

Review Article

A Pilot Study on the Effects of Simulated Re-Attachment, or Revisioning, on PTSD Inpatients' Perceived Calmness and Happiness

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Abstract

This is a retrospective analysis of data collected from patients during Revisioning sessions at a large inpatient psychiatric facility. Revisioning is an adaptation of mirror therapy for the treatment of complicated grief and PTSD instead of the more traditional purposes of relieving phantom limb pain. It has been suggested from individual case studies that Revisioning has potential to treat PTSD by activating the mirror neuron network. Patients attended between one to three Revisioning sessions. Results found that 94% of patients improved in perceived calmness and happiness during single sessions. 70% of patients improved on measures of ego repair from first to last session. Higher improvers in mood in single session Revisioning sessions had significantly greater ego repair before discharge than lower improvers.

INTRODUCTION

Revisioning is an adaptation of mirror therapy, conventionally used to eliminate phantom limb pain in amputees and stroke victims. Mirror therapy creates an illusion that the missing limb is reattached [1]. Brain scans of these patients indicated that the cause of the phantom pain was neuroplasticity in the motor cortex. Following just a few sessions of mirror therapy, fMRIs showed a functional reorganization in the sensorimotor cortex and a reduction of phantom pain. Subsequent research on mirror therapy has confirmed these neuroplastic changes reflecting improved functioning of stroke patients [2].

Further research showing that mirror therapy can be applied to complicated grief and PTSD has had some initial success [3-4]. Complicated grievers, as compared to normal mourners, have experienced increased distress when looking at photographs of deceased loved ones. However, looking at the same photograph reflected in a mirror so as to simulate the re-attachment of the deceased loved one has been found in over 90% of individual case studies to cause the same type of relief from emotional pain as the phantom pain sufferer gets from physical pain [3,4]. This finding suggested that persistent complex bereavement disorder was also due to neuroplasticity. Just as in phantom pain, the brain signals representing the deceased loved one may not have a destination anymore because of the loss (or amputation),

leading to dysfunctional changes in the brain. For example, in Ramachandran's case study of an amputee with phantom pain, the missing hand could be felt on the contralateral facial area [1]. Similarly, one client with PTSD and Persistent Complex Bereavement Disorder reported that she could feel her deceased son in her thumbs, and would subsequently experience a reattachment to him by holding her thumbs inside her fist.

This adapted form of mirror therapy, called Revisioning, was subsequently demonstrated to activate neuroplasticity in the mirror neurons within the motor cortex [3]. In over 10 case studies, suppression of the EEG mu rhythm occurred following Revisioning. For PTSD, Revisioning works by reconnecting in a mirror a photo or drawing of the client in a happy state before the trauma occurred. In a previous study of PTSD patients comparing one session of either Revisioning or EMDR, the PTSD score declined twice as much in the Revisioning group [4].

Revisioning can be utilized for a wide number of psychological conditions including grief, emotional dysregulation, addiction, attachment disorders, developmental and adult trauma, and dissociation [3-5]. During Revisioning sessions, drawings are used to access, integrate, and repair ego states through activation of the Mirror Neuron Network (MNN). The MNN is implicated in identity formation and limited research has shown that people with PTSD and high levels of dissociation have fractured identity

formation and dysfunctional connectivity within the MNN [6]. Revisioning for PTSD is hypothesized to work by reconnecting these dissociated identities.

Developmental trauma and dissociation are corrected by connecting missing developmental needs. This occurs through drawings of the client at various ages in which the missing needs are also drawn in. The drawings are then held up to the mirror by the patient so the image is reflected back to the patient. The mirrored image is then recreated with imagination, physical movement, duplicating similarities between images, and auditory repetition of connecting phrases. This simulation of the re-attachment, for example of a calmer pre-trauma ego state comforting the traumatized ego state, creates an illusion in the mirror of a reintegration that has appeared to be very rapid in many cases [4].

METHOD

This study was first approved by the Institutional Review Board at Sierra Tucson Treatment Center. As this was a retrospective study of data already collected, there was no harm potential to patients.

