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Psychological Myths as Therapeutic Instructions in Eye Movement Desensitization and Reprocessing

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ABSTRACT

The Dutch protocol for Eye Movement Desensitization and Reprocessing (EMDR) uses two psychological myths as part of the therapeutic instruction: memory works as a video camera and individuals can have a photographic memory. This study explored how participants experience and evaluate such instructions and if these instructions affect their beliefs on memory. Participants received a video, photo, or a control instruction. Participants indicated on a visual analog scale how vivid and emotional they expected to recall the traumatic memory, how credible the therapeutic instruction was, and how reliable they would consider a therapist providing such an instruction. Next, participants completed a memory belief survey. Participants who received the video instruction were most likely to expect to vividly recall a memory. The credibility of the instructions and the reliability of the therapist providing the instruction were at chance level, which might pose problems for the therapeutic alliance and therapy outcome.

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People only use 10% of their brain, the polygraph is an accurate measure for deception detection, and hypnosis is useful for retrieving memories. These are only a few examples of psychological myths that are endorsed by non-trivial percentages of the general population (see e.g. Lilienfeld et al., 2010; Taylor & Kowalski, 2004). Although endorsing such myths might not be harmful to laypersons, it can be perilous if certain professionals hold such beliefs. For example, a therapist might adopt the treatment plan in line with a controversial belief (e.g. repressed memory), which may be harmful to the patient. Therapists might believe in the existence of repressed memories and might actively search for the existence of such repressed memories, thereby increasing the likelihood of inducing false memories (i.e. memories of an event that did not happen; Loftus, 1993; Otgaar et al., 2019).

In the beginning of the 1990s, a heated debate on one specific psychological myth (i.e. the existence of repressed memories) dominated the psychological field (Crews, 1995). Researchers and clinicians argued about the accuracy of childhood sexual abuse memories that surfaced during psychotherapy and did not exist before therapy (i.e. recovered memories). Clinicians argued that individuals unconsciously block traumatic

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autobiographical experiences, making them inaccessible for retrieval (i.e. repressed memory). Furthermore, they argued that psychotherapy could unblock these memories and recover them (Ceci & Loftus, 1994). Researchers argued that the existence of repressed memories has not been supported by any empirical evidence. More specifically, one important argument against repressed memories was that a wealth of research has shown that traumatic memories are well retained and accessible (e.g. McNally, 2003). Furthermore, memory scholars argued that the emergence of these memories during therapy could be the result of suggestive therapeutic instructions potentially leading to the formation of false memories (Loftus & Pickrell, 1995).

To understand whether the belief in repressed memories is a widespread phenomenon, several survey studies examined memory beliefs in different groups of professionals, such as clinicians. An early study by Yapko (1994) found that around 60% ($n = 516$) of therapists believed in the existence of repressed memories. In a recent overview, it was found that when the majority of survey studies are combined, 70% ($n = 2305$) of clinicians indicated to believe in the existence of repressed memories (Otgaar et al., 2019). More interestingly, in the 1990s, this percentage was 61 and increased to 76% from 2010 onwards. It thus seems that psychological myths are still widely believed among clinicians. In this study, we were not interested in this pervasive belief, but are focused on the incorrect belief that our memory records everything we experience, just like a video recorder (Lilienfeld et al., 2010). The question that we raised was what would happen if such psychological myths were embedded in a therapeutic instruction.

