

**Coping as a Moderator of the Relationship Between Cumulative Trauma and Resilience**

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### **Abstract**

This study examined whether coping strategies moderated the relationship between cumulative trauma exposure and resilience among undergraduate students. Ninety-eight participants, primarily women and predominantly White, completed self-report measures assessing trauma exposure, coping style, and resilience. Participants responded to the Life Events Checklist for DSM-5 (LEC-5), the Coping Orientation to Problems Experienced (COPE) inventory, and the Brief Resilience Scale (BRS). The research question explored whether task-oriented coping would enhance resilience after cumulative trauma, while emotion-focused coping would weaken it. Results partially supported the hypotheses. Cumulative trauma was positively associated with higher resilience, suggesting that experiencing multiple traumas may lead to adaptive strengths over time. Emotion-focused coping, however, was negatively associated with resilience, indicating that strategies like rumination and avoidance may hinder recovery. Contrary to expectations, neither task-oriented nor emotion-focused coping significantly moderated the relationship between trauma and resilience. These findings challenge traditional dose-response models and highlight the complex and individualized nature of resilience after trauma exposure. Coping strategies alone may not fully explain differences in outcomes, emphasizing the need to consider broader psychosocial factors. Future research should investigate additional moderators such as social support, trauma meaning-making, and personality traits to better understand how individuals recover from cumulative adversity.

### **Coping as a Moderator of the Relationship Between Cumulative Trauma and Resilience**

Trauma exposure is a widespread phenomenon, yet individuals respond to it in vastly different ways (King et al., 2015). Some develop significant distress and long-term psychological consequences, while others demonstrate resilience. Research suggested that coping strategies played a crucial role in determining these outcomes (Hamby et al., 2021). Resilience, defined as an individual's ability to adapt and recover from adversity, has been studied in relation to trauma, but much of the existing research has focused on single-event trauma rather than cumulative exposure. Since many individuals experience multiple traumatic events over time, it was essential to examine how coping mechanisms functioned in response to repeated trauma. A deeper understanding of these relationships could contribute to improving mental health interventions and support systems.

Coping strategies have been categorized as task-oriented or emotion-focused. Task-oriented coping involves active problem-solving and cognitive restructuring to manage stress, and has been found to be associated with lower rates of depression, anxiety, and post-traumatic stress symptoms (Carver et al., 1989). Emotion-focused coping, on the other hand, includes avoidance, denial, and self-blame—strategies that provide temporary relief but are linked to greater distress over time (Smith et al., 2016; Thompson et al., 2018). While task-oriented coping is considered a protective factor against trauma-related distress, less is known about its effectiveness in individuals with high cumulative trauma exposure. Additionally,

little research has examined whether emotion-focused coping interacted with the number of traumatic experiences to predict resilience.

The dose-response theory suggested that increased trauma exposure raised the likelihood of developing post-traumatic stress symptoms (PTSS) (Hamby et al., 2021). Studies indicated that individuals with multiple trauma exposures were more vulnerable to negative psychological outcomes than those who had experienced a single traumatic event (King et al., 2015). For instance, research on the psychological effects of the 9/11 terrorist attacks found that individuals with a history of trauma were more likely to develop PTSD than those experiencing trauma for the first time (Galea et al., 2002). However, resilience remained the most common response to trauma, even in extreme cases, which suggested that coping strategies played a significant role in determining psychological outcomes.

This study sought to address these gaps by examining how task-oriented and emotion-focused coping moderated the relationship between cumulative trauma exposure and resilience. Specifically, we aimed to determine whether task-oriented coping helped protect against the negative psychological effects of repeated trauma exposure, while emotion-focused coping amplified them. We hypothesized that individuals who primarily used task-oriented coping would demonstrate higher resilience despite cumulative trauma exposure, whereas those who relied on emotion-focused coping would exhibit lower resilience as trauma exposure increased. We reached this hypothesis through findings from existing literature, which showed that highly resilient individuals relied more on task-oriented coping, which was linked to better psychological outcomes. Meanwhile low-resiliency individuals struggled even when using task-oriented coping, experiencing higher negative affect. Emotion-oriented coping (like

self-blame and rumination) was mostly harmful, but high-resiliency people were less affected by it. Avoidance coping had mixed results and wasn't influenced by resiliency (Smith et al., 2016).

