

# Beliefs about Benefits of Rumination in Depressed Men and Women With and Without a History of Assault

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**Abstract.** Positive beliefs about the benefits of rumination have been shown to be a proximal factor determining rumination. This study investigated, in a sample of 29 currently depressed patients, whether positive beliefs about rumination parallel known gender differences in rumination and whether these beliefs differ between depressed individuals with and without a history of physical or sexual assault. Depressed women tended to report stronger positive beliefs in the benefits of rumination than men. However, this result was found to be due to differential effects of a history of assault: women with a history of assault showed significantly stronger positive beliefs than women without a history of assault while there were no significant differences in men. Experiences of assault may undermine women's beliefs in coping ability so that rumination is seen as a more compelling option.

*Keywords:* Rumination, metacognitive beliefs, depression, abuse.

## Introduction

Rumination, the tendency to repetitively and passively think about one's symptoms and the possible causes and consequences of these symptoms (Nolen-Hoeksema, 1991), has been shown to be an important factor in vulnerability processes leading to the occurrence of, and relapse into depressive episodes or prolonged dysphoric mood states (e.g. Nolen-Hoeksema and Morrow, 1991). Experimental research has demonstrated that to ruminate in response to sad mood has a number of maladaptive consequences, eventually maintaining and prolonging dysphoric mood states (Nolen-Hoeksema, Morrow and Fredrickson, 1993). For example,

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rumination has been shown to exacerbate negative biases in thinking (Lyubomirsky and Nolen-Hoeksema, 1995) and to perpetuate cognitive deficits such as difficulties in social problem-solving and reduced specificity of autobiographical memories (e.g. Lyubomirsky, Caldwell and Nolen-Hoeksema, 1998; Watkins and Teasdale, 2001).

Given these negative consequences, why do people ruminate in response to sad mood? Current research suggests that one of the proximal factors determining whether people tend to ruminate is beliefs about whether this is a useful strategy to deal with current problems or concerns (Lyubomirsky and Nolen-Hoeksema, 1993). In a series of studies, Papageorgiou and Wells (2001, 2003) have demonstrated that positive metacognitive beliefs such as “ruminating about my depression helps me to understand past mistakes and failures” are correlated with rumination in both depressed and nondepressed samples. Similar findings have also been reported by Watkins and Baracaia (2001), who investigated reasons to ruminate in a sample of dysphoric individuals, using a newly devised questionnaire to assess beliefs about the benefits of rumination, the *Why Ruminates Scale*. They found that the extent to which individuals endorsed positive reasons for rumination predicted their tendency to ruminate. Altogether, these data suggest that positive beliefs about the gains of rumination may play an important role in whether individuals engage in ruminative responses to sad moods.

What are the factors that lead individuals to develop positive beliefs about the usefulness of rumination in coping with negative mood? Generally, rumination is more prevalent in women than in men and, although data on gender differences in positive beliefs about rumination are relatively scarce, a recent replication by Watkins and Mould (2005) has found significantly stronger positive beliefs in women than in men. Gender differences in rumination are already present in early adolescence and theoretical explanations for why men and women differ in preference for ways of coping with negative mood have included, amongst others, factors relating to gender socialization as well as differences in exposure to stressful events. Research on gender socialization, for example, has shown that parents tend to encourage their young sons more than their young daughters to suppress negative affect and to take a more active role in solving their problems (Kuebli, Butler and Fivush, 1995). However, it remains unclear whether differences in emotional expressivity necessarily translate into differences in use of rumination as a means of coping.

Nolen-Hoeksema, Larson and Grayson (1999) have argued that gender differences in rumination are due to the fact that women are more often confronted with negative and uncontrollable events. They cite research suggesting that women experience greater levels of strain resulting from subordinate social status, including increased role burden and parenting strain, causing them to be more concerned about possible threats and ways to control their environment. Similarly, gender differences in rumination have been related to the higher prevalence of sexual and physical abuse in women. Experiences of assault undermine beliefs in personal power and may leave the victim with a reduced sense of being able to actively cope with other challenges (Peterson and Seligman, 1983). It is conceivable that, as a consequence of this, rumination may be perceived as a response that is preferable to action-oriented coping strategies. General evidence for a link between history of sexual abuse and intimidation comes from a study of non-depressed college students by Conway, Mendelson, Giannopoulos, Csanik and Holm (2004), who found significant correlations between rumination and a history of sexual abuse and intimidation in both men and women. In a recent study by Spasojevic and Alloy (2002), childhood sexual abuse was found to be significantly related to tendencies to ruminate in women, but not in men.

