Examining the Effects of Different Coping Styles on Dependent Stress Generation

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Examining the Effects of Different Coping Styles on Dependent Stress Generation

An Honors Thesis submitted in partial fulfillment of the requirements for Honors Studies in Psychology

By

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Psychology

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Abstract

In this study, I prospectively examined the associations between different coping styles and stress. Stress can be classified as independent, which is stress that an individual has no control over, or dependent stress, which is stress that occurs because of the individuals’ actions. Coping is how individuals deal with that stress. With the role that coping plays in stress, I expected that it would relate to stress generation. I hypothesized that some forms of coping would prospectively predict the occurrence of less dependent stress but not independent stress.

To test this hypothesis, I had college students (N=73) complete negative life events questionnaire (NLEQ) and the cope inventory at two time-points separated by approximately 10 weeks. Consistent with the idea that coping styles are related to stress generation, mental disengagement and behavioral disengagement were each cross-sectionally associated with dependent life stress, but not independent life stress. More importantly, as hypothesized, both active coping and acceptance coping prospectively predicted less dependent stress at the second timepoint, controlling for dependent stress at the first timepoint and coping at the second timepoint. No significant prospective associations were found between any coping styles and independent stress. This shows that specific styles of coping are prospectively linked to less dependent stress over time, which may have important implications for interventions aimed at decreasing the occurrence of stress-related disorders.
Introduction

Stress is a major and complex component of life. It is the subjective experience that occurs when one perceives the demands of their circumstances or environment to exceed their resources, and a stressor is the environment or circumstance that produces a subjective experience of stress (Epel et al., 2018). Relatedly, stress activates a physiological response (e.g., hypothalamic-pituitary-adrenal [HPA] axis activation, autonomic nervous system [ANS] changes) that is aimed at mobilizing resources in order to facilitate survival (e.g., increasing glucose availability, strength, etc.). Within that broad definition of stress, though, there is nuance; many different types of stressors exist. For example, stress can be classified as independent (i.e., stressors which an individual has no control over preventing) or dependent (i.e., stressors that occurred because of the actions of an individual). Dependent stress in particular has been associated with greater mental and physical health issues (Hammen, 2006; Meyer & Curry, 2017). However, there is relatively little known about the individual differences that increase the occurrence and reoccurrence of dependent stressors (Meyer & Curry, 2017). This study helps to address that gap.

Dependent stress, and more specifically its generation (i.e., the occurrence and production of dependent stressors), has been linked to poor mental health outcomes in numerous studies (e.g., Hammen, 2006; Joiner et al., 2005; Liu & Alloy, 2010; Meyer & Curry, 2017). Depression has been a prevalent factor examined in these studies. Research has shown that depressive symptoms and major depressive disorders predict the occurrence of future dependent stressors (e.g., Hammen, 2006). Further investigation has shown that traits related to depression are also predictors of stress generation, meaning that it may be a specific trait or characteristic responsible (e.g., Hammen, 2006). It should be noted, however, that not all mental health
outcomes are cleanly related to stress generation. For example, studies on the relations between anxiety and stress generation have been mixed (Meyer & Curry, 2017). Nonetheless, dependent stress generation appears to play an important role in mental health dynamics, and understanding the factors that give rise to it may be important for understanding the occurrence of disorders such as depression.

As described above, a large body of work has found that dependent stress generation is related to depression and the risk for depression (e.g., Hammen, 2006). Many of these studies have found greater occurrences of dependent stressors in individuals with depression, even in periods of remission or periods with less depressive symptoms (e.g, Hammen, 1991). These findings have led some researchers to believe that higher levels of dependent stressors are not due entirely to symptoms of or patterns of behavior exhibited during depression (e.g., irritability, anhedonia, etc.) (e.g., Meyer & Curry, 2017). Instead, dependent stress generation is thought to be a function of other factors or individual differences related to individuals’ lives and characteristics, including marital quality, income, mate selection cognitive styles, genetically influenced traits, and attachment styles (Hammen, 2006; Meyer & Curry, 2017; Snyder et al., 2019). Dependent stress generation is therefore a complex process, and research has yet to determine all of the factors that may give rise to it.

