Brief report: Collecting self-defining memories outside therapy

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Abstract

Objective: The aim of this study was to test the Self-Defining Memory Task (SDM Task)—i.e., the possibility to retrieve personally meaningful memories in an experimental context.

Methods: A sample of young adults ($N = 36$) were asked to recall personal memories in response to different sets of instructions: self-defining memory instructions versus detailed/non-detailed autobiographical memory instructions. Participants' subjective ratings of memory qualities and behavioural measures were considered, such as latency and narrative duration times.

Results: Self-defining memories were rated as more important and emotionally intense compared to other autobiographical memories. The use of detailed memory instructions, however, increased the time of retrieval and the duration of the narrative, eliciting more remote memories, compared to non-detailed instructions.

Conclusions: The SDM Task seemed to be more likely to elicit the personally meaningful memories that might be shared with a significant other or in a therapeutic context. Research in autobiographical memory processes constitutes valuable material for clinical psychologists.

Key Points

1 Self-defining memories are emotionally intense and well-rehearsed memories, which are connected to the individual's most important enduring concerns and conflicts.

2 The present study confirms the possibility to collect emotionally self-relevant memories outside a therapeutic context and, at the same time, stresses the importance of retrieval contextual constraints.

3 An increased understanding of the basic processes of autobiographical memory is relevant for clinical psychologists who work daily with their clients' memories.

Autobiographical memories have been defined as the mental representations of one's past, which help to define identity and ground the self in experience (Conway, 2005; Conway, Singer, & Tagini, 2004). These mental representations can differ across many qualities—e.g., the valence and intensity of emotional experiences evoked during recall—and are related to important aspects of psychological functioning. "I remember when my aunt passed away. [. . .] I also remember the grief of my uncle . . . without her, he was slowly dying insight. [. . .] This made me realize that I will never depend on someone else. I want to love someone but without feeling lost without him."[1] Individuals form long-term goal-related autobiographical memories in which the episodic knowledge (i.e., *episodic memories*) and the semantic information about the self (i.e., *the conceptual self*) are

[1] An example of memory is drawn from this study; the actual account has been truncated and slightly modified to protect the participant's identity.

integrated in a fundamental tension between *adaptive correspondence* and *self-coherence* (Conway, 2005; Conway et al., 2004).

Given the rich nature of autobiographical memory, many different methods have been used to study it, from cue word tasks to intensive structured interviews (Griffith et al., 2012). Of the different approaches, Singer and Moffitt (1991–1992) created a highly self-involving memory task, the *Self-Defining Memory Task* (SDM Task), which is designed to collect personally meaningful memories that one might share with a significant other or in a therapeutic context. Over the last few decades, several experimental and clinical studies have reported on these self-defining memories (SDMs; e.g., Blagov & Singer, 2004; Lardi, D'Argembeau, Chanal, Ghisletta, & Van der Linden, 2010; Singer, Rexhaj, & Baddeley, 2007; Wood & Conway, 2006). SDMs are identified as a special class of autobiographical memories (Singer & Salovey, 1993), which are (1) emotionally intense, (2) repetitively recalled and accessible, (3) linked to memories that share similar themes, and (4) connected to the individual's most important enduring concerns and conflicts. These memories represent a touchstone for self-understanding and, thus, constitute significant material to work on during the flow of clinical interactions (Conway & Singer, 2011; Singer, Blagov, Berry, & Oost, 2012; Singer & Bonalume, 2010). The extract quoted above reflects the self-defining qualities of the memory: A particular emotional and relational pattern seems to arise from the participant's narrative.

SDM tasks have been widely used in cognitive memory domains, as well as in clinical research (e.g., Berna et al., 2011; Sutherland & Bryant, 2005; Werner-Seidler & Moulds, 2012). However, the presentation of a memory may be due to extra-person factors, such as the wording of the memory prompt, the content of the memory itself, and the person to whom the memory is narrated (Singer & Moffitt, 1991–1992). Most studies required participants to recall a number of SDMs—without any valence restriction, with the aim of examining the characteristics of their most personally relevant memories—i.e., memories that one might recall in a therapeutic context or in an intimate conversation (Singer & Moffitt, 1991–1992). However, few studies have directly compared the effect of this memory prompt with other kinds of requests (e.g., Crane, Goddard, & Pring, 2010; Martinelli & Piolino, 2009; Singer & Moffitt, 1991–1992)—i.e., detailed/non-detailed sets of instructions for autobiographical memories.

