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#### ORIGINAL ARTICLE

# Coping in the time of COVID-19: Mindsets and the stories we tell

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#### **Abstract**

Across two studies (*N* = 803), we explored how meaning-making systems (i.e., mindsets and narrative identity) are related to each other as well as to coping in the wake of challenges faced during the COVID-19 pandemic. In Study 1, we find that struggle-isenhancing, relative to struggle-is-debilitating, mindsets predicted stories defined by elements of personal control with opportunities for growth (agency) and an emphasis on the positive, rather than on the suffering (redemptive). Stronger enhancing mindsets and agentic as well as redemptive narratives predicted more adaptive coping, including less negative affect, less avoidance, and positive expectations for future success. In Study 2, we replicated these fundamental findings and explored relations with wellbeing. Struggle-is-enhancing, relative to debilitating, mindsets related to greater wellbeing as did agency and redemptive stories. Overall, creating meaning from struggle, crafting tales with more positive themes, and using active coping show promise for future work focused on enhancing social, emotional, and psychological wellbeing.

### 1 | INTRODUCTION

The COVID-19 pandemic, a global health calamity, created several stressors that threatened physical and mental health as well as economic wellbeing. In the United States, the majority (89%) reported as least one negative life-changing experience related to COVID-19 (Van Kessel et al., 2021). In attempting to cope with pandemic-related challenges, such as working from home while also caregiving for young children (e.g., Chung et al., 2020), or handling profound isolation (e.g., Pancani et al., 2021), we ask, why do some manage whereas others languish? A myriad of demographic, dispositional, interpersonal, and psychological predictors help to answer this question. For example, education and stable employment can provide resources for coping with the economic impact of the pandemic. Furthermore, positive relationships can promote effective coping through advice and support (Zimmer-Gembeck & Locke, 2007). Additionally, dispositional traits, such as a general tendency to be more optimistic and hopeful can serve as a buffer during stressful life experiences (Belen et al., 2020; Khodarahimi, 2013). In the current work, we seek to add to this list of predictors by focusing on two robust psychological theories related to handling difficulties. Namely, we outline how individual differences in the meaning-making systems of mindsets

and narrative identities are critical for understanding how individuals cope with everyday struggles.

In the present work, our goals are threefold. First, we examine how mindsets about the meaning of struggle relate to the stories people tell about challenges. Second, we investigate implications of these meaning-making systems for coping with COVID-19 pandemic-related parenting challenges and more general struggles. We investigate how mindsets and narratives relate to, what we term the affect, behavior, and cognitions (ABCs) of coping—affect (i.e., less negative affect and more positive affect), behavior (i.e., less avoidance and more active engagement), and cognitions (i.e., appraisals focused on the potential for future success). Our third goal, examined in Study 2, is to explore how meaning-making systems and coping relate to psychological wellbeing.

#### 2 | MINDSET THEORY

First, we draw on mindset theory, which illustrates the power of our beliefs in shaping how we see and respond to the world around us. Mindsets are beliefs about the nature of attributes, traits, people,

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experiences and more. Initial research focused on beliefs about the changeable versus innate nature of personal abilities such as intelligence (Dweck, 2006) and traits like morality (Chiu et al., 1997). The scope and range of mindsets continues to broaden to include beliefs about people (Erdley & Dweck, 1993) organizations (Canning et al., 2020; Murphy & Dweck, 2010), health (Conner et al., 2019; Crum & Zuckerman, 2017; John-Henderson et al., 2020; Thomas et al., 2019) and mental health, (Burnette et al., 2020), to name a few. The research most closely linked to the present line of work is theorizing related to beliefs about the meaning of experiences such as stress (Crum et al., 2013), negative emotions (Babij et al., 2020), and failure (Haimovitz & Dweck, 2016). Although extant literature exploring mindsets about traits and attributes, such as intelligence, is robust (e.g., Burnette, 2010; Dweck, 1999, 2006; Frondozo et al., 2020; Yeager et al., 2011), research regarding meaning-making mindsets is more nascent. Meaning-making mindsets research distinguishes between two types of beliefs. Whereas some individuals find such experiences to be opportunities for growth and development, others view them as debilitating (Crum et al., 2013).

We focus on the meaning assigned to the nature of experiencing struggle. We choose to focus on struggle, rather than failure, given that failure is valanced and potentially internally driven, whereas pandemic struggles are often not personal failures. One can struggle and ultimately succeed, or one can struggle and ultimately fail. For example, parents may have initially struggled to help their children navigate online learning but may have ultimately found a routine that produced the best possible outcomes. We explore if differences in the meaning assigned to these struggles are related to the stories we tell about challenges-namely, narrative identities-as well as how individuals cope with difficulties and their general wellbeing.

### NARRATIVE IDENTITY

Second, we draw on narrative identity, which like mindsets, serve as another meaning-making system that impacts how individuals cope with challenging events in their lives (Adler et al., 2015). Narrative identity theory argues that the stories we tell about our lives and our experiences-high points, low points, turning points, and everything in between-transcend beyond what is captured by studying dispositional traits alone (Adler et al., 2015; McAdams & Pals, 2006; McAdams, 2011). The narrative identity approach seeks to capture significant life events as well as how individuals differ in their understanding of those events (Adler et al., 2015). Recent work examining the various facets of narrative identity suggests narratives have a number of themes and components (McLean et al., 2020). Of relevance to the current work are motivational themes, which refer to the storyteller's provocations to change their lives as well as affective elements, which capture the emotions present throughout the narrative (McLean et al., 2020). Specifically, we focus on agency, redemption, and contamination. Agency, a motivational theme, refers to beliefs about one's abilities to effect change over circumstances in one's life (McLean et al., 2020). Two affective elements, redemption

and contamination, refer to the emotions present throughout the story, tracking from beginning to end (McLean et al., 2020). Redemption refers to a story that has a negative ending, but ends on a positive note. Contamination, on the other hand, refers to a story that begins positively, but ends negatively. In the current work, we discovered a fourth theme when analyzing participants' stories. Namely, we identified languishing, which are stories with strong themes of stagnation (i.e., stories that start out negatively and end negatively). These particular motivational and affective themes are likely related to mindsets and are predictors of coping and wellbeing.