Therapists conducted Revisioning for trauma by first asking patients whether anxiety or sadness were dominating their lives at that moment. Depending on their answer, "calmness" or "happiness" then became the "need" that would be reconnected to the client. One of the things that clients like most about Revisioning is that the trauma does not have to be relived. Patients were then asked to describe a fun or safe activity (involving movement) that they had enjoyed either before or during the same time period as the trauma.

Next, patients were asked to draw this fun or safe activity on white paper using colored markers. The drawing was then held up to a mirror at least 20 inches wide, so that the patient's face and drawing could be seen side by side in the mirror. Thoughts and feelings were then spontaneously discussed by the patient until happiness and/or calmness started increasing. Drawings were often revised to add in additional elements providing greater calmness, happiness, and ego repair. For example, symbols of strengths lost after the trauma were usually added to the drawing and Revisioned in the mirror to help the client reconnect to these lost strengths.

SUBJECTS AND DATA COLLECTION

62 patients in a large inpatient psychiatric facility had given consent to receive Revisioning and have their data included in the study. All patients had a diagnosis of developmental or adult PTSD. Most patients in the study received one Revisioning session while several others had 2-3 sessions. Data was collected by six clinicians at the facility trained in Revisioning. Two Likert rating scales were used to measure therapy progress within a session. The Revisioning Rating (RR) scales are a set of two 10-point Likert Scales taken at the beginning of a session and after a cycle of Revisioning [7]. Scale C is a measurement of physical agitation to physical calmness. Scale H is a measurement of the range of feeling sadness to happiness. Measuring degree of happiness with a 1-10 Likert scale has been found to be reliable and valid [8].

The Revisioning Ego Repair Checklist, developed by Lynn Heselton (2018) is a 5-point Likert scale measuring progress in correcting dissociation since the last session [9]. A five-point Likert scale is the preferred metric for its precision when rating clinical longitudinal changes [10]. This questionnaire consists of ten questions which evaluate the ability to access past and current memories, connect with feelings, thoughts, physical body, self-identity, relationships and present time. The Revisioning Ego Repair Checklist is not a diagnostic test but rather a faster, "on-the-fly" way of measuring some of the content of the Dissociative Experiences Scale-II [11] to ensure that therapy is commencing in a beneficial manner.

RESULTS OF SINGLE REVISIONING CASE

When working with developmental trauma, clients are instructed to draw each age starting with their baby ego state. The feelings and missing developmental needs are identified. The client is then instructed to draw and revision (in the mirror) the parental ego state meeting their needs.

As an example, a male client with developmental trauma drew the parent ego state cradling a baby in his arms and both smiling. In sequential order, the parental ego state was portrayed connecting with two additional, younger ego states. The older and younger ego states were portrayed engaged in identical activities, wearing identical clothes with identical facial expressions of happiness. Reconnecting statements included: "My baby self is receiving the ultimate protection. Protection is connection to my adult self."

The client remarked, "Wow, this makes sense. It's a horrible movie with a good ending. It is safe for me to be me. I can be the real me. It is safe to let go of the past. My new self has anger in harmony with the other emotions. I have healthy anger that is assertive and not aggressive. I am chilled-out but alert. I have the wisdom of age. My past does not define me. My past is not my destiny. I am not alone anymore. I can be vulnerable and honor the fear. I can use fear to make wiser decisions. The real me is now like common sense. I now have a fresh start."

GROUP RESULTS

Revisioning Rating Scales were used to ensure that patient's mood was improving throughout the session. Single session ratings on a 1-10 scale, where 10 was most calm and 1 most anxious, indicated that patients felt significantly calmer at the posttest ($t = 5.61$; $p < .01$). Happiness increased significantly as well during a single Revisioning session ($t = 5.95$; $p < .01$). 94% of all patients saw improvement in mood during their first Revisioning session.

At follow-up, 70% of patients felt improvement on the Ego Repair checklist after a single session of Revisioning. Those Ego Repair items that improved the most following Revisioning included:

3. I can more easily access different strengths or parts of myself.
4. I can more easily access feelings.
6. I have an increased ability to connect with others.
7. I can focus more on the present than the past.

