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Change in Trauma Narratives and Perceived Recall Ability over a Course of Cognitive Processing Therapy for PTSD

Juliette M. Mott^{1,*}, Tara E. Galovski², Ryan M. Walsh³, and Lisa S. Elwood⁴

¹Veterans Affairs National Center for Posttraumatic Stress Disorder-Executive Division, White River Junction, Vermont, USA

²University of Missouri-St. Louis, Center for Trauma Recovery, St. Louis, Missouri, USA

³Veterans Affairs St. Louis Healthcare System in St. Louis, Missouri, USA

⁴University of Indianapolis, Indianapolis, Indiana, USA

Abstract

This study sought to evaluate changes in written trauma narratives completed during a course of Cognitive Processing Therapy (CPT). Participants were 22 female survivors of interpersonal assault who represented a subset of participants from two larger CPT treatment trials. Participants completed two written trauma narratives over the course of treatment. We predicted that narratives would increase in length and peritraumatic detail, and that participants would perceive an increase in their recall ability for important aspects of the trauma. Although narrative length and amount of peritraumatic detail did not change significantly from first to final narrative, participants evidenced changes in the content of the peritraumatic details. Patients commonly omitted assaultive acts from one of their narratives. There was a greater degree of fluctuation within the reporting of sexual assaults, as compared to physical assaults, with 55% of participants reporting a forced sexual act in one narrative, but not the other. Participants did not report significant changes in perceived recall ability for the traumatic event after completing the narratives, but did report improvements in perceived recall from pre to posttreatment. Overall, findings indicate that clients included different details (but not more details) in their final narrative, and that perceived increases in recall ability may not be a typical experience for clients as they complete written narratives in the context of trauma treatment.

Keywords

Trauma Narrative; Traumatic Memory; PTSD; Cognitive Processing Therapy

*Corresponding Author.

Author Contact information:

Dr. Juliette Mott, VA National Center for PTSD-Executive Division (116D), 125 North Main Street; Telephone: (802) 295-9363
Juliette.Mott@va.gov

Dr. Tara Galovski, University of Missouri-St. Louis, One University Boulevard, St. Louis, MO 63129; Telephone: (314)-516-7232
Galovskit@umsl.edu

Dr. Ryan Walsh, Veterans Affairs St. Louis Healthcare System, #1 Jefferson Barracks Drive St Louis, MO 63125 Telephone: (314) 652-4100; Ryan.Walsh@va.gov

Dr. Lisa Elwood, University of Indianapolis 1400 East Hanna Ave. Indianapolis, Indiana 46227 telephone: (317) 788-3473;
ElwoodL@uindy.edu

Trauma survivors with posttraumatic stress disorder (PTSD) often describe difficulty recalling various aspects of the traumatic event (McNally, 2005; Ehlers & Clark, 2000). A variety of factors may contribute to these memory difficulties, including the physiological effects of extreme stress at the time of encoding (Halligan, Michael, Clark, & Ehlers, 2003), neurological influences such as decreased volume and activity in the hippocampus (Bremner 2001; Gilbertson et al., 2002), and deficits in working memory and attention attributable to PTSD (Samuelson et al., 2006). Lack of rehearsal of the traumatic memory may also play an etiological role in recall difficulty, as trauma survivors with PTSD often avoid thinking about the traumatic event and purposefully avoid contact with reminders that will trigger traumatic memories (American Psychiatric Association, 2013). It is well established that rehearsal typically serves to strengthen and maintain memory for past events (Mayes & Roberts, 2001), and trauma survivors who avoid recalling the traumatic event (such as in the case of PTSD) may reduce their ability to clearly access parts of the traumatic memory.

Survivors with PTSD who elect to participate in trauma-focused therapies are encouraged to recall, rather than avoid, their traumatic memory. Repeatedly writing and talking about the details of the traumatic memory are central therapeutic elements of both Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE), two of the most widely-disseminated evidence-based treatments for PTSD. Repeated recall of the trauma memory during therapy is designed to help clients break through the avoidance inherent in PTSD, thereby leading to a reduction in symptom severity (Shipherd, Street, & Resick, 2006; Riggs, Cahill, & Foa, 2006). Although there is an established link between the systematic, repeated recall of a trauma and PTSD symptom reduction (Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010), little is known about how the process of repeatedly recalling the traumatic event may influence the content or clarity of the traumatic memory itself.

