

# Treating combat-related Posttraumatic Stress Disorder using Therapeutic Fly-Fishing with EMDR (TF-EMDR)

A Parmenter

## Abstract

Therapeutic fly-fishing is a nature-based intervention that is experiencing increased use to adjunct mental health treatment with current and former uniformed service professionals. While promising, literature suggesting the use of therapeutic fly-fishing with evidenced-based psychotherapy for posttraumatic stress disorder (PTSD), or any other mode of psychotherapy, does not appear to exist. This raises several questions regarding the ethics and fidelity of current uses of fly-fishing during a person's mental health care. Because of these concerns, the author explores literature surrounding the use of therapeutic fly-fishing for combat-related PTSD and offers a way to integrate fly-fishing directly within a well-researched and widely used PTSD treatment modality: Eye Movement Desensitization and Reprocessing (EMDR) therapy. The distinct phases of EMDR are demonstrated through a treatment protocol, followed by implementation suggestions for interested mental health professionals, organisations and other treatment providers worldwide. The author hopes that clinicians and treatment programs will better understand the importance of using trained psychotherapists to facilitate trauma treatment—with the model presented as one way to integrate the worlds of nature-based treatment and evidence-based practice easily. Finally, this paper serves as a call for research into the concept of Therapeutic Fly-Fishing with EMDR (TF-EMDR) and other such integrations of nature- and evidence-based PTSD treatment approaches.

**Keywords:** EMDR; Nature-Based Therapy; Military Veterans; PTSD; Fly-Fishing

## Introduction

Nature-based approaches are promoted as cost-effective wellness and confidence-building activities to adjunct traditional mental health treatment. Nature-based interventions (NBI) and therapies are designed for specific populations within carefully chosen natural settings, providing an experiential vehicle to increase wellbeing—linking mind and body health through a person's connection to the environment.<sup>1</sup> A recent systemic literature review regarding the use of NBI for comorbid mental health disorders<sup>2</sup> concluded that nature is an essential component of healing for health professionals to consider. Although few studies have been produced to evaluate the efficacy of NBI and mental disorders, a 2018 study of incarcerated persons provides evidence that emotional health can be improved simply by engaging with nature.<sup>3</sup>

Stigma related to psychotherapy and confusing messages about confidentiality prevent many

military and uniformed personnel from accessing traditional mental health services.<sup>4</sup> This results in less prevention and addressing mental health after deterioration, resulting in longer periods away from work, higher direct care costs and the potential need for retraining. Moreover, psychotherapy can be expensive.<sup>5</sup> Therefore, non-traditional approaches facilitated by qualified civilian practitioners may appeal to military members and taxpayers alike. Several nature-based mental health programs appear to offer support for uniformed populations even though research is sparse. Although just a handful of randomised controlled trials in this area exist, they appear to show positive results when used to assist the treatment of combat-related posttraumatic stress disorder (PTSD).<sup>6</sup>

This is still a new frontier with many possibilities yet limited methods for management and cultivation in the area of nature-based treatment of PTSD. Therefore, the reader must recognise the potential good that can result from integrating nature into

the treatment for active military and veterans, done within evidence-based frameworks; scientifically proven approaches to achieve results that can be evaluated empirically and delivered with fidelity.

While suggested as useful, it is difficult to identify the types of NBI that are used specifically for treating PTSD and where consistency lies. One form of NBI—therapeutic fly-fishing—appears to show promise. It has experienced increased usage among programs serving active military and veteran individuals in recent years. A small number of published articles highlight fly-fishing as a form of recreation therapy that appears to aid in alleviating symptoms, assist with stress management and instil a positive future focus among combat veterans diagnosed with PTSD.<sup>7,8,9</sup> Despite being discussed as a therapy for PTSD, a complex mental disorder, no researched form of therapeutic fly-fishing appears to be facilitated by licensed mental health professionals. Likewise, there seems to be no research that integrates evidence-based treatment for PTSD with therapeutic fly-fishing. In their paper about fly-fishing with combat veterans, Bennet and associates recommended using the activity alongside other methods for treating PTSD<sup>7</sup> without again suggesting integration with an evidence-based treatment or specifying which models to explore. These issues are concerning, as treating any mental disorder by an unqualified person interferes with a person's trauma recovery<sup>4</sup> and is widely understood as unethical.<sup>10</sup>

