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BRIEF REPORT

Emotion Regulation in Depression: Reflection Predicts Recovery from a Major Depressive Episode

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Abstract Little is known about the relation between individual differences in emotion regulation (ER) and the maintenance of clinical depression. This study examined whether frequency of use of four ER strategies (i.e., cognitive reappraisal, expressive suppression, reflection, and brooding) predicts recovery from a major depressive episode. At an initial appointment (Time 1), participants diagnosed with current major depressive disorder completed measures assessing symptom severity and use of ER strategies. Six months later (Time 2), participants were reassessed to determine diagnostic status (i.e., recovered or non-recovered). Results demonstrated that, after controlling for symptom severity, use of ER strategies predicted recovery status at Time 2. Specifically, use of reflection at Time 1 was a unique and significant predictor of greater chance for recovery. Results indicate that ER strategies may be utilized to predict long-term symptom maintenance and provide support for the proposition that reflection may be used adaptively among individuals diagnosed with depression.

Keywords Depression · Emotion regulation · Rumination · Reflection

Introduction

Difficulties with the regulation of emotional experiences lie at the core of depressive disorders, the hallmark symptoms of which include sustained negative affect and/or blunted emotional responsivity (American Psychiatric Association 2000). Though there are many strategies that can be used to regulate how and when specific emotions are felt, certain "adaptive" emotion regulation (ER) strategies have been found to attenuate depression symptoms, while other "maladaptive" strategies have been found to exacerbate them (see Aldao et al. 2010 for a review). Few studies have examined how using adaptive or maladaptive ER strategies impacts depression symptoms longitudinally, but those that have indicate that habitual use of maladaptive ER strategies is related to the onset of depressive disorders and may predispose individuals to the recurrence of depressive episodes (Nolen-Hoeksema 2000; Bagby et al. 2004). Experimental research also suggests that the use of specific ER strategies is associated with prolonged negative affect in response to stressors and negative life events (Joormann et al. 2007). However, to date, no work has been done to examine whether the use of specific ER strategies maintains depression symptoms in a diagnosed sample using a longitudinal design.

The identification of individual ER strategies as either adaptive or maladaptive may have important implications for individuals currently experiencing a depressive episode. It is unlikely, however, that people rely on a single strategy to cope with negative emotions; instead, it may be more common to employ a combination of strategies. This idea is supported by the high intercorrelations that are often found among ER strategies (e.g., Gross and John 2003). Studies also suggest that, compared to reliance on a single strategy, flexible application of more than one ER strategy is predictive of less psychological distress over time (Bonanno et al. 2004). Yet, participants with depression demonstrate, what may be, an inflexible over-reliance on maladaptive rather than adaptive strategies (e.g., Ehring et al. 2010; Joormann and Gotlib 2010). Still, more work is

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needed to understand the relation of habitual use of multiple ER strategies to depression, as no studies have examined how the use of multiple strategies predicts long-term maintenance of symptoms within clinical samples. Moreover, examining multiple strategies together controls for the overlap in variance among strategies and may help to identify ER strategies that uniquely predict symptom maintenance or recovery.

This study examined four ER strategies frequently studied within depressed and dysphoric samples: Cognitive reappraisal, emotional suppression, ruminative reflection, and ruminative brooding. Cognitive reappraisal is an ER strategy in which the individual reinterprets negative thoughts or experiences in a way that lessens the intensity of his or her negative emotional response. Compared to people receiving no ER instructions, people instructed to reappraise report less subjective negative affect and demonstrate reduced physiological arousal in response to negative stimuli (Ray et al. 2010). Increased habitual use of cognitive reappraisal is also associated with increased positive affect, interpersonal functioning, and general well-being (Gross and John 2003). It is, therefore, considered to be an adaptive ER strategy. Individuals with major depressive disorder (MDD) report less frequent use of reappraisal than remitted or never-depressed participants, suggesting that a lack of reliance on reappraisal in response to negative emotions can lead to the development of depressive symptoms and may maintain them over time (Joormann and Gotlib 2010).