A growing body of literature suggests that memories may be altered during retrieval through a process called *reconsolidation*. Reconsolidation theories suggest that during recall, memories enter a labile state during which a person may incorporate new information that ultimately modifies the memory trace (for a review see Transon & Taylor, 2007). Outside of the context of therapy, multiple studies suggest that memories for traumatic events are dynamic and change over the course of multiple recall attempts (e.g., Engelhard, van den Hout, & McNally, 2008; Jones, Harvey, & Brwein, 2007). There is also evidence that posttraumatic stress reactions may moderate this change such that individuals with low levels of symptoms may create a more benign version of the event over time (Dekel & Bonanno, 2013). Thus, it is unlikely that traumatic memory is static and unchanging over the course of therapeutic interventions that encourage recall of the traumatic memory.

The paucity of empirical research examining the change in trauma narrative content over the course of therapy is surprising given well-documented speculation that clients' recall ability improves after writing or talking about the traumatic event in treatment. For example, Leskin, Kaloupek, and Keane (1998) suggest that increased memory for previously inaccessible aspects of the trauma is an expected consequence of trauma treatment and suggest that asking the client to describe the traumatic event often facilitates the retrieval of additional detail. Similarly, Zayfert and Becker (2007) observed that although memory

recovery is not a specific aim of PTSD treatment, it is common for clients to recall new details of the traumatic event when they are asked to verbally recount the traumatic event.

To date, two published studies have assessed changes in traumatic recall by examining narratives completed over the course of trauma-focused therapy. These studies consistently observed that with multiple iterations, narratives tend to increase in length and organization, and become increasingly focused on internal events (e.g., thoughts, feelings) relative to external events (e.g., actions, dialogue) (Foa, Molnar, and Cashman, 1995; van Minnen, Wessel, Dijkstra, and Roelofs, 2002). Although changes in trauma narratives may result from factors other than change in recall ability (for example, reduced avoidance), these studies suggest that the way in which trauma survivors describe the event and the details that they select to include in the trauma narrative vary over the course of treatment. Although both studies examined the nature of the narrative content (e.g., proportion of the narrative focused on thoughts versus actions), they did not examine the consistency of factual details across narratives in order to determine whether participants provided new or different traumatic detail over the course of multiple iterations. In addition, both narrative studies examined oral narratives recited aloud during a PE therapy session. The PE protocol allows the therapists to interpose with brief questions to elicit greater detail and to interject with supportive comments and periodic assessment of the client's anxiety (Foa, Hembree, & Rothbaum, 2007); thus, the content a PE trauma account may be influenced by the therapist's concurrent feedback. Recent research has also detected important differences between written and oral trauma accounts such that oral narratives tend to be shorter, and include a higher percentage of cognitive, affective, and sensory words (Roberts, 2007), thus highlighting the need to augment the current literature by examining written narratives.

Repeatedly confronting a traumatic memory in the context of therapy may also affect one's perception of the clarity and accuracy of the traumatic memory, or *perceived recall ability*. Research examining episodic memory indicates that perceived recall ability tends to increase with repeated retrieval, irrespective of the accuracy and completeness of the recalled information (Odinot, Wolters & Lavender, 2009; Shaw & McClure, 1996). A recent study extended this body of experimental literature by examining perceived recall ability in real-life robbery witnesses and observed that those individuals who reported more frequent post-event thinking about the robbery were more confident in their recall abilities. Confidence, however, was a poor predictor of the amount of accurate information recalled (Odinot, Wolters, & Van Koppen, 2008). Thus, trauma survivors' perceptions of their memory ability may be affected by the repeated recall of the trauma. This phenomenon has yet to be examined in the context of therapy, and it remains unknown whether repeated recall of the event during trauma-focused therapy may result in increases in perceived recall ability.

In summary, experimental and narrative analysis studies, as well as clinical observations, collectively suggest that repeated recall of a memory may influence the content of a survivor's description of a traumatic event and their confidence in the memory. The present study sought to add to the extant literature by examining changes in the number and content of peritraumatic details in written trauma narratives completed over a course of CPT for PTSD, as well as changes in participant' perceived recall ability. As the first examination of CPT narrative content, this study also provides valuable clinical information for CPT

providers regarding the type of details often included in, and omitted from, patients' narratives.

