

Vulnerability-specific stress generation: Childhood emotional abuse and the mediating role of depressogenic interpersonal processes

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ARTICLE INFO

Article history:

Received 11 May 2016

Received in revised form 22 October 2016

Accepted 25 October 2016

Keywords:

Childhood abuse

Excessive reassurance-seeking

Negative feedback-seeking

Rejection sensitivity

Stress generation

ABSTRACT

Stress generation in depression (i.e. the tendency for depression-prone individuals to experience more life stress that is in part influenced by the individual) has been well established. However, more research is necessary to clarify the role of specific types of life stress in this effect. The current study extends the stress generation hypothesis by examining whether the type of stress involved is contingent upon the nature of the individual's particular vulnerability. Childhood emotional abuse and interpersonal vulnerability factors were predicted to be associated with prospective interpersonal dependent but not non-interpersonal or independent stress. These interpersonal factors were examined as mediators of the association between childhood emotional abuse and interpersonal stress generation. Data were collected from 185 undergraduate participants at two time-points, four months apart. At baseline, participants completed assessments of depressive symptoms, childhood abuse history, interpersonal risk factors (rejection sensitivity, excessive reassurance-seeking, and negative feedback-seeking), and a diagnostic interview for depression. At the follow-up assessment, participants completed a life stress interview. Childhood emotional abuse prospectively predicted greater interpersonal dependent stress, but not non-interpersonal dependent or independent stress. Only rejection sensitivity mediated this relationship. Consistent with the stress generation hypothesis, neither childhood emotional abuse nor the three interpersonal risk factors predicted independent stress. These findings suggest that targeting interpersonal vulnerabilities in clinical settings, particularly rejection sensitivity, among individuals with a history of childhood emotional abuse, may help to reduce the occurrence of interpersonal dependent stress, thus possibly decreasing risk for depression.

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1. Introduction

Substantial empirical support has been found for the stress generation hypothesis in depression (Hammen, 1991, 2006), according to which, individuals vulnerable to depression are more likely to experience higher rates of negative events that are in part influenced by their own behavior (i.e., dependent stress), but not to differ in their rates of negative events that occur outside the influence of their behavior (i.e., independent stress; for reviews, see Hammen, 2006; Liu & Alloy, 2010). The

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stress generation effect seems particularly relevant to dependent stress occurring within interpersonal domains (Hammen, 2006); this relation is notable because both interpersonal and dependent life stress, when compared to other forms of stress, are more predictive of depressive onset (Hammen, Marks, Mayol, & DeMayo, 1985; Kendler, Karkowski, & Prescott, 1999; Slavich, O'Donovan, Epel, & Kemeny, 2010). As a result, the generation of interpersonal dependent life stress may potentially maintain current depression or increase the likelihood of depressive recurrence (Hammen, 1991, 2006). Given the potential role of stress generation in depressive chronicity, it is important to delineate the processes underlying this phenomenon. Distal risk factors may facilitate identification of at-risk individuals, whereas proximal risk factors may inform our understanding of potential targets for clinical intervention.

One such distal risk factor is childhood emotional abuse (CEA; Gross & Keller, 1992; Spertus, Yehuda, Wong, Halligan, & Seremetis, 2003). CEA has been shown to be a stronger risk factor of depression than other subtypes of childhood abuse (i.e., childhood physical abuse [CPA] and childhood sexual abuse [CSA]). In fact, three meta-analytic reviews have found consistently stronger associations between depression and CEA than CSA and CPA (Infurna et al., 2016; Mandelli, Petrelli, & Serretti, 2015; Norman et al., 2012). Furthermore, and of direct relevance to the current study, CEA has been implicated in depressogenic stress generation. Two studies (Hankin, 2005) provide mixed support for this relationship, with one showing a prospective relation between CEA and negative life events over a 10-week period, and the other failing to find this relationship over a 2-year period. Another study followed a college sample over a 7-week period and found a positive association between CEA and negative life events (Uhrlass & Gibb, 2007). Although these studies are important for providing the first empirical evaluations of CEA in relation to stress generation, their mixed findings may in part be due to the absence of distinction between dependent and independent stress. Given the specificity of stress generation to dependent stress, this distinction is important for ensuring that any putative stress generation effect is not obscured by the inclusion of independent stress with dependent stress. Two more recent studies observing this distinction are consistent in documenting an association between CEA and dependent stress (Harkness et al., 2015; Liu, Choi, Boland, Mastin, & Alloy, 2013). Collectively, there thus appears to be general support for the role of CEA in stress generation.

Although there appears to be support for CEA as a distal risk factor for stress generation, the proximal risk factors mediating this relationship are less clear. Elucidating the pathways underlying this relationship is important insofar as it may uncover actionable targets for breaking the chain in the long-term risk for depression associated with CEA. Thus far, one study has examined the role of depressogenic cognitive styles in stress generation among individuals with a history of childhood abuse, finding that CEA, but not CSA or CPA, prospectively predicted greater stress generation, and negative cognitive styles mediated this relation (Liu et al., 2013). These findings suggest that targeting negative cognitive styles in individuals with a history of CEA may help lessen the occurrence of negative life events. Given that stress generation has been described as an action theory, in which individuals have an active role in shaping their environments (Hammen, 2006), interpersonal risk factors may be especially relevant candidate mediators of the association between CEA and stress generation. Consistent with this possibility, experiences of childhood abuse have been associated with difficulties in interpersonal functioning later in life (Salwen, Hymowitz, Vivian, & O'Leary, 2014). In the current study, three such behavioral tendencies previously implicated in risk for depression were examined as potential mediators of the relation between CEA and interpersonal stress generation: (1) excessive reassurance-seeking (ERS); (2) negative feedback-seeking (NFS); and (3) rejection sensitivity. These depressogenic interpersonal processes were specifically chosen as the focus of the current investigation as prior research has found them to be associated with CEA (Massing-Schaffer, Liu, Kraines, Choi, & Alloy, 2015).

1.1. Excessive reassurance-seeking

ERS is defined as the relatively stable tendency to excessively and repeatedly seek assurance from others that one is lovable and worthy, regardless of whether such assurance has already been provided (Joiner, Alfano, & Metalsky, 1992; Joiner, Metalsky, Katz, & Beach, 1999). According to Coyne's (1976) interpersonal model of depression, individuals prone to depression seek assurance from others in an attempt to improve their feelings of low self-worth. However, these individuals tend to doubt the initial response they are given, thus causing them to seek further affirmation to the eventual frustration of those from whom they seek reassurance. Several studies support this model (see Starr & Davila, 2008 for review). ERS has been implicated as a risk factor for the development and maintenance of depression (Joiner & Metalsky, 2001; Joiner et al., 1999) and as a force behind interpersonal rejection (Benazon, 2000; Joiner et al., 1992). Of particular relevance to the current study, ERS has also been found to predict the generation of interpersonal stress (Birgenheir, Pepper, & Johns, 2010; Potthoff, Holahan, & Joiner, 1995; Shih, Abela, & Starrs, 2009).

