

UNCERTAIN SELF-ESTEEM AND FUTURE THINKING IN DEPRESSION VULNERABILITY

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The purpose of the present study was to examine whether individuals at risk for depression would be more uncertain of their future event predictions and if doubts about their self-worth might contribute to this uncertainty. At-risk (defined on the basis of a previous episode of depression), currently dysphoric, and never depressed individuals completed measures of trait self-esteem, self-esteem certainty, and thought suppression, as well as attitudes about possible future events. The results indicated that at-risk individuals did not differ from never-depressed individuals in trait self-esteem but were more uncertain about their self-esteem. A trend of depression status by gender interaction effects emerged indicating greater uncertainty about negative future events for at-risk men compared to at-risk women—suggesting a differential gender-based vulnerability factor.

Research has indicated that negative cognitions during depression are prevalent and are reflected in low self-appraisals, dysfunctional attitudes, and pessimistic outlook (for reviews, see Haaga, Dyck, & Ernst, 1991; Ingram, Miranda, & Segal, 1998; Wenzlaff, 1993). Although early results indicated that these negative cognitions could not be detected in remission, research following from diathesis-stress models of depression has shown that priming negative mood states reactivates the return of negative thinking in vulnerable individuals (Ingram et al., 1998; Segal & Ingram, 1994). For some types of cognitive biases, however, data have suggested that priming may not be necessary to uncover the biases. For example, recent research has suggested that attitudinal precursors to de-

This article is dedicated to the memory of Richard M. Wenzlaff.

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pression may go undetected possibly because of thought suppression efforts, and that lingering maladaptive thoughts may be reflected by attitude certainty.

ATTITUDE CERTAINTY

Wenzlaff, Rude, and West (2002) found that although at-risk individuals, as defined by a previous episode of depression, reported relatively adaptive attitudes on the Dysfunctional Attitudes Scale, they were uncertain of those attitudes. Similarly, Luxton and Wenzlaff (2005) found that formerly depressed individuals resembled never-depressed individuals in reported trait self-esteem, but they were more uncertain of their self-esteem. Moreover, this uncertainty was associated with high levels of thought suppression and excessive reassurance seeking. Research thus suggests that attitude uncertainty is related to higher levels of thought suppression and raises the possibility that uncertain self-esteem and chronic thought suppression may precede depression. Self-esteem certainty may therefore play an important part in determining vulnerability to depression, although precisely how uncertain self-esteem plays such a role remains unclear. One possibility is that doubts about self-worth may contribute to doubts about personal future accomplishments and serve to undermine opportunities for future success.

FUTURE EVENTS CERTAINTY

A number of studies have indicated that depressed individuals show pessimistic attitudes and hopeless expectations about the future (Andersen, Spielman, & Bargh, 1992; Butler & Mathews, 1983; Garber, Miller, & Abramson, 1980). Research has also suggested that in comparison to nondepressed individuals, depressed individuals show more predictive certainty, that is, beliefs that unfavorable events are certain to occur or that desired future events are certain not to occur (Andersen, 1990). In other words, depressed individuals are more certain of their pessimistic predictions whereas individuals who are not depressed show no predictive certainty, even for positive outcome predictions. It may be the case that depressed people hold relatively pessimistic future event schemas that enable efficient and automatic processing of information about the future whereas nondepressed individuals do not hold such schematicized views of the future that might lead to faulty generalizations (Andersen & Limpert, 2001).

Other research has suggested that mildly depressed individuals have greater causal uncertainty beliefs compared to nondepressed individu-

als (Weary & Edwards, 1994; Jacobsen, Weary & Edwards, 1999). Weary and Edwards (1994) suggest that uncertainty about people's ability to accurately ascertain cause and effect relationships may produce doubt about their perception and understanding of their social world and, as a result, produce uncertainty about their ability to exercise control over their world. It may thus be the case that an uncertain sense of self-worth is associated with beliefs about the ability to understand the social world, and therefore may bias judgments about the likelihood of future events.

Although much of the research on depressive future thinking has focused on positive and negative expectancies comparisons in currently depressed individuals, such expectancy thinking has not been specifically investigated in nondepressed individuals who are at-risk for depression. It is possible that at-risk individuals, like low-risk individuals, may indicate more positive attitudes about future events than depressed individuals. However, as data have suggested, at risk individuals may be less certain of their beliefs, which may be driven by doubts about self-worth; if individuals are struggling with their sense of self-worth, then they might also have doubts about their ability to achieve success in the future.