This question is of interest because the Dutch protocol for Eye Movement Desensitization and Reprocessing (EMDR, an intervention to treat post-traumatic stress disorder; Shapiro, 1989) includes two psychological myths as an instruction to select a target image (so-called hot spot), which will become the focus point during therapy. The selection of the target image differs from the original EMDR protocol (Hornsveld et al., 2017a, 2017b, 2017c, 2018a, 2018b). More specifically, to select the target image, in the Dutch protocol, a therapist can choose between two metaphorical instructions, which are known to be psychological myths. A therapist can select either a video metaphoric instruction: "*You've just told me how this memory is stored in your mind. Now I am asking you, what presently is the most disturbing image of this memory? Play the movie of the memory, pause it, when you see the most disturbing image. We are searching particularly for an image with you in it. It should not be the image of what you found most disturbing at that time, but what is now, at this moment, the most disturbing image to look at, including images that show what could have happened, or images that become a part of the movie later on."(…) "What does this image look like?*" or a photobook instruction: "*Imagine you have a photo album in your head, with photos or snapshots that show how you remember this event/incident momentarily; it's possible that you see images of things that did not really happen, but were added to the album later on. We are looking particularly for an image with you in it. Which photo is at this moment the worst to look at?(…)"What do you see on the photo?*" (de Jongh & ten Broeke, 2016, p. 148, translated by Giuditta Soro in 2013, adapted by Steven Meijer in 2016).

The reason why these metaphoric instructions can be problematic, is that patients might incorrectly assume that memory works as a video or photo album. Furthermore, they might reason that when they retrieve a memory, it should be highly vivid and

detailed just as a video or photo. The consequence could be that they spontaneously add details to their account, which might be false, but give the allure of a vivid and detailed memory (see e.g. Houben et al., 2020). Although recent survey studies have shown that individuals do not endorse former popular psychological myths (e.g. "memory works as a video camera, accurately recording everything that is experienced" or "people can have a photographic memory"; Brewin et al., 2019; Houben et al., 2019), it is intriguing that such psychological myths are included in a therapeutic instruction. Although the Dutch EMDR protocol is revised each year based on clinical experiences of therapists and scientific results (Hornsveld et al., 2017a), these metaphoric instructions are still included in the protocol.

The aim of this study was to explore how participants would evaluate such an instruction (i.e. on expected vividness and emotionality, therapeutic instruction credibility, and reliability of the therapist). Furthermore, we were interested if such an instruction influences participants' beliefs about memory (e.g. the belief in repressed memory). To achieve this aim, participants received video, photo, or a control instruction and were asked to evaluate the instruction accordingly. Next, participants completed a memory survey. We expected that the instructions would elicit high ratings of expected memory vividness and emotionality. In addition, we expected that the video and photobook instruction would heighten the belief in the statements "memory is like a computer/video camera, accurately recording events as they actually occurred" and "some people have true photographic memories," respectively.

Method

Participants

We recruited 160 undergraduate students ($mean_{age}$=20.18, standard deviation = 1.88, range 17 − 30**, 129** women) from a Bachelor's psychology program. Participants with mental health issues (e.g. anxiety or depression) were advised to refrain from participation. All participants provided consent and received course credits for their participation. The standing ethical committee for the Faculty of Psychology and Neuroscience approved the study. A sensitivity analysis showed that with the current sample size and design, a medium effect size could be detected ($f = 0.25$; Faul et al., 2007).

Materials and Procedure

All data and materials are available at the Open Science Framework (https://osf.io/jkv5w/). The survey was in English and took about 10 min to complete and was completed online by using Qualtrics (Provo, UT, 2017) software. Participants received the link to the questionnaire and completed it at their own pace. Participants were debriefed once the questionnaire was completed.

Metaphoric Instruction

Participants had to imagine being a patient with longstanding emotional problems and in need for therapy. Then they randomly received one of the three therapeutic

instructions (video instruction $n = 53$, photo instruction $n = 50$, control instruction $n = 57$; see https://osf.io/r4xeb/) and were asked how they would select the video, photo, or memory, respectively. There was no word limit for this answer. The video and photobook instruction was derived from de Jongh and ten Broeke (2016). The control instruction was based on these instructions as well, but without any mentioning of a video or photobook. Instead, the control condition reiterated that human memory does not store every experience and that forgetting is normal. All instructions were equally long to prevent differences based on length (video: 100 words; photo: 102 words; control: 112 words). Participants who received the video instruction needed, on average, 4.5 min to report their memory, participants who received the photo instruction 6 min on average, and the control participants needed, on average, 5 min to answer how they would select the memory.