Expressive suppression is a strategy involving efforts to hide one's emotions. Paradoxically, suppression of emotional experience has been found to relate to an increase in negative affect, and individuals who habitually suppress their emotions demonstrate avoidance of close relationships, decreased social support, and lower levels of general well-being (Gross and John 2003). Ehring et al. (2010) found that spontaneous use of suppression was reported more frequently among recovered depressed compared to never-depressed participants and was related to higher levels of negative affect in response to a sad mood induction. Furthermore, when instructed to suppress emotional responding while recalling distressing memories, participants high in negative affect reported experiencing significantly more sadness than those low in negative affect (Dalgleish et al. 2009). These findings indicate that among individuals already high in negative affect, such as depression-vulnerable participants, suppression is related to the maintenance of negative affect following a stressor. Like reappraisal, though, no work has been done to examine the longitudinal effects of habitual suppression on the maintenance of depression symptoms.

With regard to its adaptive utility among individuals with depression research on rumination has largely confirmed the maladaptive nature of this strategy, though exceptions do exist (for a review, see Nolen-Hoeksema et al. 2008). In addition, though research exists examining how rumination relates to depression longitudinally, almost all of this work has focused on the onset or recurrence of depressive episodes. Research examining rumination in relation to the maintenance of depression symptoms has been largely ignored (Aldao et al. 2010). Cross-sectionally rumination has been found to relate to increased negative affect, reduced problem-solving, and deficits in inhibitory cognitive processes among depressed individuals (Donaldson and Lam 2004; Joormann and Gotlib 2010).

However, the construct of rumination as it has been operationalized in measures such as the Ruminative Responses Scale (RRS; Treynor et al. 2003), may contain both maladaptive and adaptive components. In their factor analysis of the RRS, Treynor et al. (2003) found that the measure tapped two distinct dimensions of rumination: Brooding (negative, self-focused, perseverative thinking) and reflection/pondering (self-reflective, intellectual curiosity). Research has consistently shown brooding to be maladaptive. It is associated with greater depressive symptoms, negative attribution styles, and deficits in interpersonal functioning (Lo et al. 2008; Pearson et al. 2010).

In contrast, there is some evidence to suggest that reflection can be used as an adaptive ER strategy. Joormann et al. (2006) found that, in response to sadness, healthy controls reported relying on reflection more often than brooding, while individuals with MDD reported brooding more often than reflecting. Additionally, among participants with MDD, they found that the relation between rumination and other negative outcomes such as biased attention for dysphoric stimuli was driven by scores on the brooding subscale. In fact, in this study reflection was not significantly associated with negative cognitive biases. Furthermore, while findings reveal a relation between reflection and current depression symptoms, results have also shown an association with less depression over time. Within a large, non-clinical, community sample use of reflection has been found to relate to increased scores on the Beck Depression Inventory-Second Edition (BDI-II; Treynor et al. 2003). Yet, when these same participants were reassessed 1 year later, use of reflection at Time 1 was found to be inversely related to depression at Time 2. These findings led researchers to propose that reflection can lead to adaptive outcomes over time, perhaps because it contributes to active problem-solving (Nolen-Hoeksema et al. 2008).

The current study sought to extend previous research by examining whether the use of ER strategies relates to maintenance of depression symptoms longitudinally in a clinical sample of participants diagnosed with MDD.

Specifically, the study examined whether cognitive reappraisal, expressive suppression, reflection, and brooding predict recovery from a current depressive episode. As all four ER strategies are associated with depression or dysphoric mood, it was hypothesized that a model combining the strategies would accurately predict diagnostic status at a 6-month reassessment. The study also sought to examine how each ER strategy uniquely predicts maintenance of depression symptoms while controlling for overlap among strategies. It was hypothesized that use of expressive suppression and brooding would relate to long-term maintenance of symptoms. In contrast, cognitive reappraisal and reflection were predicted to be associated with a greater chance of recovery.

Methods

Participants

Participants ($N = 40$) were recruited through advertisements posted in community newspapers and online bulletin boards. Potential participants were screened by phone for initial inclusion/exclusion criteria. To qualify for the study, individuals had to be between 18 and 60 years of age and fluent in English. In addition, individuals were excluded if they met criteria for (1) a current or past manic episode, (2) current or past psychotic symptoms, or (3) substance abuse or dependence occurring within the past 6 months. Individuals reporting severe head trauma or learning disabilities were also excluded from participation. Following the phone screen, eligible participants were invited to come into the laboratory for a more extensive interview.

