

Mapping change in self narrative after prolonged exposure therapy: An exploration in recovery from functional dissociative seizures

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ABSTRACT

This study explored self-narrative transformations in a participant with functional dissociative seizures (FDS) following prolonged exposure therapy. The study aimed to establish emergent themes that indicated psychological challenges and the subsequent psychological shifts that accompany FDS resolution. Two interviews were held one month apart. An open-ended questionnaire was employed in the first interview, followed by a structured questionnaire based on previous findings in the second. Thematic analysis was used to explore the narrative of the transcribed interviews and extract themes. Themes constituted four or more references to the same topic during the interviews. Six main themes were identified. These were, in order of the most prevalent, Emotional and Cognitive Insights (29 %), Understanding and Negotiating Fear (24 %), Detachment and Attachment (21 %), Self-Management and Resolution (18 %), Physiological Insights (13 %) and Shifting Relationships and Social Interactions (11 %). Narratology reveals key features of an individual's story and offers insight into their psychological experience. In FDS patients, where psychological disturbance may be a causal factor for symptoms, the formation of a coherent self-narrative can be mapped from pathology through to symptom resolution. In doing so, this process identifies important possible narrative markers underlying the psychological processes involved in FDS.

1. Introduction

Functional dissociative seizures (FDS), also called dissociative seizures, represent a complex and often misunderstood condition that spans the fields of both neurology and psychiatry [1]. Unlike epileptic seizures, FDSs are not associated with abnormal electrical activity in the brain although symptoms can mimic epileptic seizures including convulsions, loss of consciousness, and other motor or sensory disturbances [2]. The diagnosis and treatment of FDS poses unique challenges, as the aetiology is multifactorial involving a combination of psychological, social, and neurobiological factors [3]. Whilst it is clear not all FDS are manifestations of psychological stress, there remains a strong correlation between psychological disturbance and FDS. Traumatic experiences have been identified as significant contributors to the development of the disorder [4]. Moreover, studies show that trauma involving childhood sexual abuse has a particularly strong association with FDS [5,6] although this is not always the case [7]. A common psychological response to traumatic stress is dissociation, which can be described as

“disconnections between thoughts, feelings, behaviours, sensations, and other mental processes...”, Boyer, Caplan, and Edwards, [[8], pg.79]. Trauma and dissociation may lead to maladaptive coping strategies when under stress leading to the physical manifestation seen in FDS patients [9]. Furthermore, dissociative experience is characterized by memory disturbance ranging from complete amnesia to challenges in organizing memories, resulting in fragmented and disorganized recall of the person's narrative.

For patients where psychological disturbance is a contributor to the development of FDS, it follows that psychological treatment may relieve symptoms. Several studies have shown seizure reduction following psychological interventions such as cognitive behaviour therapy (CBT), psychodynamic therapy, mindfulness or psychoeducation [10,11]. Nevertheless, the evidence for psychological intervention for FDS remains limited. In the recent CODES study, results indicated no significant difference in monthly seizure frequency between CBT plus standard medical care versus standard medical care [12]. CBT is a broad approach aimed at changing negative thought patterns and behaviors. However,

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research consistently shows that trauma-focused therapies, such as Prolonged Exposure (PE) therapy, are more effective in reducing trauma-related symptoms compared to other psychological techniques [13,14]. While PE remains part of the CBT framework, it is grounded in Emotional Processing Theory [15]. This therapy involves the systematic and gradual exposure of patients to both emotional and cognitive-behavioral experiences in a controlled setting, with the goal of modifying their responses over time. By doing so, patients develop healthier coping mechanisms, reducing the emotional impact of past experiences [16]. Given the heterogeneous nature of FDS, this approach is likely more relevant for individuals whose seizures are linked to traumatic events. An important aspect of PE is that it helps individuals make sense of fragmented, disorganized memories and reframe them within the context of their lives, fostering emotional processing and narrative coherence [17]. In doing so patients regain a sense of control and continuity over their personal story.

1.1. Why Narrative?

Narratology is an examination of the ways that narrative structure shapes our perceptions of both ourselves and the world around us. A life story is not only a framework for telling oneself and others about one's life, but also functions as the means by which identity is conceptualised and created [18,19]. By studying how a person tells their life story, therefore, it is possible to map parts of how identity is revised and developed in the wake of therapy. The lens of narrative theory helps us to understand how a person perceives themselves and their life post therapy, and whether the treatment has helped them to (re-)create a more stable and resilient self-concept. The narrative approach notes that our lives are composed of stories and thereby analyses the ways that experiences are constructed through language under the influence of upbringing, background, culture, religion and gender [20]. These stories come to constitute reality for the storyteller; however, in therapy, the possibility of alternate stories emerge, offering new ways of making sense of past (current) experience.