Thereafter, participants answered four questions pertaining to the therapeutic instruction they received. Participants indicated how vivid and emotional they thought they would need to recall the trauma image on a visual analog scale (*0 = not very vivid/emotional; 100 = very vivid/emotional)*, how credible they found the therapeutic instruction (*0 = not very credible; 100 = very credible*) and how reliable they would consider a therapist providing this therapeutic instruction (*0 = not very reliable; 100 = very reliable*). They also had the option to elaborate on the chosen score.

Statements about Memory

The questionnaire (see https://osf.io/j7rth/) consisted of 15 memory-related statements (Houben et al., 2019; Ost et al., 2013; Patihis et al., 2014). Two correct statements (e.g. "Memory can be inaccurate") and 13 controversial statements (e.g. "repressed memories of events that did happen can be retrieved in therapy accurately;" "even very vivid memories can be false;"; "the body may remember trauma outside of the mind's awareness") were included. Participants indicated their opinion (*1 = agree, 2 = disagree, 3 = no opinion*).

Results

Metaphoric Instruction

Participants in the video condition who elaborated on how they chose the video indicated they would recall a disturbing memory ($n = 29$) and subsequently play it as a movie in their mind ($n = 29$). A minority ($n = 4$) found the instruction confusing. Participants in the photo condition would choose a memory that was disturbing ($n = 37$), and specifically aimed to recall an actual picture ($n = 11$). Control participants ($n = 26$) indicated they would select a memory that was most disturbing at this point.

Mean VAS scores can be found in Table 1 and the respective explanations can be found on (https://osf.io/dkasc). A one-way ANOVA was performed on vividness, emotionality, credibility, and reliability. For vividness, a statistically significant effect of condition emerged ($F(2,157)=5.05$, $p=.008$, $\eta^2_{\text{partial}} =.06$). A Bonferroni post hoc test revealed that participants in the video condition (Mean = 71.30, Standard deviation = 16.62) opined to recall the trauma more vividly than the photo condition (Mean = 60.80, Standard deviation = 21.89; $p=.020$). Participants in the video condition

Table 1. Mean Ratings and Standard Deviations (in parentheses) for Vividness, Emotionality, Credibility, and Reliability per Condition.

	Video ($n = 53$)	Photo ($n = 50$)	Control ($n = 57$)
How vivid do you think you need to recall the trauma?*	71.30 (16.62)	60.80 (21.89)	61.12 (19.38)
How emotional do you think you need to recall the trauma?	66.32 (17.64)	60.32 (23.56)	65.00 (22.05)
How credible do you find the therapeutic instruction?	53.58 (23.10)	49.72 (24.73)	55.95 (23.12)
How reliable would you find a therapist providing this therapeutic instruction?	55.91 (23.20)	51.40 (24.72)	54.84 (22.06)

Notes. Answer scales range from 0 (not vivid/emotional/credible/reliable) to 100 (very vivid/emotional/credible/reliable).
*$p<.05$.

(Mean = 71.30, Standard deviation = 16.62) were also more likely to opine to recall the trauma more vividly than the control condition (Mean = 61.12, Standard deviation = 19.39; p=.020). A majority of participants in all three conditions who reported high vividness scores (i.e. VAS scores > 60) indicated that a vivid memory is necessary to overcome the trauma (i.e. that it is necessary for therapy to report many details; video: $n = 17$; photo: $n = 11$; control: $n = 10$). As can be seen from Table 1, participants in the video condition were inclined to recall the memory more vividly. Photo and control participants who reported low vividness scores (i.e. VAS scores < 40) reasoned that the memory might be vague or contain false details and as a result, they would not report a vivid memory (photo: $n = 5$; control: $n = 6$). There was no statistically significant difference between the photo and control condition ($p = 1.00$).