Trained evaluators administered the Structured Clinical Interview for the DSM-IV (SCID; First et al. 2002) during the first study session. The SCID is a semi-structured interview used to assess for current and past Axis I diagnoses. It has demonstrated good reliability for the majority of the disorders it covers (e.g., Skre et al. 1991). All evaluators had previous experience in administering structured clinical interviews with psychiatric patients and received extensive in-house training in SCID administration. Diagnostic inter-rater reliability within the laboratory is .93 for MDD. Participants were included in the study if they met criteria for current MDD according to the DSM-IV-TR criteria (American Psychiatric Association 2000) at this interview.

Average age of the sample was 38.3 years (SD = 10.9 years). Sixty-three percent of participants were female and eighty percent were Caucasian. As such, race was dichotomized into Caucasian and non-Caucasian for all subsequent analyses. With regard to marital status, the sample's frequency distribution was as follows: 47.5% never married, 20% married or cohabitating, 17.5% divorced or separated, and 15% status unknown. At reassessment, 21 participants still met criteria for a current MDE (the currently depressed [CD] group) and 19 had fully recovered (the recovered from depression [RD] group). At Time 1, no group differences were found between CD and RD participants for gender, race, or marital status (all P's $> .10$). However, at Time 2, females were more likely than males to still meet criteria for a current MDE at a level that approached significance, χ^2 (1, $N = 38$) = 3.79, $P = .052$, $V = .32$. No group differences were found for race or marital status at Time 2 (P's $> .10$).

Treatment status was coded as (1) current outpatient, (2) no current treatment, or (3) other. At Time 1, 52.5% of participants were outpatients, 45% had no current treatment, and 2.5% reported receiving some other form of treatment. When reassessed at Time 2, 50% of participants reported being outpatients and 50% reported no current treatment. Similarly, at Time 1, 82.5% of the sample had no history of psychiatric hospitalizations, 7.5% had been hospitalized one time, and 5% had been hospitalized three times. Only one participant reported having been hospitalized in the 6 months between Time 1 and Time 2. Again, no significant differences between the CD and RD groups were found for current treatment status or number of psychiatric hospitalizations at either time point (P's $> .10$).

At initial assessment participants were asked to estimate the number of depressive episodes they had experienced over the lifetime. This estimate was then coded as (1) 10 episodes or less or (2) more than 10 episodes. Within the sample as a whole, 22.5% reported 10 or fewer episodes, 52.5% reported more than 10 episodes, and 25% were not able to estimate this number. The RD and CD groups did not differ with regard to their estimated number of past depressive episodes ($P > .10$). Comparison of Time 1 symptom severity scores, however, revealed that the CD group ($M = 31.5$, SD = 11.7) had higher BDI-II scores than the RD group ($M = 24.8$, SD = 8.5), t (38) = 2.05, $P < .05$, $d = .70$.

The reported frequency of use for each of the four ER strategies of interest was not found to vary as a function of demographic variables of interest including gender, race, or age (all P's $> .10$).

Measures

Determination of Recovery Status: A slightly modified version of the SCID was used to determine recovery status at a 6-month reassessment based on the guidelines recommended by the NIMH Collaborative Program on the Psychobiology of Depression (e.g., Keller et al. 1992). To be classified as fully recovered from the previously diagnosed MDE, participants could only endorse experiencing two of the nine DSM-IV-TR diagnostic criteria at no more than a mild level (i.e., no symptoms or minimal symptoms

with no impairment) for the eight consecutive weeks leading up to the reassessment. Evaluators assessed MDE criteria in 2-week increments beginning with the current week and covering the entire 8-week period required for full recovery status.

Beck Depression Inventory- Second Edition (BDI-II; Beck et al. 1996b): The BDI-II is a 21-item, self-report measure of severity of depression symptoms. Each item maps on to a particular symptom (e.g., sad mood) included in the DSM-IV-TR diagnostic criteria, and has anchors, 0 ("I do not feel sad") to 3 ("I am so sad or unhappy I can't stand it"). It has been shown to be a psychometrically sound measure with high internal consistency ($\alpha = .91$; Beck et al. 1996a).

Emotion Regulation Questionnaire (ERQ; Gross and John 2003): The ERQ is a 10-item measure of trait-level use of emotion regulation strategies in response to both positive and negative emotions. The measure has two subscales, Expressive Suppression (e.g., "When I'm feeling negative emotions I make sure not to express them") and Cognitive Reappraisal ("When I want to feel less negative emotion, I change the way I'm thinking about the situation"). Items have anchors 1 (*Strongly disagree*) to 7 (*Strongly agree*). The measure has been shown to be a valid and reliable measure of these strategies with good internal consistency ($\alpha = .77$), test–retest reliability ($r = .69$), and convergent and divergent validity (Gross and John 2003).