Coping

One factor that may influence the occurrence of dependent stress and stress generation is how individuals cope with stress. Coping is how an individual deals with stress in an effort to minimize it. Usually, this happens through specific actions or thought processes. The two main types of coping discussed in the literature are problem-focused and emotion-focused coping. Problem-focused coping is centered on resolving the situation or event at hand that is causing the
stress (Carver et al., 1989). This type involves active coping, suppression of competing activities, restraint coping, planning, and use of instrumental social support. Emotion-focused coping is centered on alleviating the emotional strain associated with the stress. This type involves positive reinterpretation, acceptance, denial, use of emotional social support, and turning to religion. Other coping styles that have been considered less useful include mental disengagement, behavioral disengagement, and focus on/venting of emotions.

Continued research has shown that there are other ways of sorting coping styles other than emotion-focused vs. problem-focused. For example, coping styles can also be categorized as approach vs. avoidance coping, where approach is seen as any activity directed toward the stressful situation, and avoidance is any activity directed away from the stressful situation. This style is most useful for categorizing low-order styles of coping (Skinner et al., 2003). Another distinction is cognitive vs. behavioral coping, where cognitive coping involves mental strategies, and behavioral coping involves taking physical action (Latack and Havlovı, 1992). A final method of coping categorization is to distinguish between adaptive vs. maladaptive coping styles (e.g., Thompson et al., 2010). In this classification, adaptive coping includes cognitive or behavioral interventions aimed at resolving the situation in a healthy manner, and maladaptive coping includes emotional numbing, bad thoughts, the use of alcohol or drugs, and anything else that may be harmful to the person or situation (Thompson et al., 2010). Several of these different classifications have overlap between their categories, which leads to some thoughts about how these classifications can be too simple, and maybe we should be looking at the specific styles within these categories (Carver et al., 1989).

Because of the role of coping in managing stress (e.g., Carver et al., 1989), it is intuitive to link coping styles to the process of stress generation. For example, individuals who cope with
financial stressors (e.g., not having money to pay rent) by ingesting substances are likely to make that stressor worse over time compared to someone who copes with that same stressor in an active way (e.g., by working in spare time as an Uber driver). To date, however, no study has examined how different coping styles might relate to the process of dependent stress generation.

**Proposed Research**

This study attempts to evaluate how different coping styles relate to dependent stress and its generation over time. People deal with stress frequently throughout their lives, and they apply some type of coping strategy even if they are unaware of doing so (Carver, 1989). However, how these styles of coping relate to stress generation is unclear. To address this, I examined coping styles, dependent stress, and independent stress two times over an approximately 10-week period in a sample of 73 healthy undergraduate participants. Drawing on the work described above, I hypothesize that specific styles of coping will relate to the occurrence of dependent stress, but not independent stress, over time.

**Method**

**Participants**

The final sample of participants consisted of 73 college students, aged 17 to 34 ($M = 19.26, SD = 2.91$), who were recruited through the University of Arkansas. The initial sample included 108 participants. However, 35 participants did not complete the second part of the study and were thus excluded from data analysis.

**Materials**

**Stress Assessment.**

**Major Life Stressors.** A variety of measures exist for assessing life stress, but for assessing major life stressors, the National Institute of Mental Health recommends using the
Stress and Adversity Inventory (STRAIN), and the Negative Life Events Questionnaire can be used to differentiate between dependent and independent stressors. The Stress and Adversity Inventory was developed to assess major life stress exposure across the entire lifetime (Slavich and Shields, 2018). The STRAIN has extremely strong test-retest reliability over a two-week period, and in comparison, to other stress assessment measures, (i.e., the Perceived Stress Scale and the Childhood Trauma Questionnaire), the STRAIN showed good convergent validity and stronger predictive validity. The STRAIN interview gathers information on the frequency, duration, and timing of each stressor presented. Because this measure does not distinguish between independent and dependent stressors, I have not yet analyzed these data.

