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Case Report

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EMDR processing of chronic fatigue syndrome

Abstract

The understanding that chronic fatigue syndrome (CFS) or myalgic encephalomyelitis (ME) is precipitated by a viral infection advances the view that CFS/ME is a medical condition that requires medical interventions. The present case study advances the view that EMDR can process the negative memories related to the trigger situations that involve the fatigue and tiredness, the high level of interoceptive awareness, and to maladaptive thought patterns. These trigger situations are akin to the maintenance factors in the chronic pain literature that involve disability status, interoceptive awareness and maladaptive thought patterns.The subject improved on several indicators of physical and mental fatigue, as well as demonstrated by scores on the FAS (Fatigue Assessment Scale) and CIS-20 (Checklist of Individual Strengths). In conclusion, the results show that EMDR therapy can be an encouraging, non-invasive and relatively short strategy to the treatment of CFS.

Keywords: EMDR, chronic fatigue syndrome, epstein-barr

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Abbreviations: EMDR, eye movement desensitisaiton and reprocessing; CFS, chronic fatigue syndrome; ME, myalgic encephalomyelitis; CBT, cognitive behavior therapy; PLP, phantom limb pain; EB, epstein-barr

Introduction

Although eye movement desensitisaiton and reprocessing (EMDR) is an established treatment for PTSD in the general population, research on applications of EMDR therapy to chronic fatigue syndrome (CFS) is limited, even scarce. A PsychInfo search threw up only one other reference for the application of EMDR therapy to CFS (e.g., Royle.[1]) One of the beliefs about EMDR therapy is its limited applicability to syndromes with a physical, biological or organic origin. The understanding that chronic fatigue syndrome or Myalgic Encephalomyelitis (ME) is precipitated by a viral infection advances the view that CFS is a medical condition that requires medical interventions. The likelihood, therefore, that a practitioner would refer or undertake EMDR as an intervention for CFS/ME is slim, since CFS/ME as a medical condtion is not related to the processing of negative memories and the resolution of symptoms related to the memories.

The literature has also indicated aspects of CFS/ME being a chronic condition, and in general, affected individuals do not recover from the infection and instead experience a wide variety of symptoms including an inability to produce sufficient energy to meet daily demands. Marked fatigue and weakness, sickness, cognitive dysfunction and symptom flare-up follows physical and cognitive exertion, a condition described as 'post exertion malaise'.[2] However, there are also some instances in which individuals afflicted with CFS/ME do recover from their condition, with the improvements evident in the lowering of physical fatigue and tiredness attributed to a clearing up of the virus in their bodily systems. For example, several randomized controlled trials have shown that cognitive behavior therapy (CBT) and graded exercise therapy (GET) can lead to a significant reduction of fatigue and disability in CFS.[3–5]

Within the cognitive behavioral regime, the framework of understanding surrounding CFS has emphasized aspects related to maladaptive thought patterns increasing the sense of fatigue and weakness.[6] The psychological maintenance model as proposed by Chalder et al.,[7] has explained that an acute infectious illness may account for symptom severity during the initial phases of the illness. However, as the infection subsides, symptom severity and disability status may continue because of an established routine of activity avoidance and a high level of interoceptive awareness with preventing symptom flare-ups. This physical-activation psychological-maintenance hypothesis is taken from the chronic pain literature[8] and adapted as a framework for cognitive-behavioral interventions.

The chronic pain literature emanates from an understanding of the gate control model of pain,[9] which because of the relevance to CFS/ME in some aspects related to the psychological factors and antecedents, will be briefly discussed in the following sections. The gate control model views pain perception and response as complex phenomena, resulting from the interaction of sensory-discriminative, motivational-affective, and cognitive-evaluative components. The theory proposes that a neural mechanism in the spinal cord acts like a "gate' that can facilitate or inhibit the flow of nerve impulses from peripheral fibres to the central nervous system. When the amount of information that passes through the gate exceeds a critical level, the neural areas responsible for the pain experience and response are activated. Somatic input is therefore subjected to the modulating influences of the gate before it evokes pain perception and response. The theory suggests that sensory input is modulated at successive synapses throughout its projection from the spinal cord to the brain areas responsible for pain experience and response. Pain occurs when the number of nerve impulses that arrive at these areas exceeds a critical level.

