

Summary

Emotion Regulation Function of Autobiographical Remembering

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Although there has been extensive evidence on how and why emotions influence memory processes (i.e. Buchanan, 2007; Holland & Kensinger, 2010), evidence is much less consistent on the way autobiographical remembering influence emotional states. Emotions may act as internal cues that trigger the retrieval of particular memories, which subsequently transforms the emotional state along with the individual's goals and expectations. As in this case, autobiographical remembering acts as a means that individuals may use, even without awareness, to alleviate the content and intensity of their emotional experiences.

The Role of Autobiographical Remembering in Emotion Regulation

The functional approach to autobiographical memory (Bluck et al., 2005) emphasized the why aspect of remembering rather than performance and accuracy-related aspects of what and how. According to this view, remembering serves three psychosocial functions, maintaining self-consistency and positive self-view over time (*self-function*), developing and maintaining social relationships (*social function*), and reflecting back and forth to guide current and future behaviors (*directive function*) (Bluck et al., 2005).

In the present research, we have focused on a specific aspect of self-function, emotion regulation, which basically refers to the modulation of memory processes in line with the regulatory goals to alleviate emotional states (Pasupathi, 2003). In doing so, remembering can be altered in a number of ways, either by changing what is remembered or the way it is remembered. Reminiscing on the positive instances (Walker, Skowronski, Gibbons, Vogl, & Ritchie, 2009) and increasing the psychological distance of negative experiences help to down-regulate negative affect (Schwager & Rothermund, 2013) whereas specific memories of negative events lead to intensify-

ing the negative emotions. On the other hand, retrieval of memories in an overgeneral way reduces the subsequent effective change (Williams et al., 2007).

It is important to note that regulation does not necessarily aim feeling better. Individuals may attempt to decrease positive affect or increase negative affect as well. High cognitive avoidance was related to less specific retrieval of positive memories, serving these individuals to maintain self-consistency, and to regulate their emotions. Similarly, remembering a vivid scene of a negative event may help the individual to think over and resolve the emotional conflict associated with the event. In that sense, what determines the way regulation would function is the interaction between the individual's habitual regulatory behaviors and goals for emotion regulation in a particular context (Opitz et al., 2012).

Despite considerable theoretical discussions on the ways autobiographical remembering serves emotion regulation, existing evidence relies mostly on the variation in the way memories are retrieved, which is supposedly moderated by emotion regulation. It has been consistently argued that positive events tend to be perceived as more important, more self-relevant, as well as containing more detail and feelings of reliving (Berntsen, 2002; D'Argembeau & Van der Linden, 2006; Rasmussen & Berntsen, 2009; Rubin et al., 2003). The salience of positive experiences may serve to enhance one's adaptation to life and maintain a positive self-view, which has been considered to serve emotion regulation (Gross & John, 2003; Nezlek & Kuppens, 2008). However, we argue that these findings do not necessarily indicate that individuals are regulating their emotions using their autobiographical memories, but rather, it is as likely that the overall outcome (i.e. well-being) is a by-product of linked mechanisms in which emotion regulation and remembering are also involved. Such mechanisms may include rumination and cognitive avoidance, the trait-level

individual differences that have been widely studied and which have been associated with different retrieval characteristics. In the case of rumination, highly ruminating individuals were found to perceive negative events as more important, engage in frequent reminiscing, and remember especially negative events in an intense and vivid manner (Ayduk & Kross, 2008; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Schoofs, Hermans, & Raes, 2012).

Method

Participants

We recruited a total of 144 adults ($M_{age} = 39.46$, $SD = 11.88$; 116 female) using the Koç University subject pool. Participants were randomly assigned to one of the three groups to recall sadness-inducing, anger-inducing, happiness-inducing memories. Whereas sadness and anger memory groups constituted the negative memory groups, the happy memory group acted as the positive memory control group.

Measures

Autobiographical Memory Experience (AMQ).