The purpose of the current study was to investigate the relation of gender and history of assault with beliefs about the benefits of rumination in a clinical sample. Exploring these factors in a clinical sample is important because metacognitive beliefs about rumination have been identified as a useful target for interventions aimed at reducing rumination (e.g. Wells, 2002) and knowledge concerning the above factors would inform the tailoring of such interventions to specific groups.

We hypothesized that women would show stronger positive beliefs in the benefits of rumination than men, and that, especially in women, positive beliefs would be increased in those with a history of assault as compared to those without a history of assault. Replicating earlier research, we expected that positive beliefs would correlate with reports of actual tendencies to ruminate. Differences in actual tendencies to ruminate were hypothesized to mirror the pattern of positive beliefs about rumination.

## Method

### *Participants*

Fifteen women and 14 men with a diagnosis of Major Depression as assessed using the Structured Clinical Interview for DSM-IV (SCID; First, Spitzer, Gibbon and Williams, 1996; German version: Wittchen, Zaudig and Fydrich, 1997) participated in the study. They had been referred to the study by psychiatrists or psychotherapists of local clinics in and around Muenster, Germany, where they were currently in treatment for depression. Mean age was  $M = 29.27$  ( $SD = 8.90$ ) in women and  $M = 29.36$  ( $SD = 7.23$ ) in men. Both groups were comparable in terms of current depressive symptoms reported on the BDI (women:  $M = 24.50$ ,  $SD = 9.73$ ; men:  $M = 23.87$ ,  $SD = 10.68$ ) and number of previous episodes (women:  $M = 1.57$ ,  $SD = .53$ ; men:  $M = 2.00$ ,  $SD = 1.21$ ). At the time of testing, 8 of the 15 women and 8 of the 14 men were on antidepressant medication,  $\chi^2(1, N = 29) = .04$ ,  $p > .20$ . History of assault was assessed by self-report (see below). Six of the 15 depressed women in our sample reported having suffered from assault, three reported having suffered from both sexual and physical assault, two from physical assault and one from sexual assault. Two of the women with a history of assault had also experienced other traumatic events (accidents). In four cases the assault had taken place when they were aged under 18 years, in one case when the person was older than 18 and in two cases information about the first occurrence of the event was missing. Of the 14 men, seven had suffered from assault, one from physical and sexual assault and six from physical assault. Two of the men who reported having suffered from assault had experienced other traumatic events (torture, accident). In two cases the assault had happened when they were under 18 years, in one case when the person was over 18 and in three cases information about the occurrence of the event was missing. At the time of testing, none of the participants fulfilled criteria for a current diagnosis of PTSD.

### *Materials and procedure*

Participants were interviewed and filled out questionnaires at the beginning of individual sessions that also included tasks unrelated to the current analyses.

*Why Ruminare Scale.* Positive beliefs about the benefits of rumination were assessed using a literal German translation of the *Why Ruminare Scale* by Watkins and Baracaia (2001), a 30-item self-report instrument. Items reflect reasons for rumination centring around its use to gain insight, solve problems and reduce discomfort associated with past negative events, e.g. “I ruminate to try and find the answer to my problems” or “I ruminate because understanding the past and present is essential to improve things”. Higher scores on this scale are indicative of more positive beliefs about rumination. Watkins and Baracaia (2001) found that scores on this scale were significantly correlated with the self-reports of rumination in a group of dysphoric participants. The internal consistency of the translated scale in the current sample was Cronbach’s  $\alpha = .92$ .

*Response Styles Questionnaire – Rumination scale.* In order to measure rumination, the Rumination subscale of the Response Styles Questionnaire (Nolen-Hoeksema and Morrow, 1991; German translation: Kuehner and Weber, 1999) was used. The RSQ Rumination Scale comprises 22 items, which assess how far individuals tend to respond to sad moods with responses that are self-focused, symptom-focused or focused on the possible causes or consequences of the sad mood. The internal consistency in the current sample was Cronbach’s  $\alpha = .81$ .