#### MINDSETS AND NARRATIVES

We expect the two types of meaning-making systems to be related to each other. For example, it seems likely that individuals who hold a mindset that conceives of struggle as more enhancing, relative to debilitating, would believe in their ability to exercise agency, or control, over the events in their lives (Schroder, 2021). Furthermore, struggle-as-enhancing mindsets should be related to the narrative theme of redemption, which focuses on finding the positivewhether those are learning experiences, growth, or improvementin the challenges one faces (Blackwell et al., 2007; Dweck & Leggett, 1988; McAdams, 2006; McLean et al., 2020; Schroder, 2021). Additionally, enhancing mindsets may negatively relate to contamination as such stories reflect cynical expectations about the potential to develop in the future and tend to end with more negative undertones. Finally enhancing, relative to debilitating mindsets, are also likely negatively linked to languishing, or a lack of interest or desire to engage, as such mindsets can buffer against such stagnation.

## MINDSETS, COPING, AND WELLBEING

Mindsets set up a framework for understanding life experiences that impact not just the stories we tell about our lives, but also our affective, behavioral, and cognitive coping reactions to setbackswhat we call the ABCs of coping. Although there is limited work examining how struggle-is-enhancing mindsets predict coping, we expect similar patterns across affect, behavior, and cognitive responses as other adaptive meaning-making mindsets. For example, stress-is-enhancing mindsets are related to more positive affect, whereas stress-is-debilitating mindsets are related to more negative affect (Crum & Zuckerman, 2017; Park et al., 2018). Similarly, individuals with stronger negative-emotions-are-enhancing mindsets report fewer negative emotions when faced with a setback (Babij et al., 2020). To be clear, viewing stress, failure, and negative emotions as more enhancing rather than debilitating does not negate these feelings (Babij et al., 2020). Rather, it is how these experiences are framed and the meaning assigned to them that predict individual differences in outcomes. A recent meta-analysis of stress meaningmaking interventions found, overall, such interventions can have

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beneficial effects in reducing adverse responses to stress, such as lower stress, anxiety, and negative affect (Liu et al., 2019). Similarly, we expect that struggle-is-enhancing mindsets will predict less negative affect.

Additionally, meaning-making mindsets play an integral role in self-regulatory strategies, including engaging in mastery-oriented behaviors, rather than helpless, avoidant ones (Ford et al., 2018). For example, stronger stress-is-enhancing, relative to debilitating, mindsets are related to more mastery-oriented strategies such as seeking social and emotional support and active problem-solving (Crum & Zuckerman, 2017; Crum et al., 2013; Horiuchi et al., 2018). Additionally, individuals with stronger stress-is-enhancing mindsets are more likely to report a desire for feedback regarding their performance, likely because mindsets are associated with valuing learning and growth opportunities (Crum et al., 2013). Similarly, if one views their experiences with struggle as enhancing, it seems likely that they will engage, rather than avoid, when coping with challenges (Cain & Dweck, 1995; Dweck, 1986). Finally, mindsets also set up appraisals regarding the potential for future success, evaluations about whether one has the capacity to continue to improve and develop (Diener & Dweck, 1980). Growth mindsets are keystones of these evaluations (Diener & Dweck, 1980). Similarly, believing that a negative experience can be enhancing should correspond with the belief that future success, despite obstacles or struggles, is still possible.

Considering the link to more adaptive coping, it is not surprising that meaning-making mindsets, such as stress-is-enhancing mindsets, are also related to greater psychological wellbeing (Crum & Lyddy, 2014; Crum et al., 2013; Jiang et al., 2019; Keech et al., 2020) as well as flourishing (Hovt et al., 2021). For example, in a study with university students, stress-as-enhancing mindsets were positively related to both psychological and physical wellbeing (Keech et al., 2018). Additionally, in a meta-analysis, growth mindsets predicted motivation to seek treatment and more active coping, as well as less psychological distress (Burnette et al., 2020). Overall, viewing struggles as enhancing, rather than debilitating, will likely be positively associated with more adaptive coping and enhanced wellbeing.

## 6 | NARRATIVES, COPING, AND WELLBEING

Narrative identities should also impact the ABCs of coping. Narrative identity stories with elements of agency and redemption require that individuals reflect significantly on the negative event and actively search for learning moments (McAdams & McLean, 2013). This search for positive aspects of the experience can help buffer against negative affect (McLean et al., 2020). Stories with agency and redemption may also predict persistence and future cognitive expectations (McAdams & McLean, 2013). Similarly, stories with heavy undertones of defeat will also be reflected in the emotions, behaviors, and cognitions that people report in the wake of struggle.

In contrast to the more positive stories, contamination and languishing themes are likely tied to more negative affect, avoidance, and cynical evaluations.

Although there is less empirical support linking narratives to coping, there is a robust literature that outlines how stories with more agency and redemption and less contamination predict better mental health and psychological wellbeing (Adler et al., 2015). Indeed, agency and a sense of personal control is a cornerstone of psychological health (e.g., Adler, 2012). Likewise, the common thread within redemptive stories detailing how negative events in one's life (e.g., challenges/setbacks) are transformed into positive outcomes (e.g., growth, learning) is also reliably associated with psychological wellbeing (Adler et al., 2016; McLean et al., 2020). Contamination and languishing, on the other hand, undercut one's sense that the experience of struggle matters. These negatively toned stories often incorporate a sense of incoherence as well pessimistic beliefs about the possibility of finding future fulfillment, which can undermine psychological wellbeing (Ryff, 2018).