Method

Participants

Participants were 22 female survivors of interpersonal assault who represented a subsample of treatment-seeking participants from two clinical trials examining individually-administered CPT. The two trials were conducted simultaneously, and the recruitment procedures, inclusion criteria, assessment procedures and instruments, and treatment facility were identical with the exception that the first treatment trial did not exclude individuals without sleep difficulties, which was an exclusionary criteria for the other trial (please see Galovski, Blain, Mott, Elwood, & Houle, 2012 for a full description of the study design). Participants were recruited through a variety of strategies including referrals, flyers, and media advertisements. Exclusionary screening criteria included active psychosis, active suicidal ideation, current alcohol and/or substance dependence (within past 6 months), and medication instability (within one month). Eligible participants reported experiencing a sexual or physical assault in childhood or adulthood, were at least three months post-trauma, and met full criteria for PTSD at pre-treatment.

Participants ranged in age from 19 to 60 ($M = 43.8$, $SD = 14.5$). Fifteen participants (68%) identified as Caucasian, six (27%) as African-American, and one (5%) as Asian. Approximately half (45%, $n = 10$) the sample was married at the time of enrollment. On average, participants had 14 years ($SD = 3$ years) of education, and the majority (64%, $n = 14$) reported an annual household income of less than \$30,000. Fifteen participants (68%) reported that their index (worst) trauma was a sexual assault, and seven participants (32%) identified their index trauma as a physical assault. On average, participants reported that their index trauma occurred 22 years ago (range: <1 year to 30 years; $M = 18$ years for participants with adulthood index trauma; $M = 30$ years for participants with childhood index trauma.)

Measures

Posttraumatic Diagnostic Scale (PDS; Foa, Cashman, Jaycox, & Perry, 1997)

—The PDS is a self-report measure designed to aid in the detection and diagnosis of PTSD. Respondents are instructed to consider only their symptoms in the past week when responding to items. For the purpose of the present study, we used item 29 on the PDS (“Not being able to remember an important part of the traumatic event”) as a measure of perceived ability to recall the traumatic event. Participants indicate the frequency of the occurrence of this symptom on a Likert-type scale ranging from 0 (*not at all or only one time*) to 3 (*5 or more times a week / almost always*), with higher total scores on the measure indicating greater difficulty.

Written Trauma Narratives—Narratives were written by study participants between CPT sessions. Participants received typed instructions directing them to write a comprehensive account of their interpersonal assault and to include details about thoughts, emotions, and

sensory experiences (a more detailed description of the narrative construction is provided in the procedures section). Participants were instructed to read their trauma narratives on a daily basis between sessions. Although participants were not given any restrictions regarding the length of the narrative, they were instructed to write the narratives by hand.

Procedures

All participants received protocol-driven CPT (Resick & Schnicke, 1993). During the initial three sessions, participants received psychoeducation regarding PTSD, wrote an impact statement about the meaning of the traumatic event, and began worksheets designed to assist in the identification of trauma-related thoughts and feelings (see Resick, Monson, & Chard, 2007 for a full description of this protocol). At the end of the third session, participants were instructed to complete a full, written narrative of the assault as soon as possible and to read it on a daily basis between sessions. Thus, this therapy element was conducted at home, outside of the actual therapy session. During the fourth session, participants read the narrative aloud to the therapist, who encouraged processing of the emotions related to the trauma. The therapist then instructed the client to re-write the narrative at home between sessions and to read over the new account every day until the next session. Participants read the second written trauma narrative aloud to the therapist during session five and again processed related affect. Thus, narrative construction and review took place in the initial phase of therapy, spanning CPT sessions 3–5. Remaining sessions (CPT sessions 6–12) focused on helping participants learn how to identify and change unhelpful trauma-related thoughts using Socratic questioning and other cognitive techniques.

Narrative Analyses

Narrative Coding System—Trauma narratives were coded with techniques similar to those used by Sobel, Resick, and Raiablias (2009) in a study that sought to qualitatively assess a separate written component of CPT (the impact statement). A coding manual was developed for the purpose of the present study and includes numerous coding rules as well as examples of properly coded information. This manual is available from the first author upon request.