THE ROLE OF THOUGHT SUPPRESSION

Several recent studies indicate that individuals who are at-risk for depression engage in higher levels of thought suppression than do individuals who are not at risk (Wenzlaff & Bates, 1998; Wenzlaff, Rude, Taylor, Stultz, & Sweatt, 2001) and may do so in order to preserve their fragile emotional well-being (Wenzlaff, 1993; Wegner & Wenzlaff, 1996). Because thought suppression has the potential of making unwanted thoughts more intrusive because of the ironic effects of maintaining vigilance for unwanted thoughts (Wenzlaff & Wegner, 2000; Wegner & Zanakos, 1994), the results of these studies are consistent with the idea that thought suppression may exacerbate negative thinking and promote depression. Indeed, research has indicated that high levels of chronic thought suppression are associated with increased depressive symptoms over time (Rude, Wenzlaff, Gibbs, Vane, & Whitney, 2002), and with initial levels of depressive symptoms (Wenzlaff & Luxton, 2003). Furthermore, the possibility that suppression efforts can mask depressive thinking may help explain why investigators have often found it difficult to detect negative cognitions, such as low self-esteem, among at-risk individuals. Additionally, recent research has indicated that individuals who are uncertain of their self-esteem also report higher levels of thought suppression (Luxton & Wenzlaff,

2005). This finding suggests that while at-risk individuals strive to maintain a positive view of themselves, they are also struggling to suppress doubts about their self-worth. This state of affairs may not only increase the accessibility of unwanted thoughts, but may also prevent them from being resolved in a meaningful way. That is, at-risk individuals' efforts to maintain a positive state of mind in the face of intrusive, negative thoughts may serve to foster uncertainty of their self-esteem, and potentially increase risk for depression. Indeed, some data have suggested that positive self-aspects may serve as a buffer against the deleterious effects of negative life events (Ingram, Slater, Atkinson, & Scott, 1990), and it may be that uncertainty undermines this buffer and contributes to depression relapse when negative events occur.

SUMMARY AND OVERVIEW OF THE CURRENT STUDY

Although a large body of evidence suggests that negative cognitions arise concomitantly with depressive moods, without priming it has been difficult to demonstrate that these negative conditions precede the mood disturbance. Other research, however, has suggested that attitudinal precursors to depression may go undetected because of thought suppression efforts, and that lingering maladaptive thoughts may be reflected by attitude certainty. Although assessment of self-esteem certainty may help to identify depression risk in vulnerable individuals, it is unclear in which ways doubts about self-worth may contribute to depression risk. It is possible that individuals' doubts about self-worth may drive doubts about their ability to achieve success in the future. Moreover, at-risk individuals' efforts to suppress unwanted thoughts about the self and future may erode certainty about the positive self-esteem they espouse, thereby enhancing their risk for relapse.

In line with these questions, the purpose of the present study was to examine whether individuals at risk for depression would be more uncertain of their future event predictions, and if doubts about self-worth, might be associated with this uncertainty. We were also interested in determining if chronic thought suppression might be linked to uncertainty about self-esteem as well as to uncertainty about the perceived likelihood of future event predictions. In order to address these issues, we asked at-risk (defined on the basis of a previous episode of depression), currently dysphoric, and never-depressed individuals to complete measures of trait self-esteem, self-esteem certainty, thought suppression, and attitudes about the likelihood of possible future events.

METHOD

PARTICIPANTS

Three hundred and ninety-one undergraduate students (242 females and 149 males) in introductory psychology classes at The University of Texas at San Antonio participated as an optional way of fulfilling course requirements. Ages ranged from 17 to 42 years, with a mean age of 20.01. Participants whose Beck Depression Inventory scores were below 8 on the short form (BDI-SF; Beck & Beck, 1972) and whose Inventory to Diagnose Depression – Lifetime version (IDD-L; Zimmerman & Coryell, 1987) scores were above 40 were classified as at-risk. The cut-off score of 40 was suggested by research showing an average score of 41 for individuals identified as having previous depression on the basis of structured diagnostic interviews (Solomon, Haaga, Brody, Kirk, & Friedman, 1998). Of the 391 total participants, 43 (27 women and 16 men) met this criterion. Participants whose BDI-SF scores were below 8 on the BDI-SF and whose IDD-L scores were below 30 were classified as never-depressed. One hundred and seventy-eight participants (99 women and 79 men) met this criterion. Forty-four participants (26 women and 18 men) scored above 12 on the BDI-SF and were thus classified as currently dysphoric.

