

The Association Between Depression and OGM

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ABSTRACT

OGM (Overgeneral Autobiographical Memory) is a phenomenon that causes an individual to recall less detailed memories and instead remember general occurrences. This circumstance is often associated with depression; thus, this review aims to elucidate the relationship between the two. The findings deduced that OGM is a predictor of depression. However, further research is needed to concretely state these findings, as several limitations were present in the articles, such as differing versions of questionnaires and varied levels of depression within subjects. A better understanding of the correlation between OGM and depression can allow researchers to improve treatments and possibly prevent depression.

INTRODUCTION

Autobiographical Memory (AM) refers to an individual's memory of their own life, including both specific personal experiences (episodic memory) and general factual knowledge (semantic memory) (Williams et al., 2007). These memories play a central role in shaping personal identity, since past experiences influence personality, emotions, and self-identity (Sumner, 2012). For instance, recalling a specific past success can enhance confidence and self-image, while a negative experience may harm one's outlook and emotional well-being.

Overgeneral Autobiographical Memory (OGM) refers to the reduced ability to recall detailed, specific memories, which are typically defined as a memory that occurred at a particular place and lasted less than a day (Williams et al., 2007). Instead, the person tends to retrieve generalized summaries of events rather than precise recollections (Liu et al., 2016). For example, a person might remember a "trip to China" but struggle to recall a specific moment, such as visiting the Great Wall. OGM often involves overgeneralizing repeated events or events spanning a long period of time (Rawal and Rice, 2012). Over the past 25 years, research has identified associations between OGM and several mental health conditions, such as post-traumatic stress disorder (PTSD), anxiety (Liu et al., 2016), and especially depression (Sumner et al., 2010).

Major depressive disorder (MDD) is a common psychiatric condition, affecting almost 20% of American adults during their lifetime (Kessler and Wang, 2008), with a higher prevalence during adolescence (Stange et al., 2013), and a high recurrence rate (Solomon et al., 2000). Given its widespread impact, identifying and understanding risk factors for depression is crucial for prevention and early intervention. In recent years, OGM has been proposed as a potential cognitive risk factor for depression (Liu et al., 2016).

Despite these advances, important questions remain unanswered. Various factors heavily impact study results, such as trauma history, clinical vs self-diagnosed MDD, remitted MDD, differing severities of depression, subject's education level, and age (Hermans et al., 2004; Wessel et al., 2001). For example, Kuyken and Brewin (1995) found that depressed women who reported experiencing child sexual abuse retrieved more overgeneral memories than those who did not have this history, suggesting that childhood trauma may play a role in the recall of autobiographical memories. However, Wessel et. al (2001) contrasted this notion, as their results did not support the idea that trauma is an important precursor to OGM and also noted that the variable of differing intensities of depression (e.g., more suicide attempts, self-harm, more severe depression) was not accounted for in the previous study. Therefore, all of these factors led to differing outcomes in numerous articles, resulting in inconclusive findings.

Due to the growing interest in cognitive markers, such as OGM, that could signal depression (Williams et al., 2007), this literature review is significant in recognizing this sign of depression to allow for early intervention and prevention (Rawal and Rice, 2012). Throughout the past years, OGM has been thought to have been linked to depression as decreased access to personal memories is associated with mood disturbance (Rawal and Rice, 2012).

This review aims to synthesize current research on the relationship between OGM and depression, drawing on findings from several experimental and observational studies. In addition, it will

compare common methods used to measure OGM and examine the different results. This review first focused on explaining the multiple questionnaires and techniques to measure OGM and depression, then analyzed the various claims that oppose these tests. The key results and findings were shared, along with the limitations of the studies and this review. Finally, a conclusion was derived. By doing so, the review seeks to provide a clearer understanding of whether OGM represents a modifiable risk factor for depression and how this knowledge could inform prevention and intervention strategies.

METHODOLOGY

A systematic search was conducted in the ScienceDirect database using the keywords "Overgeneral autobiographical memory" AND "depression". The search was limited to peer-reviewed research articles published in English between January 2000 and July 2025. The initial search yielded 97 articles. Titles and abstracts were screened for relevance to the review topic, resulting in 24 articles selected for inclusion. The final selection was completed on July 25, 2025.