First, a coder who was blind to narrative condition and narrative number (i.e., first or final) divided the narrative into clauses. Each clause was then dichotomously coded as a *peritraumatic detail*, defined as a detail that provided information about the events, experiences, or setting at the time of the assault, or a *non-peritraumatic detail*, defined as a detail that did not pertain to events, experiences, or setting at the time of the assault, (e.g., “My sister had always been the favorite child”). Of those clauses that included peritraumatic detail, the coder further specified whether the clause gave detail about (1) *assaultive acts* (e.g., type of trauma), (2) *victim/perpetrator characteristics*, (3) the victim’s *internal experiences* (e.g., thoughts, emotions), (4) the victim’s *behaviors* (e.g., resistance behaviors), (5) the victim’s *sensory experiences* (e.g., pain, smells). The coder also detailed the specific content of the clause. For example, if a participant’s trauma narrative included the following statement: “I felt scared during the assault”, this clause would be coded as a peritraumatic detail, further specified as an internal experience, and the coder would note that “scared” was the stated emotion. After all narratives were coded, the first and final

narratives from each participant were identified in order to examine changes in peritraumatic detail across narratives.

Interrater Reliability—The coding team consisted of two independent raters (the first and third authors) trained in applying the coding system described above. At the time of coding, both raters were advanced-level doctoral students with specialized training in trauma and PTSD. Reliability was established over two phases. First, the raters demonstrated at least 80% inter-rater reliability on eight training narratives that were not included in data analysis. Following this training period, each narrative included in the present study was coded by the first author, and twenty percent of these narratives were randomly selected to be coded by the second rater who was blind to information from the first rater. Inter-rater reliability exceeded the generally accepted cut-off of .80 for Cohen's kappa for total number clauses ($\kappa = .90$) and number of peritraumatic details ($\kappa = .95$).

Data Analytic Plan

First, we aimed to describe narrative characteristics with descriptive and frequency statistics. Then, paired samples *t*-tests were used to test the hypothesis that total narrative length (number of clauses) and number of peritraumatic details would increase from the first to final narrative for all participants. Because it is possible for a participant's first narrative and final narrative to include a similar *number* of peritraumatic details but provide entirely different information, changes in narrative content were examined by describing the frequency and nature of changes within each of the five peritraumatic detail domains (assaultive acts, victim/perpetrator characteristics, internal experiences, behaviors, and sensory experiences). Finally we examined changes in perceived recall ability, as measured by PDS item 29 ("Not being able to remember an important part of the traumatic event") over the course of the written narrative completion (CPT sessions 3–5) and over the full course of CPT (pre to posttreatment). Bivariate correlations were used to examine the relations between perceived recall ability and narrative properties (length, number of peritraumatic details).

Results

Narrative Characteristics

Table 1 displays information on the frequency and type of trauma details included in initial and final narratives. Across the entire sample, initial narratives ranged in length from 9 to 223 clauses ($M = 72.1$, $SD = 60.7$), and final narratives ranged in length from 15 to 197 clauses ($M = 63.6$, $SD = 47.4$). Narratives typically included several non-peritraumatic clauses (initial narratives: $M = 14.7$, $SD = 16.8$; final narratives: $M = 10.0$, $SD = 11.2$) before disclosing their first peritraumatic detail.

Change in Peritraumatic Detail

Overall, first and final narratives were similar with respect to number of peritraumatic details ($p = .26$) and overall length ($p = .36$). On average, 14% of peritraumatic details in the first narrative were unique to that narrative, whereas 18% of peritraumatic details in the final narrative were unique to that narrative. To further assess the consistency of peritraumatic

details, we examined change in the content of trauma related details in each of the content domains (victim/perpetrator characteristics, assaultive act, internal experiences, behaviors, and sensory experiences).

Assaultive Acts—Table 2 displays the frequency with which various types of sexually and physically assaultive acts were described in first and final narratives. A total of 16 participants (73%) described a sexually assaultive act in at least one of their narratives. Ten participants described the same forced sexual act(s) in both narratives, whereas 12 participants reported at least one sexual act in one narrative but not the other. Sexually assaultive acts were more common in final narratives; in aggregate, participants described 27 sexually assaultive acts in their initial narratives and 38 sexually assaultive acts in their final narratives.

Fourteen (63%) participants reported a physically assaultive act in at least one narrative. The majority ($n=9$) described the same physically assaultive act(s) in both narratives, and 5 participants reported at least one physically assaultive act in one narrative, but not the other. Although a similar number of physically assaultive acts were described in first (16 total acts) and final (14 total acts) narratives, it is noteworthy that two participants omitted a severe physically assaultive act (i.e., a shooting and a stabbing) in the initial narrative, only reporting this detail in the final narrative.