1.2. Negative feedback seeking

In addition to seeking positive reassurance, depression-prone individuals also solicit disapproval and criticism from others through NFS as it confirms their negative self-concept (Swann, 1987). Several studies have linked NFS to depression. Compared to non-depressed individuals, depressed individuals express more interest in negative feedback (Casbon, Burns, Bradbury, & Joiner, 2005), seek more negative feedback (Swann, Wenzlaff, Krull, & Pelham, 1992), and prefer to be around people who view them negatively (Swann et al., 1992). NFS has also been proposed as a possible mechanism of stress generation (Joiner, 2000), though this relation has yet to be tested.

1.3. Rejection sensitivity

Another interpersonal risk factor for depression is rejection sensitivity. Downey and Feldman (1996) stated that individuals who are sensitive to rejection are more likely to anticipate, perceive, and react excessively to social rejection. Greater interpersonal sensitivity has been found to be associated with higher depressive symptoms (Ayduk, Downey, & Kim, 2001; Downey & Feldman, 1996), greater severity and duration of current depressive episodes (Posternak & Zimmerman, 2002), and decreased likelihood of remission at one year follow-up in individuals with clinical depression (Boyce et al., 1992). Relevant to the present study, stress generation has been found to mediate the relation between RS and depression (Liu, Kraines, Massing-Schaffer, & Alloy, 2014).

1.4. Current study

The current study aimed to address several gaps in the literature. First, the processes accounting for the link between CEA and stress generation have remained understudied. Second, an important possible extension of the stress generation hypothesis has not yet been adequately explored; namely, that the domain of dependent stress in which stress generation occurs may match depression-prone individuals' particular vulnerability (Liu et al., 2014). That is, differences in individual vulnerability may predict different patterns of dependent stress. According to this vulnerability-specific extension of the stress generation hypothesis, an individual with an interpersonal vulnerability to depression may prospectively experience higher rates of dependent stress in interpersonal domains but not in others (e.g., achievement-related dependent stress). Research in this area would address the need for more refined focus on specific domains of dependent life stress, rather than dependent stress broadly (Shahar, Joiner, Zuroff, & Blatt, 2004), and may help clarify the specific kinds of dependent stress involved in stress generation (Hammen, 2006). We hypothesized CEA and several interpersonal vulnerability factors (i.e., ERS, NFS, and rejection sensitivity) to be associated with prospective interpersonal dependent, but not non-interpersonal or independent, stress. Furthermore, these interpersonal factors were hypothesized to mediate the relationship between CEA and interpersonal stress generation. Finally, and consistent with the stress generation hypothesis, neither CEA nor the interpersonal risk factors was hypothesized to predict independent stress.

2. Method

2.1. Participants

Participants were 185 undergraduates with a mean age of 19.65 ($SD = 1.48$), recruited from the campus community of a large public university. The sample was 75.1% female, 55.7% Caucasian, 24.3% African-American, 12.4% Asian-American, 5.4% Latino-American, and 1.6% other ethnicities. Participants received either course credit or a small monetary compensation for their participation.

2.2. Procedures

Data were collected at two time-points separated by a four-month interval ($M = 117.28$ days, $SD = 9.67$). During the baseline assessment, participants completed self-report measures of depressive symptoms, history of childhood abuse, and several interpersonal risk factors (i.e., rejection sensitivity, excessive reassurance-seeking, and negative feedback-seeking). At the follow-up assessment, participants were administered an interview assessing life stress experienced across several domains in the four months since their baseline assessment. Participants also completed a semi-structured diagnostic interview for lifetime history of major depressive disorder.

2.3. Measures

2.3.1. Depressive symptoms. The Beck Depression Inventory-II (BDI-II; Beck, Brown, & Steer, 1996) was used to assess depressive symptoms. The BDI-II is a 21-item self-report questionnaire; for each item, participants were asked to select the statement that best describes how they have been feeling over the past two weeks. Total scores range from 0 to 63, with higher scores indicating greater levels of depressive symptoms. The BDI-II has been previously shown to have high test-retest reliability (Beck et al., 1996). It has also been found to correlate with other measures of depressive symptoms, including the Hamilton Psychiatric Rating Scale for Depression ($r = 0.71$; Beck et al., 1996) and the depression subscale of the Symptom Checklist-90-Revised ($r = 0.89$; Steer, Ball, Ranieri, & Beck, 1997).

2.3.2. History of major depressive disorder. Lifetime history of major depressive disorder was assessed with the Schedule for Affective Disorders and Schizophrenia-Lifetime version (SADS-L; Endicott & Spitzer, 1978), a semi-structured diagnostic interview assessing current and lifetime psychopathology. Interviews were conducted by trained research assistants and graduate students (see Alloy et al., 2006 for additional details regarding interviewer training). For the purposes of this study, an expanded version of the SADS-L was used, allowing for the assessment of DSM-IV diagnoses (Alloy et al., 2000). The original version has demonstrated high inter-rater reliability (Endicott & Spitzer, 1978), and the expanded version used in this study demonstrated high inter-rater reliability for major depression ($\kappa \geq 0.95$).

2.3.3. Childhood abuse. The Childhood Trauma Questionnaire (CTQ; Bernstein et al., 2003) is a widely-used self-report measure of childhood maltreatment history, with specific subscales for childhood emotional abuse (CEA), childhood physical abuse (CPA), and childhood sexual abuse (CSA). Participants rate each item on a 5-point Likert scale (from 1 = “Never true” to 5 = “Very often true”). Items included “People in my family called me things like “stupid,” “lazy,” or “ugly”” for CEA, “People in my family hit me so hard that it left me with bruises or marks” for CPA, and “Someone tried to make me do sexual things or watch sexual things” for CSA. Higher scores for each subscale indicate greater abuse severity. The internal consistency for each abuse type in the current study was adequate (α 's = 0.82, 0.74, and 0.92 for CEA, CPA, and CSA, respectively). The CTQ has shown good test-retest reliability at three months ($r = 0.80$) and high internal reliability with Cronbach's alphas ranging from 0.74 to 0.90 (Fink, Bernstein, Handelsman, Foote, & Lovejoy, 1995).

2.3.4. Rejection sensitivity. Rejection sensitivity was measured using the Rejection Sensitivity Questionnaire (RSQ; Downey & Feldman, 1996). The RSQ presents 18 hypothetical situations in which an individual is susceptible to rejection by an important other (e.g., asking someone out on a date). Respondents indicate their level of concern about the possibility for rejection in each scenario on a 6-point Likert scale (1 = very unconcerned; 6 = very concerned). Participants then estimate the likelihood that the interactant will respond favorably using a 6-point Likert scale (1 = very unlikely; 6 = very likely). These acceptance expectations ratings were reverse-scored to obtain measures of rejection expectation. Total rejection sensitivity scores were computed by multiplying rejection expectations and rejection concern ratings, and then averaging the resultant values across the 18 situations; higher scores reflect greater sensitivity to rejection. This instrument demonstrated high internal consistency in the current study ($\alpha = 0.88$). The RSQ test-retest reliability over a two-three week period was 0.83 and over a four month period was 0.78 (Downey & Feldman, 1996). Downey and Feldman (1996) also provided evidence that rejection sensitivity was not redundant in its predictive value, with established personality constructs to which it is conceptually and empirically relevant, including measures of introversion, neuroticism, adult attachment styles, social anxiety, social avoidance, and self-esteem.