**Dependent and Independent Stressors.** The Negative Life Events Questionnaire assesses the presence of negative events that are thought to be causes of stress (Black et al., 2010). Several categories of statements are presented to a participant and they rank them on a 0 to 4 scale where 0 indicates that event is never present and 4 indicates that event is always present. An example statement for dependent stress is “Reprimadend at work” and an example for independent stress is “Laid off or fired from a job.” Joiner and colleagues (2005) tested the validity of the questionnaire and found it to be a valid measure of stress, especially among college students. The questionnaire was also found to show good test reliability.

**Coping.** A method used for evaluating coping styles is the COPE inventory. It was developed to be used to assess different ways that people handle stress on a multidimensional scale (Carver et al., 1989). This scale breaks problem-focused coping and emotion-focused coping into subcategories that will only be examined in exploratory analyses. Problem-focused is broken down into planning, use of instrumental social support, active, suppression of competing activities, and restraint. Emotion-focused is broken down into positive interpretation, denial,
acceptance, use of emotional social support, and turning to religion. The COPE inventory presents participants with a series of 60 statements of actions (example statements for each coping style are listed in the next paragraph) and asks participants to respond using a 1 to 4 scale, where 1 is they do not usually do this and 4 is they do this a lot. Carver and colleagues (1989) found the inventory to be a valid measure of coping styles with good test and re-test reliability.

Example statements for each coping style:

**Active coping** – “I concentrate my efforts on doing something about it.”

**Acceptance coping** – “I get used to the idea that it happened.”

**Mental disengagement** – “I turn to work or other substitute activities to take my mind off things.”

**Behavioral disengagement** – “I admit to myself that I can’t deal with it, and quit trying.”

**Substance use** – “I use alcohol or drugs to make myself feel better.”

**Positive reinterpretation and growth** – “I try to see it in a different light, to make it seem more positive.”

**Focus on and venting of emotions** – “I get upset and let my emotions out.”

**Use of instrumental social support** – “I try to get advice from someone about what to do.”

**Denial** – “I refuse to believe that it has happened.”

**Religious** – “I put my trust in God.”

**Humor** – “I laugh about the situation.”

**Restraint** – “I restrain myself from doing anything too quickly.”

**Use of emotional social support** – “I discuss my feelings with someone.”

**Suppression of competing activities** – “I keep myself from getting distracted by other thoughts or activities.”

**Planning** – “I make a plan of action.”

The value for Cronbach’s alpha was found for each scale of the COPE inventory at each timepoint (with timepoint 1 being T1 and timepoint 2 being T2). Active coping had a value of $\alpha = 0.78$ at T1 and $\alpha = 0.77$ at T2. Mental disengagement had a value of $\alpha = 0.49$ at T1 and $\alpha = 0.54$ at T2. Focus on/venting of emotions had a value of $\alpha = 0.88$ at T1 and $\alpha = 0.84$ at T2. Positive reinterpretation had a value of $\alpha = 0.83$ at T1 and $\alpha = 0.73$ at T2. Use of instrumental social support had a value of $\alpha = 0.81$ at T1 and $\alpha = 0.84$ at T2. Denial had a value of $\alpha = 0.79$ at
T1 and $\alpha = 0.69$ at T2. Religious coping had a value of $\alpha = 0.95$ at T1 and $\alpha = 0.94$ at T2. Humor had a value of $\alpha = 0.93$ at T1 and $\alpha = 0.94$ at T2. Restraint had a value of $\alpha = 0.77$ at T1 and $\alpha = 0.74$ at T2. Behavioral disengagement had a value of $\alpha = 0.74$ at T1 and $\alpha = 0.72$ at T2. Use of emotional social support had a value of $\alpha = 0.91$ at T1 and $\alpha = 0.88$ at T2. Substance use had a value of $\alpha = 0.93$ at T1 and $\alpha = 0.95$ at T2. Acceptance had a value of $\alpha = 0.78$ at T1 and $\alpha = 0.74$ at T2. Suppression of competing activities had a value of $\alpha = 0.65$ at T1 and $\alpha = 0.71$ at T2. Planning had a value of $\alpha = 0.83$ at T1 and $\alpha = 0.84$ at T2.