RESULTS

Table of results

Table 1 shows the specific articles (with authors' names and dates) used in the review, along with some of the techniques that each article implements within its methodology, and finally, whether they disagree or agree with the existence of a relationship between OGM and depression. (Due to differing article objectives, the term "Other" was used in the methods used category when none of the questionnaires explained earlier were used, and instead, the study uses other methods of measurement. In addition, the term "Inconclusive" will be used to declare the conclusion of the association between OGM and depression as unknown due to differing goals of each article. For example, Raes et al. (2008) aimed to investigate the relationship between rumination and OGM, focusing less on depression.)

Table 1

Methodology Implemented in Each Study and Whether or Not They Agree with the Association

Authors & date	Methods used	Agree or disagree	Authors & date	Methods used	Agree or disagree
Beyderman and Young, 2016	AMT (modified with 18 cue words)	Disagree	Phung and Bryant, 2013	BDI-II, AMT	Disagree
Frampton et al., 2018	Other	Inconclusive	Raes et al., 2008	SCEPT, BDI-II	Inconclusive
Graham, Herlihy, and Brewin, 2014	AMT (modified with 16 cue words)	Agree	Rawal and Rice, 2012	AMT	Agree

Griffith et al., 2012	AMT (3 versions), SCEPT	Inconclusive	Rimes and Watkins, 2005	BDI	Inconclusive
Hakamata et al., 2025	fMRI, AMT	Agree	Robinaugh et al. 2013	SCEPT	Disagree
Hermans et al., 2004	AMT, BDI, HDRS-17	Agree	Stange et al., 2013	AMT	Agree
Hitchcock et al., 2016	AMT, BDI-II	Inconclusive	Sumner et al., 2010	Other (meta-analysis)	Agree
Kaczmarczyk et al., 2018	AMT	Disagree	Takano et al., 2017	AMT, CES-D	Inconclusive
Kong et al., 2015	CES-D, AMT (modified oral 12 cue words)	Agree	van Vreeswijk and de Wilde, 2004	Other (meta-analysis)	Agree
Liu et al., 2016	HDRS-17, AMT (Dutch)	Agree	Watkins and Teasdale, 2004	BDI, AMT	Inconclusive
Liu et al., 2017	HDRS-17, AMT, fMRI	Agree	Wessel et al., 2001	AMT	Agree
Matsumoto, Takahashi, and Hallford, 2023	AMT	Inconclusive	Zhu et al., 2012	CES-D, AMT (Dutch), fMRI	Agree

Methods to detect OGM and depression within patients

The Autobiographical Memory Test (AMT), created by Williams and Broadbent in 1986, was commonly administered to subjects throughout the papers selected for this review. The main goal of using this test is to assess the specificity of autobiographical memory via cue words. Before the test, subjects were given two practice words to familiarize them with the procedure. In the AMT, 12 emotional cue words (six positive and six negative adjectives) were presented (orally or on flashcards) to the participants. Afterwards, subjects were given one minute for each card to retrieve and present a specific memory to the word. However, if the participant was unable to retrieve a specific memory, they were prompted to describe a particular time or place, and the time was recorded. Each response was timed, recorded, and categorized to either “specific” or “categorical”, with the latter referring to OGM (Kong et al., 2015; Liu et al., 2016). A few different modified versions of AMT (such as the Dutch version used by Zhu et al. (2012)) were used throughout the studies (Table 1). An example of the new, modified version of

the AMT includes using 9 cue words (three positive, three neutral, and three negative) instead of the original 12 (Stange et al., 2013).

The 17-item Hamilton Depression Rating Scale (HDRS-17) was created by Hamilton in 1960 and is another test that was commonly given to subjects to assess depression severity. The questionnaire contains 17 questions inquiring about the subject's emotions and physical symptoms on a scale from 0 to 4; higher scores indicate higher severity of depression (Hermans et al., 2004; Liu et al., 2017).

The Center for Epidemiological Studies Depression Scale (CES-D) was created by Radloff in 1977, and it consists of 20 items, each describing depressive symptoms. Participants self-report how often they experience each symptom over the past week from a scale of 0 to 4, with 0 indicating no days and 4 indicating 5-7 days of the week. Like the HDRS-17, higher scores denote harsher depressive symptoms (Kong et al., 2015; Takano et al., 2017).

