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Shorter communication

# Over and over again: Rumination, reflection, and promotion goal failure and their interactive effects on depressive symptoms

Neil P. Jones [a,*], Alison A. Papadakis [b], Caitlin M. Hogan [c], Timothy J. Strauman [d]

[a] Western Psychiatric Institute and Clinic and the University of Pittsburgh Medical Center, Pittsburgh, PA, USA
[b] Loyola College, Baltimore, MD, USA
[c] Stanford University, Stanford, CA, USA
[d] Duke University, Durham, NC, USA

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ABSTRACT

Research indicates that examining failure experiences using an immersed processing style versus a non-immersed, self-distanced open style influences cognitions about the self, motivation, and subsequent depressive symptoms. However, the effect of processing goal failure experiences using these different processing styles have not been adequately incorporated into existing self-regulation theories of depression. In a cross-sectional study, we examined the interactive effects of rumination (versus reflection) and failure to attain promotion goals on depressive symptoms. As predicted, greater levels of promotion goal failure were associated with having more depressive symptoms for individuals who engage in moderate to high levels of rumination. In contrast, among individuals who engage in high levels of self-reflection, promotion goal failure was not associated with an appreciable increase in depressive symptoms. We discuss the implications of these results for self-regulatory theories of depression and treatments for depression.



## Introduction

Individuals are constantly engaged, consciously or unconsciously, in the pursuit of important personal goals, for example, being successful at work (Chartrand, Dalton, & Cheng, 2008). To attain such goals, individuals engage in an ongoing process of self-regulation, which involves the modulation of attention, cognition, affect, and/or behavior to approach desired outcomes or avoid undesired outcomes (Carver & Scheier, 1998). While failure to attain personal goals is normative (e.g., missing a deadline for work), Strauman (2002) has postulated that, for certain individuals, depression is the end result of a chronic inability to effectively pursue goals concerned with advancement and growth. For example, failing to attain one's hopes and aspirations for one's self; referred to as *ideal self-guides* by Higgins (1989) and *promotion goals* by Strauman et al. (2006). This type of self-regulatory failure results in dysphoric affect (e.g., Strauman, 1989), decreased incentive motivation (Miller & Markman, 2007), and negative self-evaluation (Scott & O'Hara, 1993) due to the chronic inability to make good things happen via progress toward promotion goals.

Findings from treatment research support Strauman's (2002) self-regulation theory of depression. Strauman and colleagues developed self-system therapy (SST; Vieth et al., 2003) to specifically target deficits in self-regulation associated with depression. In a randomized comparison of cognitive therapy (CT; Beck, 1979) versus SST, depressed patients characterized by an inadequate early socialization history to pursue promotion goals (promotion history) experienced greater reductions in depressive symptoms when treated with SST. These patients also demonstrated a greater reduction in dysphoric responses to post-treatment promotion goal priming than CT patients (Strauman et al., 2006). Thus, SST worked best for individuals who, according to other research, are less likely to construe environmental opportunities to pursue promotion goals, have difficulty identifying ways to attain promotion goals, and display less effort in the face of difficulty pursuing goals (Cunningham, Raye, & Johnson, 2005; Dickson & MacLeod, 2004, 2006; Higgins et al., 2001; Miller & Markman, 2007; Roney, Higgins, & Shah, 1995). Thus, Strauman et al.'s (2006) findings suggest that SST is remediating deficits in promotion focused self-regulation (Higgins, 1997) resulting in decreased depressive symptoms.

* Corresponding author. Western Psychiatric Institute and Clinic, University of Pittsburgh, Pittsburgh Pennsylvania, 3811 O'Hara Street, Pittsburgh, PA 15213, USA. Tel.: +1 412 383 5445.
*E-mail address:* jonesnp@upmc.edu (N.P. Jones).

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*Role of repetitive thought processes*

We have proposed that self-regulatory models of depression have not adequately articulated how the experience of *acute* emotional distress following perceived failure to attain important goals becomes the *chronic* emotional distress characteristic of depression as a disorder (Strauman, Costanzo, Jones, McLean, & Eddington, 2007). Only a subset of individuals who experience chronic difficulties in attaining personal goals become depressed. Therefore, it is likely that other factors influence whether a particular individual responds adaptively in the face of continued failure feedback or becomes mired in a downward spiral of negative self-evaluation, doubt, and distress. One candidate for such a factor is rumination, a type of repetitive thought (Watkins, 2008) that can be characterized by recurrent, thematic thinking about the self prompted by threats, losses, or injustices to the self (Trapnell & Campbell, 1999).

Research has demonstrated that rumination magnifies the effects of negative self-relevant cognitions on dysphoric affect, depressive symptoms, and major depressive episodes (Ciesla & Roberts, 2002, 2007; Robinson & Alloy, 2003). For example, rumination interacts with low levels of self-esteem and high levels of dysfunctional attitudes to predict higher levels of post-treatment depressive symptoms, both in experimental settings and in correlational studies (Ciesla & Roberts, 2002). Furthermore, prospective research has demonstrated that rumination interacts with negative cognitive styles (a combination of negative attributional styles and dysfunctional attitudes) to predict greater onset, number, and duration of hopelessness and depressive episodes (Robinson & Alloy, 2003).