Ruminative Responses Scale (RRS; Treynor et al. 2003): The RRS is a 22-item, self-report questionnaire of rumination in response to dysphoric mood. The RRS assesses responses that are focused on the self, on symptoms, or on possible consequences and causes of moods using a 4-point scale (*Almost never* to *Almost always*). Factor analysis has identified two subscales within the measure, Brooding (e.g., "I think 'what am I doing to deserve this'") and Reflection (e.g., "Analyze recent events to try to understand why you are depressed"). Internal consistency ($\alpha = .79$ and $\alpha = .72$) and test–retest reliability ($r = .62$ and $r = .60$) were previously determined within a community sample for the brooding and reflection subscales, respectively (Treynor et al. 2003).

Procedure

At Time 1, following completion of the informed consent process, participants were administered the SCID. All participants met criteria for MDD. Demographic information (e.g., age, gender), as well as information on current and past treatment history, was also collected as part of the interview. Following administration of the SCID, participants completed computer-administered self-report measures including the BDI-II, the ERQ, and the RRS. Six months later, participants returned for a follow up appointment (Time 2) to assess recovery status. For each interview, participants were compensated $30.

Results

Use of ER Strategies in RD and CD Participants

Independent samples *t* tests were used to assess for differences between the RD and CD participants on self-reported use of ER strategies at Time 1. No significant differences were found. However, there was a trend for the CD participants to report less use of reflection ($M = 10.9$, $SD = 4.3$) compared to the RD group ($M = 13.0$, $SD = 3.7$), $t\ (38) = 1.68$, $P = .098$, $d = .53$. To examine potential overlap in the use of different ER strategies, as well as their relation to Time 1 depression severity, zero-order correlations were calculated for the full sample, as well as within the CD and RD groups. Results are presented in Table 1. Brooding was found to be significantly related to the use of reflection and expressive suppression within the full sample, as well as within the CD group. However, these relations were reduced to non-significant trends when examined within the RD group.

Prediction of Recovery Status at Time 2

To test our hypotheses, we used a logistic regression model that included the four ER strategies (RRS-Reflection, RRS-Brooding, ERQ-Expressive suppression, and ERQ-Cognitive Reappraisal) at Time 1 as predictors of diagnostic status at Time 2. Time 1 BDI-II scores were also included in the model in order to control for symptom severity at baseline and because of the significant difference in scores found between the RD and CD groups.

The overall model was significant (See Table 2) and correctly classified 77.50% of the sample. More specifically, it correctly classified 81.00% of CD and 73.70% of RD participants at Time 2. As expected, BDI-II scores contributed significantly to the model with higher scores at Time 1 associated with less chance of recovery at Time 2, $\beta = -.10$, $\chi^2\ (1,\ N = 40) = 5.13$, $P < .05$. In addition, RRS-Reflection scores contributed significantly to the model even after controlling for BDI-II scores; higher reflection scores at Time 1 were associated with greater chance of recovery at Time 2, $\beta = .29$, $\chi^2\ (1,\ N = 40) = 5.16$, $P < .05$.[1] None of the other emotion

[1] The predictive ability of the four ER strategies without controlling for Time 1 symptom severity was also examined. Results mirrored the primary analyses with reflection being the only significant predictor ($\beta = .23$, $\chi^2\ (1,\ N = 40) = 4.36$, $P < .05$). No other ER strategies significantly predicted recovery status (all *P*'s $> .05$).

Table 1 Zero order correlations among emotion regulation strategies at Time 1

Entire sample	RRS-R	RRS-B	ERQ-ES	ERQ-CR	BDI-II
RRS-R		.44**	−.08	−.01	.11
RRS-B			.43**	.09	.18
ERQ-ES				.17	−.01
ERQ-CR					−.24
CD group ($n = 21$)	RRS-R	RRS-B	ERQ-ES	ERQ-CR	BDI-II
RRS-R		.51*	−.22	.03	.20
RRS-B			.49*	.09	.18
ERQ-ES				−.01	.11
ERQ-CR					−.30
RD group ($n = 19$)	RRS-R	RRS-B	ERQ-ES	ERQ-CR	BDI-II
RRS-R		.42$^{@}$	.05	−.01	.27
RRS-B			.38$^{@}$	.08	.19
ERQ-ES				.33	−.17
ERQ-CR					−.28