2.3.5. Excessive reassurance-seeking. ERS was evaluated with the Reassurance-Seeking Scale (RSS; Joiner et al., 1992). The RSS is a 4-item measure assessing the tendency to seek reassurance from close others as formulated in Coyne's (1976) interpersonal theory of depression (e.g., “In general, do you frequently seek reassurance from the people you feel close to as to whether they really care about you?”). Each item is rated on a 7-point scale (1 = “no, not at all,” to 7 = “yes, very much.”), and higher summed scores indicate higher reassurance-seeking. The RSS demonstrated adequate internal consistency in the current sample ($\alpha = 0.83$). This measure has been found in numerous past studies to have high reliability, with alpha coefficients ranging from 0.85 to 0.95 (Shahar et al., 2004). This measure has also shown adequate criterion and construct validity, with responses on this scale being found to predict interpersonal reassurance-seeking behavior, increases in depressive symptoms in response to stress, diagnostic specificity to depression, and the development of future depressive symptoms in initially asymptomatic individuals (Joiner & Metalsky, 2001).

2.3.6. Negative feedback-seeking. NFS was indexed using the Feedback Seeking Questionnaire (FSQ; Swann et al., 1992), which assessed individuals' tendency to seek feedback from others within five domains (i.e., social, intellectual, artistic/musical, athletic, and physical appearance). Within each domain, participants are presented with a list of six questions, three being positively framed (e.g., “What is some evidence you have seen that ___ has good social skills?”), and the other three being negatively framed (e.g., “What is some evidence you have seen that ___ doesn't have good social skills?”). Participants are asked to select two out of the six questions in each domain for which they would like feedback from a close other. Scores are calculated by summing the number of negative questions selected, with higher scores indicating greater preference for negative feedback. The FSQ has also demonstrated adequate reliability, with an alpha coefficient of 0.78 in a college sample (Weinstock & Whisman, 2004), and 0.66 in the current sample. In support of the construct validity of this measure, depressed individuals tend to engage in more negative feedback-seeking (Joiner & Metalsky, 1995). Negative feedback-seeking, in turn, has been found to predict increases in depressive symptoms, to be associated with interpersonal rejection, and specifically related to depression rather than general distress (Joiner, 1995; Joiner, Katz, & Lew, 1997). The FSQ has also been found to correlate with a behavioral measure of negative feedback-seeking (Rehman, Boucher, Duong, & George, 2008).

2.3.7. Life stress. The Life Events Scale (LES) and Life Events Index (LEI; Safford, Alloy, Abramson, & Crossfield, 2007) are a combination of questionnaire and semi-structured interview used to assess the occurrence of negative life events spanning a variety of content domains relevant to college students (e.g., school, family, relationships, finances). In the current study, these measures were used to assess negative life events that occurred in the four months between baseline and follow-up. A four-month follow-up interval was specifically chosen based on previous research indicating that recollection of non-severe events tends to become less reliable after about 6 months (Brown & Harris, 1982). This interval also allowed for meaningful variability in the occurrence of stressful events under consideration. The LES asks participants to identify the occurrence of specific stressful life events; in addition to indicating whether an item event occurred, participants were instructed to indicate the number of occurrences for the item event over the period assessed. This allowed for the capturing of multiple distinct events for any given item (e.g., ending multiple friendships).

For each event endorsed on the LES, participants were interviewed with the LEI by a trained research assistant or graduate student. In this study the LEI was adapted to conform to the “contextual threat” method (Brown & Harris, 1978). Events

endorsed on the LES (with onsets within the 4-month follow-up period) were probed for objective information regarding the context and circumstances surrounding their occurrence, as well as their timing, duration, and consequence. This method allowed for life events to be identified and considered more objectively in order to reduce potential subjective report bias, such as mood-congruent interpretive biases (e.g., “feeling” like a significant other is going to sever a relationship would not qualify as an event, whereas having the breakup occur would qualify). The information collected on the LEI was used by three raters (blind to participants’ depressive symptoms, diagnoses, and vulnerabilities) to determine the objective impact of individual events, separate from participants’ interpretation and subjective response. Raters also coded individual events in terms of independence/dependence on a three-point scale (1 = mostly independent of participant; 2 = partly dependent on participant; 3 = mostly dependent on participant). Events with ratings of two or more were dichotomized as dependent. Inter-rater reliability in the current study was high (intra-class correlation = 0.90). Past studies have found the LES and LEI to exhibit good reliability and validity, particularly in terms of producing an accurate record of life events experienced within a period of time (Alloy & Abramson, 1999; Alloy & Clements, 1992; Needles & Abramson, 1990; Safford et al., 2007). A previous version of the LES has been found to have good two to three week test-retest reliability, with an alpha coefficient of 0.82 in a college sample (Needles & Abramson, 1990). LES scores have also been found to interact with cognitive vulnerability to predict concurrent and future depression (McClain & Abramson, 1988).

3. Results

3.1. Preliminary analyses

No demographic characteristics (i.e., gender, age, ethnicity, and education) were significantly correlated with past of history of major depression or baseline depressive symptoms. As baseline depressive symptom severity scores were positively skewed, they were submitted to a square root transformation to satisfy assumptions of normality.

In a series of correlation analyses with the primary study variables, a degree of specificity was observed between CEA and the three interpersonal risk factors. In particular, CEA was positively correlated with rejection sensitivity, ERS, and NFS. Of the other abuse subtypes, CPA was only positively associated with NFS. Similarly, CEA, but not CPA or CSA, was also positively correlated with both a history of major depression and depressive symptom severity at baseline. For more details regarding these findings, see Massing-Schaffer et al. (2015).

In addition to these findings, CEA was positively correlated with interpersonal dependent stress ($r = 0.33, p < 0.001$) and academic dependent stress ($r = 0.278, p < 0.001$), but not independent stress ($r = 0.05, p = 0.47$). Apart from a positive association between CPA and academic dependent stress ($r = 0.19, p < 0.05$), no significant associations were observed between the CPA or CSA and independent or dependent stress. Furthermore, each interpersonal vulnerability was positively correlated with total dependent stress ($r_{\text{rejection sensitivity}} = 0.40, p < 0.001$; $r_{\text{ERS}} = 0.26, p < 0.001$; and $r_{\text{NFS}} = 0.20, p < 0.01$) and interpersonal dependent stress ($r_{\text{rejection sensitivity}} = 0.40, p < 0.001$; $r_{\text{ERS}} = 0.29, p < 0.001$; and $r_{\text{NFS}} = 0.20, p < 0.01$). Only rejection sensitivity was correlated with academic dependent stress ($r_{\text{rejection sensitivity}} = 0.18, p < 0.05$; $r_{\text{ERS}} = 0.11, p = 0.12$; and $r_{\text{NFS}} = 0.13, p = 0.07$).

