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Research report

Ruminative response in clinical patients with major depressive disorder, bipolar disorder, and anxiety disorders

Sojung Kim, Bum Hee Yu, Dong Soo Lee, Ji-Hae Kim *

Department of Psychiatry, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea

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ABSTRACT

Background: There is a growing interest in the transdiagnostic trait of rumination. However, few studies have directly examined the ruminative response in the diagnosis of disorders other than major depression, such as anxiety disorders and bipolar disorders. Even fewer studies have done so in a large, clinical sample.

Method: Patients with major depressive disorder (MDD), bipolar disorder (BPD), panic disorder with/without agoraphobia (PD), and generalized anxiety disorder or obsessive–compulsive disorder (GAD/OCD) were compared using the Ruminative Response Scale (RRS), Hamilton Rating Scale for Depression (HAM-D), and Hamilton Rating Scale for Anxiety (HAM-A).

Results: The PD group displayed the lowest levels of rumination even when depression and anxiety symptoms were treated as a covariate. The BPD group displayed higher levels of rumination than the MDD group.

Conclusions: A heightened ruminative response was not only found among individuals with MDD, but also among those with BPD and GAD/OCD; this might indicate ineffective thought control.

1. Introduction

Rumination is a cognitive process. It has been defined by Response Style Theory of Nolen-Hoeksema as “behaviors and thoughts that focus one's attention on one's depressive symptoms and on the implications of those symptoms” (Nolen-Hoeksema, 1991). Rumination is a stable, trait-like tendency to respond to negative life events and negative mood states with both repetitive thinking and negative automatic thoughts. Previous works have shown that high trait-levels of rumination are associated with a heightened vulnerability to develop major depression symptoms due to its passive and negatively biased process (Nolen-Hoeksema, 1991; Nolen-Hoeksema et al., 1993). The majority of previous studies in this area have focused on the association between rumination and unipolar depression. These studies have shown that individuals with depression tend to display higher levels of rumination than healthy controls. However, it has also been demonstrated that individuals in a state of remission from depression tend to display higher levels of rumination than healthy controls. As such, it appears that rumination is a stable trait that is present in individuals both during active states of depression and remission (Lyubomirsky et al., 1998, 1999).

Additionally, previous work has shown that individuals with high levels of anxiety tend to display higher levels of rumination than healthy controls. Specifically, Legerstee et al. (2011) reported that adolescents with anxiety disorders tend to have higher scores across a number of cognitive coping strategies, including rumination. In particular, adolescents with generalized anxiety disorder (GAD) have been shown to score markedly higher in ruminative responding as assessed by the rumination scale. Yook et al. (2010) found that patients with GAD reported higher levels of rumination than controls, though patients with GAD reported lower levels of rumination

* Corresponding author at: Department of Psychiatry, Samsung Medical Center, 50 Irwondong, Gangnam-gu, Seoul 135-701, South Korea. Tel.: +82 2 3410 0931; fax: +82 2 3410 0050.
E-mail address: jihae0931.kim@samsung.com (J.-H. Kim).

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than patients with major depressive disorder (MDD). Repetitive thoughts related to personal concerns occur in several anxiety disorders, including social anxiety, GAD, obsessive–compulsive disorder (OCD), and post-traumatic stress disorder (PTSD). The presence of rumination across these various disorders suggests that rumination is a transdiagnostic process (Abbott and Rapee, 2004; American Psychiatric Association, 1994; Ehlers et al., 1998; Van Oppen et al., 1995). As such, Watson has examined depressive rumination and comorbidity. The results of this study showed that rumination was positively associated with both depression and anxiety symptoms, as well as the traits associated with borderline personality, while brooding was related to comorbid OCD and GAD (Watkins, 2009). Additionally, several prospective longitudinal studies have shown that rumination predicts levels of both anxiety and depressive symptoms (Hong, 2007; Nolen-Hoeksema, 2000; Sarin et al., 2005).