RRS-R Reflection subscale of the Ruminative Responses Scale, *RRS-B* Brooding subscale of the Ruminative Responses Scale, *ERQ-ES* Expressive Suppression subscale of the Emotion Regulation Questionnaire, *ERQ-CR* Cognitive Reappraisal subscale of the Emotion Regulation Questionnaire, *BDI-II* Time 1 Beck Depression Inventory-Second Edition, sum score

** $P < .01$, * $P < .05$, $^{@}P < .10$

Table 2 Logistic regression analysis of recovery status at Time 2

Predictor	β	*SE*	Wald's χ^2	*df*	*p*	odds ratio
Constant	.92	1.99	.21	1	.65	2.50
BDI-II	−.10	.05	5.13	1	.02	.90
RRS-R	.29	.13	5.16	1	.02	1.34
RRS-B	−.13	.13	1.09	1	.30	.88
ERQ-CR	−.36	.29	1.55	1	.21	.70
ERQ-ES	.35	.31	1.27	1	.26	1.42
Test			Wald's χ^2	*df*	*p*	
Overall model fit			12.25	5	.03	

BDI-II Time 1 Beck Depression Inventory-Second Edition, sum score, *RRS-R* Reflection subscale of the Ruminative Responses Scale, *RRS-B* Brooding subscale of the Ruminative Responses Scale, *ERQ-ES* Expressive Suppression subscale of the Emotion Regulation Questionnaire, *ERQ-CR* Cognitive Reappraisal subscale of the Emotion Regulation Questionnaire

regulation strategies were found to be significant and unique predictors of Time 2 diagnostic status (all *P*'s $> .05$).[2]

Discussion

The current study examined whether habitual use of ER strategies, including cognitive reappraisal, expressive suppression, brooding, and reflection predicts recovery from an MDE using a longitudinal design. Results from this study support the proposition that individual differences in the use of ER strategies play a role in the maintenance of depressive episodes. Indeed, our model accurately classified almost 80% of the sample as recovered versus non-recovered.

[2] Because gender was found to be marginally related to recovery status, we further examined the predictive ability of reflection, controlling for both Time 1 BDI-II scores and gender. A logistic regression was conducted, entering BDI-II scores and gender in Block 1 and the four ER strategies in Block 2. Even after controlling for gender, reflection was still found to significantly predict recovery status ($\beta = .28$, χ^2 (1, $N = 38$) = 4.43, $P < .05$). None of the other ER strategies were found to be significant predictors (all *P*'s $> .05$).

In addition, the study investigated whether specific ER strategies were uniquely related to the maintenance of depressive episodes at a 6-month follow-up assessment. It was hypothesized that frequent use of reappraisal and reflection would be associated with greater chance for recovery from an MDE and that use of expressive suppression and brooding would be associated with maintenance of symptoms. These hypotheses were partially supported. Even after controlling for Time 1 depression severity and overlap among ER strategies, habitual use of reflection in response to negative emotions remained predictive of recovery status, such that participants who reported reflecting more on their negative emotions were less likely to still meet criteria for an MDE at reassessment. This finding is consistent with previous research using a non-clinical sample, which found that reflection was positively related to current depression symptoms, but inversely related to symptoms over time (Treynor et al. 2003).

The results of this study support the proposition that rumination is comprised of both maladaptive and adaptive components. As these components are differentially related to the maintenance of depressive symptoms, it is important to distinguish between brooding, a maladaptive strategy utilizing perseverative, self-focused, negative thought in response to negative emotion, and reflection, a more general, self-reflective tendency or intellectual curiosity about the self with possible adaptive utility (Nolen-Hoeksema et al. 2008). Previous research indicates that depressed individuals report using reflection more frequently than non-depressed participants, and use of reflection is positively associated with severity of depression symptoms (Joormann et al. 2006). However, within a non-clinical sample of adults recruited from the community, use of reflection was predictive of less severe depression symptoms over time (Treynor et al. 2003). From these findings, Nolen-Hoeksema et al. (2008) concluded that regulating negative emotion through the use of reflection may cause an increase in emotional distress in the short term, but lead to adaptive outcomes over time, perhaps because reflection contributes to active problem-solving. Results of the current study lend further support to this hypothesis. Multivariate analyses indicate that even after controlling for the overlap in variance among predictors, use of reflection uniquely predicted recovery status at reassessment. As such, assessment of the reflection subtype of rumination may have important implications for predicting long term outcomes among clinically depressed individuals.