Victim/Perpetrator Characteristics—Overall, narratives included few details regarding victim or perpetrator characteristics (see Table 1). Notably, 41% of initial narratives and 22% of final narratives did not include any description of the perpetrator's characteristics. The perpetrator's name was the most commonly reported characteristic, included in 27% of first and 36% of final narratives. Descriptions of the victim's clothing were the most common victim characteristic, described in 32% and 36% of first and final narratives, respectively.

Internal Experiences—In both first and final narratives, participants included more details on peritraumatic thoughts than peritraumatic emotions; on average, initial and final narratives each included 1–2 emotions, and 5–6 thoughts (see Table 1). Nine participants made no mention of their emotional experiences in their initial narrative whereas only five participants failed to identify an emotion in their final narratives. Fear was the predominant emotion for both first and final narratives. The most notable changes in emotion were seen in shame and confusion. Shame was specifically mentioned in 27% of initial narratives, but only 9% of final narratives, whereas confusion was mentioned in 5% of initial narratives and 23% of final narratives. Table 2 displays emotions reported by participants in their first and final narratives.

Behaviors—Participants' reports of their behaviors during the assault remained relatively consistent across first and final narratives (see Table 2). Generally, active resistance strategies, such as struggling, were reported more often than passive resistance strategies, such as keeping silent. For both first and final narratives, participants most commonly described struggling against the perpetrator (reported by 36% [first] and 41% [final] of participants) and screaming (27% and 31%).

Sensory Experiences—On average, first and final narratives described 3–4 sensory experiences. Physical pain was the most frequently described sensory experience, reported in 45% of first narratives and 23% of final narratives. Sensory experiences of taste, noises/songs, or other physical sensations were comparatively less common.

Perceived Recall Ability

Thirteen participants (59%) reported experiencing difficulty recalling important aspects of the trauma at least some of the time (score of 1 or higher on PDS item 29). Although recall ability (PDS item 29) did not change significantly over the course of narrative completion (i.e., CPT session 3 through CPT session 5; $t = .50, p = .62$), perceived recall ability did improve from pre to posttreatment ($t = 2.35, p = .03$). Change in perceived recall ability for the traumatic event was unrelated to change in amount peritraumatic detail ($r = -.10, p = .52$) or changes in total narrative length from first to final narrative ($r = -.05, p = .78$).

Discussion

This study examined the content and consistency of written trauma narratives completed during a course of CPT for PTSD. Examination of the narrative content revealed that narratives included an approximately equal number of peritraumatic and non-peritraumatic clauses. Details about assaultive acts were the most common type of peritraumatic detail, followed by internal experiences (the victim's thoughts and feelings) and descriptions of the victim's behavioral response. Details focusing on sensory experiences, or the physical characteristics of the victim or perpetrator were less common.

First and final narratives were similar with respect to length and number of peritraumatic details. Although this is contrary to previous research indicating that narrative length increases with multiple iterations (Foa et al., 1995), differences in study design may account for these discrepant findings. Foa and colleagues examined change over the course of multiple oral narratives, which may be influenced by different demands than a written account (Roberts, 2007). Additionally, narrative changes observed over many iterations of the narrative may not be observable after completion of the two narratives required for the CPT protocol. Although participants in the present study did not include a greater number of peritraumatic details in their final account, they did make important changes to the content of these details. Part of the clinical rationale for having clients complete two trauma accounts over the course of CPT is to give the client an opportunity to add or elaborate any details that they avoided or omitted in the initial account (Resick & Schnicke, 1993). Our findings suggest that rather than adding *more* details, clients are including *different* details.

Examination of changes in narrative content revealed that, overall, participants' descriptions of their behavioral responses and sensory experiences remained largely consistent. In contrast, patients commonly omitted assaultive acts from one of their narratives. There was a greater degree of fluctuation regarding the reporting of sexual assaults, as compared to physical assaults, with 55% of participants reporting a forced sexual act in one narrative, but not the other. It was more common for participants to omit a sexually assaultive act from the first narrative and subsequently report it in the final narrative than to omit a previously reported sexual act from the final narrative. This may be due in part to the common

experiences of guilt and shame among sexual assault survivors (Dorahy & Clearwater, 2012; Feiring & Taska, 2005), which may render these participants less willing to initially share certain details of their sexual trauma. Interestingly, this observation did not extend to the physical assaults, suggesting that the omission of assaultive acts appears to be specific to sexual trauma.

