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Adaptive functions of self-focused attention: Insight and depressive and anxiety symptoms

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ABSTRACT

Maladaptive forms of self-focus, such as rumination, are considered transdiagnostic factors that contribute to depressive and anxiety symptoms. However, no or few studies have explored the possibility that adaptive forms of self-focus can also be a common factor that is negatively associated with depressive and anxiety symptoms. To test this possibility, we first examined the psychometric properties of a scale measuring adaptive forms of self-focus (the Self-Reflection and Insight Scale) on Japanese undergraduates (n=117). We replicated the two-factor structure of the scale: (a) self-reflection, which is a tendency to focus purposefully on self for self-regulation, and (b) insight, which is a sense of clear self-understanding. Second, we tested our specific hypothesis that these two factors negatively predict a common factor of depressive and anxiety symptoms. The results of structural equation modeling showed that insight (but not self-reflection) has a significant negative association with a latent variable that explains both depressive and anxiety symptoms. Furthermore, this common-factor model explained the data better than a control model in which insight predicts depressive and anxiety symptoms individually. These results suggest that (lack of) insight plays an important role in psychological (mal) adjustment as a shared process in depressive and anxiety symptoms.

1. Introduction

A number of previous studies have suggested high comobidity between depression and anxiety, highlighting common vulnerabilities that contribute to both symptoms that are often referred to as transdiagnostic factors (Clark and Watson, 1991). To date, various types of transdiagnostic factors have been proposed at psychological and biological levels (Craske, 2012). Among these factors, excessive attention to the self has received much attention as an important common feature to characterize depressive and anxious cognitions (Gotlib and Joormann, 2010; Mor and Winquist, 2002). A tendency to introspect on inner aspects of self, or private self-consciousness, has been repeatedly shown to be associated with depressive and anxiety symptoms (Grant et al., 2002; Smith and Greenberg, 1981; Trapnell and Campbell, 1999). More recently, repetitive, chronic, and negative forms of thought, such as depressive rumination and anxious worry, have received growing attention as a transdiagnostic factor that could explain the high comorbidity between depression and anxiety among the factors that relate to self-focus (Ehring and Watkins, 2008). Although definitions and conceptualizations of such repetitive thoughts vary across studies (Martin and Tesser, 1996; Watkins, 2008), repetitive thoughts have been demonstrated to have significant cross-sectional and prospective associations with depressive and anxiety symptoms (Ruscio, et al., 2015; Trapnell and Campbell, 1999). Furthermore, experimental studies have suggested that inducing rumination and worry increases both depressive and anxious moods (Andrews and Borkovec, 1988; Blagden and Craske, 1996; McLaughlin et al., 2007).

However, it is argued that self-focused attention also has adaptive aspects that enhance psychological adjustment in particular forms or situations (Grant et al., 2002; Trapnell and Campbell, 1999; Watkins, 2008). Indeed, studies have shown that private self-consciousness is associated with increased self-control, cognitive flexibility (Ghorbani et al., 2004; Grant et al., 2002), and objective self-understanding (Franzoi, 1983). Moreover, some subordinate concepts of private self-consciousness are known to be associated with decreased depressive and anxiety symptoms (Grant et al., 2002; Takano and Tanno, 2009). These findings highlight a potential function of self-focus to alleviate and/or prevent both depressive and anxiety symptoms; in other words, lack of the adaptive types of self-focused attention could be a common

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vulnerability factor for depression and anxiety. Although empirical and theoretical studies have suggested the maladaptive transdiagnostic roles of rumination and worry (Ehring and Watkins, 2008; McEvoy et al., 2013), the adaptive roles of self-focus for depressive and anxiety symptoms have been investigated separately. Therefore, in the present study, we examined the adaptive types of self-focused attention in the light of common factors between these two symptoms.

Previous studies have suggested that self-focused attention has two adaptive forms (Anderson et al., 1996; Burnkrant and Page, 1984; Grant et al., 2002): (a) *self-reflection*, which is a tendency to focus on the self for the purpose of self-interest and problem solving (Grant et al., 2002; Trapnell and Campbell, 1999; Treynor et al., 2003), and (b) *insight,* which is a sense of clear understanding of the self, such as one's own thoughts, feelings, and behaviors. Both self-reflection and insight are considered essential factors of a self-regulatory process that contributes to psychological adjustment (Grant et al., 2002). Indeed, self-reflection is known to be associated with autonomous self-regulation (Thomsen et al., 2011) and decreased depressive symptoms (Takano and Tanno, 2009). Similarly, insight has been shown to correlate with increased subjective well-being (Lyke, 2009), cognitive flexibility, and self-control (Grant et al., 2002), whereas lack of insight is related to increased levels of depressive and anxiety symptoms (Grant et al., 2002) and self-rumination (Harrington and Loffredo, 2010).