Somatic input is subjected to the modulating influences of cognitive, affective and behavioural factors before it evokes pain perception. In this regard, a central control mechanism is proposed to account for alterations in pain perception and response produced by psychological factors and psychological control techniques. Psychological factors may mediate pain by altering individuals' appraisals of the threat, their ability to control the quality of noxious sensations, and their emotional arousal. Psychological methods that modulate cognitive factors and affective factors may thus prevent the development of pain, abolish it entirely, or at least reduce the intensity of noxious sensations. Thus sensory aspects of pain are but one, albeit important, dimension of the pain phenomenon.

The similarities posited within the framework of "physical-activation and psychological maintenance" between chronic pain and

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CFS/ME is applied to an understanding of the maintenance pathway of psychological interventions in the present article. Specifically, this article explores how EMDR therapy is helping with CFS/ME in much the same way as cognitive behavioural therapy (CBT) by dealing with the same psychological factors. To reiterate, the psychological factors that maintain CFS/ME is related to the maladaptive thought patterns increasing the sense of fatigue and weakness leading to an established routine of activity avoidance and heightened sense of interoceptive awareness. EMDR therapy works within the Adaptive Information Processing framework to process the memory surrounding the established routine of activity avoidance and desensitise the CFS/ME sufferer to trigger situations that involve the fatigue and tiredness.

Case report

The client DO, an 18-year-old old, was first seen in May 2016at an outpatient clinic of a private practice in Singapore.

The symptoms of fatigue and tiredness were, in the main, caused by the presence of the Epstein-Barr (EB) virus (human herpesvirus 4), mycoplasma bacteria, and deficiency in levels of Vitamin D3. An infectious disease doctor first detected DO's condition in June 2012 when DO was 15years of age. A specialist physician, an endocrinologist, from the health system in Singapore had given him the diagnosis of CFS after observing and assessing his condition over duration of 4months. The family took DO to various specialist doctors in Singapore, and although all of them had agreed with the diagnosis of CFS, none of them could offer any form of medical intervention for his condition. In fact, one doctor who specialized in infectious diseases gave prescriptive advice of, in the words of DO's mother, "Vitamin D because there was nothing else he could offer". Starting with June 2012 till the present, his school attendance dropped noticeably. He would go to school twice or thrice a week, his school attendance punctuated by symptoms of fatigue in which he would wake up in the morning and feeling so overwhelmed by tiredness that he would miss school. He completely avoided exercises, even though prior to his bout of infection, he was with the school track and field team. Exercise for the client represented a huge triggering factor for symptoms of tiredness and fatigue, a condition known among CFS sufferers as 'post exertion malaise'; and many times, DO would notice that a short stint of exercise would follow with missing school the day after.

In May 2016, DO was subsequently referred to the psychologist- who is also the author of this article- to deal with his symptoms related to CFS. Specifically, DO have some expectations that EMDR therapy can assist in lowering his feelings of tiredness so that his school attendance can improve.

Measures

DO is administered the FAS (Fatigue Assessment Scale) and the Checklist Individual Strength- 20 (CIS-20) at different phases of the intervention to monitor his progress.

Fatigue assessment scale

The FAS is a 10-iteminventory developed by Michielsen et al.,[10] that measures symptoms of fatigue, and basically consists of items from the World Health Organization Quality of Life assessment questionnaire,[11] Checklist Individual Strength – 20 (CIS–20;,[12]) Maslach Burnout Inventory (MBI; Maslach & Jackson,[13]) and Fatigue Scale (FS; Chalder et al.,[7]) The FAS is measured on a 5-point Likert scale of 1 (Never), 2 (Sometimes), 3 (Regularly), 4 (Often) and 5 (Always). The study by Michielsen et al.,[10] examining the psychometric properties of the FAS has also indicated good reliability and content validity of the FAS items, with the one factor solution extracted by Michielsen et al.,[10] demonstrating that fatigue is a unidimensional construct based on the semantic analyses of the items of the four questionnaires (WHOQOL, CIS-20, MBI, FS).

