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Overgeneral autobiographical memory as a predictor of the course of depression: A meta-analysis

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ABSTRACT

Overgeneral autobiographical memory (OGM) is a robust phenomenon in depression, but the extent to which OGM predicts the course of depression is not well-established. This meta-analysis synthesized data from 15 studies to examine the degree to which OGM 1) correlates with depressive symptoms at follow-up, and 2) predicts depressive symptoms at follow-up over and above initial depressive symptoms. Although the effects are small, specific and categoric/overgeneral memories generated during the Autobiographical Memory Test significantly predicted the course of depression. Fewer specific memories and more categoric/overgeneral memories were associated with higher follow-up depressive symptoms, and predicted higher follow-up symptoms over and above initial symptoms. Potential moderators were also examined. The age and clinical depression status of participants, as well as the length of follow-up between the two depressive symptom assessments, significantly moderated the predictive relationship between OGM and the course of depression. The predictive relationship between specific memories and follow-up depressive symptoms became greater with increasing age and a shorter length of follow-up, and the predictive relationship was stronger for participants with clinical depression diagnoses than for nonclinical participants. These findings highlight OGM as a predictor of the course of depression, and future studies should investigate the mechanisms underlying this relationship.

Over the past 20 years, a large body of research has accumulated on the overgeneral autobiographical memory (OGM) phenomenon in depression. First described by Williams and Broadbent (1986) in their study of suicidal patients, OGM refers to the finding that, when asked to come up with a specific memory in response to a cue word, some individuals are less specific and/or more overgeneral in their memory retrieval than others. In particular, much research has shown that individuals with depression are characterized by higher levels of OGM than nondepressed controls (Williams et al., 2007). Moreover, OGM has been proposed as a risk factor for the onset and course of depression. This phenomenon appears to be relatively specific to depression rather than being characteristic of psychopathology in general (although it has also been associated with traumatic experiences and trauma-related disorders, such as PTSD and acute stress disorder; Moore & Zoellner, 2007; Williams et al., 2007).

In the majority of studies on OGM, the Autobiographical Memory Test (AMT; Williams & Broadbent, 1986) has been used to assess the specificity of autobiographical memory. On the AMT, individuals are presented with cue words of different valences, and are asked to produce a specific memory related to the cue word within a given time limit (e.g., 30 s). A specific memory is defined as a memory for an event that occurred at a particular time and place and lasted less than one day (e.g., "my high school graduation;" Williams et al., 2007). In contrast, overgeneral memories include both categoric memories that refer to a class of generic events (e.g., "parties with my friends") and extended memories that refer to an event lasting more than one day (e.g., "when I was on vacation last month"). Researchers have most frequently analyzed specific memories and/or categoric memories, although some have presented results for overgeneral memories more broadly (e.g., categoric and extended memories). In this review, and in most other work on this topic, OGM refers to either the retrieval of fewer specific memories and/or more categoric/overgeneral memories.

The OGM phenomenon appears to be a robust and replicable phenomenon among individuals with clinical depression as evidenced by recent meta-analytic and literature reviews (van Vreeswijk & de Wilde, 2004; Williams et al., 2007). However, in contrast to studies of individuals with clinical depression, there is

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less consistency in the findings of studies with nonclinical samples.[2] Some studies have found that dysphoric individuals are less specific in their memory than nondysphoric respondents (e.g., Goddard, Dritschel, & Burton, 1997), but other studies have failed to detect this phenomenon (e.g., Raes, Pousset, & Hermans, 2004). However, this pattern of results may be due to insensitivity of the AMT as a measure of OGM in nonclinical samples rather than to an absence of the phenomenon in these groups. For example, item response theory analyses of AMT performance suggested that the AMT may be insufficiently sensitive to measure OGM in nonclinical samples (Griffith et al., 2009). Furthermore, Raes, Hermans, Williams, and Eelen (2007) used an alternative sentence-completion methodology that does not explicitly prompt respondents to retrieve specific memories. They found that overgeneral responding on this measure was indeed associated with increased levels of depressive symptoms in nonclinical samples, even when traditional AMT performance was not.

OGM has been posited as a trait-like characteristic that may serve as a vulnerability factor for depression (Williams et al., 2007). For example, OGM has been associated with later increases in depressive symptoms in nonclinical samples. In one study, higher levels of OGM (relative to lower levels) predicted higher levels of depressive symptoms after a failed in vitro fertilization attempt (van Minnen, Wessel, Verhaak, & Smeenk, 2005). Higher levels of OGM are also sometimes (but not always) observed in individuals in remission from depression (e.g., Mackinger, Pachinger, Leibetseder, & Fartacek, 2000; Wessel, Meeren, Peeters, Arntz, & Merckelbach, 2001), thereby suggesting that OGM is not merely a correlate of depressed mood.