For emotionality, credibility, and reliability, no statistically significant effect of condition emerged (all p's>.275). For emotionality, participants who reported high VAS emotionality scores mentioned that emotional memories would be beneficial for therapy (video: $n = 9$; photo: $n = 6$; control: $n = 6$), but that it is also a normal reaction when recalling a traumatic event (video: $n = 3$; photo: $n = 3$; control: $n = 4$). Participants who provided low VAS scores reasoned that it is important to prevent that emotions take over or that a patient starts reliving the trauma (video: $n = 2$; photo: $n = 3$; control: $n = 0$). As for credibility, participants who provided high credibility scores indicated that the instructions seem professional and that it would be necessary to trigger the origin of the trauma (video: $n = 9$; photo: $n = 8$; control: $n = 18$). Participants who provided low VAS scores said the instructions were too long, vague, and confusing (video: $n = 6$; photo: $n = 13$; control: $n = 6$). For reliability, participants who provided high scores indicated that therapists itself are reliable (video: $n = 10$; photo: $n = 5$; control: $n = 8$). Participants who provided low-reliability scores stated that because of the unclear instructions, it seemed that the therapist does not know what (s)he is doing (video: $n = 4$; photo: $n = 4$; control: $n = 3$).

Statements about Memory

Table 2 gives an overview of all scores and effect sizes. Here, we will highlight some of the most important results reported in Table 2. Participants agreed with the statement that vivid memories can be false (video: $n = 50$, 94.3%, 95% CI [83.4–98.5], photo:

Table 2. Number, Percentages, and Confidence Intervals (CI) of Participants Endorsing Memory Statements.