The present research explores the differential effect of memory prompts in a non-clinical sample. Does an SDM Task elicit true SDMs in an experimental context? We consider both (1) participants' subjective ratings—i.e.,

ratings of the importance, emotional valence, and intensity experienced during recall—and (2) behavioural indices—i.e., latency and duration times of the memory narratives. We can outline two possible scenarios: The SDM Task may be a "facilitating" prompt for the recollection of SDMs or, in contrast, it may be a "restraining" prompt.

According to the first scenario, the SDM Task is more likely to lead participants to retrieve memories that are considered as extremely important and that are characterised by intense emotions during recall. In spite of the task's complexity, participants should also be able to retrieve their SDMs faster (shorter latency) and report longer narratives (longer duration). According to the second scenario, no differences in subjective ratings should be observed between different memory prompts. However, longer latency and duration times should be observed for detailed instructions regardless of the self-defining nature of the task.

Method

Participants

Ethical approval for the study was obtained from the ethical committee of the University of Bologna. A total of 36 Italian subjects were selected (26 women and 10 men) ranging from 19 to 33 years of age (mean (M) = 23.97). The majority of the sample consisted of university students (80.6%). Of the original sample, five participants were excluded from the analysis because of damage to memory records.

Measures

Memory tasks

Participants were asked to recall three autobiographical memories for each of the following instructions: SDM instructions (i.e., SDM Task), autobiographical memory instructions (i.e., AM Task), and minimal instructions (i.e., MI Task). We used a modified version of Singer and Moffit's (1991–1992) memory requests. Specifically, for the SDM Task, participants were asked to: "Please describe a memory that is personally meaningful to you. It may be a memory of any kind of experience, either positive or negative, but it should be a memory that helps you to understand who you are and how you arrived at your current identity. It should be something you have thought about many times and is still important to you, even as you are recalling it now. The memory should be from at least one year ago. Please describe the memory in detail: What happened and when, who you were with (if

anyone), and how you felt or reacted." For the AM Task, participants were asked to: "Please describe a memory of any kind of experience. It can be either a positive or negative memory, which evokes intense or faded emotions. It may or may not be important to you in your life. It may be a memory that you have thought about many times or rarely. The memory should be from at least one year ago. Please describe the memory in detail: What happened and when, who you were with (if anyone), and how you felt or reacted." The MI Task was simply: "Recall a memory from at least one year ago."

Memory ratings

Participants were asked to rate on the subscales of the Self-Assessment Manikin (Bradley & Lang, 1994) the valence and the intensity of emotions felt at the time of the recall. They also used a 1–9 rating scale to indicate how important the memory was to them (from *1-not at all* to *9-extremely important*).

Procedure

Following informed consent, each participant attended a single experimental session of about 1 hr. The subject sat at a desk in a quiet room in the presence of the experimenter. Participants were told to report memories from their personal lives (i.e., memories of events personally experienced, not described by a parent or friend, nor that they read about or heard about through the media). The different sets of instructions were presented on a computer screen in three blocks, using E-Prime version 2 (Psychology Software Tools Inc., Sharpsburg, PA, USA). Each block consisted of the three memory tasks presented in randomised order. After reading each instruction, the audio-recording started. Participants had 5 min to describe each memory. During the recording, the experimenter strived to minimise any conversation with the subject. The experimenter announced when the recording time was coming to an end. After the account, the participant rated the importance, valence, and intensity, as well as giving their age at the time of the recalled event. Latency and duration times were derived from the records. At the end of the experimental session, subjects were debriefed.

Analytic Strategy

Analyses were performed using SPSS (version 17.0 for Windows, SPSS Inc., Chicago, IL, USA). To examine differences between memory prompts, a 3 (task: *SDM Task, AM Task*, and *MI Task*) × 3 (block: *Block 1, 2*, and *3*) multivariate analysis of variance for repeated measures was conducted on the mean scores of importance, valence,

and intensity, with Bonferroni-corrected post hoc comparisons. A similar procedure was used to examine the effects of the instructions on the behavioural measures of the memories (i.e., latency and duration times of the narratives).