### COPING AND WELLBEING

In addition to the direct tie between meaning-making and both coping and wellbeing, we also expected the ABCs of coping to predict wellbeing. For example, positive, rather than negative, emotions can help people to adapt to challenging events in their lives, including COVID-19 pandemic struggle (Israelashvili, 2021; Moskowitz et al., 2021). Additionally, more mastery-oriented, rather than avoidant coping behaviors, can help to reduce psychological distress (Cicognani, 2011: Frydenberg & Lewis, 2009: Gustems-Carnicer & Calderón, 2013). Furthermore, positive expectations and appraisals can promote wellbeing by reframing the current problem and exhibiting a sense of optimism for future success (Zheng et al., 2021).

## 8 | CONCEPTUALIZATION OF **CURRENT WORK**

In summary, the goals of the current work are threefold. First, we explore relations among mindsets and narrative identities. Second, we investigate how these two meaning-making systems relate to what we call the ABCs of coping-namely, affective, behavioral and cognitive responses to pandemic-related struggles. Third, we examine how these meaning-making systems relate to psychological wellbeing. We offer and test the following hypotheses:

Struggle-is-enhancing, relative to debilitating, mindsets will be positively related to narratives focused on agency and redemption, but negatively related to contamination and languishing-themed

Struggle-is-enhancing, relative to debilitating, mindsets will be related to coping-namely, they will be negatively related to negative affect and avoidant coping behaviors and positively related to positive expectations.

Narratives will be related to coping—namely, agency and redemption will be negatively related to negative affect and avoidant coping behaviors and positively related to positive expectations for future success. In contrast, contamination and languishing will show the reverse pattern.

Mindsets, narratives, and coping will all be related to wellbeing (Study 2). Specifically, enhancing mindsets, agency and redemption themes, more positive affect, active coping, and positive expectations, will be positively related to wellbeing, whereas stories with contamination and languishing themes will be negatively related.

### 9 | STUDY 1 METHODS

In this first study, we focus on parenting challenges as many parents reported experiencing more stressors during the pandemic as they balanced many responsibilities including work, virtual education, and financial burdens (Fontanesi et al., 2020; Horesh & Brown, 2020). In Study 1, we recruited 350 participants through CloudResearch who identified as a parent of at least one school-aged child in April 2021 (Litman et al., 2017). Due to the exploratory nature of this first study, we estimated the sample size using a moderate effect size (r = .20) and 80% power with a two-tailed  $\alpha$  of .05 (Faul et al., 2007), which resulted in a sample size of roughly 300. We oversampled by 50 to compensate for eligibility and data quality issues.

We compensated participants \$1.00 for completion of the online survey. Of the 329 participants who passed eligibility requirements, including living in the United States and being a parent of a schoolaged child (defined as ages 4-18), 317 provided sufficient quality data for analysis (e.g., passing attention checks, answering any items in the questionnaire). We used multiple attention checks (e.g., asking participants to select the year "2018" from a list, asking participants to summarize what the study was about in their own words) to mitigate MTurker inattention and included a reCAPTCHA verification to decrease the likelihood of web robots, which boosts the internal validity, construct validity, and statistical validity of our studies (Aguinis et al., 2021). In addition, because we used CloudResearch (Litman et al., 2017), we were able to verify self-reported demographics, which bolster the external validity of our study (Aguinis et al., 2021). The study received ethical approval from the university IRB. Because this study was part of a larger study (see Supporting Information: Appendix with data transparency table), we created an OSF that outlines all measures utilized in the study (https://osf.io/5k9q7/?view\_only=7364a00af9c04b4ab34bb6ed1c6 a62a4). All conditions and data exclusions are reported.

### 9.1 | Participants

Participants' mean age was 39.53, with an age range of 21–65 (SD = 8.26). Participants could select more than one racial/ethnic identity. The racial composition is as follows: 231 White, 33 Asian, 19 Black/African American, 3 American Indian/Alaskan Native, 8

Hispanic/Latino, 2 Native Hawaiian/Pacific Islander, 14 identifying as 1 or more race/ethnicity, 1 identifying as Mixed, 1 identifying as Middle Eastern, 1 identifying as Jamaican, 1 no longer identifying with a racial group, and 3 preferring not to answer. The gender identification was 118 cisgender male (37.2%), 194 cisgender female (61.2%), 2 transgender females, with the remainder either identifying as nonbinary/genderqueer (1) or preferring not to answer (2). Overall, the sample over-represented White and female Americans.

#### 9.2 | Measures

#### 9.2.1 | Struggle mindsets

Participants completed a three-item struggle mindsets scale, adapted from Haimovitz's and Dweck's (2016) Failure Mindsets Scale. The scale measured participants' beliefs about the meaning they assigned to struggle in their lives, viewing it on a continuum from debilitating to enhancing. The three items are: "Experiencing struggle debilitates my performance and productivity; experiencing struggle inhibits my learning and growth; and the effects of struggle are negative and should be avoided." Participants responded using a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree). We reverse coded items such that a higher score indicates more of an enhancing view of struggle ( $\alpha$  = .72). This is in line with similar work, where higher scores reflect enhancing mindsets (Crum et al., 2013; Haimovitz & Dweck, 2016; Smith et al., 2020).

## 9.2.2 | Narrative identities

We asked participants to think about an event that best explains a parenting challenge they had faced using a narrative identity framework (McAdams, 2011). The prompt asked participants to include information such as who was there, when the event occurred, what they thought/felt during the event, why they chose this event, and the meaning they assign to the event (Pasupathi et al., 2020). We planned on extracting themes related to agency, redemption, and contamination, but in the process of coding we found another consistent theme—namely, languishing, which we define as stories that start out negatively and end negatively. These languishing stories illustrated a lack of engagement and instead clearly reflected a sense of stagnation when describing the nature and meaning of the struggles.