Statement		Agree	95% CI	Disagree	95% CI	No opinion	95% CI	Cramer's *V*
Even very vivid memories can be false	Video	50 (94.3%)	82.5–98.4	2 (3.8%)	0.7–14.1	1 (1.9%)	0.1–11.4	0.053
	Photo	47 (94.0%)	83.4–98.5	(2 4.0%)	0.7–14.9	1 (2.0%)	0.1–12.0	
	Control	54 (94.7%)	84.5–98.6	1 (1.8%)	0.0–10.6	2 (3.5%)	0.6–13.2	
The more intense the emotion in response to a memory, the more likely it is to be accurate	Video	10 (18.9%)	9.9 – 32.4	38 (71.7%)	57.5 – 82.8	5 (9.4%)	3.5 – 21.4	0.122
	Photo	16 (32.0%)	19.9 – 46.8	33 (66.0%)	51.1 – 78.4	1 (2.0%)	0.1 – 12.0	
	Control	12 (21.0%)	11.8 – 34.4	40 (70.2%)	56.4 – 81.2	5 (8.8%)	3.3 – 20.0	
It is possible that someone suddenly remembers an abuse experience that they have not thought about for years	Video	48 (90.6%)	78.6 – 96.5	1 (1.9%)	0.1 – 11.4	4 (7.5%)	2.5 – 19.1	0.072
	Photo	45 (90.0%)	77.4 – 96.3	2 (4.0%)	0.7 – 14.9	3 (6.0%)	1.6 – 17.5	
	Control	52 (91.2%)	79.9 – 96.7	3 (5.3%)	1.4 – 15.5	2 (3.5%)	0.6 – 13.2	
The human mind is capable of unconsciously blocking out memories of traumatic events	Video	48 (90.6%)	78.6 – 96.5	1 (1.9%)	0.1 – 11.4	3 (5.7%)	1.5 – 16.6	0.089
	Photo	45 (90.0%)	77.4 – 96.3	2 (4.0%)	0.7 – 14.9	2 (4.0%)	0.7 – 14.9	
	Control	55 (96.5%)	86.8 – 99.4	1 (1.8%)	0.0 – 10.6	1 (1.8%)	0.0 – 10.6	
Repressed memories can be retrieved in therapy accurately	Video	40 (75.5%)	61.4 – 85.8	6 (11.3%)	4.7 – 23.7	7 (13.2%)	5.9 – 26.0	0.118
	Photo	40 (56.0%)	41.4 – 69.7	11 (22.0%)	12.0 – 36.3	11 (22.0%)	12.0 – 36.3	
	Control	37 (67.9%)	51.1 – 76.8	9 (15.8%)	7.9 – 28.4	11 (19.3%)	10.5 – 32.3	
Memory of everything experienced is stored permanently in our brains, even if we cannot access all of it	Video	18 (33.9%)	21.9 – 48.4	29 (54.7%)	40.6 – 68.2	6 (11.3%)	4.7 – 23.7	0.085
	Photo	18 (36.0%)	23.3 – 50.9	28 (52.8%)	41.4 – 69.7	4 (8.0%)	2.6 – 20.1	
	Control	18 (31.6%)	20.3 – 45.4	29 (50.9%)	37.4 – 64.2	10 (17.5%)	9.2 – 30.4	
Memory can be unreliable*	Video	52 (98.1%)	88.6 – 99.9	0 (0.0%)	0.0 – 8.4	1 (1.9%)	0.1 – 11.4	0.174
	Photo	45 (90.0%)	77.4 – 96.3	5 (10.0%)	3.7 – 22.6	0 (0.0%)	0.0 – 8.9	
	Control	54 (94.7%)	84.5 – 98.6	1 (1.8%)	0.0 – 10.6	2 (3.5%)	0.6 – 13.2	
Some people have true photographic memories	Video	31 (58.5%)	44.2 – 71.6	7 (13.2%)	5.9 – 26.0	15 (28.3%)	17.2 – 42.6	0.059
	Photo	31 (62.0%)	47.1 – 75.0	8 (16.0%)	7.6 – 29.7	11 (22.0%)	12.0 – 36.3	
	Control	35 (61.4%)	47.6 – 73.7	10 (17.5%)	9.2 – 30.4	12 (21.0%)	11.8 – 34.3	
Memory is like a computer/ video camera, accurately recording events as they actually occurred	Video	2 (3.8%)	0.6 – 14.1	46 (86.8%)	74.0 – 94.1	5 (9.4%)	3.5 – 21.4	0.101
	Photo	2 (4.0%)	0.7 – 14.9	44 (88.0%)	75.0 – 95.0	4 (8.0%)	2.6 – 20.1	
	Control	3 (5.3%)	1.4 – 15.5	53 (93.0%)	82.2 – 97.7	1 (1.8%)	0.0 – 10.6	
Memories of trauma can be influenced by suggestion	Video	45 (84.9%)	71.9 – 92.8	1 (1.9%)	0.1 – 11.4	7 (13.2%)	5.9 – 26.0	0.050
	Photo	45 (90.0%)	77.4 – 96.3	1 (2.0%)	0.1 – 12.0	4 (8.0%)	2.6 – 20.1	
	Control	49 (85.9%)	73.7 – 93.3	1 (1.8%)	0.0 – 10.6	7 (12.3%)	54.9 – 24.3	
It is possible to suggest false memories (i.e. memories of an event that did not happen) to someone who then incorporates them as true memories	Video	48 (90.6%)	78.6 – 96.5	4 (7.5%)	2.5 – 19.1	1 (1.9%)	0.1 – 11.4	0.142
	Photo	49 (98.0%)	88.0 – 99.9	1 (2.0%)	0.1 – 12.0	0 (0.0%)	0.0 – 8.9	
	Control	56 (98.2%)	89.4 – 99.9	0 (0.0%)	0.0 – 7.9	1 (1.8%)	0.0 – 10.6	
Just like memory for everyday experiences, memory for traumatic experiences is reconstructive	Video	28 (52.8%)	38.8 – 66.5	7 (13.2%)	5.9 – 26.0	18 (34.0%)	21.9 – 48.4	0.115
	Photo	33 (66.0%)	51.1 – 78.4	6 (12.0%)	4.9 – 25.0	11 (22.0%)	12.0 – 36.3	
	Control	40 (70.2%)	56.4 – 81.2	6 (10.5%)	4.4 – 22.2	11 (19.3%)	10.5 – 32.3	
If a traumatic experience is not consciously processed, it will continue to express itself indirectly as psychopathological symptoms or bodily reactions	Video	35 (66.0%)	51.6 – 78.1	6 (11.3%)	4.7 – 23.7	12 (22.6%)	12.7 – 36.6	0.077
	Photo	35 (70.0%)	55.2 – 81.7	8 (16.0%)	7.6 – 29.7	7 (14.0%)	6.3 – 27.4	
	Control	39 (68.4%)	54.6 – 79.7	6 (10.5%)	4.4 – 22.2	12 (21.1%)	11.8 – 34.3	
Traumatic memories can be stored in the body	Video	43 (81.1%)	67.6 – 90.1	3 (5.7%)	1.5 – 16.6	7 (13.2%)	5.9 – 26.0	0.153
	Photo	29 (58.0%)	43.3 – 71.5	5 (10.0%)	3.7 – 22.6	16 (32.0%)	19.9 – 46.8	
	Control	37 (64.9%)	51.1 – 76.8	7 (12.3%)	5.5 – 24.3	13 (22.8%)	13.2 – 36.2	
The body may remember trauma outside of the mind's awareness	Video	38 (71.7%)	57.5 – 82.8	2 (3.8%)	0.7 – 14.1	13 (24.5%)	14.2 – 38.6	0.117
	Photo	37 (74.0%)	59.4 – 84.9	4 (8.0%)	2.6 – 20.1	9 (18.0%)	9.1 – 31.9	
	Control	47 (82.5%)	69.7 – 90.8	4 (7.0%)	2.3 – 17.8	6 (10.5%)	4.4 – 22.2	