Regarding emotions, participants described a similar number of emotions in the first and final narrative (1–2 emotions, on average), but often reported different emotions; for example, shame was more common in initial narratives, whereas confusion was more common in final narratives. From a CPT perspective, shame would be considered a manufactured emotion directly caused by a distorted thought or “stuck point”. Thus decreases in shame may be due to the cognitive restructuring interventions occurring in session through Socratic dialogue between patient and therapist. The decreases seen in this manufactured emotion may also be due to the participant’s engagement with the trauma memory, which, by definition, encourages the survivor to think the situation through clearly and accurately. It is less likely that the change over narratives was due to a habituation response, given that shame is not conceptualized as a natural emotion from a CPT perspective.

Although it was beyond the scope of the present study to examine causal factors that may explain why participants often included important peritraumatic details in one account but not the other, there are several possible explanations. First, this may be the result of changes in the clients’ level of avoidance. For example, a client may make the conscious decision to exclude a detail from the initial narrative due to a host of possible concerns (e.g. engagement with the memory perceived as overwhelming, shame over disclosure to therapist, perceived protection of the therapist from traumatic detail), but may include this detail in a later account as he or she moves toward symptom alleviation and/or greater alliance with therapist. Similarly, the salience of certain aspects of the event may change over the course of therapy, and the client may choose to focus on different aspects of the event in different iterations of the account. This would not reflect an *inability* to recall those details that are omitted, but rather a re-prioritization of which details are most important to include. Alternatively, omission of a particular detail from one of the narratives may also reflect an inability to retrieve the detail at one of the narrative time points. Finally, consistent with memory reconsolidation theories, retrieval of the traumatic memory during the construction and subsequent re-reading of the narrative may provide an opportunity for modification; these modifications may be reflected in the narrative content.

One unexpected finding was that, on average, participants did not report changes in their perceived recall ability for the traumatic event across the two weeks during which they were specifically asked to write (and read on days between sessions) about the event in significant detail. Although trauma clinicians have historically observed that patients often remember previously unrecalled aspects of the trauma over the course of treatment (Leskin et al., 1998; Nishith, Weaver, Resick, & Uhlmansiek, 1999), our results suggest that perceptions of increased recall of the trauma may not be a typical or expected experience for those clients during the phase of CPT that includes writing the trauma narrative. This finding may serve to normalize the experience of trauma clients who may be feeling frustrated or concerned by

their inability to recall important aspects of the event, and may potentially become disappointed when their experience of constructing the narrative does not assist them in remembering more details about the trauma. Results did indicate, however, that participants evidenced significant improvements in perceived recall ability over the full course of treatment. Thus, it appears that changes in perceived recall ability *do* occur during over the course of trauma-focused therapy, but these changes are not necessarily circumspect to the written trauma narrative portion of the therapy. It may be that other aspects of the therapy protocol, for example the cognitive work that takes place in the latter sessions of CPT may be more influential in reducing perceived memory deficits for the event. Future research is needed to identify which therapeutic techniques have the greatest impact on perceived recall ability.

Limitations and future directions

This study is the first to provide a description of changes in written trauma narratives completed in the context of trauma-focused therapy. The small sample size constitutes the primary limitation of this study; however, it is notable that prior narrative studies have detected change in narrative length in comparatively smaller participant samples (Foa et al., 1995; Van Minnen et al., 2002). Our study sample consisted entirely of female participants; in light of research suggested difference in episodic memory between men and women (Pauls, Peterman, & Lepach, 2013), it is unknown whether our results will generalize to men. Participants ranged widely with respect to time since index trauma, and it is unknown how duration of time since trauma exposure may impact recall ability, and therefore narrative construction, during therapy. This study used a single-item to assess perceived memory ability, and future research using more comprehensive methods to assess perceived recall ability is needed. In the absence of objective details of the traumas experienced by each participant, the present study was unable to draw conclusions about the completeness and accuracy of the participants' narratives. Although participants were specifically instructed to include as many details as they recalled, we are unable to ascertain why some trauma details were included in only one of the narratives.