Using prior literature as a guide, we utilized the gold standard/ primary coder approach because of our sample size and simple coding scheme (Syed & Nelson, 2015). Therefore, two coders first coded 20% of the data set. Then, the first author, who is well-versed in narrative identity literature and the coding process, served as the primary coder, completing the remaining coding (Lilgendahl & McAdams, 2011; McLean & Pratt, 2006; Syed & Nelson, 2015). We coded agency continuously (0–4 scale), with 0 referring to no agency and 4 referring to high agency. Narratives with high agency themes focused on achievement and ability to effect change over life

circumstances. For example, one parent described finding out her son failed an assignment. She went on to describe how she asked her son and husband to be involved in solving the problem and how she followed up regularly with her son. Since agency was coded continuously, we calculated an intraclass correlation coefficient (ICC) to calculate the reliability (Shrout & Fleiss, 1979; Syed & Nelson, 2015; ICC = 0.80, p < .001).

For redemption, contamination, and languishing, we used categorical coding (0 = not present, 1 = present). Redemption sequences in narratives included stories featuring growth, learning, and improvement (McLean et al., 2020). For example, one parent stressed the difficulty of limited social interaction for their teen and ended with solutions that helped their teen's mental health. Contamination and languishing had negative components such as betrayal, loss, failure, and/or disappointment (McLean et al., 2020). For example, one parent discussed how her son was incredibly smart, but had recently failed his classes. She felt like she did not know how to help him succeed (contamination). Another parent discussed how her children kept misbehaving and it made the parent feel like a failure (languishing). The main difference between these two narratives is that contamination starts with some positive elements, which is subsequently tainted (McLean et al., 2020).

For redemption, the percent agreement was 90.2%. For contamination, the percent agreement was 88.2%. For languishing, the percent agreement was 93.1%. After reaching agreement on these initial codings, the first author coded the remaining responses. Of all the participants, 44.2% percent reported some (3) or high (4) agency in their stories, 16.1% reported both agentic and non-agentic elements in their stories (2), and 39.8% of participants reported little (1) to no (0) agency in their stories. In examining affective components, 50.5% of participants wrote redemptive stories, 31.2% wrote stories with some contamination and 39.3% wrote stories with some languishing. Narratives can contain both redemptive and contamination elements (Adler et al., 2015), so the story themes present are over 100%.

## 9.2.3 | ABCs of coping

We assessed affective, behavioral, and cognitive responses to a parenting challenge based on similar work assessing coping responses to a dieting setback in the mindset literature (e.g., Burnette, 2010). Namely, participants continued to reflect on the challenge they wrote about for the narrative identity exercise. Participants responded with how they would feel (i.e., affect) if they encountered a similar challenge, how they would behave (i.e., avoidant coping), and if they believed they could still prevail in the future (i.e., expectations).

#### **Affect**

We focused on negative, helpless affect as this is most closely linked to mindsets and wellbeing. We adapted the Positive and Negative Affect Schedule (Watson et al., 1988) to focus on negative affect. We

asked participants to reflect on a challenge they experienced while parenting, and then indicated how much they felt anxious, frustrated, helpless, and irritated on a 5-point Likert-type scale (0 = Not at all, 1 = A little, 2 = Moderately, 3 = Quite a bit, 4 = Extremely). A higher score indicates more negative affect ( $\alpha = .81$ ).

#### Avoidance

Participants rated the extent to which they would utilize avoidant strategies to cope with the setback. They rated 5-items on a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree). The measure was modified for parents and shortened from Ottenbreit and Dobson (2004) Cognitive-Behavioral Avoidance Scale. Sample items included, "I would avoid engaging in the situation" and "I would avoid dealing with similar parenting issues." A higher score indicates use of more avoidance ( $\alpha$  = .94).

#### Expectations for future success

Two items measured participants' expectations for future success, adapted from past mindset research looking at expectations in the wake of a dieting setback (Burnette, 2010). We assessed expectations on a 7-Point Likert-type scale (1 = strongly disagree, 7 = strongly agree). Items included "I am confident that, in the future, I can succeed as a parent" and "I am confident that, in the future, I can improve as a parent." A higher score indicates greater expectations of future success ( $\alpha$  = .82).

#### 9.2.4 Demographics

Participants responded to demographics questions regarding their age, race/ethnicity, gender, education level, income, and information about their child (e.g., age).

## 9.3 | Results

See Table  ${\bf 1}$  for means, standard deviations, and correlations for Study  ${\bf 1}.$ 

### 9.3.1 | Hypothesis 1: Mindsets and narratives

Bivariate correlations revealed that stronger struggle-is-enhancing mindsets were significantly and positively related to agency in narrative identity stories and to redemptive stories. Counter to expectations, struggle-is-enhancing mindsets were not significantly related to contamination stories or languishing narrative identity stories.