Notes. Video $n = 53$, photo $n = 50$, control condition $n = 57$. CI:= Confidence intervals including continuity correction.
* $p<.05$.

n = 47, 94.0%, 95% CI [82.5–98.4], control: n = 54, 94.7%, 95% CI [84.5–98.6]). A minority of the video (n = 10, 18.9%, 95% CI [9.9–32.4]), photo n = 16, 32.0%, 95% CI [19.9–46.8]) and control condition (n = 12, 21.0%, 95% CI [11.8–34.3]) agreed with the statement that the more intense the emotion in response to a memory is, the more likely the memory is to be accurate. A majority of the video and control condition (n = 40, 75.5%, 95% CI [61.4–85.8] and n = 37, 64.9%, 95% CI [51.1–76.8], respectively) agreed with the statement that repressed memories can be retrieved in therapy accurately. Only about half of the participants in the photo condition (n = 28, 56.0%, 95% CI [41.1–69.7]) agreed with this statement. More than half of the participants agreed with the statement that some people have true photographic memories (video: n = 31, 58.5%, 95% CI [44.2–71.6], photo: n = 31, 62.0%, 95% CI [47.1–75.0], control: n = 35, 61.4%, 95% CI [47.6–73.7]). Only a few participants (n = 2, 3.8%, 95% CI [0.6–14.7], n = 2, 4.0%, 95% CI [0.7–14.9], and n = 3, 5.3%, 95% CI [1.4–15.5], respectively) agreed with the statement that memory is like a computer/video camera, accurately recording events as they actually occurred.