3.2. Multi-mediator analyses of specificity to dependent stress subtypes

We conducted a series of two multi-mediator regression analyses (Preacher & Hayes, 2008) in which ERS, NFS, and rejection sensitivity were concurrently examined as mediators of the relationship between CEA and prospective interpersonal dependent stress and academic dependent stress, respectively. Consistent with previous studies, sex, baseline depressive symptom severity, and past history of major depression were entered as covariates in all subsequent analyses. CPA and CSA were also covaried in all analyses, so as to provide an assessment of the unique effect of CEA by accounting for the frequent co-occurrence of childhood abuse subtypes (Finkelhor, Ormrod, & Turner, 2007; Kim & Cicchetti, 2006). We used bootstrapping to assess the degree to which each interpersonal vulnerability uniquely mediated the relationship between CEA and each prospective dependent stress subtype. The benefits of implementing bootstrapping are that it is less vulnerable to Type 1 errors and can be used with relatively small sample sizes. Multi-mediator bootstrapping accounts for collinearity among variables and mediation effects. This method allows for assessment of unique effects of each mediator after simultaneously accounting for the other mediators in the model, and thus provides a particularly conservative test of the association of each with CEA and each dependent stress subtype. Significant mediation at $p < 0.05$ is indicated by 95% confidence intervals that do not include 0.

As shown in Fig. 1, CEA was positively associated with ERS, NFS, and rejection sensitivity. In this multi-mediator model, rejection sensitivity was predictive of subsequent interpersonal dependent stress, whereas ERS and NFS were not. Applying bootstrapping procedures to this model, we found that the indirect effects of rejection sensitivity were significant ($B = 0.03, 95\% \text{ CI} = 0.01\text{--}0.06$), indicating that it mediated the relationship between CEA and interpersonal dependent stress. In contrast, ERS and NFS were not significant mediators in this model after accounting for the mediational role of rejection sensitivity. Moreover, as shown in Fig. 2, CEA, ERS, NFS, and rejection sensitivity were not predictive of academic dependent stress. Thus, a mediational relationship between CEA and academic dependent stress involving the interpersonal risk factors was not observed.

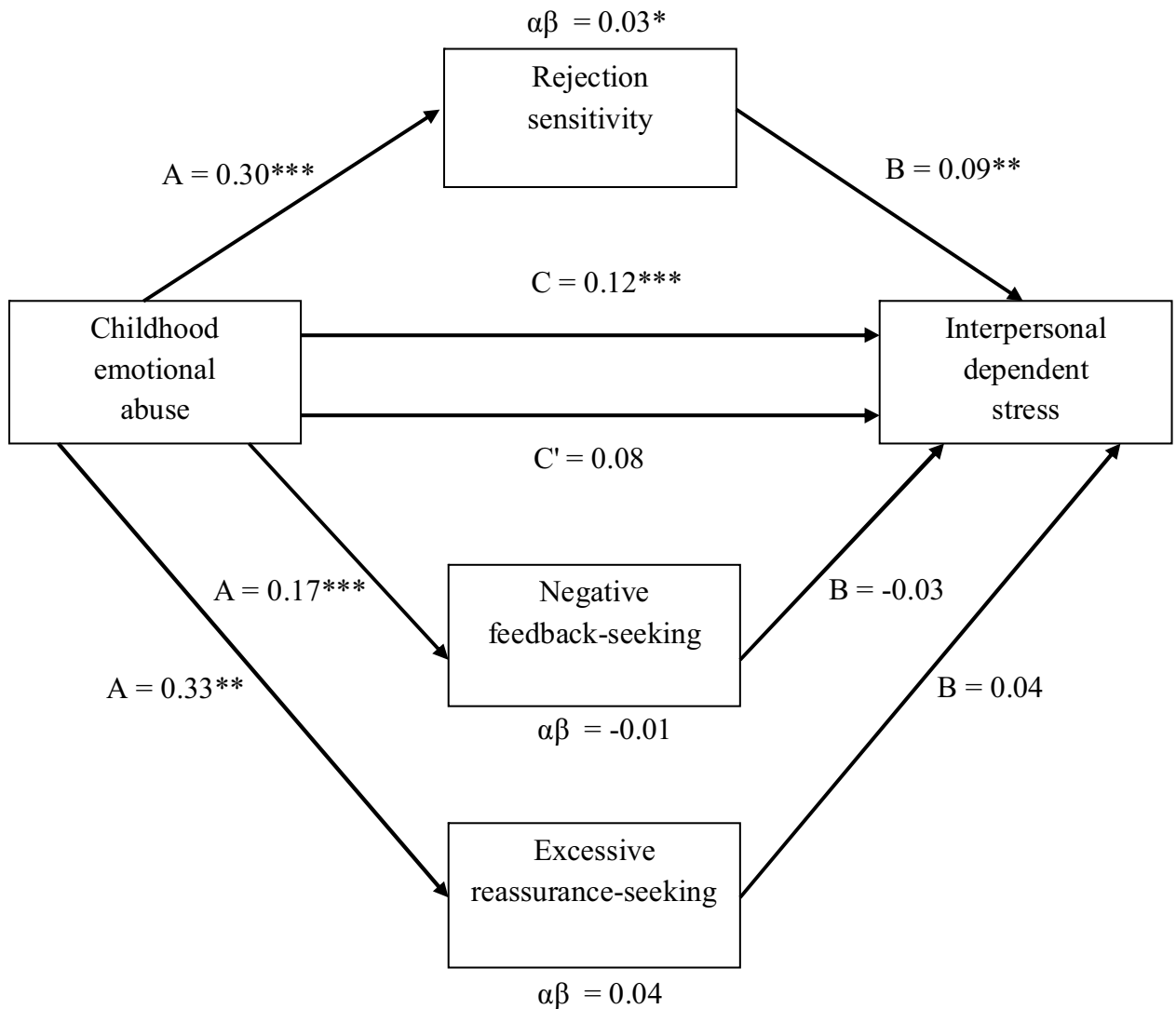


Fig. 1. Multi-mediator model for the prospective prediction of interpersonal dependent stress.

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 1

Regression analyses for the prospective prediction of independent stress.

Predictor	B	S.E.	t	p
Excessive reassurance-seeking	-0.02	0.01	-1.65	0.10
Negative feedback-seeking	-0.06	0.04	-1.59	0.11
Rejection sensitivity	0.02	0.02	0.96	0.34
Childhood emotional abuse	-0.01	0.02	-0.67	0.50

Note: Each row represents a separate regression analysis. History of major depression, baseline depressive symptoms, and sex were covaried in all analyses. Childhood physical abuse and childhood sexual abuse were covaried in the analysis for childhood emotional abuse.

3.3. Multivariate analyses of independent stress

To provide a thorough test of the stress generation hypothesis (i.e., CEA and the interpersonal risk factors being specifically predictive of dependent, but not independent stress), a series of four regression analyses were conducted with independent stress as the criterion variable, and CEA, ERS, NFS, and rejection sensitivity, respectively, as the predictor variable. Again, sex, baseline depressive symptom severity, and past history of major depression were entered as covariates in all analyses, and CPA and CSA were covaried in the model evaluating CEA as a predictor of independent stress. Consistent with the stress generation hypothesis, neither of these interpersonal vulnerability factors nor CEA was predictive of subsequent independent stress (see Table 1).