## 9.3.2 | Hypothesis 2: Mindsets and coping

Stronger struggle-is-enhancing mindsets were significantly related to the ABCs of coping in expected directions. Namely, such mindsets

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TABLE 1 Means, standard deviations, and correlations for struggle mindsets, agency, redemption, contamination, languishing, setback affect, avoidant coping, and expectations of future success

	М	SD	1	2	3	4	5	6	7	8
1. Enhancing mindsets	4.30	1.25	_	_	_	_	_	_	_	_
2. Agency <sup>a</sup>	2.04	1.52	.12*	_	-	-	-	_	-	_
3. Redemption <sup>b</sup>	N/A	N/A	.12*	.60***	_	_	_	_	_	_
4. Contamination <sup>b</sup>	N/A	N/A	07	40***	22***	-	-	_	_	_
5. Languishing <sup>b</sup>	N/A	N/A	05	28***	64***	42***	-	_	_	_
6. Negative affect	2.46	1.05	25***	22***	12*	.13*	02	_	_	_
7. Avoidant coping	2.32	1.22	38***	22***	26***	.02	.17**	.14**	_	_
8. Success expectations	6.09	0.95	.28***	.24***	.22***	10	08	08	55***	-

<sup>&</sup>lt;sup>a</sup>Measured on a 0-4 scale (0 = no agency, 4 = high agency).

were negatively related to negative affect and avoidant coping and positively related to future expectations of success. Overall, while encountering a challenge, individuals with stronger struggle-isenhancing mindsets, relative to struggle-is-debilitating mindsets, were less likely to report negative affect or avoidant coping behaviors and more likely to believe they could succeed when they face adversity in the future.

### Hypothesis 3: Narratives and coping

Narratives were also significantly related to the ABCs of coping. Agency and redemption predicted coping in the expected directions. More specifically, agency and redemption were negatively related to negative affect and avoidant coping but positively related to future expectations of success. Contamination was significantly and positively related to negative affect, but it was not significantly related to avoidant coping or future expectations of success. Languishing was not significantly related to negative affect or expectations but was positively related to avoidant coping. In sum, agency and redemption predicted all components of the ABCs of coping in predicted directions, whereas contamination and languishing exhibited less consistent patterns.

Next, we explored both meaning-making systems as predictors of the ABCs of coping in the same model. We conducted regression equations, with struggle-is-enhancing mindsets and all four types of narratives as predictors (coded 0 for not present and 1 for present for categorical narrative identity themes of redemption, contamination, and languishing and coded 0-4 for the continuous narrative identity theme of agency) for each coping outcome: affect, avoidant coping, and expectations for future success. First, predicting affect, struggleis-enhancing mindsets ( $\beta = -.23$ , t = -4.17, p < .001) and the narrative

theme of agency ( $\beta = -.22$ , t = -3.08, p < .001) were significant predictors. Redemption ( $\beta = -.11$ , t = -1.05, p = .296), contamination  $(\beta = -.08, t = -0.964 p = .346)$ , and languishing  $(\beta = -.19, t = -1.85, t = -1.85)$ p = .065), did not predict affect. Next, predicting avoidant coping behaviors, struggle-is-enhancing mindsets were a significant predictor  $(\beta = -.35, t = -6.81, p < .001)$  as were redemptive themes  $(\beta = -.25, p < .001)$ t = -2.68, p = .008). Agency ( $\beta = -.12$ , t = -1.71, p = .088), contamination stories ( $\beta = -.15$ , t = -1.84, p = .067), and languishing stories  $(\beta = -.11, t = -1.12, p = .262)$  were not predictive of avoidant coping. Finally, examining future expectations of success, struggle-isenhancing mindsets ( $\beta$  = .25, t = 4.64, p < .001), agency ( $\beta$  = .16, t = 2.27, p = .024), and redemptive narratives ( $\beta = .21$ , t = 2.17, p = .031) predicted expectations. Contamination ( $\beta = .09$ , t = 1.07, p = .287) and languishing narratives ( $\beta = .15$ , t = 1.50, p = .135) did not predict future expectations of success.

#### **Discussion Study 1** 9.4

Overall, struggle-is-enhancing mindsets related in expected ways to narratives and coping. Namely, people who hold stronger struggle-isenhancing mindsets are more likely to write narratives with more agency and redemptive stories. Contrary to our initial prediction, struggle-is-enhancing mindsets were not related to contamination. We also discovered a third type of narrative, languishing, but this theme was not related to struggle mindsets. Struggle-is-enhancing mindsets reliably predicted the ABCs of coping. Believing that experiencing struggle is a chance to develop and mature predicted less negative affect, less avoidance, and more positive expectations. Narrative identities had more mixed patterns, with agency predicting less negative affect and more positive expectations but not fewer avoidant behaviors. Redemption predicted both less avoidant

<sup>&</sup>lt;sup>b</sup>Measured as 0 (not present) or 1 (present).

<sup>\*\*\*</sup>Correlation is significant at the .001 level (2-tailed).

<sup>\*\*</sup>Correlation is significant at the .01 level (2-tailed).

<sup>\*</sup>Correlation is significant at the .05 level (2-tailed).

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behavior and more positive cognitions. However, the narrative themes of contamination and languishing did not predict the ABCs of coping. In the next study, we continue to explore the associations between meaning-making systems and coping and we also examine links to wellbeing.

#### 10 STUDY 2 METHODS

Using effect sizes from Study 1, we utilized G\*Power to determine the appropriate sample size necessary to replicate Study 1 results. The study has 80% power to detect an r of .13, with a two-tailed  $\alpha$  of .05 (Faul et al., 2007) with a sample size of close to 500. Thus, in Study 2, we recruited 500 participants through CloudResearch in July 2021 (Litman et al., 2017). We compensated participants \$1.00 for completion of the online survey. Of the 498 participants who passed eligibility requirements, 486 ( $M_{\rm age}$  = 42.10, age range = 18-80, SD = 13.72) provided sufficient quality data for analysis (e.g., passing attention checks, answering survey questions). We used the same attention checks from Study 1 (Aguinis et al., 2021). Participants could select more than one racial/ethnic identity. The racial composition is as follows: 363 White, 31 Asian, 42 Black/African American, 15 Hispanic/Latino, 29 identifying as one or more race/ ethnicity, 2 identifying as Mixed, 1 identifying as Middle Eastern, 1 identifying as Mexican-Czech-American, 1 identifying as Jewish, and 1 identifying as Hebrew. The gender identification was 166 cisgender male (33.4%), 313 cisgender female (64.4%), 1 transgender female, with the remainder either identifying as nonbinary/genderqueer (4) or preferring not to answer (2). Like Study 1, the sample over-represented White and female Americans. The study received ethical approval from the university IRB and all measures, conditions, and data exclusions are reported.