Results

We first examined the effect of memory prompts on subjective ratings of the memories. Multivariate tests showed a main effect of task, $F(6, 24) = 7.97$, $p \leq 0.001$, $\eta_p^2 = 0.67$, observed power (o.p.) = 1.00, with a significant interaction between task and block, $F(12, 18) = 3.27$, $p \leq 0.05$, $\eta_p^2 = 0.68$, o.p. = 0.92. Considering the univariate tests, a significant main effect of task was found on the importance ($p \leq 0.001$) and intensity ratings ($p \leq 0.01$). As evidenced by post-hoc comparisons, SDMs tended to be rated as more important and emotionally intense compared with other everyday autobiographical memories (all ps ≤ 0.05). In addition, in terms of importance ratings, a significant interaction between task and block was also found ($p \leq 0.05$). Memories prompted by minimal instructions tended to be less important than memories prompted by SDM instructions within the last block of instructions ($p \leq 0.001$). Mean values and univariate tests are reported in Table 1.

We then examined the effect of memory prompts on behavioural measures of the memories—i.e., latency and duration times of memory narratives. Because no significant effects of block were observed ($p > 0.05$), single memory values were averaged across blocks for the same memory prompts. The multivariate test showed a significant main effect of task, $F(3, 25) = 6.35$, $p \leq 0.001$, $\eta_p^2 = 0.60$, o.p. = 0.99. A significant effect was found on latency, $F(2, 60) = 4.15$, $p \leq 0.05$, $\eta_p^2 = 0.12$, o.p. = 0.71—i.e., longer latencies were observed for the SDM Task compared with the MI Task ($p \leq 0.05$; $M = 29.19$ s, standard deviation (SD) = 23.08 for SDM Task; $M = 21.75$ s, $SD = 26.23$ for AM Task; $M = 18.73$ s, $SD = 15.27$ for MI Task)—and duration times, $F(2, 60) = 11.98$, $p \leq 0.001$, $\eta_p^2 = 0.28$, o.p. = 0.99—i.e., longer mean times were observed in response to detailed memory instructions, regardless of the self-defining nature of the task (all ps ≤ 0.01; $M = 141.02$ s, $SD = 65.25$ for SDM Task; $M = 129.94$ s, $SD = 68.60$ for AM Task; $M = 113.04$ s, $SD = 74.22$ for MI Task). In addition, a significant effect of task was also found on age at the time of the event, $F(2, 60) = 16.29$, $p \leq 0.001$, $\eta_p^2 = 0.35$, o.p. = 1.00. Memories prompted by minimal instructions tended to be more recent than memories prompted by other specific instructions (all ps ≤ 0.001; $M = 16.46$ years, $SD = 4.74$ for SDM Task; $M = 16.29$ years, $SD = 4.51$ for AM Task; $M = 19.82$ years, $SD = 3.21$ for MI Task).

Table 1 Multivariate analysis of variance (MANOVA) univariate tests on importance, valence, and intensity ratings

Measures	SDM Task	AM Task	MI Task	Main effect task	Interaction task × block
Importance	8.20 (0.85)	6.69 (1.57)	6.49 (1.77)	$F_{(2, 58)} = 30.54, p \leq 0.001$	$F_{(4, 116)} = 2.50, p \leq 0.05$
Block 1	8.33 (1.24)	7.17 (1.97)	7.33 (2.12)	$\eta p^2 = 0.51$, o.p. = 1.00	$\eta p^2 = 0.08$, o.p. = 0.69
Block 2	8.13 (1.07)	6.17 (2.33)	6.37 (2.59)	SDM Task > AM Task and MI Task	MI Task < SDM Task in Block 3
Block 3	8.10 (1.21)	6.57 (2.19)	5.57 (2.37)		
Valence	6.51 (1.79)	6.20 (1.71)	6.68 (1.74)	n.s.	n.s.
Block 1	6.67 (3.01)	5.90 (2.77)	6.60 (2.65)		
Block 2	6.60 (2.81)	5.80 (2.35)	6.47 (2.65)		
Block 3	6.13 (2.81)	6.70 (2.37)	6.80 (2.32)		
Intensity	7.21 (1.59)	6.47 (1.46)	6.29 (1.41)	$F_{(2, 58)} = 7.10, p \leq 0.01$	n.s.
Block 1	7.20 (1.81)	6.80 (2.00)	6.50 (2.03)	$\eta p^2 = 0.20$, o.p. = 0.92	
Block 2	7.47 (2.08)	6.20 (2.17)	6.10 (2.06)	SDM Task > AM Task and MI Task	
Block 3	6.60 (2.54)	6.17 (1.86)	6.10 (1.80)		

$N = 31$. ηp^2, partial eta squared; AM Task, Autobiographical Memory Task; MI Task, Minimal Instructions Task; n.s., not significant; o.p., observed power; SDM Task, Self-Defining Memory Task.