We hypothesized that these two adaptive types of self-focus would be associated with a common factor linking depressive and anxiety symptoms. To test this hypothesis, we conducted a questionnaire survey with a Japanese university student sample. Because university students are thought to be at higher risk of depression than are the general population (Ibrahim et al., 2013), investigating resilience factors in such a vulnerable sample could provide important insights into the way we can promote their mental health. First, we examined and replicated the psychometric properties of the measures of self-reflection and insight (Self-reflection and Insight Scale; Grant et al. (2002)). Second, we used structural equation modeling to extract a common factor as a latent variable explaining both depressive and anxiety symptoms. In this common-factor model, we predicted that self-reflection and insight would have a significant negative effect on the latent common-factor variable. Furthermore, we estimated a control model in which self-reflection and insight predict depressive and anxiety symptoms individually without assuming the latent common-factor variable. By comparing the common-factor with the control model on the basis of model-fit indices, we could determine which hypothesis is more likely to be true; the two adaptive types of self-focus would explain (a) a single cognitive process that is shared by depressive and anxiety symptoms or (b) individual processes that are unique for each of the symptoms.

2. Method

2.1. Participants and procedure

We recruited undergraduate students in an introductory psychology course. All of the participants voluntarily participated in the survey and provided informed consent in advance. We administered similar questionnaire surveys twice in the same psychology class with an interval of five weeks.

In the first survey (Time 1), participants completed the Japanese version of the SRIS. For the analysis, data with missing values were eliminated. Data for 149 participants (104 males, 45 females, mean age=19.23, *SD*=1.25 years) were used to analyze the factor structure and internal consistency of the translated version of the SRIS. In the second survey (Time 2), participants completed questionnaires to measure (a) private self-consciousness, (b) symptoms of depression and anxiety, (c) alexithymia, (d) hardiness, and (f) self-regulation. Data for 108 undergraduates (76 males, 32 females, mean age=19.32, *SD*=1.36 years) were used to assess the convergent and discriminant validity of the SRIS (Grant et al., 2002). At the same time, the data from Time 2 were used to estimate the common-factor and control models to test our main hypothesis. Ninety-five participants completed both surveys and their data were used to evaluate the test-retest reliability of the Japanese version of the SRIS. Since there were no obvious outliers indicated by the scatter plots, we did not exclude any data from the statistical analysis.

2.2. Measures

2.2.1. Self-reflection and insight scale (SRIS; Grant et al., 2002)

We translated the SRIS into Japanese with permission from the authors of the original version. We confirmed that the translated items retain the same meanings as the original version through back-translation by a bilingual English-Japanese speaker who was blinded to the original English items. The SRIS consists of 20 items describing a tendency for self-reflection (e.g., *I frequently take time to reflect on my thoughts*) and insight (e.g., *I am usually aware of my thoughts*). Each item was rated on a 6-point scale ranging from (1) *strongly disagree* to (6) *agree strongly*.

2.2.2. Private self-consciousness scale (Fenigstein et al., 1975)

The Japanese translated version of the scale was used (Oshimi et al., 1986). An example item of the scale is "*I reflect about myself a lot*." The private self-consciousness scale consists of 9 items, which were rated on a 5-point scale ranging from *1 (strongly disagree)* to *6 (strongly agree)*.

2.2.3. Hopkins Symptom Checklist (Derogatis et al., 1974)

Depressive and anxiety symptoms were assessed by the Japanese version of the Hopkins Symptom Checklist (Nakano and Kitamura, 2001). This scale consists of 54 items measuring the degree of psychological symptoms, which are grouped into five subscales: interpersonal sensitivity, somatization, and depressive, anxious, and obsessive-compulsive symptoms. In the present study, we used the 13 items of the depression subscale (e.g., "*feeling hopeless about the future*") and 8 items of the anxiety subscale (e.g., "*feeling fearful*"). Although it is possible that other subscales, such as the one for obsessive-compulsive symptoms, are associated with self-reflection and insight, we exclusively focused on the depression and anxiety measures because it has been suggested that the association with obsessive-compulsive symptoms is mostly explained by the presence (or comorbidity) of depressive and/or anxiety symptoms (e.g., Watkins, 2009). Each item was rated using a 4-point scale ranging from (1) *not at all* to (4) *frequently*.

2.2.4. Toronto alexithymia scale (Bagby et al., 1994)

Alexithymia was measured by the Japanese version of the 20-item Toronto alexithymia scale (Komaki et al., 2003). We obtained permission in advance to use this scale from the first author of the Japanese version of the scale. Because alexithymia is defined as difficulties in recognizing, processing, and regulating emotion, we predicted that alexithymia would be associated with decreased levels of self-reflection and insight. The alexithymia scale consists of 20 items such as "*I am often confused about what emotion I am feeling*." Each item was rated on a 5-point scale ranging from (1) *strongly disagree* to (5) *strongly agree*.

2.2.5. Hardiness 1uestionnaire (Kobasa, 1979)

Hardiness was measured by the 15-item version of the Hardiness Questionnaire (e.g., "*If I do my best, any problem will be alright at the end*"; Tada and Hamano (2003)). Hardiness is a personality trait that functions as a resource for stress coping and self-regulation (Aspinwall and Taylor, 1997; Maddi and Khoshaba, 2005). Hardiness consists of three psychological attitudes: *commitment*, which is a tendency to involve oneself when encountering situations; *control*, which is a