The field of narratology argues that the self is a product of narrative: an individual's self-concept is the story they tell themselves about who they are. The fictional self can be both useful (in maintaining consistency and coherence in a person's life) but also potentially damaging. Schnell [21] contends that narratives created after trauma often serve to retrospectively control the trauma stimulus, leading to the development of anxiety and other physiological effects such as increased heart rate, rapid breathing and muscle tension. Similarly, a person may create or adapt a "false" narrative around a traumatic experience to make sense of or control the trauma. Schnell terms this "creative compensation" whereby an individual processes the emotions related to a traumatic experience by reinterpreting them in a way that allows psychological relief from the experience.

The act of storytelling – of creating coherent and resilient narratives – is at the heart of prolonged exposure therapy, and therefore the narrative lens can help practitioners classify and understand the types of changes enacted by this therapy in FDS patients. The aim of this study, therefore, was to explore the experience of a participant following prolonged exposure therapy for FDS, to identify prominent themes and changes within the individual's narrative structure that contributed to improved psychological well-being and reduced seizure events.

2. Methods

IRB approval (CR00004167) was granted by Georgetown University in Qatar for this project with the stated aim of attempting to recognize features of narrative transformed through prolonged exposure therapy. The participant was recruited through a friend's network after approaching the corresponding author. For the safety of the participant, the risks of re-traumatization and/or psychological distress through participation were explained before acceptance onto the study. The

participant was reassured of their right to withdraw at any point, including pre-publication and free counselling support was provided in the case of adverse events. The participant was required to give written consent to participate in the study.

Two interviews were held one month apart between the participant and study authors. The interviews occurred one month after the termination of prolonged exposure therapy and were not part of treatment. The plan for a second interview was blinded to the participant until the end of the first session. In the first interview, an open-ended questionnaire developed by the authors to best elicit responses related to the research question was employed (see [Appendix A](#)). This interview took approximately one hour and was recorded for analysis purposes. The participant was asked to 'tell their story' as they remembered it before psychological intervention. Where topics in the open-ended questionnaire were not addressed the participant was prompted to recall these events. Responses were transcribed independently by the authors and from this initial exploration, themes extracted, and further questions and clarifications formalized in a more structured questionnaire. The second interview was then held with MZ and a final data extraction carried out on the transcribed findings.

2.1. Participant

MZ is a 56-year-old female with no prior history of neurological disorders. MZ described presenting at a neurology clinic in the UK with a history of recurrent episodes characterised by gradual loss of speech and unawareness, leading to unconsciousness lasting approximately five to ten minutes. No premonitory symptoms were reported, and no memory loss or confusion was experienced post event. These episodes waxed and waned occurring 2–3 times one month and then reemerging several months later causing considerable anxiety. MZ had a history of migraine but was otherwise medically healthy although there was a history of alcohol and narcotic use twenty years previously. Following her first event, MZ was prescribed Topiramate 25 mg for seizure control and this was maintained for approximately three months post diagnosis primarily for migraine. No focal neurological deficits were found upon exam and brain MRI and CT scan were reported unremarkable. MZ underwent video-EEG monitoring on two occasions and no epileptiform discharges were noted. MZ complained of memory impairment but no significant cognitive issues were identified on neuropsychological exam. Given the absence of neurological abnormalities or epileptiform activity, the possibility of functional dissociative seizures (FDS) was raised. A psychological evaluation revealed a history of child sex abuse with unknown onset until aged eight. It was formulated that the psychological impact of early trauma may have been a contributing factor in the development of MZ's seizure-like episodes. It was therefore suggested that treatment aimed at reducing the emotional impact of childhood trauma could be beneficial. MZ was offered treatment using prolonged exposure therapy focused on processing traumatic childhood experiences. Therapy was delivered over a two-year period with varying levels of intensity due to travel and work commitments. Typically therapy sessions occurred on a weekly basis in three month blocks. Sessions were one hour in duration and consisted of the therapist guiding the patient to repeatedly face and process childhood memories to reduce their emotional intensity over time. This was coupled with the teaching of coping strategies to manage intense emotions and cognitive restructuring to address negative beliefs that emerged about oneself, others, and the world as a result of the trauma. MZ experienced their last seizure two months after beginning prolonged exposure therapy (four months after referral from neurology) and four years after the onset of events at 49 years.