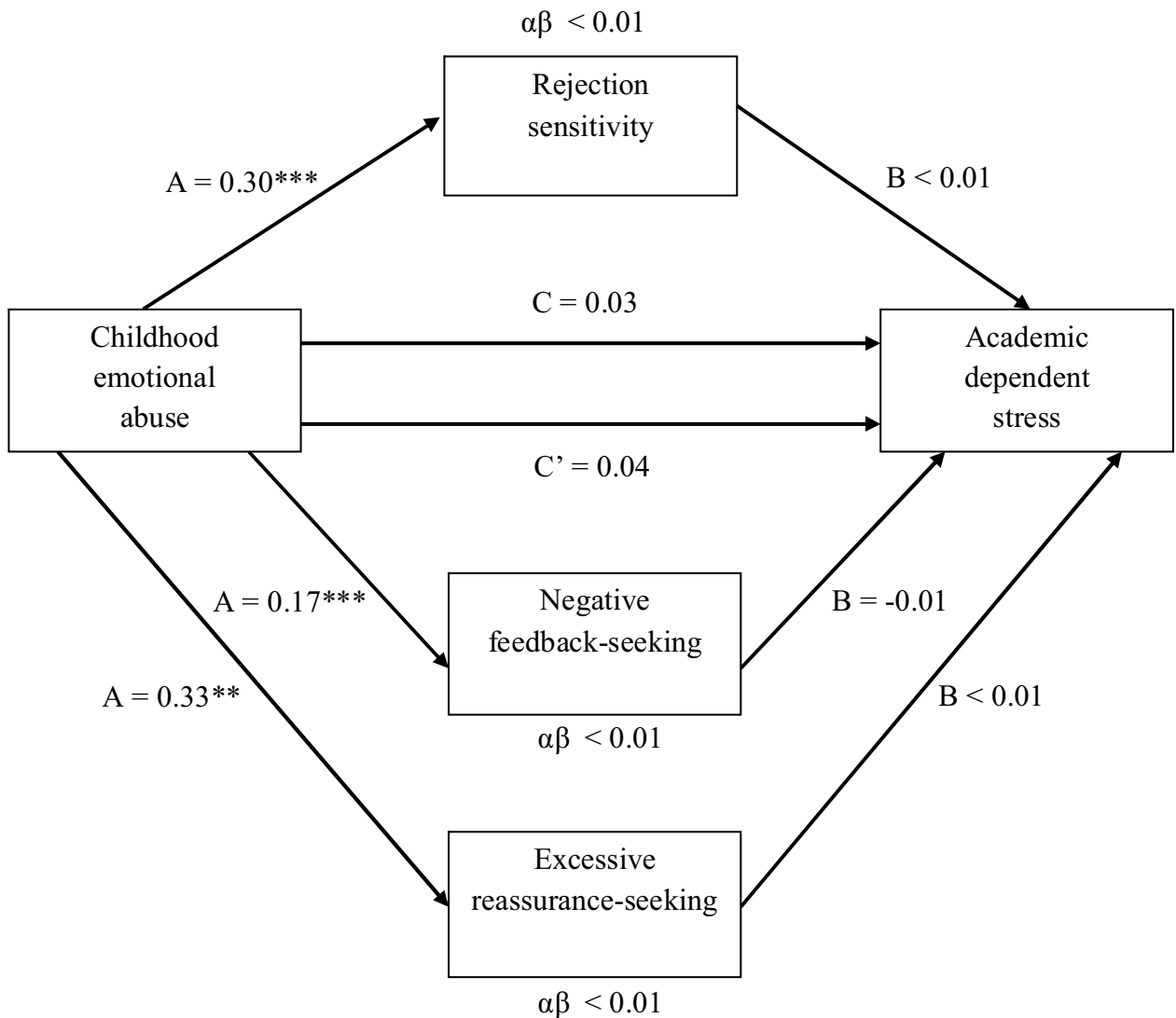


Fig. 2. Multi-mediator model for the prospective prediction of academic dependent stress.

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

4. Discussion

The goal of the present study was to further current understanding of distal and proximal risk factors for stress generation, with a particular focus on CEA and interpersonal vulnerabilities for depression, respectively. It also evaluated the specificity between the interrelationship of these risk factors and the types of dependent stress relevant to their stress generation effect, thereby providing a fine-grained analysis of this phenomenon (Hammen, 2006; Shahar et al., 2004). Specifically, we examined three interpersonal risk factors (ERS, NFS, and rejection sensitivity) as potential mediators of the relation between CEA and stress generation. In accordance with a vulnerability-specific extension of the stress generation hypothesis (Liu et al., 2014), we also assessed the specificity of interpersonal dependent stress to this process, examining whether CEA and these interpersonal vulnerability factors predicted greater rates of interpersonal dependent stressors, but not other subtypes of stress.

The current findings generally supported the study hypotheses. Specifically, consistent with the stress generation hypothesis, CEA and the three interpersonal risk factors did not predict greater independent or non-interpersonal stress. Additionally, results from a multi-mediator analysis offered partial support of our hypotheses that interpersonal risk factors would mediate the association between CEA and interpersonal stress generation, with rejection sensitivity, in particular, appearing to underlie this relationship. The current findings are consistent with the possibility that individuals who experience repeated CEA may internalize these experiences (Rose & Abramson, 1992), and consequently develop sensitivity to future emotionally rejecting interpersonal experiences. One important way this may manifest is in the form of sensitivity to rejection. Rejection sensitivity, in turn, appears to confer risk for interpersonal difficulties (Downey & Feldman, 1996),

such as increased conflict in romantic relationships (Downey, Freitas, Michaelis, & Khouri, 1998). Thus, individuals with CEA, being more prone to rejection sensitivity, may unknowingly be more likely prospectively to experience interpersonal dependent stress, which in turn may heighten their sensitivity to future rejection in an essentially recursive process. It is also important to note that although these individuals may have subjectively perceived more interpersonal stress, our findings reflect higher rates of objectively stressful interpersonal events.

The current study addresses several gaps in the literature. First, although prior research has examined the relationship between CEA and stress generation (Hankin, 2005; Harkness et al., 2015; Liu et al., 2013; Uhrlass & Gibb, 2007), the present study is the first to examine the interpersonal processes that may mediate this association, as well as its specificity to interpersonal dependent stress. The current study provides preliminary evidence that interpersonal risk factors, particularly in individuals with a history of CEA, may play an essential role in interpersonal stress generation. By examining three frequently studied interpersonal risk factors as distinct constructs, the present study provided a test of the unique effects of each individual risk factor in stress generation.