Fortunately, various studies have been conducted on the use of evidence-based psychotherapies for the treatment of PTSD. Eye Movement Desensitization and Reprocessing (EMDR) therapy is a psychotherapy that was initially developed as a way to lessen distress related to traumatic memories.<sup>11</sup> It is a cost-effective and significantly researched PTSD treatment method,<sup>12</sup> accepted as safe and effective for treating even the most serious comorbid cases.<sup>13</sup> EMDR is identified by the World Health Organization as a primary treatment for mental disorders resulting from traumatic stress.

In the United States, the Department of Veterans Affairs (VA) partnered with Project Healing Waters—one of the country's largest organised therapeutic fly-fishing programs with affiliations in Australia, Europe and Canada. While veterans' agencies from various nations consider EMDR as a recommended evidenced-based therapy for PTSD, neither therapeutic fly-fishing nor any other form of nature-based activity are mentioned in a comprehensive review of randomised controlled trials studying the use of EMDR with combat veterans.<sup>14</sup> This article introduces the concept of Therapeutic Fly-

Fishing with EMDR (TF-EMDR) as a nature-based EBP framework, and *Seiyu-zuri* as the first method for delivering the EMDR Standard Protocol in this way. It serves as an encouragement for treatment providers, especially those engaged with military- and veteran-focused PTSD treatment, to consider the direct integration of therapeutic fly-fishing and EMDR when appropriate. Empirical research for integrating fishing with EMDR is encouraged, as are other possible integrations of evidence-based PTSD treatments with other NBIs.

### Eye Movement Desensitization and Reprocessing (EMDR) Therapy

EMDR follows an eight-phased Standard Protocol and is currently one of the most researched psychotherapies showing efficacy in PTSD treatment.<sup>15</sup> Guided by a trained EMDR Therapist, a client processes imagery, physical sensations, feelings and other associations that arise as a traumatic memory is accessed. Repetitive saccadic eye movements, or other forms of alternating physical stimulation known in EMDR as bilateral stimulation (BLS), aid adaptive information processing in a way that is believed to be similar to what happens during REM sleep.<sup>16</sup> Both EMDR theory and research acknowledge that this decreases the physiological and psychological intensity of a memory as it is reprocessed in a new adaptive form within a person's permanent working memory.<sup>11,17,18,19</sup> While effective across many populations, a recent meta-analysis by Peter Coventry and colleagues suggests specific efficacy of EMDR with active and veteran military members over other treatment methods.<sup>20</sup>

As an advanced form of psychotherapy, EMDR may only be conducted by qualified mental health professionals who have completed or are in consultation as they complete a rigorous training program. Many training programs are accredited by a regional EMDR association, such as EMDR Association of Australia (EMDRAA), EMDR Europe and EMDR International Association (EMDRIA) in the United States. Thus, readers cannot use the following information to treat clients unless they have participated in an approved EMDR Basic Training, and trained EMDR therapists are encouraged to seek training in TF-EMDR before actively utilising this in therapy. A trained mental health professional interested in practising EMDR can become an *EMDR Therapist* through approved trainers. EMDR associations can serve as accrediting bodies, and as clearinghouses for consumer-focused information on EMDR. For example, the eight phases of EMDR therapy (Evaluation/History taking; Preparation; Assessment; Desensitisation; Installation; Body

scan; Closure; Reevaluation) are introduced at EMDRIA.org. Finally, many associations manage online directories of trained EMDR therapists.