2.2. Data analysis

To explore the participant's narrative after prolonged exposure therapy, a reflexive thematic analysis [22,23] was utilized to investigate

interview transcripts. Thematic analysis is a method for analysing qualitative data that prioritizes searching across the data set to identify, scrutinize, and record emerging patterns [22]. This framework allows focus solely on emerging patterns in the data rather than view the results through a preconceived lens. Braun and Clarke’s [22] six-phase framework for thematic analysis was followed: becoming familiar with the data; generating codes; searching for themes; reviewing themes; defining and analysing; writing up. Since the primary concern was addressing the guiding research question, a theoretical thematic analysis was followed whereby manual open-coding was used to identify and code each part of the data that spoke to beliefs about the self, authenticity, attachment, relationships, trauma, and transformation in narrative terms. Familiarity as researchers with the data guided manual generation of these codes, which could be modified and developed throughout the process, and this in turn led to search, review, and finally define themes. Classification of a theme required reference to an event, feeling or subject by the narrator on four or more separate occasions during the interviews. To reduce bias, the authors carried out all analyses independently before findings were cross-referenced to look for agreement between generated data sets. Where ambiguity was found discussion between authors was used for resolution. Each instance that related a specific theme in the data was recorded and summed to quantify the most common themes that emerged.

3. Results

Six main themes were identified from elements of narrative extracted from the interview data. These were; Negotiating fear (T1), Physiological insights (T2), Emotional and cognitive insights (T3), Shifting relationships and social interactions (T4), Detachment and attachment (T5) and Self-management and resolution (T6) (Supplementary Material C). Examples of elements of narrative are presented in Table 1.

As shown in Fig. 1, the, most frequently recurring theme was Emotional and Cognitive Insights (T3), accounting for 29 % of selected data. This theme was dominated by references to the participant’s recognition of emotional difficulties. The participant shared moments of

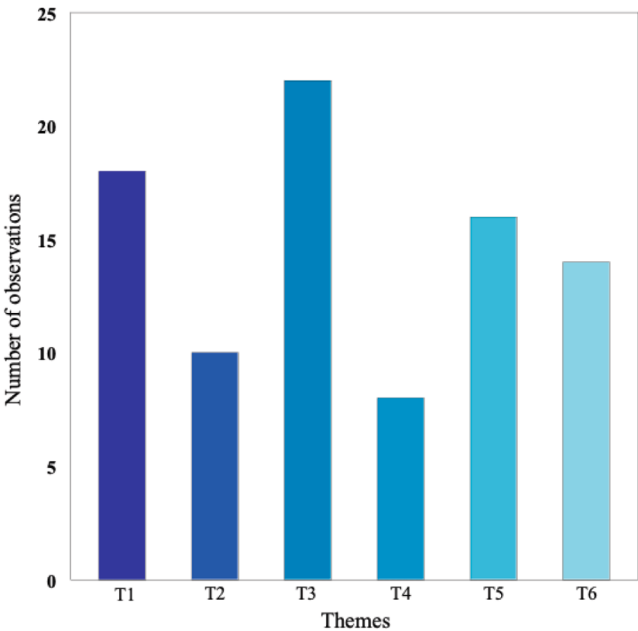


Fig. 1. Frequency of narrative elements contributing to overarching themes. Note.T1 = Understanding and negotiating fear, T2=Physiological insights, T3 = Emotional and cognitive insights, T4=Shifting relationships and social interactions, T5 = Attachment and detachment, T6=Self-management and resolution.

realization regarding how unresolved emotions and maladaptive coping strategies influenced their lives. Later on in the transcript there were frequent references to reframing of emotions and emotional growth.

The second most common theme was Understanding and Negotiating Fear (T1), which appeared in 24 % of the participant’s responses. Pervasive fears, including fear of failure, vulnerability, authority figures, and social rejection were described but there were also multiple references to overcoming fear.

Detachment and Attachment (T5) was the third most prominent theme (21 %). Common narratives in T5 included tendencies to withdraw from relationships, develop unhealthy relationships or seek safe attachments to books, dolls or pets, rather than family/people. Similarly to T3, there are multiple moments within the narrative where healthier relational patterns, and deeper connections are shared as well as one important extended family bond in childhood.

Self-Management and Resolution (T6), was found in 18 % of responses. Many of these responses emphasized self-forgiveness, boundary setting, and reclaiming control over the participant’s life.

Physiological Insights were mentioned throughout the transcript (13 %). The participant often described these in relation to emotional distress, such as shaking, nausea, or insomnia. The participant reflected back on these physiological symptoms with increased awareness of the relationship between them and mental health and in particular feelings of being overwhelmed.