Correlations were run between Revisioning within session improvements (Revisioning Rating scales) and Ego Repair post-test scores. "Happiness" ($r = .43$) predicted higher ego repair scores than "Calmness" ($r = .39$). As shown in Table 1, these are statistically significant at the .05 and .01 levels, respectively.

Table 1: Correlations among Revisioning Rating Scales and Ego Repair.	
	Ego Repair
Revisioning Rating Scale (Happiness)	.43 ($p < .05$)
Revisioning Rating Scale (Calmness)	.39 ($p < .01$)

Next, the Revisioning Rating Scale scores were divided into two groups of high and low scorers. Their Ego Repair scores from each group were compared to see if improvement during one Revisioning session predicted ego repair. Two-tailed t-test comparison showed that the high scorers on the Revisioning Rating Scales had significantly higher scores on the Ego Repair Checklist ($t = 2.02$, $p < .05$).

Finally, correlations were run between individual questions on the Ego Repair Scale to within-session Revisioning Rating Scales to see which types of ego repair were best predicted by Revisioning Rating scores. Improvements in 'Happiness' and 'Calmness' both had their highest correlations ($r = .5$ and .39, respectively) with the single statement: "I can more easily access different parts or strengths of myself." 'Happiness' also correlated highly with the statement, "I can focus more on the present than the past" ($r = .39$).

CONCLUSIONS

The results of this pilot study indicate that targeting the mirror neuron network in psychotherapy through Revisioning offers a potentially safe and effective treatment for adult psychiatric inpatients with a diagnosis of PTSD. Revisioning also produced significant happiness and calmness after one session for most patients (94%), which is important for patients with a limited time in the hospital. Controlled studies of Revisioning with comparison treatment and control groups are needed to expand these preliminary results.

This study also confirmed that using the Revisioning Rating (Likert) scales to measure progress during psychotherapy is predictive of ego repair upon discharge. This practice is somewhat similar to the Subjective Units of Distress in EMDR. Revisioning, however, being a positive psychology technique is focused more on strengths. Initial sessions focus primarily on calmness and happiness, whereas additional strengths are commonly reconnected to clients in ensuing sessions, namely, 'motivation', 'self-esteem', and 'flow'.

No negative side effects such as psychotic decompensation, dissociation, or emotional flooding were experienced with Revisioning. Brief grief reactions were found to be common before calming or happiness appeared during sessions. This was consistent with the previously observed phenomenon of three stages within Revisioning sessions. The first was the mirror neuron activation stage in which the client developed empathy for their younger selves and initiated motor movements

which subsided with emotional resolution. The second was the cathartic stage associated with brief grief reactions over their lost, pre-trauma identity. The final stage was the ego integration phase where emotional resolution occurred, and anxiety and depression remitted.

Finally, patients who experience high levels of dissociation and childhood amnesia often have difficulty with exposure-type therapies like EMDR. There appeared to be high acceptance of Revisioning among patients with high dissociation as they did not have to re-experience their traumas.

Because oxytocin expression is commonly found in mirror neuron activation, it is hypothesized that oxytocin may be an important chemical messenger in Revisioning. This could explain some of the immediate results found after some of the patients' sessions. Future studies should focus on both brain activity and neurohormonal changes following Revisioning.

APPENDIX

Revisioning Follow-Up Ego Repair Checklist

1. Rate from 1 (no increase) to 5 (big increase) I have increased memories of my childhood.
2. My current day-to-day memory is improved.
3. I can more easily access different strengths or parts of myself.
4. I can more easily access my feelings.
5. I feel developmentally older.
6. I have an increased ability to connect to others.
7. I can focus more on the present than the past.
8. I have decreased negative thoughts.
9. I have a more integrated, cohesive self-identity.
10. I feel more connected to my physical body

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Cite this article

Rider M, Heselton L, Seymour J, Drachman C, Guilfoyle S, et al. (2021) A Pilot Study on the Effects of Simulated Re-Attachment, or Revisioning, on PTSD Inpatients' Perceived Calmness and Happiness. *J Behav* 4(1): 1019.