Although few studies have examined ruminative responses in individuals with bipolar disorder, there is a growing interest in the role of ruminative responses in this disorder. In particular, one such study by Johnson et al. (2008) found that both undergraduates diagnosed with bipolar disorder and those diagnosed with MDD experienced heightened levels of rumination. Specifically, undergraduates with a history of both mania and depression reported higher levels of rumination than undergraduates with a history of depression only. This study also found that a diagnosis of depression was associated with significantly higher scores on the reflection and depression subscales of the RRS, but not with scores on the brooding subscale. Thomas et al. (2007) also reported that patients with bipolar disorder showed higher levels of rumination during remission than normal controls. This finding suggests that individuals with a history of bipolar disorder may have a preexisting, trait-like predisposition toward the inability to control negative thoughts. In addition to the work by Thomas et al., two studies have shown that rumination is associated with hypomanic traits and low levels of positive emotions (Knowles et al., 2005; Thomas and Bentall, 2002).

In sum, the study of rumination is expanding beyond its role in unipolar depression to other areas such as examinations of the association between rumination and various psychological traits and vulnerabilities and other mental disorders. Furthermore, refinement of the concept of rumination into the subdomains of brooding and reflective pondering has facilitated studies of the impact and association of cognitive processes with clinical impairments (Treynor et al., 2003). However, previous studies of rumination have experienced some limitations, such as the use of undergraduate student participants, a small number of clinical patients participating in the study, the limited number of mental disorders examined, and the lack of control for comorbid disorders.

This study investigated rumination levels among patients with MDD, bipolar disorder, and anxiety disorders. These associations were examined according to diagnosis, and the associations among subfactors of rumination, mood states, and diagnosis were examined. It was hypothesized that patients with mood disorders would have higher levels of rumination than patients with anxiety disorders. Additionally, it was predicted that patients with panic disorder, who mainly experience high levels of physical arousal, would display lower levels of rumination than patients with GAD or OCD, as these disorders are characterized by worry and cognitive dyscontrol.

2. Methods

2.1. Participants and procedure

Participants were recruited from outpatients and inpatients of Samsung Medical Center, Seoul between November, 2007 and August, 2010. Four hundred and seventy-six patients diagnosed with MDD, BPD, panic disorder with/without agoraphobia (PD), and GAD/OCD by the Structured Clinical Interview for DSM-IV (SCID) agreed to participate in the study. Patients with mood disorders and comorbid anxiety disorders, as well as patients with anxiety disorders and comorbid mood disorders, were excluded in order to clarify the comparison between mood disorders and anxiety disorders. Participants completed self-report questionnaire packets, including the RRS. Participants were interviewed by clinical psychologists using the HAM-D and HAM-A. All study procedures were compliant with the regulations of the Samsung Medical Center Institutional Review Board. Written informed consent was obtained from all participants.

Participants ranged in age from 16 to 88 years. Of the recruited patients, 62.8% (N = 299) were female. Two hundred twenty-seven patients with MDD, 157 patients with BPD, 65 patients with PD, 16 patients with GAD, and 11 patients with OCD were enrolled in the study. Among the 157 patients with BPD, 68 (43.3%) were diagnosed with bipolar I disorder, 52 (33.1%) were diagnosed with bipolar II disorder, and 37 (23.6%) were diagnosed with bipolar disorder NOS. Among the patients with bipolar I and bipolar II disorders, 54 (45.0%) were in a manic or hypomanic episode, 54 (45.0%) were in a depressive episode, 9 (17.5%) were in a mixed episode, 2 (1.7%) were in partial remission, and one (0.8%) was in an unspecified episode. As normality was not validated for the four groups, a Kruskal–Wallis test was conducted to estimate age differences, and a Chi square test was conducted to estimate gender differences. The BPD group was significantly younger than the other groups ($p<0.0001$), and females were approximately two times as prevalent as males in the mood disorder groups ($p<0.0001$), which is similar to the rates reported in previous studies (Cuellar et al., 2005; Leibenluft, 2000; Weissman et al., 1996).

2.2. Measures

2.2.1. Structured Clinical Interview for the DSM-IV (SCID)

The Structured Clinical Interview for the DSM-IV (SCID) has been used as a semi-structured interview to assess whether individuals meet diagnostic criteria for Axis I disorders of the DSM-IV (Spitzer et al., 1992; Williams et al., 1992). The modules for the assessment of lifetime mood disorders, anxiety disorders, psychosis, somatoform disorders, and substance dependence/abuse were administered to participants. The SCID has been shown to display good test–retest reliability in previous studies (Williams et al., 1992).