Discussion

We assessed the effects of different memory prompts on participants' subjective ratings and behavioural indices of the memories, such as latency and narrative duration times. The aim of this study was to formally test SDM instructions—i.e., the possibility to retrieve personally meaningful memories in an experimental context. Indeed, the SDM Task may alternatively be a "facilitating" or a "restraining" prompt for the recollection of SDMs outside therapy. Such memories constitute the material that clinical psychologists work on with their clients (Singer et al., 2012).

With respect to subjective ratings of the memories, results were consistent with the "facilitating" hypothesis. We found significant mean-level differences in all three memory prompts. Participants tended to rate their SDMs as more important and emotionally intense compared with everyday autobiographical memories; no differences in valence were found. The SDM request seemed, therefore, to invoke more affective and personal meaningful memories compared with other requests. By contrast, with respect to behavioural measures, results were consistent with the "restraining" hypothesis. The longer latency times observed for the SDM request may reflect a greater difficulty in retrieving SDMs. In addition, the use of detailed memory instructions elicited longer narratives. In other words, a greater cognitive load seemed to be required for detailed sets of instructions and, especially, for SDM instructions (see e.g., Yanes, Roberts, & Carlos, 2008). Lastly, while non-detailed instructions typically elicited the retrieval of more recent memories, detailed instructions generally elicited the retrieval of remote, and thus well-consolidated, memories. Detailed memory requests are more likely to engage complex reconstructive processes and, therefore, enable memories to be retrieved that involve greater autobiographical reasoning or meaning making. Taken together, these findings support the notion that episodic memories need time to be consolidated and integrated into a coherent *self-narrative* (McAdams, 2001) and that the search and retrieval of such relevant narratives is particularly challenging for young adults who may not comprehend the importance of their self-defining experiences (Montebarocci, Luchetti, & Sutin, 2013).

The present study has a number of limitations that need to be taken into account. First, we asked for general self-defining memories, without any valence or thematic restrictions. Second, we applied a within-subject design asking participants to respond to repeated sets of instructions. Increased differences in memory ratings could be expected as participants recognised the different criteria of the three memory requests with repeated blocks. Lastly, we tested the effects of the different instructions on a small non-clinical sample. Further insights should also be obtained by applying the SDM Task to sub-clinical, clinical, and psychiatric samples (e.g., Raffard et al., 2009). Indeed, narrative memory tasks may be useful in understanding the relationship between memory and psychopathology, as they may be more sensitive to important aspects of memory compared to other memory cueing tasks (Griffith et al., 2012)—e.g., the structure of the narratives. However, despite these limitations, the current study provides a replication and a further validation of the SDM request, highlighting its applicability across different cultures.

To sum up, this study partially confirms Singer and Moffitt's (1991–1992) findings. Instructions, as well as listener response and other contextual constraints (see e.g., Alea & Bluck, 2003; Pasupathi, McLean, & Weeks,

2009), affect the qualities of the memory. Despite the apparently contrasting results of the subjective ratings and behavioural measures, we were able to confirm that the application of the SDM Task ensures the retrieval of memories that are extremely important and affectively intense for the subjects and for which participants are more likely to engage in complex reconstructive processes. It would also be interesting to manipulate the context in which the memory is recalled—e.g., by varying the degree of intimacy (i.e., recounting a memory to a stranger, to an acquaintance, or to an intimate friend). As highlighted by Singer and Moffitt (1991–1992), ecologically valid approaches need to be encouraged. Given the daily work of clinical psychologists with client memories and life stories (Singer et al., 2012), research advances in autobiographical memory constitute valuable material. Indeed, this study constitutes an example of translational research, an instance of the continuity of basic psychological processes between the laboratory and clinical practice.

Acknowledgements

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