Checklist individual strength-20

The Checklist Individual Strength-20 (CIS-20) is a 20-item self-report questionnaire developed by Vercoulen et al.,[12] to measure symptoms of chronic fatigue in the working population. The validation study article by Beurskens et al.,[14] indicated that the CIS-20 had adequate discriminant validity between fatigued and non-fatigued employees in occupational groups, with the results of the CIS-20 comparable to four related measures of fatigue (Subjective feelings of fatigue, Concentration, Motivation, Physical activity), specifically fatigue measured on a uni-dimensional seven point Likert scale, the scale exhaustion of the MBI, and the need for recovery.

Procedure

At the beginning of the session, the client DO was provided with an information sheet outlining the study and the use of the CIS-20 and FAS. The client was invited to ask any question he had regarding the study and to sign a consent form if he agreed to participate. A client-debriefing sheet was provided to the client at the end of the first therapy session.

Treatment

The patient was seen over 20 sessions, between May and November 2016, on a weekly/bi-weekly basis. All the sessions were for duration of 1hour.

The targeting sequence was set up in a manner that located the recent triggers for desensitization and processing. The processing of recent triggers surrounded situations that DO experienced "tiredness and lethargy". For example, the first target memory was chosen as a scene in which DO felt tired after taking a nap. This was a recent memory that was fairly representative of the many occasions in which he still felt tired despite taking a nap. The targeting sequence was set up with the negative cognition (NC) of "I am not in control" and desired positive cognition (PC) of "I can be in control," with a validity of cognition (VOC) of 4/7. The emotions elicited were "tiredness, sadness and resignation", and subjective units of distress (SUDs) were at 6/10. Some disturbances were located in the eye and chest area. Desensitization was done with bilateral stimulation through the use of eye movements, but processing was incomplete in the first session.

One week later in the second session, DO reported some progress, in the sense that his feelings of tiredness for situations related to non-exertion of efforts or exercises had gone down by 30%, which was considerable and noticeable. DO also noticed that his energy levels had gone up noticeably. In this session, DO's memories along the targeting sequence of NC of "I am not in control" were processed related to situations in which he exercised or exerted himself, after continuing the processing of the memory from the previous week.

Between the third and sixth sessions, the decision was made to process other target memories related to the NC of "I am not in control"; and because the focus was on clearing the symptoms of physical and mental lethargy, target memories related to 'post exertion malaise' and emotions of 'tiredness' were processed primarily in this phase. For example, Session 3 targeted memories related to 'feeling tired after napping for one hour', while Sessions 4, 5 and 6 targeted memories related to 'feeling tired one hour after doing the exercise'. By the sixth session, the client was noticing that he was taking naps

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on a lesser frequency per week, which were two or three times a week as compared to the pre-intervention baseline of four to five times a week. The client was already very pleased with his progress, and was advised on extending his exercise levels to duration of 30minutes.

In the seventh and eighth session, the other memories along the targeting sequence of recent trigger situations related to 'lethargy and tiredness' – albeit 'feeling tired the day after the jogging exercise', 'feeling tired and needing to take a nap after doing brisk walk the day before'– were processed to clear the disturbances in the body related to 'physical exhaustion'. In the seventh and eighth session, DO was advised on an exercise regimen of thrice a week, with 15 to 20minutes of brisk walking twice a week and two to three minutes of slow jog for about 200 to 300meters.