#### 10.1 Measures

#### 10.1.1 | Struggle mindsets

We used the same three debilitating items from the struggle mindsets scale from Study 1 and added the three enhancing items for a total of 6-items (Haimovitz & Dweck, 2016). The new items were: "Experiencing struggle enhances my performance and productivity, experiencing struggle facilitates my learning and growth, and the effects of struggle are positive and should be utilized." We reverse-coded the debilitating items so a higher score indicates more of an enhancing view of struggle ( $\alpha$  = .87).

#### 10.1.2 Narrative identity

Participants described a COVID-19 setback or challenge using the same narrative identity framework as Study 1 except we did not require them to focus on a parenting challenge in this study

(McAdams, 2011; Pasupathi et al., 2020). The prompt asked participants to think about and describe an event that best explains the challenges they have faced because of the COVID-19 pandemic. Like Study 1, they were asked to include information such as who was there, when the event occurred, what they thought/felt during the event, why they chose this event, and the meaning they assign to the event (Pasupathi et al., 2020). For example, participants wrote about effects on their mental health, isolation, online schooling, and changes in their daily schedule due to COVID-19.

As in Study 1, two coders coded 20% of the data set using the same guidelines and approach from Study 1 (Lilgendahl & McAdams, 2011; McLean & Pratt, 2006; Syed & Nelson, 2015). We calculated an ICC to examine the reliability (Shrout & Fleiss, 1979; Syed & Nelson, 2015; ICC = 0.76, p < .001). The percent agreement for redemption was 91.9%; for contamination it was 99% and for languishing it was 89.9% agreement. Next, the first author coded the remaining responses. Thirty-point nine percent of participants reported some or a lot of agency in their stories, 6% reported both agentic and non-agentic elements in their stories, and 63.3% of participants reported little to no agency in their stories. In contrast, 34.4% of participants wrote redemptive stories. Contamination was present in 1% of stories and, due to the low number of occurrences, was not included in any subsequent analyses. Languishing was present in 60.7% of stories. Additionally, 5.1% of the studies did not meet criteria for redemption, contamination, or languishing themes and these were coded as a fourth category labeled Other. This included stories that started out positively and ended positively or didn't provide enough information to code both a beginning and end of a story. As with Study 1, some stories contained two themes, which is reflected in the percentages listed above.

The lack of stories containing contamination may reflect differences in the studies. For example, we conducted Study 2 later in the pandemic when individuals failed to find any benefits. Additionally, in Study 2, we we asked participants to reflect on a challenge specific to the pandemic. Such a challenge, relative to a parenting struggle, is potentially less likely to contain positive notes.

#### 10.1.3 Coping ABCs

We again looked at ABCs related to coping with setbacks.

Setback affect

Participants completed the same measure from Study 1 ( $\alpha$  = .86).

**Avoidance** 

We used the same scale from Study 1, but it was adapted so that it did not include the word "parenting," ( $\alpha$  = .90).

Expectations for future success

We used the same measure as Study 1 except again changing it from a focus on parents to a more general challenge. A higher score indicates greater expectations of future success ( $\alpha$  = .92).

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### 10.1.4 | Wellbeing

Participants completed Keyes' (2002) Mental Health Continuum-Short Form (MHC-SF), which measures emotional, social, and psychological wellbeing across 14 items using a 6-point Likert-type scale (0 = never, 5 = everyday). Sample items included, "In the past 30 days, how much have you felt the following: happy; that you had something important to contribute to society; or that you had warm and trusting relationships with others." We created an overall sum score (range 0-70, M = 43.83, SD = 15.77). A higher score indicates greater psychological wellbeing ( $\alpha$  = .94).

#### 10.1.5 Demographics

Participants responded to demographic questions regarding their age, race/ethnicity, gender, education level, income, and marital status.

#### 10.2 Results

See Table 2 for means, standard deviations, and correlations for Study 2.

## 10.2.1 | Hypothesis 1: Mindsets and narratives

Consistent with Study 1, bivariate correlation analyses revealed that struggle-is-enhancing mindsets were significantly and positively related to agency and redemption in narrative identity stories about challenges. In contrast to Study 1, struggle-is-enhancing mindsets were negatively correlated with languishing narrative identity stories. Due to the low number of contamination stories present in the study, no analyses were conducted related to contamination.

#### 10.2.2 Hypothesis 2: Mindsets and coping

Furthermore, stronger struggle-is-enhancing mindsets were significantly and negatively related to negative affect and avoidant coping and positively related to future expectations of success.

#### Hypothesis 3: Narratives and coping 10.2.3

Once again, the narrative themes of agency and redemption predicted coping in the expected directions. They were both negatively related to negative affect and avoidant coping and positively related to future expectations of success. Languishing stories showed the opposite pattern: they were significantly and positively related to both negative affect and avoidant coping and negatively related to future expectations of success.