MEASURES

The Inventory to Diagnose Depression, Lifetime Version (IDD-L; Zimmerman & Coryell, 1987). The IDD-L is a 22-item self-report inventory that assesses the level and duration of previous depressive symptomatology. The IDD-L compares well in terms of sensitivity and specificity to the Diagnostic Interview Schedule (Zimmerman & Coryell, 1987) has good discriminant validity (Sakado, Sata, Uehara, Sato, & Kameda, 1996), and test-retest reliability (Sato et al., 1996). Each item on the IDD-L consists of a symptom severity rating from 0 to 4 (0 = no disturbance; 1 = subclinical severity; 2–4 = varying levels of symptom presence). Scores can range from 0 to 96 and, as noted, previous research has indicated that scores of 40 and above are indicative of a previous depressive episode (Soloman et al., 1998; Wenzlaff, Meier, & Salas, 2002).

Beck Depression Inventory–Short Form (BDI-SF; Beck & Beck, 1972). The BDI-SF is a reliable and well-validated measure of current depressive symptomatology (for a review see Beck, Steer, & Garbin, 1988). Scores can range from 0 to 39 with higher scores indicating more severe depression symptomatology. We followed the recommendation of Beck and Beamesderfer (1974) that 8 be used as a cut-off score for moderate depression and therefore classified participants with BDI-SF scores of 0 to

7 as nondepressed. We classified participants with scores of 12 and above as dysphoric.

Self-Esteem Scale (SES; Rosenberg, 1965). The SES is a ten-item self-report measure of self-esteem. The SES is a widely used self-report measure of trait self-esteem and has good psychometric properties (Joiner, Alfano, & Metalsky, 1992; Rosenberg, 1965). The SES is scored according to the Likert format with low self-esteem responses scored as 1 and high self-esteem responses scored as 4. Thus, scores can range from 10 to 40 with the higher scores indicating higher self-esteem. In order to assess the certainty of participant's attitudes about the self we asked participants to go back and look at their responses to the SES and then rate how certain they were of their ratings. Participants indicated their certainty for each of their SES responses using a ten-point rating scale with anchors at 1 (not at all certain) and 10 (very certain).

White Bear Suppression Inventory (WBSI; Wegner & Zanakos, 1994). The WBSI was used to assess chronic thought suppression tendencies. The WBSI is a 15-item self-report inventory that asks respondents to indicate how much they agree with statements such as: "there are things I prefer not to think about" and "I often do things to distract myself from my thoughts." Items on the scale are ranked on a 5-point scale with anchors at 1 (strongly agree) and 5 (strongly disagree). Responses can be averaged to a score that ranges from 1 to 5, with higher scores corresponding to a stronger tendency to suppress. The reliability of the WBSI is good and evidence has supported the validity of the scale (Muris, Merckelbach, & Horselenberg, 1996; Wegner & Zanakos, 1994). Investigations of the WBSI have suggested that the scale is multidimensional with three factors that best account for the common variance among the items (for a review see Blumberg, 2000). The three factors are thought suppression (e.g., "There are things that I try not to think about"), unwanted intrusive thoughts (e.g., "I have thoughts that I cannot stop", and self-distraction (e.g., "I often do things to distract myself from my thoughts").

Future Event Likelihood Measure. In order to assess beliefs about the likelihood of future positive and negative events, we used a measure consisting of 28 events derived from a list employed by Andersen (1990). The list includes 14 possible positive future events (e.g., "Achieve life goals") and 14 possible negative future events (e.g., "Fail to achieve success in life") that have been rated by college students as moderately likely to be experienced by the average person (Andersen et al., 1992). Items on the measure are ranked on a seven-point scale with anchors at 1 (highly unlikely to happen to you) and 7 (very likely to happen to you). The first part of the measure asks participants to respond to each of the

28 items after considering how likely it is that the event will happen to them.

PROCEDURE

Participants assembled in small groups and each participant was given a booklet containing the experimental measures. Participants first completed the SES and then immediately rated how certain they were of their responses. Subsequently, participants completed the WBSI and the Future Event Likelihood measures. Participants completed either the self or others part of the measure first in order to ensure a counterbalanced presentation of the measure. Finally, participants completed the BDI-SF followed by the IDD-L.