## **Method**

### **Participants**

A total of 98 participants were included in this survey. The race/ethnicity of participants was 74.5% White or Caucasian, 9.2% Asian, 6.1% Black or African American, 16.3% Hispanic or Latinx, 7.1% bi-racial or multi-racial, and 1.0% decided to self-describe. For sexual orientation, 5.1% of participants identified as lesbian, 24.5% of participants identified as bisexual, 7.1% of participants identified as pansexual, 6.1% of participants identified as queer, 6.1% of participants identified as asexual, 55.1% of participants identified as straight, and 3.1% of participants self-described their sexual orientation. For gender identity, 6.1% identified as nonbinary, 3.1% identified as genderqueer, 2.0% identified as gender non-conforming, 14.3% identified as a man, 76.5% identified as a woman, and 3.1% self-described their gender identity. The demographic information is shown in Table 1. The demographic data collected was on race, ethnicity, sexual orientation, and gender identity.

### **Measures**

The Life Events Checklist for DSM-5 (LEC-5; Weathers et al., 2013), is a self-report measure that is used to establish exposure to PTSD Criterion A traumatic events. The LEC-5 assesses exposure to 17 different events known to possibly result in distress towards a traumatic event. Some of these include natural disasters, physical assault, sexual assault, illness, and

sudden death. The LEC-5 also had one question to assess any other stressful events not asked about in the first 16 questions. Participants indicated varying levels of exposure to each type of potentially traumatic event included on a five-point nominal scale; “(A), Happened to me, (B), witnessed it, (C), learned about it at my job, (D), not sure, (E), does not apply”. Respondents may endorse multiple levels of exposure to the same trauma type. There is technically no formal scoring protocol for this measure as it is up to the researchers to interpret. The scaling used for this study is represented by the option of a one or a zero. “Happened to me” is represented by a one, whereas the rest of the options are represented by a zero. This was done to ensure the criterion A traumatic event is fully captured, as the study’s goal is to represent direct trauma. Participant's responses to the LEC-5 have been shown to remain consistent over time and are comparable to the results of other trauma measures such as the Traumatic Life Events

Questionnaire and the Stressful Life Events Screening Questionnaire (Weathers et al., 2013). The Coping Orientation to Problems Experienced (COPE) inventory (COPE; Carver et al., 1989), is a 28-item self-report measure designed to assess how individuals cope with stress. It evaluates effective and ineffective coping strategies that people use in response to negative life events. The COPE inventory is widely used in psychological research to understand individuals' coping mechanisms under stress which may include health problems, financial stress, or personal struggles. The survey measures three main coping styles: problem-focused, emotion-focused, and avoidant. Problem-focused coping is to directly address or solve the problem causing stress. Emotion-focused coping is a strategy aimed at managing emotional distress rather than solving the problem. Avoidant coping is attempting to avoid or escape from the stressor. The participants chose answers from the following: “I haven’t been doing this at all”, “a little bit”, “a medium amount”, or “I’ve been doing this a lot”. For example, if the statement is “I’ve been having

negative thoughts”, the participants would then answer from the choices that best suit them to indicate how much they have used that coping strategy. The COPE inventory demonstrates strong construct validity, as factor analyses have supported its structure in distinguishing different coping strategies. It also displays convergent validity, correlating well with other established measures of coping and psychological well-being. Additionally, its internal consistency typically ranges from 0.70 to 0.90 alpha score for different subscales, indicating good reliability. (COPE; Carver et al., 1989).

The Brief Resilience Scale, (BRS; Smith et al., 2008), is a self-assessment tool that measures an individual’s capability to recover from adversity. The BRS scale assesses one’s ability to recover by having participants rate their agreement with statements describing their typical responses to difficult situations. It consists of six items that are each rated on a five-point Likert Scale ranging from one (strongly disagree) to five (strongly agree). Three items assess the presence of resilience with statements such as “I tend to bounce back after hard times,” and “It does not take me long to recover from a stressful event.” The remaining items assess the absence of resilience through statements such as “It is hard for me to snap back when something bad happens,” and “I tend to take a long time to get over setbacks in my life,” and are reverse scored. Higher total scores indicate an easier time recovering from adversity, signaling higher resilience. Lower total scores represent greater difficulty in recovering from stress, indicating lower resilience. The BRS scale shows internal consistency, with an alpha score ranging from .80 to .91. The BRS scale is also positively correlated with other measures that assess resilience, which supports the presence of convergent validity. It was found to be negatively correlated with anxiety, depression, and negative affect, demonstrating discriminant validity (BRS; Smith et al., 2008).