The final theme extracted was Shifting Relationships and Social Interactions (T4), with 11 % of responses. This theme related to recognition of the participant’s interpersonal relationship experiences. There are several references to transformations within the participant’s relationships ranging from isolation and distrust to increased openness, trust, and emotional availability.

4. Discussion

This study aimed to explore the self-narrative of a participant with functional dissociative seizures after undergoing prolonged exposure therapy. This prolonged exposure therapy focused on processing

Table 1
Illustrative examples of narrative elements contributing to overarching themes identified in the participant’s interview.

Theme (%)	Example of narrative element
T1 (24)	“I can reflect back on and not be scared by them, not be fearful of them, not be afraid of them, but I can immerse myself in those memories and allow myself to have the emotions of them, which I never do [sic] before.”
T2 (13)	“And then the seizures,... looking back now, it was just a complete shutdown, for the overwhelm to pass and understanding or doing the exposure therapy and understanding the psychological part of it has released that sensation of overwhelm”
T3 (29)	“Blaming everybody else was protecting myself, ... Internalising my anger as well was protecting myself, ...Feeling shame and guilt and not understanding really where that shame and guilt needed to be because it wasn’t my shame and guilt”
T4 (11)	“I feel different. I couldn’t be more honest with my feelings with people. And I definitely feel a lot people that I might have distrusted before I don’t distrust them anymore.”
T5 (21)	“I definitely feel a lot people that I might have distrusted before I don’t distrust them anymore. And because I trust them. I feel we’re having better conversations.”
T6 (18)	“things have happened before where I haven’t really had control over them. ... You know, before I was still very much in the I really need to participate in stuff to make life okay. And now I feel like [life] really is okay. There’s not much you need to do. You just need to let the process play out.”

Note. T1 = Understanding and negotiating fear, T2=Physiological insights, T3 = Emotional and cognitive insights, T4=Shifting relationships and social interactions, T5 = Detachment and attachment, T6=Self-management and resolution.

traumatic childhood experiences, considered to be linked to the participant's FDS. By analysing the participant's narrative using a thematic approach, the study mapped emergent themes, changes in self-conception, and emotional processes that reflect successful psychological shifts which underpin the resolution of their symptoms in FDS. Six key themes were identified with varying degrees of importance to the participant's narrative.

The most-frequently occurring theme related to emotional and cognitive insights (T3). Emotional dysregulation is hypothesized as a key contributor to FDS [24,25]. One potential explanation relates to failed integration of interoceptive emotional cues leading to somatization and motor responses [26]. For the participant, this theme was a crucial aspect of narrative refiguration (whereby stories are created by developing alternate understandings and solutions). Emotions became less confusing, dangerous, anxiety-inducing as the participant began to understand the impetus behind them (the participant noted that "blaming others...[and] internalising my anger as well as protecting myself"). Instead, the participant was able to reframe emotions as logical and causal, and as such fitting into a clear narrative arc (reflecting that in the past "I started to use alcohol and drugs a lot more to cope with really not being very happy"). This corresponds to the finding of Ramírez-Esparza and Pennebaker [27] that linguistic features are a key marker of changes in health: for instance, talking about positive emotions and using causal and reflective language correlates with fewer hospital visits. Being able to speak about emotions and realisations is therefore an indicator of narrative cohesion and of the success of prolonged exposure therapy in terms of reducing emotional dysregulation and FDS.

The second most common theme referenced in the participant's narrative was fear (T1). Heightened fear sensitivity has been demonstrated in FDS patients [28]. For those with trauma experiences, fear may provoke dissociation to reduce arousal [29,30]. From the narrative perspective, allusion to fear indicates rising tension: it leads towards the climactic point of a narrative arc, and in storytelling is designed to point the reader towards conflict and emotional showdown. In this case, fear fulfilled the same function, as it directed us towards the participant's trauma and potential source of dissociation. The participant referred several times to fear (saying "it's the only thing I ever knew"; and "[I] felt scared of doing any different...") as something that felt normal in her childhood. This fits with McNally's [31] hypothesis that the emotions of fear and stress frequently strengthen memory and may point towards a critical moment in a remembered narrative. It is interesting to note that after prolonged exposure therapy, the participant recounted that now they "can reflect back on and not be scared by them, not be fearful of them, not be afraid of them." Frequent mentions of fear and its effects thus provide a warning to medical practitioners of potential trauma history that may be contributing to presenting symptoms and warrant psychological investigation.