**Procedure**

Consenting participants were given a link to access the study materials online for each part of the study. Participants completed the COPE inventory, the Negative Life Events Questionnaire, and the Stress and Adversity Inventory (STRAIN) at an initial assessment. Relevant covariates (e.g., demographics, health, affect) were also measured. After a period of approximately 10 weeks ($M = 73.6$ days, $SD = 3.0$, range = 70.3 to 82.7), the participants completed the measures a second time. Each time point was estimated to take participants up to 60 minutes. Participants were compensated after participation in each time point.

**Results**

**Concurrent Associations Among Coping Styles and Stressor Types**

We first examined associations among dependent and independent life stressors at each timepoint. We found that dependent and independent stressor occurrences were significantly associated with each other at both timepoints, $rs > .26$, $ps < .05$ (see Table 1).

We next examined how coping styles might relate to exposure to different types of stressors at the same timepoint. We focused on coping styles that were consistently associated with stressor variables at their respective time points; additional significant associations are
shown in Table 1. We found that mental disengagement coping was significantly associated with the occurrence of dependent life stressors when both variables (i.e., coping and stress) were measured at baseline, \( r = .47, p < .001 \), and at the follow-up time point, \( r = .32, p < .01 \). Mental disengagement coping was not associated with independent life stressors at either time point, \( |r| < .10, ps > .05 \).

Similarly, we found that behavioral disengagement coping was significantly associated with the occurrence of dependent life stressors when both variables were measured at baseline, \( r = .34, p < .01 \), and at the follow-up time point, \( r = .35, p < .01 \). Behavioral disengagement coping was not associated with independent life stressors at either time point, \( |r| < .11, ps > .05 \). In contrast, we found that substance abuse coping was significantly associated with the occurrence of both dependent life stressors, \( r = .36, p < .001 \), and independent life stressors, \( r = .31, p < .01 \), when all variables were measured at baseline, but substance abuse coping was not associated with either stressor type at the follow-up time point, \( |r| < .16, ps > .05 \).

Table 1
Correlations among coping styles and stressors at each time point

<table>
<thead>
<tr>
<th></th>
<th>Dependent stressors T1</th>
<th>Dependent stressors T2</th>
<th>Independent stressors T1</th>
<th>Independent stressors T2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent stressors - T1</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Dependent stressors - T2</td>
<td>.33*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent stressors - T1</td>
<td>.34**</td>
<td>.35**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent stressors - T2</td>
<td>.32*</td>
<td>.27*</td>
<td>.63***</td>
<td></td>
</tr>
<tr>
<td>Positive reinterpretation and growth - T1</td>
<td>.03</td>
<td>-.07</td>
<td>.21*</td>
<td>.05</td>
</tr>
<tr>
<td>Positive reinterpretation and growth - T2</td>
<td>.12</td>
<td>.03</td>
<td>.20</td>
<td>.12</td>
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<tr>
<td>Mental disengagement - T1</td>
<td>.47***</td>
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<td>.06</td>
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<tr>
<td>Mental disengagement - T2</td>
<td>.24</td>
<td>.32**</td>
<td>.01</td>
<td>.09</td>
</tr>
<tr>
<td>Focus on/venting of emotions - T1</td>
<td>.17</td>
<td>.05</td>
<td>-.04</td>
<td>.12</td>
</tr>
<tr>
<td>Focus on/venting of emotions - T2</td>
<td>.28*</td>
<td>.38**</td>
<td>.07</td>
<td>.29*</td>
</tr>
<tr>
<td>Use of instrumental social support - T1</td>
<td>-.05</td>
<td>-.10</td>
<td>.04</td>
<td>.07</td>
</tr>
<tr>
<td>Use of instrumental social support - T2</td>
<td>.12</td>
<td>.13</td>
<td>.19</td>
<td>.10</td>
</tr>
</tbody>
</table>
Prospective Predictors of Dependent Life Stressor Occurrence

The primary analyses of interest in this project examined prospective associations between coping styles and the subsequent occurrence of dependent life stress. To that end, we examined these associations in a structural equation model including independent life stressors, dependent life stressors, and the respective coping style at each time point in order to account for the covariances among each of these variables at each time point (see Figure 1).