### Five-senses experiencing

New research finds evidence that increased awareness of the five senses and a person's subjective experience will influence wellbeing and resilience even during intense emotional experiences.<sup>21</sup> It is important to understand that cognitive networks contain much more than thoughts and words. Learning takes place as emotions are held in the body. The integration and processing of information from external and internal stimuli is a key function that has enabled humanity to survive and thrive across ages of traumatic and disturbing experiences. From an epigenetic perspective, frequent experiences of any consistent emotional experience can significantly impact a community when felt at large.<sup>22</sup>

Emotions are physiological in nature, meaning that a link between chronic experiences of negative emotions and physical illness exists.<sup>23</sup> Despite this, recent studies on PTSD diagnosed in combat veterans reveal the dangers associated with learning to numb emotional discomfort. Worsened mental health and quality of life, relationship struggles and increased regularity of behavioural traits such as aggression, avoidance of or noncompliance in psychological or medical care, and harm to self and others appear more likely and exacerbated when emotional numbing is a trait.<sup>24</sup> As a result, it is possible to assume that engaging with natural urges to avoid psychological threats influences the development of behaviours and associated physiological experiences that can maintain and worsen a person's daily experiences of psychological trauma. Undoing this avoidance, and moving a person towards healing from trauma, involves connecting both a person's mind and body to positive experiences associated in some way with the traumatic wound. Decreasing psychological fusion with negative emotions, while increasing mental flexibility and the ability to have a full range of experiences can allow a person to move towards an adaptive resolution that allows them to live life more fully.<sup>25,26,27</sup>

### Bilateral stimulation and five-senses experiencing

In a review of *Levine and Shefner's Fundamentals of Sensation and Perception*,<sup>28</sup> the author remarked that an integrated sensory experience is 'worth ten-thousand words'.<sup>29</sup> This statement is an accurate description of the complete picture that takes shape as an adaptive resolution in EMDR—when the linkage

of information from flexible memory networks into maladaptive ones causes a shift in a person's trauma narrative toward letting go.<sup>17,27</sup>

Since its inception by Francine Shapiro in 1987, EMDR has involved the direct integration of a person's cognitive and physiological experiences. This integration is a hallmark of the model that is present throughout the eight phases of EMDR. The explicit necessity of a whole-person approach and a person's physical and environmental awareness has been amplified throughout the development of EMDR over the past 3 decades. As such, a felt link between mental experiences and physical sensations is widely understood as key for anyone to prepare for adequately and experience posttraumatic growth.<sup>25,27,30</sup>

Rapid eye movements influence memory consolidation and information processing.<sup>28,27,31</sup> Techniques like BLS, such as therapist-controlled saccadic eye movements via a handheld wand or fingers moving left to right, and other forms of alternating physical stimulation, are key components of EMDR. Alternating physical movement or stimulation allows a person to remain dually attentive to their internal experience while maintaining a grounded, mindful connection to the here and now.<sup>25,27</sup> Initially discovered as eye movements alone, BLS techniques are used throughout EMDR to help activate information sharing between a person's cerebral hemispheres to relieve distressful emotional and physical sensations associated with trauma.<sup>27</sup> Thus, strengthening the corpus callosum and creating space for flexibility and mobilisation when experiencing both threatening and non-threatening stimuli.<sup>32,33</sup>

Over 30 years of research and professional experimentation with BLS have found that various types of cross-lateral physical movement have similar positive effects as using eye movements during EMDR. While some research promotes therapist-controlled eye movements as more effective for information processing and memory reconsolidation, other forms of alternating physical stimulation are frequently used in EMDR.<sup>34</sup> Examples of alternative forms of BLS include the use of alternating stereo sounds and handheld electrical tactile stimulation, as well as rhythmic alternating physical movements such as feet tapping, tapping on the knees, movement of the arms and using recorded visual light streams to regulate one's own eye movements manually. An action known as the 'butterfly hug' is a specific self-administered BLS technique that involves crossed arms over a person's chest, with rhythmic alternating hand tapping on their shoulders or chest area.<sup>27</sup>

The effects of BLS appear to be no different whether therapist-controlled or self-administered.<sup>31,35,25,27</sup> BLS influences the integration of a complete five-senses experience in EMDR. Although specific uses of self-administered alternating physical stimulation will be discussed later in this paper, the form of BLS used during an EMDR session and its mode of administration can vary based on clients' needs.<sup>27,36</sup>

