least one course at the largest public university system in the US, and our data were collected at one time-point at an initial pandemic peak. Therefore, our findings may not be adequately generalizable for other populations or at other times during COVID-19. However, the diverse ethnorracial groups represented provide a unique snapshot into the mental health of this important population during COVID-19. Second, due to the cross-sectional nature of our data, causation could not be established between stress and anxiety outcomes, and we are unable to rule out the potential for reverse causation, whereby the presence of anxiety symptoms impacts endorsements of stress. Last, as noted, is the limitation of self-report measures: the use of them in this study may introduce increased error and participant bias either toward or away from perceived coping processes. Nevertheless, the

measures used in this study are highly reliable and well-validated self-report measures, which to the best of the authors' knowledge have not suffered from such critique.

Despite these limitations, the above findings highlight the overall importance of both trauma- and forward-coping processes for low-income student populations during COVID-19. Further research is necessary to determine if particular stressors differentially interact with each coping type. Nevertheless, the importance of both coping forms during COVID-19 is vital to the development of psychological interventions. For example, prevention efforts that nurture a forward-focused planning framework and mental health treatments incorporating trauma-focused processing are likely to reduce the anxiety symptoms experienced among individuals in the context of chronic stress (Shapiro & Maxfield, 2002; Turner et al., 2005; Walker, 2017). For lower income students in particular, university-led efforts to expand targeted counseling services in both individual and group formats that seek to enhance trauma-focused capacities to understand and sit with the pain of COVID-19-related stress, as well as increased opportunities for academic and career future-oriented goal-setting are necessary. Such initiatives would reduce increased anxiety and serve to improve psychological health outcomes for lower SES students.

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