From the ninth session to the fifteenth session, themes surrounding 'mental exhaustion' were processed in the targeting sequence. Trigger situations related to target memories of 'feelings of tiredness due to hectic preparations for the exams' were processed, together with other scenarios related to 'feelings of tiredness after school', 'feeling mentally tired because of lack of interest in studies and games', 'feeling mentally exhausted because he is doing the same thing repeatedly'.

In the fifteenth session, DO was reporting progress with his own subjective indicators of 'physical exhaustion' and 'mental exhaustion', explaining that there is a drop in levels of 'physical exhaustion' and 'mental exhaustion' of at least 70% and 50% respectively. Interestingly for DO, physical exhaustion was felt as disturbances on the legs and warm sensations on the skin while mental exhaustion was perceived as disturbances in the head and neck area. Significantly for DO as well, his exercise level has progressed remarkably to the extent where he was exercising three to four times a week, with 60minutes of brisk walking twice a week and an hour of leisurely walk once a week, interspersed with a cycling routine of five to ten minutes once a week. At this point, DO was optimistic about his improvements, noting that he did not need to take naps after his exercises and that his concentration difficulties have declined by about 20 percent.

From the sixteenth session onwards, a decision was made to process the trigger situations that still made DO tired, whether it was 'physical or mental exhaustion'. In other words, the final four sessions endeavor to clean up the remaining channels of residual target memories linked to feelings of tiredness. The sixteenth session targeted memories related to a 'pokemon walk', while the seventeenth and eighteenth session worked on a target memory related to 'feeling physically and mentally tired on a particular evening'. The eighteenth session also touched on aspects of processing of future template according to a scenario in which he would proceed with relapse prevention to reduce the feelings of tiredness.

In the final session, DO referred to drop in levels of 'physical exhaustion' and 'mental exhaustion' of at least 80% and 60% respectively. He also pointed out those improvements in his concentration levels during studies had improved by at least 80%, with no necessity to take naps in the past three weeks. Finally, DO was advised to continue with his exercises which was presently, three to four times a week. At this point, DO was highly optimistic about his improvements, noting that his energy levels had improved by at least 90% in the four months after the commencement of EMDR treatment.

It is also interesting to note that –with the exception of the final 20th session –DO's ratings of feelings of disturbance at the end of each session was at best a SUDs (subjective unit of distress) score of 3/10, which means that the feelings of disturbance in the body after each session had never been reduced to a SUDs of 0/10; in that regard, the aspect of the standard EMDR protocol that was about the installation of the Positive Cognitions was only started and completed in the final 20th session. The following Table 1 lists the SUDs ratings of feelings of disturbance for each session.

Results

Notwithstanding DO's progress with what he understood be subjective indicators of improvement with 'physical exhaustion' and 'mental exhaustion', he had also indicated improvements with the FAS and CIS-20. At the point of follow-up with this psychologist, DO report a baseline (pre-intervention) score of 32 on the FAS. At the point of follow-up with this psychologist, DO also reported a baseline (pre-intervention) score of 114 on the CIS-20, with scores of 47 on Scale 1 (subjective feelings of fatigue), 28 on Scale 2 (concentration), 21 on Scale 3 (motivation) and 18 on Scale 4 (physical activity). At around the eighth session mark (mid point of treatment), DO reported a score of 22 on the FAS and a score of 77 on the CIS-20, with scores of 27 on Scale 1 (subjective feelings of fatigue), 21 on Scale 2 (concentration), 17 on Scale 3 (motivation) and 12 on Scale 4 (physical activity). At the end point of the intervention, DO reported a score of 21 on the FAS and a score of 55 on the CIS-20, with scores of 16 on Scale 1 (subjective feelings of fatigue), 21 on Scale 2 (concentration), 10 on Scale 3 (motivation) and 8 on Scale 4 (physical activity).

Table 2 shows his progress across the three points of evaluation, specifically the baseline, midpoint and endpoint of intervention.