### TF-EMDR: Landing the method

Various forms of fly-fishing are used throughout the world, each with its own cultural and historical roots. Forms that are more commonly practised in Western societies find roots in historical European culture. This form, known to many as 'rod and reel' fly-fishing, is a technological advancement on simpler fishing methods that used only rod, line and bait.<sup>37</sup> Reel-free fly-fishing has experienced a boost in popularity over recent years. Tenkara fishing (*tenkara-zuri* in Japanese), a form of fly-fishing traditionally used in Japanese mountain streams, has developed an enthusiastic North American audience since the first regional brand took root there in 2009. Tenkara is similarly popular in other areas such as Europe, Australia and New Zealand. With a fixed line tied to a flexible rod, it is understood as an efficient way for anglers to cast across a diversity of ecosystems. As most rods retract to a size small enough to fit into a backpack, it is known as a portable, simplistic and barrier-free method of fly-fishing.<sup>37,38</sup>

While most therapeutic fly-fishing programs reviewed do not explicitly specify the type of fly-fishing used, most appear to apply the rod and reel method common in European-settled areas. To directly integrate fly-fishing with an EBP, the author has chosen tenkara as a method due to the issues of simplicity and cost. Without a reel, the client is able to focus more on the motion of the cast. While writing this article, the author engaged in a personal review of North American branded ready-to-fish outfits for both rod and reel fly-fishing and tenkara. Tenkara outfits appear to be sold for as little as \$US25 with an average cost of \$US100–\$US300 depending on quality, while rod and reel outfits show averages of around \$US100–\$US900. Thus, simply choosing tenkara as a fly-fishing method appears to greatly reduce cost as a barrier to incorporating it with any therapeutic approach.

### Seiyu-zuri: The TF-EMDR Protocol

*Integrity* is a core value and key personal trait that is held in common by modern military agencies. It is defined by Merriam-Webster and Cambridge Dictionaries as adherence to a code/protocol and

describes integration. A synonym of this word, *sincerity*, is described in these same sources as a characteristic regarding genuineness or authenticity. EMDR and the practice of fly-fishing each promote growth in this area. *Seiyu* (pronounced as 'say-you'), a word in the Japanese language, can translate to 'having sincerity'. Due to the purpose of promoting genuine self-growth and integrating an established EBP protocol with therapeutic fly-fishing via tenkara-zuri, the author has chosen to also refer to the method of delivering TF-EMDR as *Seiyu-zuri*.

The following section provides a glimpse into the guiding philosophy of *Seiyu-zuri* and a description of how the EMDR Standard Protocol functions when used in this way. Additional techniques and aspects of the TF-EMDR protocol that are not mentioned here are available through consultation with the author.

### Key characteristics

There are a few important traits of this model which are unique from the sport of fly-fishing. First, it is currently designed as a one-on-one activity. The objective is not to catch fish but to expect it as a possibility while attention is placed on casting and focusing. Second, when a fish is caught or landed, it is a welcome engagement that can be a powerful experience during trauma processing. The therapist will assist the client in accepting the fish carefully and with compassion, releasing it back to the wild. Self-administered forms of BLS (such as the butterfly hug technique or another form of alternating physical movement) is then used to incorporate the experience into processing before going *back to the water*. Once back to the water, the therapist leads the client's focus to their original target to reassess distress and continue processing using the form of BLS, which is described in the next section. As a final key point, celebratory pictures of caught fish are prohibited in this method. Doing this supports the idea that *it's not about the fish*—maintaining a therapeutic frame on the activity, focused on resolution of the traumatic material, without diverting attention away from the activated memory network.

### Bilateral stimulation

As with any application of EMDR, BLS techniques are essential core functions for integrating adaptive memory networks with wounded ones. In this model, self-administered stimulation is executed by the physical movement of the rod while the client visually focuses on the presentation of the fly on the water. As this is done, a connection to their own five senses is influenced by the experience of being in nature. In the 2017 publication, *Tenkara - the book:*

*The complete guide to tenkara*, Daniel Galhardo describes two specific presentations used in this form as BLS techniques.<sup>38</sup> The 'pause-and-drift' presentation causes the fly to appear alive as it drifts with the current. Keeping their eye on the location of the fly, the client rotates their wrist slightly, so that tip of the tenkara rod moves in a saccadic stop-start motion. Thus, pulling it through the water in short, controlled rhythmic bursts. The second presentation, referred to as 'pulling', moves the fly against the current. Pulling involves longer movements of the rod upstream, allowing for the client to experience slower and longer eye movements if those are more comfortable. Clients may also allow the fly to drift naturally downstream, moving their rod in the opposite direction as they prepare to cast again. When engaging in these methods of BLS, the client casts with their dominant arm while the therapist is positioned opposite to their casting direction, slightly out of view. This is a modification of an EMDR stance known as 'Ships Passing in the Night'.<sup>39</sup> Out of sight, the therapist risks less interference with the client's processing while being able to monitor body language and check in between sets of casting as necessary.