As a vulnerability factor, OGM should also predict the course of depression (Williams et al., 2007), but the results of empirical studies are inconsistent. Some studies, for example, have shown that AMT performance predicts depressive symptoms at follow-up approximately 7 months after an initial assessment (e.g., Brittlebank, Scott, Ferrier, & Williams, 1993; Dalgleish, Spinks, Yiend, & Kuyken, 2001; Raes et al., 2006). Specifically, clinically depressed individuals who retrieve more categoric and/or fewer specific memories have higher levels of depressive symptoms at follow-up, even after covarying baseline symptoms. In addition, Hermans et al. (2008) showed that patients with major depressive disorder (MDD) who retrieved fewer specific memories and more categoric memories upon hospital admission were more likely than patients not characterized by OGM at the initial assessment to still meet criteria for MDD 3–4 weeks later. Together, these studies suggest that OGM predicts the maintenance of depression (i.e., compared to lower levels of OGM, higher levels of OGM are associated with less of a decrease in depressive symptoms over time). However, Brewin, Reynolds, and Tata (1999) failed to detect a significant predictive relationship between OGM and depressive symptoms at 6-month follow-up as measured by the Beck Depression Inventory (BDI) in a sample of patients with MDD.

The aim of the current review was to perform a systematic quantitative analysis of the extent to which OGM predicts the course of depression. This was examined in two ways. First, we analyzed correlations between OGM and the level of depressive symptoms at a follow-up assessment. Second, we examined standardized regression (β) coefficients for OGM predicting depressive symptoms at follow-up in order to examine the predictive power of OGM over and above initial depressive symptom levels. All studies included in this second set of analyses incorporated only 1) a measure of OGM and a baseline measure of depressive symptoms as predictors, and 2) a follow-up measure of depressive symptoms as an outcome variable in their regression models.

[2] In this review, nonclinical samples refer to samples of individuals who were not selected on the basis of the level of depressive symptoms or a depression diagnosis. Examples include pregnant women who were recruited from the community and college students in an Introductory Psychology course. Individuals in these samples may be described as dysphoric (those with elevated scores on a measure of depressive symptoms) or nondysphoric. However, in nonclinical studies, the presence of clinical depression is generally not assessed with a diagnostic interview.

Consideration of moderator variables

Several variables could moderate the relationship between OGM and the course of depression. Thus, we had a secondary goal of examining two classes of potential moderators: characteristics of the sample and characteristics of the study design. Given that there is little research on this issue, many of these analyses are preliminary exploratory investigations, although the potential moderator variables we chose to examine are relevant from a theoretical standpoint.

Characteristics of the sample

As described above, OGM is a replicable phenomenon among individuals with clinical depression, but it is less consistently detected in nonclinical samples. Thus, we anticipated that the clinical depression status of participants (i.e., patients with clinical depression diagnoses versus nonclinical participants) would be an important moderator. Specifically, we hypothesized that the predictive relationship between AMT performance and the course of depression might be greater for samples of individuals with a clinical diagnosis of depression than for nonclinical samples, as suggested by Raes et al. (2007).

We also examined the age of participants as a moderator. Research shows that aging is associated with declines in executive functioning (e.g., Salthouse, Atkinson, & Berish, 2003), which in turn may contribute to difficulties in retrieving specific memories (e.g., Dalgleish et al., 2007). Consequently, older participants may retrieve fewer specific memories on the AMT than younger participants. Indeed, Ros, Latorre, and Serrano (2009) recently found that older adults generated fewer specific memories and more categoric memories on the AMT than did younger adults, and deficits in working memory were associated with lower levels of memory specificity. Given this more pronounced OGM phenomenon in older (compared to younger) adults, we were interested in exploring the preliminary hypothesis that the predictive relationship between OGM and the course of depression might also be greater for older than younger participants.

Characteristics of study design

This class of potential moderator variables included: a) the valence of the AMT cue word, b) the measure of depressive symptoms used, and c) the length of follow-up between the two assessments of depressive symptoms.

Cue word valence was chosen as a potential moderator variable because it is often taken into account in studies of OGM, such that memories retrieved in response to positive and negative cue words are analyzed separately. However, findings with respect to valence effects have been highly inconsistent. For example, some studies have found that depressed individuals generate fewer specific and/or more overgeneral memories to positive than negative cue words (e.g., Park, Goodyer, & Teasdale, 2002), whereas others have detected the opposite pattern (e.g., Mackinger, Pachinger et al., 2000). The prediction of depressive symptoms over time based on memories to cue words of different valence has also been