For the emotion induction episode, participants were asked to remember two sadness-, anger-, or happiness-relevant- events. For each event, they rated the valence and recollective properties (i.e. reliving, imagery and emotional intensity) of the event on the Autobiographical Memory Questionnaire (Rubin et al., 2003). Similarly, for the subsequent recall, re-collective properties and important features were rated on AMQ as well. We also asked for the psychological distance with an item (“How far away does the event feel?”) and participants indicated the psychological distance of the event on a continuum using a slider with values ranging from 100 (“I feel like the event happened today”) to 0 (“I feel like the event occurred a very long time ago”) (Demiray & Janssen, 2014; Liberman, Sagristano & Trope, 2002). Then, they provided the actual date of the event for the reported memory.

Pre- and post-report emotionality. We asked individuals how they were feeling before and after the subsequent remembering phase in order to evaluate the influence of autobiographical remembering on their emotional state. They indicated their responses on a 7-point scale in which lower scores represented the negative affect and higher scores represented positive affect.

Emotion Regulation Questionnaire. This 10-item measure of emotion regulation aims to assess individual differences in their habitual use of two emotion regulation strategies, cognitive reappraisal, and expressive suppression (Gross & Thompson, 2003).

Procedure

Participants first responded to demographic information questions such as gender and age, then they were assigned to one of the sad, anger and happy memory groups. The specific instructions were as follows:

“We want you to think back to two events that made you feel lonely, sad, rejected, or hurt (and angry, annoyed or enraged for the anger memory group; happy, or proud for the happy memory group) in the last five years of your life. We would like you to recall these events in detail, remembering how you felt and what happened. Please make sure these are the events that you still feel emotional as you recall now. Take your time to recall the incidents and provide a brief description of each of them.”

After participants reported each event, they rated their memory on the memory characteristics, which were valence, intensity, importance, imagery, and psychological distance and then they dated the event. Following the initial memory recall phase, we had a manipulation check to ensure that autobiographical remembering induced negative effect. In the subsequent recall phase, we requested one random memory, asking specifically “to recall an event that came to your mind. It could be related to anything but it should be an important, specific event that you experienced”. For this, any memory, participants rated all the items in the AMQ and dated the event as well. As the last phase of the study, they reported their emotionality and completed the ERQ.

Results and Discussion

Changes in emotionality ratings became more salient, in that, individuals who recalled negative events in the initial recall, thus, who were feeling negative, which supported for a counter-regulation account. This is important as we did not expect efforts for emotion regulation in individuals who were feeling positive. The emotional impact of the subsequent recall had a significant role as well. Memories who were positive and perceived to occur in the near past had the most influence to upregulate positive emotions. Although we did not find any difference in the phenomenological features of the subsequent recall, there are subtle differences which appeared to be significant as we controlled for the emotional impact of the subsequent memory.

More specifically, for the sadness group, the emotional impact of the memory operated through the emotional intensity of the event, which resulted in high impact positive events in the subsequent recall to be perceived more emotionally intense and led to feeling more positive afterward. For the anger group, on the other hand, importance accounted for the role of emotional im-

pact in the upregulation of positive effect. These findings are significant as we found evidence supporting the role of particular phenomenological features in the regulation of specific emotions.

Although we provided no explicit instructions to regulate emotions, we found that individuals who are better equipped with regulatory skills automatically oriented to the information in accordance with the emotion goals and remembering experience served to upregulate positive emotions. Previous studies also discussed the implicit (Kooze, 2009) or covert (Aldao & Dixon-Gordon, 2014) emotion regulation strategies both of which emphasized the automatic mechanisms that generation and regulation of emotions operate. We consider such a perspective as important because emotional processing in their daily life is mostly spontaneous; otherwise, continuous attempts to monitor and regulate emotions would be mentally exhausting.

In conclusion, the general idea we argue for is that emotion regulation function of autobiographical memory ensures a/the phenomenological form of the memory to be constructed to optimize regulation success. The events that are represented in the optimal phenomenology for an effective change are more likely to be retrieved, especially in individuals with effective regulatory skills. In that sense, current evidence has promising implications, showing what we remember is not that random, but interacts with both our internal states and the ways we use to regulate internal states.