### Phases 1–2: Evaluation & Preparation

This method is a creative utilisation of the Standard Protocol for EMDR, rather than a modification of it. Evaluation should take place in a private environment, such as an office, and the Preparation Phase should begin there. Preparation allows the therapist to ensure that EMDR is appropriate for the client's presenting issue and ascertain the person's willingness and ability to use BLS to maintain a dual focus of awareness of internal and external experiences. Self-administration using a 'wand' will allow a person essentially the same method of 'casting and following', which they will experience on the water. The therapist will guide the client to simultaneously move their eyes along with the wand's motion, preparing them for an easy transition to the act of moving the rod while watching the fly. Eventually, the wand becomes the rod, and alternative forms of alternating physical stimulation can be suggested at the therapist's discretion.

When it is determined that a person can focus on alternating eye movements while physically engaged in another activity, and if there are no safety concerns regarding conducting psychotherapy in an outdoor setting, the Preparation Phase can be continued in an accessible barrier-free outdoor environment, such as a field. They are introduced to their tenkara fishing gear, provided a brief lesson on casting, and shown how to softly follow the fly's to-and-fro movements with their eyes. This experience is meant to be a brief

encounter that allows the client to practice casting and gain familiarity with the equipment prior to visiting a river or any other body of water. Phase 2, Preparation, begins away from a body of water, yet it is to be completed nearby prior to entering Phase 3 of EMDR. By doing so, the client can establish a direct felt connection to the environment where adaptive processing will happen. Additional preparation may be useful during this time, with the use of natural markers as grounding, or meaningful metaphors for desired personal qualities.<sup>36,40</sup>

### Phases 3–4: Assessment & Desensitisation

Once a client shows comfort with casting and performing self-administered BLS on the water, the therapist guides them through an assessment of the most charged areas in need of desensitisation or calming. The therapist prompts the client to notice the emotions, physical sensations, beliefs and ratings of distress and validity related to the image that best describes the worst aspect of their target. Phases 3 and 4 of EMDR transition as the therapist moves into the Ships Passing in the Night position. The therapist directs their client to feel the emotions and sensations elicited, connecting to their surrounding environment, and without filtering or passing judgement for what arises to 'cast with that'. Thus, initiating processing of the traumatic memory.

As they cast, the client can choose either the 'pause-and-drift' or 'pulling' movements, or let the fly naturally drift downstream—whichever is most comfortable. If focusing on the cast is difficult, the therapist can prompt the client to use an alternative form of BLS (either administered by the therapist or self-administered by the client), such as therapist-controlled eye movements, leg tapping or the butterfly hug technique, until they express comfort in casting again. The therapist may also recommend any alternating movement at their discretion based on assumed effects of the speed or mode of BLS on the client. As the fly moves up or downstream, one complete set of casting concludes one set of BLS. The therapist checks with the client, once finishing the first set, for any new information or signs that the disturbance is changing and again directs them to 'cast with that'. If two sets have been completed, with the client expressing progressive insight or signs of relief, the therapist may allow them to cast until they feel the need to pause.

If the client appears to be experiencing distress, no change in insight, or if they have wandered into other thoughts, the therapist can intervene using a 'cognitive interweave' or redirect their mental focus back to the target image for any new information. A

cognitive interweave is an EMDR technique in which a therapist provides a person-centred, open-ended question when a client's thought process appears to be looping, their subjective distress appears to be increasing, or if they are stuck in any other way. Interweaves can also be somatic. They are used strategically if the therapist perceives that it may help the mental processing move towards a natural, adaptive resolution.<sup>26,41,42</sup> Using these techniques, the trained therapist will find ease in conducting EMDR therapy as usual. If a session ends and distress still exists, incomplete processing can be held with a 'container exercise' using metaphors unrelated to present surroundings so that nature is just associated with healing. The container exercise is another specific EMDR technique,<sup>26</sup> used to help close sessions when processing has not finished. This exercise provides clients with a way to mentally detach from traumatic material between therapy sessions if thinking about it causes pain, urges for experiential avoidance or does not serve them in another way.