This study is not without its limitations. First, measures of childhood abuse and interpersonal risk factors were based on self-report and therefore vulnerable to shared-method variance. This limitation is likely relatively minor in the current context, given that the measures in the present study effectively yielded findings consistent with previous research implicating CEA and ERS in stress generation (Birgenheir et al., 2010; Hankin, 2005; Harkness et al., 2015; Liu et al., 2013; Potthoff et al., 1995; Shih et al., 2009; Uhrlass & Gibb, 2007). Moreover, the support for vulnerability-specific stress generation with regards to CEA, rejection sensitivity, and interpersonal dependent stress is unlikely to occur as a result of shared-method variance. Additionally, childhood abuse was assessed retrospectively, and thus responses may have been influenced by recall bias. Despite the use of a validated measure, it is possible that depression-prone individuals were more likely to recall negative life events. This pattern may potentially contribute to the observed association between depression and childhood abuse. However, there is some indication that individuals' recall of negative childhood events tend to be fairly accurate and free from mood dependent recall biases (Bifulco, Brown, Lillie, & Jarvis, 1997; Brewin, Andrews, & Gotlib, 1993; Pereda, Guilera, Forn, & Gómez-Benito, 2009; Robins et al., 1985). Nonetheless, future studies may consider using different methodological approaches. Semi-structured contextual threat interviews assessing childhood abuse, in particular, have been recommended (Harkness et al., 2015) for their ability to reduce recall biases when compared to self-report measures (Dube, Williamson, Thompson, Felitti, & Anda, 2004; McQuaid, Monroe, Roberts, & Johnson, 1992). There is also evidence that stress generation may be especially relevant to females (Safford et al., 2007; Shih & Auerbach, 2010; Shih & Eberhart, 2010). Larger studies may allow for an assessment of possible gender interactions. Finally, although rejection sensitivity was found to be a mediator of the relationship between childhood emotional abuse and interpersonal dependent stress, it is possible that this construct might serve as a proxy of self-criticism. Self-critical individuals have been found to experience more stressful events and less social support over time than dependent individuals (i.e. individuals that tend to seek close and protecting relations at the expense of developing a self-concept; Priel & Shahar, 2000; Shahar et al., 2004). In fact, self-criticism, itself, has been associated with stress generation (Shahar et al., 2004; Shahar & Priel, 2003). Relevant to the present study, childhood maltreatment has been linked to self-criticism which may lead to rejection sensitivity (Pagura, Cox, Sareen, & Enns, 2006; Sachs-Ericsson, Verona, Joiner, & Preacher, 2006). Whether rejection sensitivity is a unique risk factor for stress generation, apart from self-criticism, remains to be evaluated in future studies.

It is worth mentioning the strengths of this study as well. The current study featured a contextual threat life stress interview instead of the commonly adopted alternative of self-report life stress checklists. This contextual threat approach to assessing life stress is regarded as the gold standard in the field (Hammen, 2005; Monroe, 2008), as it allows for a much more nuanced measure of negative life events, which is particularly essential for differentiating between subtypes of life stress (e.g., dependent versus independent life stress) and evaluating the study hypotheses.

The current findings have important clinical implications. First, they are consistent with the possibility that targeting interpersonal risk factors may be an effective component of intervention for depression in individuals with a history of CEA. Second, clinicians may consider targeting rejection sensitivity specifically, given its mediating role between CEA and stress generation. Because rejection sensitivity may be associated with risk for depression through the engagement of maladaptive behaviors, behavioral modification strategies may be an especially important focus of treatment. The support for vulnerability-specific stress generation has potential clinical implications as well, insofar as individuals with particular vulnerabilities may be prone prospectively to experiencing the very types of life stress to which they are most sensitive (i.e., interpersonal life stress in the case of individuals sensitive to rejection), thus possibly placing them at especially elevated risk for depression (i.e., event congruency hypothesis; Beck, 1983). It may therefore be of benefit within clinical contexts to assess depressogenic vulnerabilities and functioning across domains. Focusing on these interpersonal vulnerability factors, particularly rejection sensitivity, in treatment, may lessen the rate of negative life events, especially in the interpersonal domain, thus potentially lessening the risk for depressive recurrence.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