*Trauma checklist.* History of traumatic experiences was assessed using a checklist of 12 traumatic events (including accident or fire, natural disaster, nonsexual assault (known assailant), nonsexual assault (unknown assailant), sexual assault (known assailant), sexual assault (unknown assailant), combat or war zone, sexual abuse, imprisonment, torture and life-threatening illness as well as an “other” category) taken from a literal translation of the Posttraumatic Diagnostic Scale by Foa, Cashman, Jaycox and Perry (1997). Participants were asked to indicate how many of these events they had experienced or witnessed and to briefly describe the event in the space provided. As these descriptions were open-format and often relatively brief, only very limited information on qualitative aspects of the trauma was available. Descriptions of events given in the categories of sexual and physical assault and sexual abuse were combined to yield a single score indicating absence or presence of a history of assault.

Diagnostic information was assessed using the Structured Clinical Interview for DSM-IV (SCID, First et al., 1996; German version: Wittchen et al., 1997) and severity of depression was measured using the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock and Erbaugh, 1961; German version: Hautzinger, Bailer, Worall and Keller, 1994).

## Results

“Why Ruminare” scores were analysed using a 2 (gender: male vs. female)  $\times$  2 (history of assault: previous history vs. no previous history) ANOVA. This yielded a trend for gender,  $F(1, 25) = 3.89, p = .06$ , together with a significant gender  $\times$  history of assault interaction,  $F(1, 25) = 5.52, p < .03$ . Single pairwise comparisons with Bonferroni-correction indicated that women with a history of assault reported significantly higher positive beliefs than women without history of assault,  $M_{I,J} = -27.39, SE = 9.84, p = .01$ , while there were no differences between men with and without history of assault,  $M_{I,J} = 5.57, SE = 9.98, p = .58$ . Groups did not differ in BDI scores ( $p$ s for main effects and interaction all  $> .50$ ) and results of the above analyses remained virtually unchanged when they were repeated with BDI scores as a covariate,

**Table 1.** Means and standard deviations of “Why ruminate” and RSQ rumination scores in depressed men and women with and without a history of assault

	Women		Men	
	No Assault ( <i>n</i> = 9)	Assault ( <i>n</i> = 6)	No Assault ( <i>n</i> = 7)	Assault ( <i>n</i> = 7)
“Why ruminate”	63.8 (22.5)	91.1 (18.0)	66.4 (21.3)	60.8 (7.1)
RSQ-R	56.7 (10.9)	63.3 (9.9)	53.2 (8.0)	52.0 (12.1)

Note. RSQ-R = Response Styles Questionnaire Rumination.

yielding a trend for gender,  $F(1, 24) = 4.16, p = .05$ , and a significant gender  $\times$  history of assault interaction,  $F(1, 24) = 5.11, p = .03$ . Mean “Why Ruminate” scores by gender and history of assault are listed in Table 1.

“Why Ruminate” scores were significantly correlated with both RSQ Rumination,  $r = .52, p < .05$ , and BDI,  $r = .30, p < .05$ . The former relation remained significant when BDI scores were partialled out,  $r = .45, p = .02$ , suggesting that the relation between positive beliefs about rumination and self-reported tendencies to ruminate is not due to shared variance reflecting severity of current depressive symptoms. RSQ rumination scores correlated  $r = .55, p < .01$ , with BDI. Following a recent psychometric analysis of the RSQ by Treynor, Gonzalez and Nolen-Hoeksema (2003) that suggested a three-factor structure comprising a factor of depression-related items and two rumination factors called reflective pondering and brooding, we also computed correlations between “Why Ruminate” scales and sumscores of RSQ items mapping onto these three factors. “Why Ruminate” scores were significantly related to the brooding,  $r = .53, p < .01$ , and reflective pondering items,  $r = .40, p < .03$ , while the relation with depression-related items was only marginally significant,  $r = .32, p = .08$ . When computed with reflective pondering as a covariate, the correlation between “Why Ruminate” scores and brooding remained significant,  $pr = .42, p < .05$ . In contrast, the relation between “Why Ruminate” scores and reflective pondering was rendered non-significant when brooding was entered as a covariate,  $pr = .22, p > .20$ , thus suggesting that metacognitive beliefs were related most strongly with the brooding aspect of rumination.