**Procedure**

The purpose of this research is to study the use of coping strategies after stressful life events. Individuals who volunteer to participate in this study will complete an online survey that consists of questions about stressful things they may have experienced, such as being physically or sexually harmed. They were also prompted to answer questions about how they think and feel. The sample for this study consisted of undergraduate students from the University of Mary Washington General Psychology participant pool. Participants were recruited from SONA and asked to complete a 30-minute online survey consisting of demographics and self-report measures remotely through the Qualtrics platform. The participants were compensated 0.5 credit towards their General Psychology class. No identifying information was collected as the survey was anonymous. Participants could withdraw at any point throughout the study. This data will help expand the knowledge of how people cope differently and how people with traumas can have different reactions and overall resilience.



## Results

In response to the LEC-5, 27.8% of participants reported directly experiencing a traumatic event at some point in their lives. Of the direct traumatic experiences reported, 49.5% reported experiencing an unwanted sexual act, 38.8% reported experiencing a transportation accident, and 24% reported experiencing physical assault. Of participants who directly experienced a traumatic event, 83.3% reported experiencing additional trauma, with 19.4% reporting 2 events, 12.2% reporting 3 events, and 29.5% reporting more than three. 40% of participants reported experiencing a stressful life event not listed on the questionnaire. In response to the COPE Inventory, the mean score for Problem-Focused Coping items was 20.2 ( $SD = 5.62$ ), while the mean score for Emotion-Focused Coping items was 28.8 ( $SD = 7.0$ ).

Process syntax was used to test the hypothesis that individuals who had problem-focused coping would experience a positive relationship between the number of traumas experienced and resiliency, while those who had emotion-focused coping would experience a negative relationship between the number of traumas and resiliency. Our hypothesis was partially supported by the main effects. There was a significant main effect for the relationship between trauma and resiliency ( $\beta = 0.31$ ,  $p = .03$ ). There was a nonsignificant main effect between problem-focused coping and resiliency ( $\beta = 0.02$ ,  $p = .77$ ). There was a significant main effect for the relationship between trauma and resiliency ( $\beta = 0.43$ ,  $p = .00$ ). There was a significant main effect for the relationship between trauma and emotion focused coping ( $\beta = -0.12$ ,  $p = .01$ ).

However, the interactions showed that our hypothesis was not supported by the data. The interaction between cumulative trauma and problem-focused coping was not statistically significant ( $\beta = -0.03$ ,  $p = .17$ ). The interaction between cumulative trauma and emotion-focused coping was not statistically significant ( $\beta = 0.01$ ,  $p = .66$ ).

### **Discussion**

The findings of our study offer partial support for our original hypotheses. We expected that individuals who experienced more cumulative trauma would also report higher resilience, and this hypothesis was supported. Interestingly, this positive relationship was observed across individuals regardless of whether they tended to use problem-focused or emotion-focused coping strategies. This suggests that individuals may develop adaptive strengths in response to repeated adversity, a phenomenon consistent with the concept of post-traumatic growth. We also hypothesized that emotion-focused coping would be negatively associated with resilience, which was supported. However, our prediction that coping style would moderate the relationship between trauma and resilience was not supported—neither problem-focused nor emotion-focused coping significantly interacted with trauma exposure to influence resilience levels.

Moreover, the relationship between trauma and resilience appeared curvilinear rather than linear. As individuals experienced more traumatic events, their levels of resilience did not simply increase steadily—they accelerated. This suggests that beyond a certain threshold, people may develop exponentially greater resilience, possibly due to adaptation or meaning-making processes. This pattern adds nuance to our understanding of trauma's psychological consequences, indicating that higher trauma exposure may sometimes strengthen an individual's capacity to recover.