### Phases 5–8: Installation, Body scan, Completion and Reevaluation

When distress around the client's chosen target is alleviated, a positive cognition or self-belief is installed using appropriate BLS. Standing comfortably in or near the river, the client then pays attention to any sensations arising in their body as signs for potential processing. If there are no distressing physical sensations to revisit, the session is closed with a round of slow, deep breathing followed by psycho-education around wellness planning and the potential for continued processing. The final phase of EMDR takes place during the next treatment day, and a return to the river takes place if continued processing or resourcing appears necessary.

### Discussion

Due to the potential low cost associated with facilitating TF-EMDR, ease of integration can also be assumed. However, as EMDR practice requires graduate-level mental health professionals to undergo specific rigorous training by an approved training institute, mental health treatment programs will experience costs related to hiring or training an EMDR Therapist if there is no trained person on staff. If program leadership determines that it is more affordable to hire a trained EMDR Therapist, EMDR associations maintain searchable databases of professionals who have completed the minimum of an approved basic training in EMDR. Program leadership should weigh the costs related to training versus hiring to determine which option is most cost-effective.

Literature is limited regarding the general integration of nature in the treatment of combat-related PTSD. Current research into therapeutic fly-fishing avoids exploring full integration with an EBP and only explores programs facilitated by recreation therapists or others who are not qualified as mental health professionals. As it is becoming a widely practised adjunctive modality in treatment among individuals with combat-related PTSD, fly-fishing invites the natural integration of evidence-based psychotherapies into an ecological frame. It offers opportunities for increased consistency, order and desirable outcomes in the practice of caring for military and veterans' mental health. Due to the established research on both EMDR and preliminary explorations of basic therapeutic fly-fishing with combat veterans, it is assumed that TF-EMDR can be easily utilised across the spectrum of outpatient mental health treatment settings and provide an efficacious way to reach military-affiliated individuals who are culturally more inclined to avoid treatment as usual.<sup>4</sup>

Adjustments should be considered when working with clients with physical limitations or mobility issues impacting engagement. The nonprofit organisation Project Healing Waters serves as one example of an organisation that has found ways to accommodate fly-fishing for combat veterans with such needs.<sup>9</sup> The broader culture can also be considered to accommodate family members impacted by combat-related PTSD or other forms of trauma. Because current TF-EMDR utilises the Standard Protocol of EMDR, it can be offered to address single incident trauma and historical trauma. As a result, research and therapeutic implementation of TF-EMDR should be considered for non-combat wounds, as mental injuries from military service can be exacerbated by previous traumatic experiences in a person's history.<sup>43</sup>

Qualitative research into this model is highly recommended, and examinations of other means to meld together NBI with evidence-based treatment are also encouraged. Although the practice of EMDR while fly-fishing offers a way to utilise five-senses experiencing and the somatic element of EMDR therapy, practitioners and researchers should consider additional practices as well. Future directions for nature-based EMDR could include other activities, such as hiking or climbing, which involve bilateral movement and can be done safely while following the EMDR Standard Protocol. The author hopes that readers will consider additional ways to adapt existing evidence-based treatments for use in nature. The needs and treatment interests of any population are as diverse as the environment within

and surrounding the water. Therefore, we should also assume that EMDR is not the only way to deliver evidence-based psychotherapy from an ecological perspective. EMDR is one of several methods useful for treating combat-related PTSD.<sup>12,13,44</sup> For example, in addition to EMDR, the World Health Organization lists cognitive behavioural therapy (CBT) as another valid and recommended EBP for traumatic stress. Research into the effectiveness of TF-EMDR, or any other nature-based integration of EMDR, should be conducted against a nature-based integration of CBT and treatment as usual. Research and program development can also explore implementation outside of the context presented in this article. With the assumption that posttraumatic growth is not limited to those who experience war, adaptations are possible across all age groups and with civilians suffering from other types of psychological trauma.