- Alloy, L. B., & Abramson, L. Y. (1999). The temple-Wisconsin cognitive vulnerability to depression project: Conceptual background, design, and methods. *Journal of Cognitive Psychotherapy, 13*, 227–262.
- Alloy, L. B., Abramson, L. Y., Hogan, M. E., Whitehouse, W. G., Rose, D. T., Robinson, M. S., et al. (2000). The temple-Wisconsin cognitive vulnerability to depression project: Lifetime history of axis I psychopathology in individuals at high and low cognitive risk for depression. *Journal of Abnormal Psychology, 109*, 403–418. <http://dx.doi.org/10.1037/0021-843X.109.3.403>
- Alloy, L. B., Abramson, L. Y., Whitehouse, W. G., Hogan, M. E., Panzarella, C., & Rose, D. T. (2006). Prospective incidence of first onsets and recurrences of depression in individuals at high and low cognitive risk for depression. *Journal of Abnormal Psychology, 115*, 145–156. <http://dx.doi.org/10.1037/0021-843X.115.1.145>
- Alloy, L. B., & Clements, C. M. (1992). Illusion of control: Invulnerability to negative affect and depressive symptoms after laboratory and natural stressors. *Journal of Abnormal Psychology, 101*, 234–245.
- Ayduk, O., Downey, G., & Kim, M. (2001). Rejection sensitivity and depressive symptoms in women. *Personality and Social Psychology Bulletin, 27*, 868–877.
- Beck, A. T., Brown, G., & Steer, R. A. (1996). *Beck depression inventory II manual*. San Antonio, TX: The Psychological Corporation.
- Beck, A. T. (1983). Cognitive therapy of depression: New perspectives. In P. J. Clayton, & J. E. Barrett (Eds.), *Treatment of depression: Old controversies and new approaches* (pp. 265–290). New York, NY: Raven Press.
- Benazon, N. R. (2000). Predicting negative spousal attitudes toward depressed persons: A test of Coyne's interpersonal model. *Journal of Abnormal Psychology, 109*, 550–554. <http://dx.doi.org/10.1037/0021-843X.109.3.550>
- Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., et al. (2003). Development and validation of a brief screening version of the childhood trauma questionnaire. *Child Abuse & Neglect, 27*, 169–190. [http://dx.doi.org/10.1016/S0145-2134\(02\)00541-0](http://dx.doi.org/10.1016/S0145-2134(02)00541-0)
- Bifulco, A., Brown, G. W., Lillie, A., & Jarvis, J. (1997). Memories of childhood neglect and abuse: Corroboration in a series of sisters. *Journal of Child Psychology and Psychiatry, 38*, 365–374.
- Birgenheir, D. G., Pepper, C. M., & Johns, M. (2010). Excessive reassurance seeking as a mediator of sociotropy and negative interpersonal life events. *Cognitive Therapy and Research, 34*, 188–195.
- Boyce, P., Hickie, I., Parker, G., Mitchell, P., Wilhelm, K., & Brodaty, H. (1992). Interpersonal sensitivity and the one-year outcome of a depressive episode. *Australian and New Zealand Journal of Psychiatry, 26*, 156–161.
- Brewin, C. R., Andrews, B., & Gotlib, I. H. (1993). Psychopathology and early experience: A reappraisal of retrospective reports. *Psychological Bulletin, 113*, 82–98.
- Brown, G. W., & Harris, T. O. (1978). *Social origins of depression: A study of psychiatric disorder in women*. New York: Free Press.
- Brown, G. W., & Harris, T. O. (1982). Fall-off in the reporting of life events. *Social Psychiatry, 17*, 23–28. <http://dx.doi.org/10.1007/BF00583889>
- Casbon, T., Burns, A., Bradbury, T., & Joiner, T. (2005). Receipt of negative feedback is related to negative feedback seeking in individuals with depressive symptoms. *Behaviour Research & Therapy, 43*, 485–504.
- Coyne, J. C. (1976). Toward an interactional description of depression. *Psychiatry, 39*, 28–40.
- Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology, 70*, 1327–1343.
- Downey, G., Freitas, A. L., Michaelis, B., & Khouri, H. (1998). The self-fulfilling prophecy in close relationships: Rejection sensitivity and rejection by romantic partners. *Journal of Personality and Social Psychology, 75*, 545–560. <http://dx.doi.org/10.1037/0022-3514.75.2.545>
- Dube, S. R., Williamson, D. F., Thompson, T., Felitti, V. J., & Anda, R. F. (2004). Assessing the reliability of retrospective reports of adverse childhood experiences among adult HMO members attending a primary care clinic. *Child Abuse & Neglect, 28*, 729–737. <http://dx.doi.org/10.1016/j.chiabu.2003.08.009>
- Endicott, J., & Spitzer, R. A. (1978). A diagnostic interview: The schedule for affective disorders and schizophrenia. *Archives of General Psychiatry, 35*, 837–844. <http://dx.doi.org/10.1001/archpsyc.1978.01770310043002>
- Fink, L. A., Bernstein, D., Handelsman, L., Foote, J., & Lovejoy, M. (1995). Initial reliability and validity of the childhood trauma interview: A new multidimensional measure of childhood interpersonal trauma. *American Journal of Psychiatry, 9*, 1329–1335. <http://dx.doi.org/10.1176/ajp.152.9.1329>
- Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect, 31*, 7–26. <http://dx.doi.org/10.1016/j.chiabu.2006.06.008>
- Gross, A. B., & Keller, H. R. (1992). Long-term consequences on childhood physical and psychological maltreatment. *Aggressive Behavior, 18*(3), 171–185. <http://dx.doi.org/10.1023/A:00000000000000000>
- Hammen, C., Marks, T., Mayol, A., & DeMayo, R. (1985). Depressive self-schemas, life stress: And vulnerability to depression. *Journal of Abnormal Psychology, 94*, 308–319.
- Hammen, C. (1991). The generation of stress in the course of unipolar depression. *Journal of Abnormal Psychology, 100*, 555–561.
- Hammen, C. (2005). Stress and depression. *Annual Review of Clinical Psychology, 1*, 293–319. <http://dx.doi.org/10.1146/annurev.clinpsy.1.102803.143938>
- Hammen, C. (2006). Stress generation in depression: Reflections on origins, research, and future directions. *Journal of Clinical Psychology, 62*, 1065–1082.
- Hankin, B. L. (2005). Childhood maltreatment and psychopathology: Prospective tests of attachment, cognitive vulnerability, and stress as mediating processes. *Cognitive Therapy and Research, 29*, 645–671.
- Harkness, K. L., Bagby, R. M., Stewart, J. G., Larocque, C. L., Mazurka, R., Strauss, J. S., et al. (2015). Childhood emotional and sexual maltreatment moderate the relation of the serotonin transporter gene to stress generation. *Journal of Abnormal Psychology, 124*(2), 275–287.
- Infurna, M. R., Reichl, C., Parzer, P., Schimmenti, A., Bifulco, A., & Kaess, M. (2016). Associations between depression and specific childhood experiences of abuse and neglect: A meta-analysis. *Journal of Affective Disorders, 190*, 47–55. <http://dx.doi.org/10.1016/j.jad.2015.09.006>
- Joiner, T. E., Jr. (1995). The price of soliciting and receiving negative feedback: Self-verification theory as a vulnerability to depression theory. *Journal of Abnormal Psychology, 104*, 364–372.
- Joiner, T. E., Jr. (2000). Depression's vicious scree: Self-propagating and erosive processes in depression chronicity. *Clinical Psychology: Science and Practice, 7*, 203–218.
- Joiner, T. E., Jr. & Metalsky, G. I. (1995). A prospective test of an integrative interpersonal theory of depression: A naturalistic study of college roommates. *Journal of Personality and Social Psychology, 69*, 778–788.
- Joiner, T. E., Jr. & Metalsky, G. I. (2001). Excessive reassurance seeking: Delineating a risk factor involved in the development of depressive symptoms. *Psychological Science, 12*, 371–378.
- Joiner, T. E., Jr, Alfano, M. S., & Metalsky, G. I. (1992). When depression breeds contempt: Reassurance seeking, self-esteem, and rejection of depressed college students by their roommates. *Journal of Abnormal Psychology, 101*, 165–173.
- Joiner, T. E., Jr, Katz, J., & Lew, A. S. (1997). Self-verification and depression among youth psychiatric patients. *Journal of Abnormal Psychology, 106*, 608–618.
- Joiner, T. E., Jr, Metalsky, G. I., Katz, J., & Beach, S. R. H. (1999). Depression and excessive reassurance-seeking. *Psychological Inquiry, 10*, 269–278.
- Kendler, K. S., Karkowski, L. M., & Prescott, C. A. (1999). Causal relationship between stressful life events and the onset of major depression. *American Journal of Psychiatry, 156*, 837–848.
- Kim, J., & Cicchetti, D. (2006). Longitudinal trajectories of self-system processes and depressive symptoms among maltreated and nonmaltreated children. *Child Development, 77*, 624–639.
- Liu, R. T., & Alloy, L. B. (2010). Stress generation in depression: A systematic review of the empirical literature and recommendations for future study. *Clinical Psychology Review, 30*, 582–593. <http://dx.doi.org/10.1016/j.cpr.2010.04.010> PMID: PMC3049314
- Liu, R. T., Alloy, L. B., Mastin, B. M., Choi, J. Y., Boland, E. M., & Jenkins, A. (2014). Vulnerability-specific stress generation: An examination of depressogenic cognitive vulnerability across multiple domains. *Anxiety Stress and Coping, 27*, 695–711. <http://dx.doi.org/10.1080/10615806.2014.909927>