To further examine associations between these two meaning-making systems and the ABCs of coping, we explored meaning-making systems as predictors of the ABCs of coping in the same model. Consistent with Study 1 findings, a regression equation with struggle-is-enhancing mindsets and all three types of narratives as predictors (coded 0 for not present and 1 for present for categorical narrative identities of redemption and languishing) found that struggle-is-enhancing mindsets significantly predicted lower levels of negative affect ( $\beta$  = -.11, t = -2.44, p = .015). Also consistent with Study 1 findings, agency was not a significant predictor of affect ( $\beta$  = -.02, t = -0.472, p = .637) and redemption did not significantly predict greater levels of negative affect,  $\beta$  = .16, t = 1.94, p = .053. Unlike Study 1, languishing significantly predicted greater negative affect,  $\beta$  = .36, t = 4.34, p < .001. In terms of avoidance, both struggle-is-enhancing mindsets ( $\beta = -.21$ , t = -4.85, p < .001) and agency ( $\beta$  = -.22, t = -4.47, p < .001) predicted less avoidance. Neither redemption ( $\beta = -.07$ , t = -0.87 p = .384) nor languishing ( $\beta = .02$ , t = 0.19, p = .849) significantly predicted avoidance. Finally, both struggle-isenhancing mindsets ( $\beta$  = .45, t = 11.12, p < .001) and agency ( $\beta$  = .13,

Means, standard deviations, and correlations for struggle mindsets, affect, coping, future success, agency, redemption, languishing, and wellbeing

	М	SD	1	2	3	4	5	6	7	8
1. Enhancing mindsets	4.44	1.20	_	_	_	_	_	_	_	_
2. Agency <sup>a</sup>	1.32	1.43	.16***	_	_	_	_	_	_	_
3. Redemption <sup>b</sup>	N/A	N/A	.19***	.48***	_	_	_	_	_	_
4. Languishing <sup>b</sup>	N/A	N/A	19***	52***	84***	-	-	-	_	_
5. Negative affect	2.26	1.14	15***	15***	18***	.26***	_	_	_	_
6. Avoidant coping	3.36	1.55	26***	30***	23***	.23***	.31***	_	_	_
7. Success expectations	5.62	1.13	.48***	.22***	.19***	20***	14**	23***	_	-
8. Wellbeing	43.83	15.77	.35***	.19***	.20***	21***	20***	33***	.57***	-

<sup>&</sup>lt;sup>a</sup> Measured on a 0-4 scale (0 = no agency, 4 = high agency).

<sup>&</sup>lt;sup>b</sup>Measured as 0 (not present) or 1 (present).

<sup>\*\*\*</sup>Correlation is significant at the .001 level (2-tailed).

<sup>\*\*</sup>Correlation is significant at the .01 level (2-tailed).

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t = 2.70, p = .007) were robust predictors of greater future expectations of success. However, neither redemption ( $\beta$  = .02, t = 0.28, p = .776) nor languishing ( $\beta = -.03$ , t = -0.41, p = .685) predicted future expectations.

## 10.2.4 | Hypothesis 4: Mindsets, narratives, coping, and wellbeing

Finally, struggle-is-enhancing mindsets were significantly and positively related to wellbeing. In examining links between narrative themes and wellbeing, the results indicate that agency and redemption were positively related and languishing was negatively related to psychological wellbeing. We also examined relationships between the ABCs of coping and wellbeing, finding both negative affect and avoidance were negatively related to wellbeing while future expectations of success was positively related to wellbeing. We then explored predictors of wellbeing. We included the meaning-making systems of struggle mindsets and narrative identity themes (i.e., agency, redemption, and languishing). Struggle-is-enhancing mindsets were the only significant predictor of wellbeing ( $\beta$  = .32, t = 7.36, p < .001). Agency ( $\beta = .08$ , t = 1.68, p = .093), redemption ( $\beta = .02$ , t = 0.31, p = .759), and languishing ( $\beta = -.09$ , t = -1.09, p = .275) were not significant predictors.

## **Discussion Study 2**

Study 2 replicated Study 1-namely, the relationship between struggle mindsets and narrative identity themes of agency and redemption. The results also illuminated a significant and negative relationship between struggle-is-enhancing mindsets and languishing. Stronger struggle-is-enhancing mindsets and narrative themes predicted the ABCs of coping in expected directions. However, in Study 2, contamination narratives lacked adequate data to test. This finding suggests that as the pandemic continued, languishing may have become more common as it became clearer that the end of the pandemic was nowhere in sight (Derosier, 2022; Grant, 2021; Stolberg & Rabin, 2021). In line with Study 1, Study 2 findings indicate that struggle mindsets are a more robust predictor of the ABCs of coping than narrative identity themes. We also explored the outcome of wellbeing and found that both meaning-making systems and the ABCs of coping predicted wellbeing in the expected directions. Testing the meaning making systems simultaneously, struggle-is-enhancing mindsets, but not narrative themes, predicted psychological wellbeing.

#### 11 **GENERAL DISCUSSION**

In this study, we had three primary goals: to explore relations among struggle mindsets and narrative identities, to investigate how these two meaning-making systems relate to the ABCs of coping, and to examine if the meaning-making systems predict psychological

wellbeing. Overall, we find that the more people construe struggleas-enhancing, the more their narrative stories of struggle are marked with themes of agency and redemption and the less they focus on the negative elements. That is, struggle-is-enhancing mindsets correspond with personal narratives defined by elements of control, opportunities for growth, and a focus on the positive. Additionally, struggle-is-enhancing mindsets and narrative stories that are imbued with agency and redemption predict adaptive coping, including more positive affect, fewer avoidant behaviors, and positive cognitions. Finally, in the second study we show that meaning-making systems (i.e., struggle-is-enhancing mindsets and personal narratives of agency and redemption) and active coping are positively related to social, emotional, and psychological wellbeing.

We highlight a few takeaways relevant to theoretical advances and practical application. This is the first empirical work to our knowledge that merges mindset theory with narrative identity theory to investigate responses to challenges. Our work shows these beliefs are both related to each other and are also unique predictors of coping. Thus, this study suggests that to gain a fuller understanding of the role of belief systems in predicting how people cope with challenges, we should consider both beliefs about the nature of setbacks as well as the stories we construct about challenging life circumstances. There may be shared elements between these belief systems that can also help us understand how they predict psychological flourishing. For example, both mindsets and agency share components regarding the belief that one can impact change. Thus, the current work suggests that struggle-as-enhancing mindsets might predict wellbeing in part through a greater sense of control over the events one experiences in life. This potential mechanism aligns with a long line of previous work showing a link between perceived control and wellbeing in clinical settings (Brown & Siegel, 1988; Strömberg et al., 2021; Wardle et al., 2004) as well as employment settings (Gabriel et al., 2020; Spector et al., 2002).