RESULTS

SELF-ESTEEM

We first examined participants' reported self-esteem by conducting an analysis of variance (ANOVA) with depression status (never-depressed/at-risk/dysphoric) and gender as the factors.¹ The results indicated a reliable main effect for depression status $F(2, 259) = 70.18, p < .001$, although no gender effects were significant. A Student-Newman-Keuls analysis indicated that there was not a significant difference between the self-esteem ratings of the at-risk group ($M = 33.65, SD = 3.91$) and the never-depressed group ($M = 34.57, SD = 3.62$) but that the dysphoric group reported significantly lower trait self-esteem ($M = 26.43, SD = 5.11$) than did either the never-depressed group or the at risk-group. These results replicate the findings of previous research and are consistent with research indicating low self-esteem for dysphoric individuals, but not for never-depressed or at-risk individuals.

SELF-ESTEEM CERTAINTY

We then tested self-esteem certainty by conducting an ANOVA with depression status and gender as the factors. The results again indicated a reliable main effect for depression status, $F(2, 258) = 9.72, p < .001$, and no significant gender effects. A Student-Newman-Kuels analysis for the

1. Although we were not interested in gender per se, we nevertheless included it as a factor in the event that it was related to some of the dependent variables.

certainty ratings indicated that, consistent with previous research, the at-risk group was more uncertain about their self-esteem ($M = 5.65$, $SD = .93$) than the never-depressed group ($M = 6.02$, $SD = .97$). However, the at-risk group did not reliably differ from the currently dysphoric group ($M = 5.38$, $SD = 1.09$), suggesting that although self-esteem scores are different between dysphoric and at-risk individuals, their levels of uncertainty about their self-esteem is similar.

FUTURE EVENTS LIKELIHOOD RATINGS

In order to assess dysphoria status and gender differences on future event predictions, we conducted a 3 (dysphoria status) by 2 (gender) by 2 (valence of future event) mixed design analysis of variance (ANOVA), with one repeated measure. The omnibus analysis indicated a reliable main effect for valence, $F(1, 259) = 456.96$, $p < .001$, that was qualified by a statistically reliable two-way interaction between valence and depression status, $F(2, 306) = 17.39$, $p < .001$. As can be seen in Figure 1, the at-risk group and the currently dysphoric group were more certain about the likelihood of negative future events than the never-depressed group. For positive events, however, the at-risk group was least certain compared to the other two groups, and the dysphoric group was less certain than the never-depressed group. These results suggest that at-risk individuals resemble currently dysphoric individuals in their attitudes about the likelihood of negative future events, but are even more uncertain than currently dysphoric individuals about the likelihood of positive future events. The only other finding was a three-way depression status by valence by gender interaction, $F(1, 259) = 3.65$, $p < .05$. As can be seen in Figure 2, the interaction is being driven by at-risk men who were more certain about the likelihood of negative events than at-risk women. Interestingly, at-risk men were more certain about the likelihood of negative events compared to dysphoric men and almost as certain as currently dysphoric women regarding the likelihood of future negative events.

In order to test the possibility that uncertainty about self-esteem might be associated with uncertainty about the likelihood of future events, we examined the correlations between the self-esteem certainty ratings and the negative and positive future events ratings of each of the three depression status groups. The only reliable finding was a positive correlation between self-esteem certainty and positive future events ratings for the nondepressed group, $r(178) = .32$, $p < .001$. These results suggest that for individuals who have never been depressed, higher levels of self-esteem certainty are associated with increased certainty about

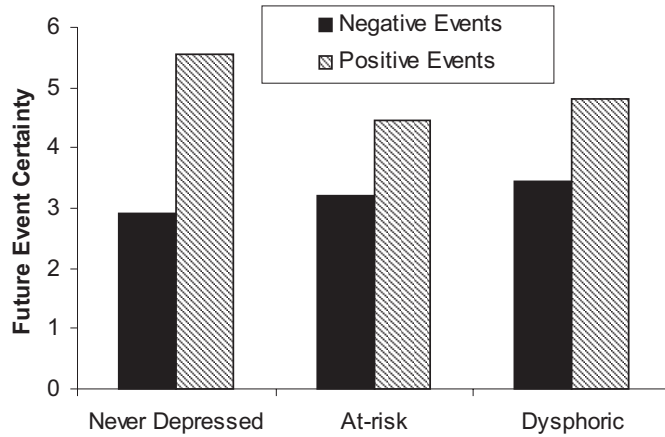


FIGURE 1. Mean scores on future event certainty based on depression status and event valence.
Note. Higher values indicate greater certainty about the likelihood of future events.