These results contribute to the broader literature by challenging the traditional dose-response model, which posits that more trauma results in worse psychological outcomes (Hamby et al., 2021). Instead, our findings align more closely with research showing resilience as a common, even amplified, response to repeated trauma (Galea et al., 2002). Notably, participants in our study reported significantly greater use of emotion-focused coping ( $M = 28.8$ ,  $SD = 7.0$ ) than problem-focused coping ( $M = 20.2$ ,  $SD = 5.62$ ). This may help explain the significant negative association between emotion-focused coping and resilience. Strategies such as rumination or avoidance (Smith et al., 2016) can hinder recovery, and their overuse may be one reason why individuals who rely on emotion-focused coping showed lower resilience.

Problem-focused coping, on the other hand, was not significantly related to resilience in our data, despite previous findings suggesting otherwise (Thompson et al., 2018). One explanation for this may be that coping effectiveness depends on the nature of the trauma, the timing of the event, or whether the coping strategy is internally developed or externally taught. The key takeaway is that trauma increased resilience regardless of coping strategy, and neither type of coping amplified or diminished this relationship—challenging the idea that coping styles are always reliable buffers.

A key strength of our study is the use of reliable and validated measures (LEC-5, COPE Inventory, BRS), which strengthens the internal validity of our findings. Additionally, our relatively large undergraduate sample offered clear insights into how young adults respond to trauma. However, this demographic also introduces limitations. The sample lacks diversity in age, race, and life experience, which limits the external validity of our findings. Furthermore, our cross-sectional design restricts any causal conclusions. We also did not differentiate between types, timing, or severity of trauma—factors that likely influence coping and recovery. Lastly, we

only examined two coping styles. Other strategies—such as mindfulness, avoidant coping, or meaning-focused coping—may play important roles in shaping resilience outcomes and deserve further study.

The next step in the theory-data cycle should involve investigating other moderators that influence the trauma-resilience relationship. These might include perceived social support, cultural context, personality traits, or trauma-specific meaning-making. Future research should also examine whether coping strategies are taught, innate, or shaped by environment—and whether their effectiveness changes over time. Longitudinal studies would provide a clearer picture of how coping and resilience evolve following trauma across the lifespan.

In sum, our findings suggest that cumulative trauma may foster greater resilience, even when individuals rely on less adaptive coping strategies. However, coping style alone does not fully explain why some people recover better than others. This highlights the importance of contextualizing coping within a broader psychosocial framework. Ultimately, resilience appears to be a complex and individualized response—shaped not only by what people do, but by who they are, what they've endured, and the systems that support them.

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*Table 1*

Main Effects and Interaction of Cumulative Trauma on Resilience

<b>Resilience</b>	<b>Coefficient</b>	<b>Standard</b>	<b>T- Value</b>	<b>P - Value</b>
<b>Table 1</b>		<b>Error</b>		
<b>Cumulative</b>	<b>.31</b>	<b>.14</b>	<b>2.28</b>	<b>.03</b>
<b>Trauma</b>				
<b>Problem</b>	<b>.02</b>	<b>.05</b>	<b>.30</b>	<b>.77</b>
<b>Focused</b>				
<b>Coping</b>				
<b>Interaction</b>	<b>-0.03</b>	<b>.02</b>	<b>-1.38</b>	<b>.17</b>
<b>Term</b>				

**Table 2**

Main Effects and Interaction of Cumulative Trauma on Resilience

<b>Resilience</b>	<b>Coefficient</b>	<b>Standard</b>	<b>T- Value</b>	<b>p - Value</b>
<b>Table 2</b>		<b>Error</b>		
<b>Cumulative</b>	<b>.43</b>	<b>.13</b>	<b>3.32</b>	<b>.0013</b>
<b>Trauma</b>				
<b>Emotion</b>	<b>-.12</b>	<b>.04</b>	<b>-2.83</b>	<b>.006</b>
<b>Focused</b>				
<b>Coping</b>				
<b>Interaction</b>	<b>.01</b>	<b>.02</b>	<b>.44</b>	<b>.66</b>
<b>Term</b>				



**Figure 1**

Curvilinear Relationship Between Cumulative Trauma and Resilience