DO have demonstrated scores on the FAS and CIS-20 that was consistent with the progress he reported for the SUDs ratings in each session. The research undertaken by Michielson et al.,[10] with the various Fatigue measurement scales indicated mean and SD scores of 51.25 ± 23.70 and 19.80 ± 5.86 for the CIS-20 and FAS total scores respectively. For the FAS, DO's pre-intervention score of 32 is more than 2 SDs away from the mean score (z score = 2.08, 98th percentile). The FAS scores on the midpoint and endpoint evaluation register scores of 0.38(65th percentile) and 0.20 (58th percentile) respectively. For the CIS-20, DO's pre-intervention score of 114 is likewise more than 2 SDs away from the mean score (z score = 2.64, 99th percentile). The CIS-20 scores on the midpoint and endpoint evaluation register z scores of 1.09 (86th percentile) and 0.16 (56th percentile) respectively.

Noting that 95% of the observations fall within 2 standard deviations of the mean, most researchers applying clinical inventories/questionnaires take 2 standard deviations as cut-off scores or scores that indicate a clinical range. Using this guideline, DO had indicated FAS and CIS-20 pre-intervention scores that were clearly in the clinical range ($z_{FAS\_Pre\text{-}Intervention} = 2.08$; $z_{CIS\text{-}20\_Pre\text{-}Intervention} = 2.64$), the scores being placed on the 98th and 99th percentile of a sample representative of the Dutch population. After the 20 sessions of processing the chronic fatigue symptoms, DO had shown FAS and CIS-20 endpoint scores that were clearly in the non-clinical range ($z_{FAS\_Endpoint} = 0.20$; $z_{CIS\text{-}20\_Endpoint} = 0.16$), the scores being placed on the 58th and 56th percentile of a sample representative of the Dutch population. The scores on the other subscales of the CIS-20, specifically the subjective feelings of fatigue, concentration, motivation and physical activity, have also improved, with significant reduction in subjective feelings of fatigue ($Mean_{Scale\ 1} = 22.59$, $SD_{Scale\ 1} = 22.59$; $z_{Scale\ 1\_Pre\text{-}intervention} = -.29$, $z_{Scale\ 1\_Endpoint} = 1.08$), increase in concentration ($Mean_{Scale\ 2} = 12.13$, $SD_{Scale\ 2} = 6.87$; $z_{Scale\ 2\_Pre\text{-}intervention} = 2.31$, $z_{Scale\ 2\_Endpoint} = 1.29$), motivation ($Mean_{Scale\ 3} = 10.04$, $SD_{Scale\ 3} = 5.25$; $z_{Scale\ 3\_Pre\text{-}intervention} = 2.09$, $z_{Scale\ 3\_Endpoint} = -0.01$) and physical activity ($Mean_{Scale\ 4} = 6.60$, $SD_{Scale\ 4} = 4.16$; $z_{Scale\ 4\_Pre\text{-}intervention} = 2.74$, $z_{Scale\ 4\_Endpoint} = 0.34$).