In these analyses, we found that two different coping styles were prospective predictors of dependent life stressors, such that more of these styles of coping at baseline was associated with less dependent life stressors at follow-up. In particular, greater active coping at baseline predicted less dependent life stressor occurrence at follow-up, $\beta = -.28$, $p = .018$ (green path in
Figure 1), controlling for associations within each timepoint and among the various stressor types. Similarly, greater acceptance coping at baseline predicted less dependent life stressor occurrence at follow-up, β = -.35, p = .003 (green path in Figure 1), controlling for associations within each timepoint and among stressor types.

No coping style was a prospective predictor of the occurrence of independent life stressors in these prospective structural equation models, nor were either independent or dependent life stressors prospective predictors of any coping style in these models.

Discussion

Stress is something we all experience but very little is known about how our ways of attempting to deal with that stress, referred to as coping, might influence the occurrence of stressors as time progresses. In this study, we found that mental disengagement coping, and behavioral disengagement coping were significantly associated with the occurrence of dependent life stressors at each time point but were not associated with the occurrence of independent life
stressors. Prospectively, we found that greater active coping at baseline was predictive of less dependent stressors at the follow-up time point. Greater acceptance coping was also found to be predictive of less dependent stressors between time points. Independent life stressors were not found to be prospectively predicted by any of the coping styles.

Previous work has shown that there are different cognitive styles, attitudes, thought processes, and vulnerabilities that are predictive of changes in dependent stress. Some studies have found that negative cognitive styles, which can be characterized as dysfunctional ways of thinking, prospectively predict increases in dependent stress. These results have been specifically found in studies of children and adolescents (Hamilton et al., 2013). Similarly, research has shown that cognitive vulnerability (i.e., attitudes or thoughts that make a person vulnerable to psychological problems) and the tendency to ruminate prospectively predict dependent stress (Kercher and Rapee, 2009). Other studies have looked at personal traits and characteristics being in part responsible for dependent stress generation as well as different attachment styles (Liu and Alloy, 2010). Our results add coping styles as another predictor of changes in dependent stress generation.

In regard to coping styles, previous work has shown that they prospectively predict changes in some personality disorders, depression rates, and in the use of additional styles. Specifically, problem-focused coping has shown to improve scores on personality disorder inventories (give lower scores indicating less of a personality disorder), whereas disengagement and venting of emotions tend to exasperate scores (Vollrath et al., 1998). Other research has shown that active coping styles prospectively predict lower depression levels among children (Gaylord et al., 2009). It is also theorized that coping styles may be interconnected, meaning that the use of one style may lead to the use of another depending on the context of the situation.
Our work extends these findings in that we show for the first time that positive types of coping are prospectively predictive of changes in dependent stress generation.

The findings from the current study have implications for theories of dependent life stress in the context of psychopathology. The stress generation hypothesis suggests that people tend to engage in behaviors that increase their own stress exposure (i.e., they bring about dependent stress) (Connolly et al., 2010; Conway et al., 2012). This stress can lead to greater experiences of emotional dysregulation, which may explain why dependent stress is so strongly linked to psychopathology (Snyder, 2019). Our results suggest that by modifying peoples coping styles (e.g., getting people to engage in more styles of acceptance and active coping) we might be able to reduce the occurrence of psychopathology.

Some strengths of the study should be noted. These include a longitudinal study design, a high retention rate of participants between time points, and this is the first study to tie together dependent stress generation and different coping styles in this way. Also, to be noted are the limitations within the study. First, the sample size was smaller than anticipated. Second, there is restricted generalizability within this study because the participant pool consisted of only college students. With this restriction, the data may not be generalizable to every person in a general population. Third, the measures used rely on self-reported data which can entail bias from the participants. This bias includes selective memory, exaggeration, and attribution errors.

**Conclusion**

Although stress is a major and complex component of life, we know very little about how our individual styles of dealing with it might contribute to stressors that we have control over preventing. In this study, we examined these processes. We found that although various coping styles (e.g., behavioral disengagement and mental disengagement) were related to the occurrence
of dependent life stressors concurrently, the use of active coping or acceptance coping was each prospectively associated with less dependent life stressors. In other words, dealing with stress in certain ways can reduce the amount we experience at later time points.
References


COPING AND STRESS GENERATION