- Liu, R. T., Choi, J. Y., Boland, E. M., Mastin, B. M., & Alloy, L. B. (2013). Childhood abuse and stress generation: The mediational effect of depressogenic cognitive styles. *Psychiatry Research*, 206, 217–222. <http://dx.doi.org/10.1016/j.psychres.2012.12.001>. PMID: PMC4081492
- Liu, R. L., Kraines, M. A., Massing-Schaffer, M., & Alloy, L. B. (2014). Rejection sensitivity and depression: Mediation by stress generation. *Psychiatry*, 77, 86–97.
- Mandelli, L., Petrelli, C., & Serretti, A. (2015). The role of specific early trauma in adult depression: A meta-analysis of published literature. *Childhood trauma and adult depression. European Psychiatry*, 30, 665–680. <http://dx.doi.org/10.1016/j.eurpsy.2015.04.007>
- Massing-Schaffer, M., Liu, R. T., Kraines, M. A., Choi, J. Y., & Alloy, L. B. (2015). Elucidating the relation between childhood emotional abuse and depressive symptoms in adulthood: The mediating role of maladaptive processes. *Personality and Individual Differences*, 74, 106–111.
- McClain, L., & Abramson, L. Y. (1988). Self-schemas and life events as predictors of depression. Unpublished manuscript.
- McQuaid, J. R., Monroe, S. M., Roberts, J. E., & Johnson, S. L. (1992). Toward the standardization of life stress assessment: Definitional discrepancies and inconsistencies in methods. *Stress Medicine*, 8, 47–56. <http://dx.doi.org/10.1002/smi.2460080107>
- Monroe, S. M. (2008). Modern approaches to conceptualizing and measuring human life stress. *Annual Review of Clinical Psychology*, 4, 33–52. <http://dx.doi.org/10.1146/annurev.clinpsy.4.022007.141207>
- Needles, D. J., & Abramson, L. Y. (1990). Positive life events, attributional style, and hopelessness: Testing a model of recovery from depression. *Journal of Abnormal Psychology*, 99, 156–165.
- Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: A systematic review and meta-analysis. *PLoS Medicine*, 9, e1001349. <http://dx.doi.org/10.1371/journal.pmed.1001349>
- Pagura, J., Cox, B. J., Sareen, J., & Enns, M. W. (2006). Childhood adversities associated with self-criticism in a nationally representative sample. *Personality and Individual Differences*, 41, 1287–1298. <http://dx.doi.org/10.1016/j.paid.2006.05.003>
- Pereda, N., Guilera, G., Forns, M., & Gómez-Benito, J. (2009). The prevalence of child sexual abuse in community and student samples: A meta-analysis. *Clinical Psychology Review*, 29, 328–338.
- Posternak, M. A., & Zimmerman, M. (2002). The prevalence of atypical features across mood, anxiety, and personality disorders. *Comprehensive Psychiatry*, 43(4), 253–262.
- Potthoff, J. G., Holahan, C. J., & Joiner, T. E., Jr. (1995). Reassurance seeking, stress generation: And depressive symptoms: An integrative model. *Journal of Personality and Social Psychology*, 68, 664–670.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879–891. <http://dx.doi.org/10.3758/BRM.40.3.879>
- Priel, B., & Shahar, G. (2000). Dependency, self-criticism, social context and distress: Comparing moderating and mediating models. *Personality and Individual Differences*, 28, 515–525. [http://dx.doi.org/10.1016/S0191-8869\(99\)00116-6](http://dx.doi.org/10.1016/S0191-8869(99)00116-6)
- Rehman, U. S., Boucher, E. M., Duong, D., & George, N. (2008). A context-informed approach to the study of negative-feedback seeking in depression. *Behaviour Research and Therapy*, 46, 239–252.
- Robins, L. N., Schoenberg, S. P., Holmes, S. J., Ratcliff, K. S., Benham, A., & Works, J. (1985). Early home environment and retrospective recall: A test for concordance between siblings with and without psychiatric disorders. *American Journal of Orthopsychiatry*, 55, 27–41.
- Rose, D. T., & Abramson, L. Y. (1992). Developmental predictors of depressive cognitive style: Research and theory. In D. Cicchetti, & S. Toth (Eds.), *Rochester symposium of developmental psychopathology* (Vol. IV) (pp. 323–349). Hillsdale, NJ: Erlbaum.
- Sachs-Ericson, N., Verona, E., Joiner, T., & Preacher, K. J. (2006). Parental verbal abuse and the mediating role of self-criticism in adult internalizing disorders. *Journal of Affective Disorders*, 93, 71–78. <http://dx.doi.org/10.1016/j.jad.2006.02.014>
- Safford, S. M., Alloy, L. B., Abramson, L. Y., & Crossfield, A. G. (2007). Negative cognitive style as a predictor of negative life events in depression-prone individuals: A test of the stress generation hypothesis. *Journal of Affective Disorders*, 99, 147–154. <http://dx.doi.org/10.1016/j.jad.2006.09.003>
- Salwen, J. K., Hymowitz, G. F., Vivian, D., & O'Leary, K. D. (2014). Childhood abuse, adult interpersonal abuse, and depression in individuals with extreme obesity. *Child Abuse & Neglect*, 38, 425–433. <http://dx.doi.org/10.1016/j.chiabu.2013.12.005>
- Shahar, G., & Priel, B. (2003). Active vulnerability, adolescent distress, and the mediating/suppressing role of life events. *Personality and Individual Differences*, 35, 199–218.
- Shahar, G., Joiner, T. E., Jr, Zuroff, D. C., & Blatt, S. J. (2004). Personality, interpersonal behavior, and depression: Co-existence of stress-specific moderating and mediating effects. *Personality and Individual Differences*, 36, 1583–1596. <http://dx.doi.org/10.1016/j.paid.2003.06.006>
- Shih, J. H., & Auerbach, R. P. (2010). Gender and stress generation: An examination of interpersonal predictors. *International Journal of Cognitive Therapy*, 3, 332–344.
- Shih, J. H., & Eberhart, N. K. (2010). Gender differences in the associations between interpersonal behaviors and stress generation. *Journal of Social and Clinical Psychology*, 29, 243–255.
- Shih, J. H., Abela, J. R. Z., & Starrs, C. (2009). Cognitive and interpersonal predictors of stress generation in children of affectively ill parents. *Journal of Abnormal Child Psychology*, 37, 195–208.
- Slavich, G. M., O'Donovan, A., Epel, E. S., & Kemeny, M. E. (2010). Black sheep get the blues: A psychobiological model of social rejection and depression. *Neuroscience and Biobehavioral Reviews*, 35, 39–45. <http://dx.doi.org/10.1016/j.neubiorev.2010.01.003>
- Spertus, I. L., Yehuda, R., Wong, C. M., Halligan, S., & Seremetis, S. V. (2003). Childhood emotional abuse and neglect as predictors of psychological and physical symptoms in women presenting to a primary care practice. *Child Abuse & Neglect*, 27(11), 1247–1258.
- Starr, L. R., & Davila, J. (2008). Excessive reassurance seeking, depression, and interpersonal rejection: A meta-analytic review. *Journal of Abnormal Psychology*, 117, 762–775.
- Steer, R. A., Ball, R., Ranieri, W. F., & Beck, A. T. (1997). Further evidence for the construct validity of the Beck depression inventory-II with psychiatric outpatients. *Psychological Reports*, 80, 443–446.
- Swann, W. B., Wenzlaff, R. M., Krull, D. S., & Pelham, B. W. (1992). Allure of negative feedback: Self-verification strivings among depressed persons. *Journal of Abnormal Psychology*, 101, 293–306.
- Swann, W. B., Jr. (1987). Identity negotiation: Where two roads meet. *Journal of Personality and Social Psychology*, 53, 1038–1051.
- Uhrlass, D. J., & Gibb, B. E. (2007). Childhood emotional maltreatment and the stress generation model of depression. *Journal of Social and Clinical Psychology*, 26(1), 119–130.
- Weinstock, L. M., & Whisman, M. A. (2004). The self-verification model of depression and interpersonal rejection in heterosexual dating relationships. *Journal of Social and Clinical Psychology*, 23, 240–259.