Table 1 SUDs ratings after each session

	Initial Ratings of SUDs	Final Ratings of SUDs	Comments
Session 1	6/10	7/10	Processing of recent triggers of tiredness and lethargy: TM was chosen as a scene in which DO felt tired after taking a nap.
Session 2	6/10	8/10	Processing of TM from Session 1 continued.
Session 3	6/10	8/10	Processing of TM from Session 2 continued.
Session 4	6/10	3/10	Processing of 'post exertion malaise': TM was chosen as a scene in which DO felt tired after doing exercises.
Session 5	6/10	3/10	Processing of TM from Session 4 continued.
Session 6	6/10	5/10	Processing of TM from Session 5 continued.
Session 7	7/10	3/10	Processing of 'post exertion malaise': TM was chosen as a scene in which DO felt tired the day after exercise.
Session 8	7/10	3/10	Processing of TM from Session 7 continued.
Session 9	7/10	3/10	Processing of TM from Session 8 continued.
Session 10	7/10	3/10	Processing of 'mental exhuastion': Targeting sequence include 'feelings of tiredness after school', 'feelings of tiredness because of hectic exam preparations', 'feeling mentally tired because of repetitive tasks while preparing for exams'.
Session 11	7/10	3/10	Processing of TM from Session 10 continued.
Session 12	6/10	3/10	Processing of TM from Session 11 continued.
Session 13	7/10	2/10	Processing of TM from Session 12 continued.
Session 14	7/10	6/10	Processing of TM from Session 13 continued.
Session 15	5/10	5/10	Processing of TM from Session 14 continued.
Session 16	6/10	4/10	Processing of remaining 'triggers of tiredness': TM was chosen as a scene in which DO felt tired the day after 'Pokemon walk'.
Session 17	6/10	4/10	Processing of remaining 'triggers of tiredness': TM was chosen as a scene in which DO felt physically and mentally tired on a particular evening.
Session 18	6/10	4/10	Processing of TM from Session 17 continued.
Session 19	7/10	3/10	Processing of TM from Session 18 continued.
Session 20	6/10	0/10	Processing of TM from Session 17 continued. Installation of PC of "I am in control" to a VOC of 7/7.

Table 2 Progress in FAS and CIS-20 scores across the three points of evaluation

	FAS	CIS-20				
		Scale 1	Scale 2	Scale 3	Scale 4	Total
Pre-Intervention	32	47	28	21	18	114
Midpoint	22	27	21	17	12	77
Endpoint	21	16	21	10	8	55

Scale 1 of the CIS-20 (Checklist Individual Strengths – 20) measures subjective feelings of fatigue

Scale 2 of the CIS-20 (Checklist Individual Strengths – 20) measures concentration

Scale 3 of the CIS-20 (Checklist Individual Strengths – 20) measures motivation

Scale 4 of the CIS-20 (Checklist Individual Strengths – 20) measures physical activity

Table 3 Progress in FAS and CIS-20 z scores across the initial and final points of evaluation

	FAS	CIS-20				
		Scale 1	Scale 2	Scale 3	Scale 4	Total
Pre-Intervention	2.08	1.08	2.31	2.09	2.74	2.64
Endpoint	0.2	-0.29	1.29	-0.01	0.34	0.16

Scale 1 of the CIS-20 (Checklist Individual Strengths – 20) measures subjective feelings of fatigue

Scale 2 of the CIS-20 (Checklist Individual Strengths – 20) measures concentration

Scale 3 of the CIS-20 (Checklist Individual Strengths – 20) measures motivation

Scale 4 of the CIS-20 (Checklist Individual Strengths – 20) measures physical activity

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In conclusion, the client has progressed from the clinical to non-clinical range on the FAS and CIS-20 scores over the 20 sessions of EMDR therapy. Most forming considerations place scores above the second deviation as within the clinical range, and from Table 3, there is a clear movement of FAS_{Total} and $CIS\text{-}20_{Total}$ *z*scores away from the clinical range (above 2 standard deviations) to non-clinical range (less than 5 standard deviation).

Discussion

This case study distinguishes itself by being one of the few articles on the application of EMDR to CFS. Literature search through Psych Info has indicated one other article by Royle,[1] and this is incidentally the first EMDR-related article to be featured from Singapore highlighting applications to CFS. EMDR therapy has a relatively short history in Singapore, with EMDR Singapore only being established in July 2010. The EMDR therapy community has grown in Singapore to include about 100 members, of which 30 are active EMDR therapy practitioners. There are also five practitioners who have attained facilitator status with EMDR Institute, with ongoing efforts to have certified trainers and consultants from the ranks of the EMDR Singapore community.