Discussion

This study explored how participants would evaluate metaphoric instructions used in the Dutch EMDR protocol, which are psychological myths concerning the functioning of memory (Lilienfeld et al., 2010). Furthermore, participants completed a memory belief survey to examine whether such an instruction would influence their beliefs on how memory operates. Our results showed that all instructions led participants to expect to recall an emotional memory. In addition, we found that the use of the video instruction yielded an expectation that the recalled memory must be highly vivid. Though a vivid memory is beneficial to work on during the EMDR therapy, this expectancy effect could lead to certain therapeutic demand characteristics (Kanter et al., 2002). For example, as was evident from participants' elaborations, patients might believe they should report as many details as possible, irrespective if they were authentic. Littel et al. (2017) claimed that (in)correct knowledge about EMDR's working mechanism (i.e. performing eye movements and simultaneously recalling the target image) does not contribute to its' effectiveness. However, this study shows that the instruction to select the target image does elicit a treatment expectancy effect during this phase of the treatment protocol.

Interestingly, the credibility of the therapeutic instruction and the reliability of the therapist providing such an instruction were at chance level (i.e. around 50%). For example, participants expressed their trust in the capability of a therapist, but the confusing instructions were a reason to question the therapist's reliability. This is an important finding, as treatment credibility and therapist reliability predict the therapeutic alliance (Fjermestad et al., 2018). A strong therapeutic alliance is associated with patient attendance (Shirk et al., 2011) and it increases the chance of a positive therapy outcome (Owen et al., 2015). Hence, the use of such a metaphoric instruction during EMDR therapy might jeopardize the therapeutic alliance.

In line with previous research (Brewin et al., 2019; Houben et al., 2019), only a minority endorsed the controversial belief that memory works as a video camera, accurately recording events as they occurred. Half of all the participants endorsed the belief

that some individuals have a photographic memory. Interestingly, a majority of participants (around 95%; see Table 2), irrespective of therapeutic instruction, believed in the existence of repression. This finding is in line with the prevalence of belief in repression (see Otgaar et al., 2019).

EMDR aims to decrease the vividness and emotionality of negative autobiographical memories. To elicit a target image to work with during therapy, therapists are able to choose between a video or photo instruction. Participants who received the video instruction expected to recall more vivid memories than participants who received the photo instruction. However, neither the instruction itself nor the therapist providing such an instruction was perceived as highly credible and reliable.

Although these findings provide some insight on how the use of metaphorical instructions could be evaluated by patients, future research is needed to draw firm conclusions. For example, a study is needed to explore how actual patients evaluate such an instruction. A limitation of this study was that a Bachelor's psychology student sample was included. Though psychological myths concerning, for example, the functioning of memory are not explicitly covered in the Bachelor's educational program, some students might have preexisting knowledge about psychological myths, which was not checked for in this study. Furthermore, participants could earn extra credits by participating in this study, which could be a confounding factor. Another limitation is that the study was completed online. Therefore, participants who needed psychological support during their imagination could not ask questions directly, but were able to refer for help and assistance afterward. More importantly, it is still unclear how a therapeutic instruction can influence memory. Although the instructions did not influence memory beliefs per se, it could still influence the content of the memory that is being recalled (e.g. more and/or incorrect details are reported). However, a reliability analysis indicated a poor reliability (Cronbach's $\alpha = 0.57$) of the memory questionnaire. Future research should include an improved questionnaire to obtain more reliable memory beliefs.

Though the instructions do elicit vivid and emotional memories, it may be a threat to the therapeutic relationship. During the next yearly revision of the Dutch EMDR protocol, it might be important to examine whether the instruction could be altered in a way that (1) it still elicits vivid (and emotional) memories and (2) is perceived as credible so the therapeutic alliance is not at risk. For example, a therapist could instruct a patient to select a memory that is most disturbing to remember at this moment in time, and ask what the patient hears/sees/feels/smells/etc. Additionally, the therapist should educate the patient that memory is reconstructive and details might be forgotten or added later on.

To conclude, in this study we examined how participants would evaluate a metaphorical instruction. An expectancy effect was found for vividness, implying that instructions containing psychological myths might be detrimental for the therapeutic relationship. As the therapeutic relationship is important for therapeutic success, more research is needed on the effect of such instructions.

Author Notes

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Data Availability

The data that support the findings of this study are openly available in the Open Science Framework at https://osf.io/jkv5w/.

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