The Beck Depression Inventory (BDI), created by Steer et al. (1993), is a self-report questionnaire containing 21 items on a 4-point scale measuring how participants felt during the last week, similar to the CES-D. The BDI-II, created by Beck et al. (1996), was also used in a few articles, with both measuring the severity of depressive symptoms in subjects (Hitchcock et al., 2016; Phung and Bryant, 2013; Raes et al., 2008; Rimes and Watkins, 2005; Watkins and Teasdale, 2004).

The Sentence Completion for Events from the Past Test (SCEPT), created by Raes et al. (2008), is a task where subjects complete 11 sentence stems that connect to past experiences. The responses are then categorized as either specific or general and elicit a higher amount of OGM in nonclinical, healthy individuals compared to AMT (Robinaugh et al., 2013).

Functional magnetic resonance imaging (fMRI) is a powerful in vivo brain imaging technique that measures brain activity by detecting differences in blood flow. Experiments that used this approach conducted brain scans on the subjects while being shown a visual stimulus (fearful vs neutral faces) or subjects were prompted to think of an AM (Hakamata et al., 2025; Liu et al., 2017).

CaR-Fa-X model

Williams et al. (2007) developed the CaR-Fa-X model, detailing the processes (capture and rumination (CaR), functional avoidance (FA), and impaired executive capacity and control (X)) contributing to overgeneral memory. The cognitive model also shows the independent or combined effect of these processes on the subject's cognition and behaviour (e.g., problem solving). To this day, this model is one of the most prevalent figures used to demonstrate the process of OGM in particular relation to depression and was referenced numerous times (Graham, Herlihy, and Brewin, 2014; Liu et al., 2016; Phung and Bryant, 2013; Raes et al., 2008; Stange et al., 2013).

However, Phung and Bryant's (2013) findings contradicted this popular model that was frequently referenced throughout the other articles as supportive evidence (Graham, Herlihy, and Brewin, 2014; Liu et al., 2016; Phung and Bryant, 2013; Raes et al., 2008; Stange et al., 2013). They found that avoidance strategies (e.g., emotional suppression and inhibition) led to fewer categoric memories, which contrasted

with CaR-Fa-X. Therefore, they stated that the model may need some revision and further research, perhaps weakening our understanding of this process between OGM and depression.

OUTCOMES

These various questionnaires, surveys, and techniques were assigned to the participants, usually ranging from 20 to 100 people. Overall, a majority of the articles supported the notion that OGM predicts depression; people who recall vague memories rather than specific events are more likely to develop depression or relapse into it (Frampton et al., 2018; Graham, Herlihy, and Brewin, 2014; Hakamata et al., 2025; Liu et al., 2016; Matsumoto, Takahashi, and Hallford, 2023; Rawal and Rice, 2012; Stange et al., 2013; Sumner et al., 2010; Wessel et al., 2001).

On the other hand, there were a few articles that didn't fully agree with this concept, particularly doubtful of the methods that led to this conclusion. Specifically, the AMT has been unfavored by some researchers for many reasons (Griffith et al., 2012). For example, Robinaugh et al. (2013) used the SCEPT in their research as AMT was hypothesized to be inadequately sensitive to detecting OGM in non-clinical subjects. However, van Vreeswijk and de Wilde (2004) found evidence to support the usage of the AMT. Other findings rejected the association between OGM and depression entirely (Beyderman and Young, 2016; Kaczmarczyk et al., 2018).

DISCUSSION

With the essential association between OGM and depression being that OGM predicted the occurrence of depression, the plethora of science articles also displayed a few other relationships between the two experiences. One of the main key findings in this review includes the involvement of rumination in OGM. Rumination is the repetitive and passive constant thinking about the individual's own causes, consequences, and symptoms of depression (Nolen-Hoeksema, 1991). This style of thinking is typically present in those with depression and plays a role in predicting depression too (Rimes and Watkins, 2005). Kong et al. (2015) found that individuals who tend to use ruminative coping techniques tend to have more OGM, potentially leading to OGM playing a mediator role between rumination and depression (Liu et al., 2016). Additionally, Raes et al. (2008) compared abstract (maladaptive and analytical thinking) vs concrete (detailed and specific thinking) rumination and found that concrete rumination led to less OGM (Watkins and Teasdale, 2004).