The present study has drawn upon cognitive behavioral concepts gleaned from the chronic pain literature mainly because of the similarities in the maintaining/perpetuating psychological factors. Essentially, the factors that maintain both chronic pain and CFS are the maladaptive thought patterns, activity avoidance and heightened sense of interoceptive bodily awareness. In a similar vein, EMDR therapy in the present study has sought to process the memory surrounding the routine of activity avoidance and desensitize the client to trigger situations that involve the interoceptive awareness of fatigue and tiredness. Irrational cognitions surrounding themes of helplessness and loss of control were also reduced with the installation of positive cognitions "I am in control". In effect, all the factors gleaned from the chronic pain literature relevant to the treatment of CFS – maladaptive cognitions, activity avoidance, and interoceptive awareness – were processed using EMDR therapy.

The client has also shown progress on all indicators of 'physical exhaustion' and 'mental exhaustion' with the FAS and CIS-20. As explained by the results, the client has progressed from the clinical to non-clinical range on the FAS and CIS-20 scores over the 20 sessions of EMDR therapy. The progress has been significant, and considering that 95% of scores fall within 2 standard deviations of the mean, there is a clear movement of FAS_{Total} and $CIS\text{-}20_{Total}$ *z* scores away from the clinical range (above 2 standard deviations) to the non-clinical range.

Notwithstanding the highly limited studies of EMDR therapy application to CFS – locally and globally, the issue is also the lack of public awareness of the utility of EMDR therapy. There is a scarcity of referrals through the national health system for EMDR therapy to CFS; mainly because of the belief that CFS is a medical condition that requires medical interventions. While the next step forward is to propagate a higher level of research with studies and randomized controlled trials of larger sample sizes, EMDR therapy practitioners are limited by the lack of referrals from the health system. As an example to illustrate the point, the author of the present article has only had one referral for CFS in the 10years of EMDR therapy practice! This article is therefore an attempt to propagate awareness for the utility of EMDR therapy to the treatment of CFS.An aspect common to both case studies– undertaken by Royle[1] and the present article – has indicated client histories of five years of debilitating CFS symptoms. Both clients have also tried other treatment methods, but with little success. The hypothesis of the present author is that the viral infection precipitating CFS have cleared in the five years, and what is showing up with the CFS symptoms is psychosomatic and related to unprocessed memories of the feelings of tiredness in various situations. In other words, the success of EMDR applications to CFS symptoms – as posited by the present author – is limited to cases in which there has been a significant recovery period for the clearing of the viral infection. More specifically, EMDR therapy is processing the memories of the "feelings of fatigues/tiredness" for an individual who has already recovered from viral infection.

As a corollary, this phenomenon is akin to how EMDR therapy has been useful with treating phantom limb pain (PLP). In the only two studies indicating EMDR therapy applications for phantom limb syndrome,[15,16] the afflicted individuals are still experiencing pain intensities despite the amputation of the limbs. Similarly, the two clients in both case studies[1] are still experiencing symptoms of fatigue despite the clearing of the viral infection. The ongoing fatigue symptoms, like the pain symptoms that persist despite the amputation of limb in PLP, are a psychosomatic phenomenon of unprocessed memories that clears with EMDR therapy processing.

The hypothesis that the success of EMDR applications to CFS symptoms is limited to cases of whom there has been a significant recovery period for the clearing of the viral infection is not examined in the present study, largely due to limitations in the sample size (N=1). The validation of this hypothesis would require exploration of the differences between two samples of subjects with CFS, one sample consisting of patients of whom the viral infection has not cleared and the other sample consisting of patients in which there is a significant recovery period with the viral infection cleared. A randomized controlled trial looking at systematic differences between these two samples would be a significant step forward in understanding how affected individuals can recover from CFS, as indicated by studies undertaken by Castell, Malouff & Price et al.,[3–5]

Conclusion

In conclusion, the results show that EMDR therapy can be an encouraging, non-invasive and relatively short strategy to the treatment of CFS. While these results need to be supplemented by other studies covering a larger population and the use of a randomized control group, the results of the present finding are still encouraging because they suggest that a psychological treatment based on EMDR techniques and adapted to the specificity of CFS could be effective in bringing relief to patients.

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Conflicts of interest

Author declares there are no conflicts of interest.

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