In terms of self-regulation, rumination can lead to the prolonged salience of perceived failure to make progress toward personal goals (Brunstein & Gollwitzer, 1996; Lavallee & Campbell, 1995; Lyubomirsky, Tucker, Caldwell, & Berg, 1999, Study 2). In particular, dysphoric rumination appears to also accentuate negative cognitive processes such as self-criticism and self-blame that follow perceived failure (Lyubomirsky et al., 1999, Study 2; Rimes & Watkins, 2005). Ruminating on promotion goal failure and the accompanying experience of dejection may be particularly detrimental because ruminating when in a dysphoric mood decreases problem-solving ability, optimism, and motivation (e.g., Lyubomirsky & Nolen-Hoeksema, 1993, 1995; Rimes & Watkins, 2005). This decreased motivation may further prevent persons from acting in ways to make progress toward their promotion goals resulting in increased depressive symptoms.

Consistent with the above findings, we have observed that the combination of high levels of perceived failure to attain promotion goals and moderate to high levels of brooding (a particular form of rumination; Treynor, Gonzalez, & Nolen-Hoeksema, 2003) is associated with more severe depressive symptoms in adolescent girls (Papadakis, Prince, Jones, & Strauman, 2006). Interestingly, for girls who reported low levels of rumination, promotion goal failure was not associated with depressive symptoms. A similar pattern was found by Ciesla and Roberts (2007, Study 3); in that study, for people who reported low levels of rumination, high levels of dysfunctional attitudes and low levels of self-esteem did not influence dysphoria. Taken together, these results suggest that one way rumination contributes to higher levels of depressive symptoms is by repeatedly activating perceived failure to make good things happen, thus magnifying the impact of perceived failure on the individual's ongoing motivational and affective state.

Emerging research has demonstrated that not all forms of repetitive thought are detrimental (Watkins, 2008). Specifically, reflecting on negative interpersonal experiences from a self-distanced, questioning, non-attached standpoint results in lower levels of negative affect and greater insight into problems compared to an experientially immersed processing style characteristic of rumination (e.g., Kross, Ayduk, & Mischel, 2005). Similarly, self-reflection is associated with improvement in negative moods by prompting the use of self-enhancing cognitive strategies; for example, believing that one is more intelligent than one's peers (McFarland, Buehler, von Ruti, Nguyen, & Alvaro, 2007).

In the current investigation, we sought to replicate and extend our initial findings in adolescent girls (Papadakis et al., 2006) by examining the associations among perceived promotion goal failure, rumination, reflection, and depressive symptoms in a young adult mixed gender sample. In our analysis we controlled for comorbid anxious symptoms hypothesized to be caused by an alternate type of goal failure, that is, prevention failure, which is the failure to attain goals associated with responsibilities, safety, and security (e.g., Scott & O'Hara, 1993). In addition, we controlled for other vulnerability factors including poor socialization toward promotion goals and lack of past promotion goal success. We chose this conservative analytic strategy to provide a rigorous test of the moderating effects of rumination versus reflection on the association between promotion failure and depressive symptoms. Specifically, we hypothesized that: (1) higher levels of rumination would magnify the positive association between promotion goal failure and depressive symptoms; and (2) higher levels of reflection would decrease the positive association between promotion goal failure and depressive symptoms.

## Method

*Participants*

The sample consisted of 121 undergraduates at a medium-sized private university in the southeastern US. The average age was 18.7 years (SD = 1.1). The sample was relatively balanced according to gender (56% female) and was predominately Caucasian (54% Caucasian, 22% Asian, 14% African American, 7% Hispanic, 3% other).

*Procedure*

Participants were recruited from introductory psychology courses to participate in a study of goals, personality, and emotions. Participants received course credit for completing a 45 min questionnaire assessment in a lab setting.

*Measures*

*Beck Depression Inventory (BDI)*

The 21-item BDI (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) was used to assess the presence and severity of cognitive, affective, and physiological symptoms of depression. The measure has good internal consistency estimates of 0.81 for non-psychiatric populations (Beck, Steer, & Carbin, 1988).

*State Trait Anxiety Inventory (STAI)*

The 20-item state anxiety scale of the STAI (Spielberger, Gorsuch, & Lushene, 1970) was used to assess state anxiety. The scale evaluates feelings of apprehension, tension, nervousness, and worry (e.g., "I am worried"). Items are rated on a four-point scale ranging from 1 (not at all) to 4 (very much so). The measure has demonstrated good internal consistency estimates of 0.92 (Ramanaiah, Franzen, & Schill, 1983).

*Rumination/Reflection Questionnaire (RRQ)*

The RRQ (Trapnell & Campbell, 1999) was used to measure rumination and self-reflection. The 12-item rumination subscale