Actual tendencies to ruminate as reported on the RSQ were analysed using a 2 (gender: male vs. female)  $\times$  2 (history of assault: previous history vs. no previous history) ANOVA. Findings showed a trend for gender,  $F(1, 25) = 3.56, p = .07$ , but no other significant main or interaction effect, all  $ps > .20$ , although rumination scores showed a pattern similar to those for beliefs about rumination (see Table 1). Re-running these analyses with BDI scores as a covariate rendered the gender effect significant,  $F(1, 24) = 5.37, p = .03$ , while all other results remained unchanged. Analyses based on the brooding items produced a similar picture with a marginally significant effect for gender,  $F(1, 25) = 3.94, p = .06$ , while there were no significant or marginally significant effects when scores based on reflective pondering items were used as the dependent variable.

## Discussion

Results were partly consistent with our hypotheses. They replicate the general finding of a relation between positive beliefs about rumination and self-reported tendencies to ruminate

as well as findings suggesting that this relation is not due to severity of current symptoms of depression or conceptual overlap of rumination questionnaires with symptoms of depression. Consistent with previous research by Watkins and Moulds (2005), depressed women in our sample tended to report stronger positive beliefs in the benefits of rumination than men. However, this result was found to be mainly due to differential effects of history of assault: women with a history of assault showed significantly stronger positive beliefs than women without a history of assault while there were no significant differences in men.

This study has several limitations. First of all, it is correlational and, therefore, does not allow causal inferences about the link between beliefs about rumination, history of assault and tendencies to ruminate. Second, the assessment of history of assault was based on retrospective reports using a checklist approach, which is prone to subjective biases and does not allow for the systematic assessment of qualitative aspects of the trauma. Third, the study was based on a relatively small sample and reduced power may have precluded detection of some of the relations reported from larger previous studies. For example, we did not find significant effects of gender or history of assault on reports of actual degree of rumination, which is inconsistent with previous findings by Conway et al. (2004) and Watkins and Moulds (2005). However, given that the pattern of mean scores mirrored that found for beliefs about rumination, the most parsimonious explanation for this failure seems to be that of a Type-1 error. In a similar vein, the fact that we compared relatively homogeneous samples of currently depressed men and women may have restricted possibilities to find a gender difference unqualified by influences of history of assault that might be indicative of differential risk in the general population.

Our findings in women show a relation between experiences of assault and metacognitive beliefs. This result fits with previous research that has found a relation between history of abuse and tendencies to ruminate and suggests that positive beliefs about rumination may be implicated in this relationship. It is conceivable that experiences of assault may undermine confidence in active coping capacities and sense of mastery and that this reduced confidence in one's own capacities to cope with events itself may reinforce ruminative tendencies. From this perspective, positive beliefs about rumination may occur as part of a preference for an altogether more emotion-oriented approach at coping.

In contrast to the above results in women, we did not find a relation between history of assault and beliefs about rumination in men. As men and women in our sample differed systematically with regard to the traumatic events they were exposed to, our study must remain inconclusive with regard to whether this finding is due to the nature of the traumatic events experienced itself or interactions with pre-existing gender specific differences in coping. While all the men with a history of assault had suffered from physical assault, the majority of women who had suffered from assault reported having been the victim of sexual assault. Sexual abuse has been shown to have stronger effects on self-esteem than physical abuse (Kamsner and McCabe, 2000) and might, therefore, be more likely to undermine beliefs in usefulness of active coping strategies. The higher prevalence of sexual abuse in women in our sample is consistent with rates in the general population and the finding of increased positive beliefs in women with a history of sexual assault would thus fit with the assumption that an increased prevalence of such traumatic events in women is implicated in gender differences in rumination. Further research on this link would benefit from taking into account qualitative aspects of the trauma including age at occurrence, chronicity and the context in which the event occurred.

Correlative analyses distinguishing between different facets of rumination indicated that positive beliefs about rumination were most strongly related to the brooding aspect of rumination. This facet has previously been described as most relevant for psychopathology (Treyner et al., 2003).

From a clinical perspective, these findings support the idea that interventions aimed at reducing positive beliefs about the benefits of rumination may be a helpful way to reduce ruminative tendencies, although evidence regarding causal effects of positive metacognitive beliefs on the onset of rumination is still lacking. The fact that, in women, these beliefs were increased in those with a history of assault suggests that such interventions could benefit from going beyond pure cost-benefit analyses of rumination by taking into account how previous experiences might have undermined individuals' beliefs in the ability to actively cope with problems and their sense of mastery.

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