In addition to having shared elements, these meaning making systems also have unique components that are related to coping and wellbeing. In both studies, we examined both meaning making systems together in the same model to examine the strongest predictors of the outcomes. Mindsets remained a robust predictor of the ABCs of coping and wellbeing, whereas the pattern of associations between narrative themes and coping showed more mixed patterns. We found some, though not robust, support for stories marked by themes of agency and redemption to also independently, beyond mindsets, predict less negative affect, fewer avoidant behaviors, and more positive cognitions.

We also contribute to the narrative identity literature by identifying a new narrative theme of languishing. Our work shows that this type of bleak storytelling, that starts and ends in negativity, has adverse implications for coping and wellbeing. Our work also adds to the empirical work linking narrative stories with themes of agency and redemption to more adaptive coping and better wellbeing.

These findings also offer a new approach for investigating coping and wellbeing in the context of the COVID-19 pandemic and

highlights how positive psychology can help individuals navigate the challenges of the pandemic (Waters et al., 2021). By exploring the role of mindsets and storytelling, we contribute another potential path for helping individuals cope with inevitable and seemingly never-ending struggles associated with pandemic life. Namely, this study suggests that working to promote the belief that struggles can be enhancing rather than debilitating and more agentic narrative storytelling might stimulate more adaptive coping and greater overall wellbeing. For example, drawing on the tradition of wise interventions in psychology that are focused on the meaning and inferences people make about themselves and their situations (Walton & Yeager, 2020), a brief meaning-making intervention on the nature of struggles might be beneficial. That is, an intervention focused on promoting the understanding that experiencing pandemic-related struggles can ultimately be enhancing, rather than debilitating, might serve as a catalyst for both cognitive and behavioral strategies that promote greater wellbeing.

Additionally, considering what elements of the struggle one does have control over may help promote more agency. For example, even something as simple as obtaining resources or outside help can be considered effective demonstrations of agency (Adler et al., 2015). Furthermore, learning how to reframe negative experiences by examining the recovery, learning, growth, improvement, or other beneficial opportunities can also help people cope with pandemicrelated stressors (McLean et al., 2019). In the context of the pandemic, this may take many forms, such as recognizing the ways in which struggling can lead to learning and positive change. However, we are not suggesting that narratives should be crafted in a manner that dissolves the anguish and distress from pandemic related stressors (Adler et al., 2015). Overall, we suggest that how one thinks about and tells stories about life's pivotal, yet challenging, moments can be important predictors of coping and wellbeing.

#### 11.1 Limitations and future directions

Despite theoretical and applied contributions of this study, there are limitations worth noting and addressing before putting findings into practice. First, our methods do not establish causality and likely these relations are a bit more cyclical rather than linear. Thus, questions remain. Does a tendency to tell stories with agency contribute to the belief that struggle-is-enhancing or does this belief lead to a life narrative that recognizes opportunities for growth in everyday challenges? It seems plausible that it goes both directions, but experimental work can help to answer these questions and will provide important clues for where to potentially intervene when trying to leverage meaning-making systems to improve wellbeing. Additionally, future work can employ a manipulate the mediator design (Pirlott & MacKinnon, 2016) to investigate if coping is working as a primary mechanism by which these meaning-making systems, especially mindsets, are contributing to wellbeing. Work examining processes should also consider multiple psychological mechanisms

such as threat appraisals, goal orientations, and value, which have been shown to be important in the context of mindsets and wellbeing (Hoyt et al., 2021; Mansell, 2021; Sosik et al., 2017; Thomas et al., 2019). This study should emphasize behavioral components, as prior work has called for increased attention to potential behavioral pathways which mediate the relationship between mindsets and outcomes (Miller et al., 2017).

Another limitation of the study is the sample, which is drawn from a Western, Educated, Industrialized, Rich, Democratic (WEIRD) population (Henrich et al., 2010; Johnson, 2021). The participants were mainly female and White, and resided in the United States, limiting the generalizability of the results. Future research should focus on recruiting a more diverse sample of participants to determine boundary conditions, especially given the cultural value placed on redemptive stories within the United States (McAdams, 2006; McLean et al., 2020). Another issue is that we investigated links within the context of struggles-ones experienced during the COVID-19 pandemic. Thus, questions remain about replications with potentially more rote difficulties or during times that are not as marked by languishing (Grant, 2021). Future work should continue to try and determine the constraints on the generality of the findings (Simons et al., 2017). For example, understanding if these findings extend beyond mostly WEIRD populations and contexts that do not incorporate such a pivotal moment in our history may lead to key insights as to for whom and when these meaning-making systems matter for wellbeing.

#### 11.2 Conclusion

Understanding factors that are linked to psychological flourishing is important in everyday life, and is especially vital during a time in which many are languishing. The current work contributes to a growing body of literature linking meaning-making systems to navigating challenges. The results indicate that struggle-isenhancing mindsets and the narrative theme of agency, both of which share components of a sense of control, relate most strongly to one's thoughts, feelings, and behaviors when encountering difficulty. We hope this initial line of work merging mindset and narrative identity theories paves the way for future inquiry to better understand the potential to leverage these beliefs and processes in interventions that promote psychological flourishing.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in Open Science Framework (OSF) at https://osf.io/5k9q7/?view\_ only=7364a00af9c04b4ab34bb6ed1c6a62a4.

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#### **ENDNOTE**

<sup>1</sup> This outcome is also included in another line of work focused on mindsets of parenting; see Supporting Information: Appendix for a data transparency table.

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#### SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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