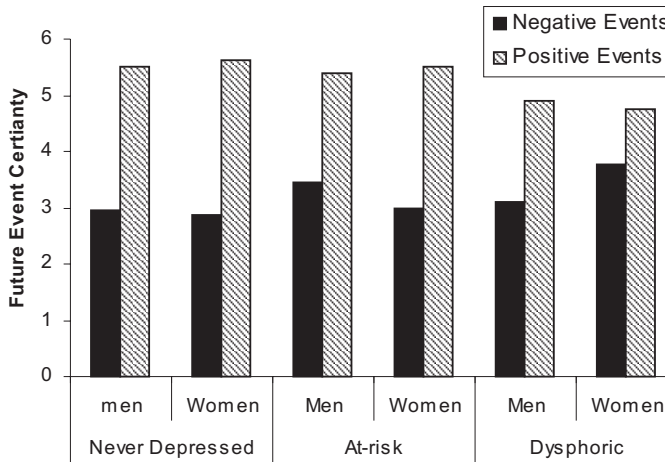


FIGURE 2. Mean scores on future event certainty by depression status, gender and event valence.
Note. Higher values indicate greater certainty about the likelihood of future events.

the likelihood of positive future events. These results, however, do not support the idea that doubts about self-worth contribute to doubts about future event predictions of previously depressed individuals.

THOUGHT SUPPRESSION

We predicted that at-risk individuals would report relatively high levels of chronic thought suppression that would be associated with self-esteem uncertainty. To test this prediction, we first conducted a MANOVA on the three subscales of the WBSI (unwanted intrusive thoughts, thought suppression, and self-distraction) using dysphoria status (never-depressed/at-risk/dysphoric) and gender as the factors. The results indicated a reliable main effect for depression status, $F(6, 516) = 10.74, p < .001$, and a main effect for gender $F(3, 257) = 4.71, p < .01$. Univariate ANOVAs indicated that the subscales of suppression, distraction, and intrusiveness each varied as a function of depression status, $F(2, 262) = 13.71, p < .001$, $F(2, 262) = 20.05, p < .001$, and $F(2, 262) = 30.45, p < .001$, respectively (see Table 1). There was a reliable gender effect for suppression $F(1, 263) = 14.97, p < .001$ with women ($M = 15.63, SD = 0.28$) reporting higher levels of suppression than men ($M = 14.17, SD = .35$). There was also a reliable gender effect for distraction $F(1, 263) = 9.87, p < .05$ with women ($M = 9.40, SD = .27$) reporting higher levels of distraction than men ($M = 8.45, SD = .34$). However, there was not a reliable gender effect for intrusiveness, $p > .36$.

As can be seen in Table 1, there was no reliable difference between the suppression ratings of the at-risk and dysphoric groups, but there were reliable differences between each of the depression status groups on the intrusiveness subscale. The currently dysphoric group reported higher levels of intrusiveness than the at-risk group and the at-risk group reported higher levels of intrusiveness than the never-depressed group. The distraction subscale showed the same pattern of differences as intrusiveness. The overall trend on these measures is consistent with previous findings (Luxton & Wenzlaff, 2005).

We also conducted correlational analyses in order to examine the association between thought suppression and self-esteem certainty for each of the depression status groups. None of the correlations were statistically reliable. These results suggest that uncertainty about self-esteem is not driving thought suppression tendencies.

In order to examine whether thought suppression might be related to future event certainty, we also examined the correlations between the thought suppression scores and the negative and positive future events ratings of each of the depression status groups. Results indicated that

TABLE 1. Mean Scores on WBSI Components as a Function of Depression Status

	At-risk	Never-depressed	Dysphoric
<i>N</i>	43	178	44
Suppression			
<i>M</i>	15.26 ^a	13.72 ^b	16.09 ^a
(<i>SD</i>)	(2.94)	(2.93)	(3.06)
Distraction			
<i>M</i>	9.19 ^a	7.51 ^b	10.32 ^c
(<i>SD</i>)	(2.81)	(2.86)	(2.82)
Intrusive			
<i>M</i>	28.70 ^a	25.61 ^b	32.52 ^c
(<i>SD</i>)	(5.51)	(5.56)	(4.67)

Note. Means in the same row that do not share the same superscript differ using Student–Newman–Kuels tests ($p < .05$). Higher numbers indicate higher levels of each component.

higher levels of thought suppression were associated with less certainty about positive future events for the never-depressed group only, $r(178) = -.15$, $p < .05$.