Surprisingly, none of the other three ER strategies were associated with recovery status. However, there exists a dearth of research examining the long-term effects of cognitive reappraisal, expressive suppression, and brooding on depression symptoms (Aldao et al. 2010). To date, no studies have examined the effects of habitual use of cognitive reappraisal or expressive suppression on the onset, recurrence, or maintenance of depression symptoms using longitudinal designs. Previous research suggests that depressed people struggle with the implementation of adaptive ER strategies, and particularly, the spontaneous use of cognitive reappraisal (Campbell-Sills and Barlow 2007; Ehring et al. 2010). In addition, research demonstrates that expressive suppression is used at high rates among depressed people, and that, within this group, it is perceived of as an effective way to cope with difficult emotions (Campbell-Sills and Barlow 2007). It remains unclear, however, whether these patterns of ER are simply symptoms of depressive disorders or if they may play a role in depression vulnerability. As such, further research in this area is warranted.

Some longitudinal research has examined the effects of rumination on depression symptoms. Nevertheless, these studies have rarely examined reflection and brooding as distinct constructs. It is possible that predictive power of ruminative brooding is moderated by factors associated with rumination, such as depression severity or timeline for reassessment (i.e., short-term assessment versus long-term assessment). Yet, even without considering moderators, virtually no research has been done to examine the relation between brooding and the maintenance of current depression symptoms. In the single exception to this, Treynor et al. (2003) examined the relation between brooding and depression over a 1 year period, finding that brooding contributed to maintained depression symptoms. Results of the current study are inconsistent with this finding. One important difference, however, is that the previous study examined the relation between brooding and depression using a non-clinical sample of adults recruited from the community, whereas, the current study examined the contribution of brooding to the maintenance of a diagnosed MDE.

It should be noted that the current study was limited by its small sample size. Given this, it is possible that the regression analyses presented were underpowered and, as such, drawing conclusions from the null findings is cautioned against. Replication of the current findings within a larger clinically depressed sample is clearly needed to further elucidate these relations. That reflection predicted recovery status despite a potential lack of power, however, speaks to the strength of this relation.

The study was also limited by the fact that we did not manipulate ER strategies, but rather assessed their habitual use via self-report. Because of the correlational nature of the study design, no causal conclusions can be drawn, and it is possible that results may have been impacted by third variables. Importantly, though, use of ER strategies was assessed 6 months prior to the determination of diagnostic status, indicating that temporally, use of ER strategies

came before MDE recovery. Finally, the study may have benefited from further descriptive information regarding the participants' depressive episodes. For example, the duration of the Time 1 index episode was not assessed. Similarly, aside from assessing for recovery from the current MDE at Time 2, depression symptoms were not measured dimensionally at this time point, and little is known about participants' recovery trajectories over the course of the 6-month period between assessments.

Despite the limitations, the current study should be noted for its methodological rigor; diagnoses were made using gold standard clinical interviews and recovery status was assessed using the stringent guidelines recommended by the NIMH Collaborative Program on the Psychobiology of Depression, involving a comprehensive assessment of all depression symptoms in the previous 2 months using four 2-week intervals. Few studies have examined how ER predicts recovery from depressive episodes over time and those that have relied exclusively on questionnaires assessing frequency and severity of depressive symptoms without assessing for the presence of a clinical diagnosis (Treynor et al. 2003). In this regard, our study is an important next step in understanding the role of ER in the maintenance of this psychological disorder.

Overall, findings from this study indicate that an understanding of the utilization of ER strategies among individuals with MDD may be particularly valuable in attempting to predict the course of a depressive episode. Our study also provides support for the hypothesis that reflection may be used adaptively among individuals with depression. In light of this, future studies should examine reflection and brooding separately when attempting to understand the role of rumination in the maintenance of depressive disorders. These results have important theoretical and clinical implications, as they suggest that investigating the use of ER strategies among individuals with MDD may help to identify individuals at high risk for chronic depression. These findings also highlight the importance of interventions that may help people to establish the use of adaptive regulatory strategies in response to negative emotion.

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