Another one of the key findings regarding OGM and depression is that depression was found to be associated with negative or positive overgeneral bias. This negative bias occurs when individuals with depression retrieve negative personal memories more easily than positive memories (Gotlib and Joormann, 2010), and a positive bias occurs when the opposite happens. Because of how the AMT is formatted (with positive and negative cue words), this valence effect was noted by Hitchcock et al. (2016), and Wessel et al. (2001) observed results indicating a positive bias. However, Takano et al. (2017) found results that conflicted with this idea and did not find the factor to be of importance in their research (Rawal and Rice, 2012). Therefore, further research is needed to determine if this effect greatly affects the subjects' responses and the results.

A few limitations included in the articles that the authors expressed include too broad or too specific samples, differing versions of AMT, and differing levels of depression within the subjects. Takano et al. (2017) gathered data suggesting that the cognitive decline due to age impacts subjects' performance on the AMT, therefore suggesting that age plays a role in autobiographical memory specificity (AMS). A plethora of studies only included one specific age group, and thus their findings cannot be generalized to a bigger population (Kong et al., 2015). In addition, Takano et al. (2017) also found that gender played a role in AMS, but a few of the research articles only conducted the experiment on one gender or had an unequal balance between them (Rawal and Rice, 2012). Another limitation listed by the researchers was the use of distinct versions of the AMT. Some studies used written AMTs while others used oral or modified versions with differing amounts of cue words (Beyderman and Young, 2016; Graham, Herlihy, and Brewin, 2014). In particular, Stange et al. (2013) used a new version of AMT (including three neutral words and subsequently three words, instead of five, for each valence) that had never been used in research before. Thus, it is unclear whether or not this new version impacts the results of the study. Likewise, Rimes and Watkins (2005) shared that self-reporting questionnaires must also be taken into account and suggested that future studies should also take non-self-reporting approaches. Moreover, the education/IQ and language of the participant play a role, particularly in the written AMT. Wessel et al. (2001) showed that education level predicts memory performance; consequently, the higher the individual's education, the more specific memories they have. Unfortunately, this measurement was not taken in various studies (Liu et al., 2016). Additionally, Phung and Bryant (2013) noted that their research was conducted in Hong Kong, where English was most likely the subject's second language. Accordingly, language plays a role in the AMT too (Graham, Herlihy, and Brewin, 2014). Finally, MDD severity has a role in the studies too, as Zhu et al. (2012) stated that because their subjects had mostly mild MDD, the findings cannot be generalized to all individuals with differing levels of MDD (Rawal and Rice, 2012).

Additionally, limitations to this specific review article include the databases and the range of the research articles. The articles were taken from ScienceDirect databases, but could have been expanded to many other databases (e.g., PubMed). Furthermore, the research articles were filtered from the years 2000-2025, but could have been filtered to even earlier years, such as 1990.

Further research can be conducted to conclude OGM's role in anxiety-related disorders, as well as other psychological disorders other than depression (e.g., PTSD, trauma). Rawal and Rice (2012) strongly stated that OGM predicts the development of depression but not of anxiety. Similarly, Wessel et al. (2001) also concluded this and even go on to say that past studies that have concluded a relationship between OGM and anxiety, the source may be co-morbid depression. On the other hand, Graham, Herlihy, and Brewin (2014) found that asylum seekers and refugees with PTSD and depression tend to retrieve fewer specific memories of their past, potentially suggesting an association between PTSD and OGM. Nevertheless, much more research needs to be conducted in order to fully uncover the connection between OGM and the multitude of psychological disorders.

CONCLUSION

In conclusion, this review aimed to elucidate the association between OGM and depression. Based on the numerous research articles analyzed, it is possible to conclude that OGM may be a predictor of depression. Understanding how our memory works is crucial for mental health, as the way we

remember things can often affect our emotions and coping strategies. Vaguely recalling specific events can make it harder to solve problems, manage our emotions, and learn from our mistakes. By learning more about how memory and OGM work, therapists and individuals can work on improving memory, build coping skills, and potentially predict depression and therefore prevent it.

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