Conclusions

This study sought to contribute to a more comprehensive understanding of changes in written trauma narratives that may occur within the context of trauma treatment. Clinically relevant information emerged from this study. First, although first and final narratives were similar in length and number of peritraumatic details, results suggest that patients often omit details from one narrative, particularly details regarding sexual offenses. The rationale for the inclusion of the written narrative component of CPT is to allow the client the opportunity to engage with the trauma memory and experience natural affect, while providing the opportunity for both the therapist and client to identify inaccurate thoughts. This study suggests that sexual assault survivors may be less likely to disclose the details of the attack in the first narrative, so additional work around identifying barriers and concerns to approaching the written narrative may be warranted. Second, consistent with previous reports by trauma clinicians that many patients demonstrate improved recall during trauma-focused treatment, patients did report improved recall from pre to posttreatment; however, it appears that changes in recall are occurring across the therapy, not necessarily during

narrative-focused sessions. Trauma therapists can expect that patients may include different details over the course of multiple narrative iterations and may not necessarily experience improvements in their perceived recall ability as a result of narrative completion.

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Table 1

Descriptive Statistics for Initial and Final Written Trauma Narratives

	Narrative 1			Narrative 2		
	Range	M	SD	Range	M	SD
Total Clauses	9–223	72.1	60.7	15–197	63.6	47.3
Peritraumatic Clauses	6–107	35.9	41.7	0–80	30.2	21.0
Assaultive Acts	1–61	13.9	14.1	0–62	14.9	13.3
Victim Characteristics	0–3	0.8	0.9	0–3	0.9	1.0
Perpetrator Characteristics	0–4	0.8	1.0	0–5	1.1	1.1
Internal Experiences	0–35	7.6	9.4	0–26	7.7	6.8
Victim Behaviors	0–30	8.3	7.6	1–24	6.3	5.1
Sensory Experiences	0–8	3.4	5.0	0–8	3.0	4.5

Table 2

Frequency of assaultive acts, emotions, and victim behaviors in first and final narratives.

Domain	Content	Narrative 1 n (%)	Narrative 2 n (%)
Assaultive Acts- Sexual	Vaginal Rape	7 (31.8)	9 (40.9)
	Anal Rape	1 (4.5)	0 (0.0)
	Oral Rape	4 (18.2)	5 (22.7)
	Object Inserted	2 (9.1)	3 (13.6)
	Kissing	6 (27.3)	6 (27.3)
	Manual Stimulation of Perpetrator	0 (0.0)	4 (18.2)
	Manual Stimulation of Victim	4 (18.2)	7 (31.8)
	Other	3 (13.6)	4 (18.2)
Assaultive Acts- Physical	Kicked	4 (18.2)	3 (13.6)
	Hit	0 (0.0)	0 (0.0)
	Restrained	3 (13.6)	3 (13.6)
	Choked	3 (13.6)	2 (9.1)
	Stabbed	1 (4.5)	2 (9.1)
	Cut	1 (4.5)	0 (0.0)
	Shot	0 (0.0)	1 (4.5)
	Pushed	1 (4.5)	0 (0.0)
	Other	2 (9.1)	3 (13.6)
Emotions	Angry	2 (9.1)	3 (13.6)
	Anxious	1 (4.5)	0 (0.0)
	Betrayed	0 (0.0)	2 (9.1)
	Confused	1 (4.5)	5 (22.7)
	Disgusted	0 (0.0)	1 (4.5)
	Shame	6 (27.3)	2 (9.1)
	Fearful/Afraid	10 (45.5)	11 (50.0)
	Hurt	1 (4.5)	1 (4.5)
	Relieved	1 (4.5)	0 (0.0)
	Shocked	2 (9.1)	4 (18.2)
	Terrified	1 (4.5)	1 (4.5)
	Guilty	0 (0.0)	2 (9.1)
	Helpless	0 (0.0)	2 (9.1)
	Numb	0 (0.0)	2 (9.1)
Victim Behaviors	Sad	0 (0.0)	1 (4.5)
	Reasoned	2 (9.1)	3 (13.6)
	Screamed	6 (27.3)	7 (31.8)
	Cried	6 (27.3)	1 (4.5)
	Begged	5 (22.7)	1 (4.5)
	Kept Silent	1 (4.5)	2 (9.1)
	Struggled	8 (36.4)	9 (40.9)
	Did As Told	3 (13.6)	3 (13.6)

Domain	Content	Narrative 1 n (%)	Narrative 2 n (%)
	Apologized	1 (4.5)	0 (0.0)
	Prayed	0 (0.0)	1 (4.5)

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