The third most common theme related to attachment (T5). There have been several studies that indicate people with FDS have different attachment styles compared to healthy samples [32,33]. More specifically, FDS patients tend to show low secure attachment and high attachment anxiety. This was confirmed in the participant's narrative with frequent references to poor attachment experiences from childhood extending into adulthood. However, recognition and resolution of attachment patterns demonstrated the participant's ability to contrast her earlier emotional processes with her post-exposure-therapy actions and responses. This corresponds to the idea of narrative epiphany, whereby viewing past events through the lens of new information or revelations leads to acceptance and a resolving narrative. For instance, when the participant notes of her father in law that "my relationship with him is completely transformed because of the level of trust and love that I have for him now", this suggests narrative completion and cohesion.

The theme of self-management was the next most common theme (T6). Autonomy from the therapist remains one of the primary goals of

therapy [34]. It represents a stage in the therapeutic alliance where the participant has improved and has sufficient insight and understanding to consider termination. This can be thought of as narrative resolution. A story ends when the narrative arc is complete: when a challenge or conflict is overcome, when the protagonist has undergone a transformation, when something is learned, understood, or accepted. The prevalence of the self-management theme highlights how prolonged exposure therapy has enabled the participant to reframe her life story, allowing control of her narrative as the main 'character' rather than being passively 'written in' by external events. For example, the participant notes she had previously stopped listening to music because of its association with abuse, stating, "That's his performance. That's his music. But now I can suddenly enjoy listening to it again [...] I just enjoy the music for what it is."

Increasing psychological and physiological insights was the fifth most frequent theme in the narrative (T2). For many patients, lack of understanding regarding their events heightens fear, anxiety and shame [35]. A diagnosis can reduce these psychological concerns by providing the patient with a better understanding of FDS, including the relationship between psychology, physical or motor symptoms and the connection between mind and health more generally. This was exemplified by the participant's ability to (re)construct a cohesive self-narrative, achieved through comprehending the role of cause and effect in her life story and health journey. An understanding of structure and causality is fundamental to narrative construction and the participant demonstrated the ability to map this causality, saying, "if I'm moving my body and exercising...I don't feel so stuck, stuck and blocked and when I feel stuck and blocked is when I start to have depression and frustration". This reflection indicates increased self-reflectivity and acceptance/understanding of the roots of her symptoms and the creation of stable self-narratives.

The final theme identified was references to changing relationships and social interactions (T4). There is an overlap with attachment here; however, this theme is focused more on adaptations. In strong narratives, characters must be complex to be believable (meaning they have a range of emotions, motivations, and expressions, rather than just being archetypes). The prevalence of this theme suggests that prolonged exposure therapy led to a strengthening of the narrative conception of character as relational, complex and adaptable. The participant reevaluated her relationships with her father, her daughter, her husband and even herself (saying "I learned how to trust myself again, and that made me trust others more") reflecting her growing awareness of character complexity and the relational nature of the self. Where she had thought of relationships as transitory, after prolonged exposure therapy she spoke of them as adaptable, for instance noting that "I feel close to my partner in a way I never thought I could. I feel understood and seen for the first time." This exemplifies Hutto and colleagues' [36] theory that improving our narrative skills can significantly improve our ability to commit to embodied engagement in our actions and interactions.

4.1. Limitations

As this work uses a single participant study, the generalizability of findings is limited. The study was reliant on the participant's recall of previous experiences; therefore, the possibility of memory bias is present. Despite attempts to initiate a comprehensive overview of the participant's experience through open-ended questionnaire, the data was dependent on the topics the participant recalled and therefore important themes relevant to narrative may not have been captured.

5. Conclusions

People create narratives to make sense of their lives. Trauma affects how people create these self narratives, and how they tell our life stories. In FDS patients, the fictionality of self-narratives can cause physical disruption. This suggests a complex interrelation between identity,

storytelling and health. Moreover, the revision and rewriting of self-histories through the process of prolonged exposure therapy can (in specific scenarios) create narrative resolution and thereby promote self-cohesion. As this study has outlined, the changes in narrative go hand in hand with respite from physical symptoms, suggesting the inseparability of the physical and psychological effects of trauma. Furthermore, identification of the storytelling markers that have been mapped in this paper may aid diagnosis and awareness of trauma in FDS sufferers.

Ethical approval

Ethics approval and consent to participate – this study was approved by Georgetown University in Qatar, Institutional Review Board: REF# CR00004167.

Credit authorship contribution statement

Jon D. Perkins: Writing – review & editing, Writing – original draft, Methodology, Investigation. **Sam Meekings:** Writing – review & editing, Writing – original draft, Resources, Project administration, Methodology, Investigation, Conceptualization.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ebr.2025.100812>.

Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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