DISCUSSION

Consistent with previous research, at-risk individuals did not differ from never-depressed individuals in their reported levels of trait self-esteem, but in comparison to the never-depressed group, at-risk individuals were more uncertain of their self-esteem. We also predicted that at-risk individuals would evidence a greater uncertainty toward their future event predictions compared to never-depressed individuals, as reflected by the extremity of their responses. The interaction effect between depression status and valence suggests that at-risk individuals are more certain about the likelihood of negative events than never-depressed individuals, and less certain about the likelihood of positive events compared to currently dysphoric individuals. Taken together, these results suggest that the seemingly adaptive self-appraisals of at-risk individuals are relatively precarious, and that at-risk individuals maintain relatively pessimistic bias toward the likelihood of future events.

Also consistent with previous research, the at-risk group reported high levels of chronic thought suppression and high levels of self-esteem uncertainty. The results, however, did not yield a statistically reliable association between thought suppression and uncertain self-es-

teem among at-risk individuals. It appears, then, that uncertain self-esteem is not driving a tendency to suppress thoughts. Nonetheless, it is possible that the combination of uncertainty about self-worth and chronic thought suppression might confer enhanced risk for relapse when the vulnerable person encounters stress. In this vein, diathesis-stress models of depression suggest that vulnerable individuals possess maladaptive negative schemas that are dormant until activated in reaction to the experience of life stress (Beck, 1987; Ingram, 1984) and it is possible that uncertain self-esteem is a diathesis for depressive reactions to life stress. Furthermore, evidence suggests that the experience of life stress depletes the cognitive resources necessary for thought suppression (Wenzlaff & Luxton, 2003). Thus, stress may foster the ironic effects of thought suppression and undermine the effortful distraction process of thought suppression, resulting in a surge of unwanted negative thoughts that could predispose to depression relapse.

Interestingly, the currently dysphoric group also reported high levels of thought suppression and self-esteem uncertainty. This suggests that, like at-risk individuals, depressed individuals may be trying to keep doubts about self-worth out of mind. It is likely that their negative mood state may make it difficult for them to do so, and possibly undermine suppression by fostering associations to the unwanted thoughts (Wenzlaff, Wegner, & Roper, 1988). This mood-congruency effect could help explain why, unlike the other two groups, dysphoric individuals reported especially high levels of intrusive thoughts. Thus, it may be that their thought suppression efforts are largely unsuccessful.

The present data also indicated some interesting gender differences for future event predictions that may provide some insight into gender differences in depression vulnerability, in particular, the at-risk men who were more certain about the likelihood of negative events than at-risk women. Furthermore, the gender by depression status by valence interaction effect indicated that at-risk men were more certain about the likelihood of negative events compared to dysphoric men and that at-risk men resemble currently dysphoric women in their responses to negative future event predictions.

IMPLICATIONS AND FUTURE DIRECTIONS

The gender by depression status by valence interaction that emerged in the present data suggests that a pessimistic bias toward negative future events exists for dysphoric women while a relatively diminished one exists for dysphoric men. This seems to suggest that women in a depressed mood may be more inclined to engage in rumination about potential

failure in future events, therefore making these pessimistic biases more pronounced for women. Moreover, this interaction effect indicated that at-risk men resemble currently dysphoric women in their certainty about future events, suggesting that these negative cognitions are evident in absence of depressed mood. These results seem to suggest that at-risk men may be more vigilant for this negative bias and this may indicate a stronger vulnerability characteristic for at-risk men compared to at-risk women. However, the nature of this bias in at-risk men is yet to be explored and we thus cannot be certain if this bias is a residual cognitive scar left over from a previous depression, or some other variable that indeed confers unique vulnerability for at-risk men.

Although these findings are interesting, we acknowledge that the present research has limitations. For one, the correlational nature of the present data precludes a determination of whether individuals who report high levels of uncertain self-esteem or uncertainty about future events will indeed suffer a relapse. Longitudinal studies should help address this issue. Moreover, these results are preliminary and need to be replicated in a clinical sample before more definite conclusions can be made.

In conclusion, the present data suggest that uncertainty about self-esteem and future events may mark an enhanced risk for depression. Moreover, the results seem to suggest that previously depressed men suffer a pessimistic cognitive bias. These findings are interesting because research without priming has typically shown that depressive cognitive processes such as low self-esteem (Billings & Moos, 1985; Hamilton & Abramson, 1983) and hopelessness about the future (Abramson, Garber, Edwards, & Seligman, 1978; Lewinsohn, Steinmetz, Larson, & Franklin, 1981) cannot be detected in remission. The current findings, however, suggest that a residual pessimistic bias about the future remains in at-risk men—suggesting a differential gender-based vulnerability factor.

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