Finally, how should TF-EMDR and other nature-based EBPs be implemented? Is personal willingness a key factor for treatment success, or does the evidence behind EMDR mean that we can rely on the Standard Protocol across implementations? Existing evidence sets the direction. Though, personal willingness and military culture may determine more regarding overall engagement and treatment outcomes. Military health agencies, veteran administrations, and other such organisations can address this with a top-down approach that deviates from messaging as usual and helps to distance mental health care from beliefs related to negative consequences.<sup>4,5</sup> Future research should incorporate perceptions of stigma within these treatments, as doing so can help target ongoing implementation and service delivery while avoiding pitfalls wherever they may be. It can also explore when a referral to TF-EMDR is most useful and investigate its usefulness as employed through intensive group treatment programs versus individual psychotherapy. Finally, the study of TF-EMDR utilisation should be considered within law enforcement, fire service, emergency response, corrections and other unique, high stress uniformed cultures.

### Conclusion

The author believes that incorporating fly-fishing with EMDR offers an appealing, engaging and tolerable approach to trauma recovery that is refreshing and relevant to the needs of active and veteran military members. Engaging with psychotherapy and five-senses experiencing differently may also increase psychological flexibility, alleviate distress, increasing a person's creativity and capacity to handle new stressors as they arise. As there seem to be a number

of nature-based veteran- and active military-focused PTSD treatment offerings in existence, combined NBI and EBP approaches can add value to the healthcare system while making certain that the work is happening in the safest, most ethical and efficacious ways possible. TF-EMDR is just one proposed method of doing so. By following the Standard EMDR Protocol, the author believes that trained EMDR therapists will have little difficulty learning Seiyu-zuri in its full form and incorporating it into their practices.

The author plans to engage in research exploring the benefits of Therapeutic Fly-Fishing with EMDR compared to other evidence-based psychotherapies for PTSD. Qualitative research can also focus on the type of combat trauma experienced. It can be used as a means to explore the use of TF-EMDR as described by the author, in addition to commonly used modified EMDR protocols for addressing complex/relational trauma, urge reduction, critical incident stress, acute stress and in group settings.

### Conflict Of Interest Statement

Anthony Parmenter has a Master of Arts in Clinical Mental Health Counseling from Antioch University New England, is a licensed mental health professional in the United States and is acknowledged by the EMDR International Association (EMDRIA) as an EMDR Certified Therapist and Consultant-in-training. As an OEF veteran of the United States Air Force, the author works in various capacities supporting military veterans and first responders. When this article was submitted, he was employed full-time by Invest EAP – Centers for Wellbeing, the Vermont state government's Employee Assistance Program. He holds consultation roles with state governments in the United States, trauma recovery tech startups, and provides professional consultation in trauma therapy and EMDR in his associations with EMDRIA and the Parnell Institute for EMDR. The author holds an academic appointment with Bellevue University and operates a private EMDR psychotherapy, coaching and consultation practice that facilitated the development of the ideas presented in this paper. He actively offers TF-EMDR as therapy and offers advanced training to psychotherapists. No other form of financial compensation or support was involved. The terms 'Therapeutic Fly-Fishing with EMDR (TF-EMDR)' and 'The Seiyu-zuri Method' are pending trademarks with USPTO and cannot be used commercially without explicit permission from the author.

## Acknowledgements

The author expresses appreciation to the EMDR International Association (EMDRIA) and the Parnell Institute for EMDR, as well as consultants Kit Dowling, Patty Monteleone, Aaron Koba, Kambria Evans and colleague Renee Seff for their guidance and professional support during the development of TF-EMDR. Invest EAP – Centers for Wellbeing encouraged the author's development as an EMDR Therapist, Bellevue University offered library resources which aided research, and Daniel Galhardo provided expert insight into tenkara fishing methods. Finally, the author expresses appreciation to fly-fishing guide Ryan Heck for the introduction of therapeutic fly-fishing while employed together at the

Brattleboro Retreat's Uniformed Services Program in Vermont, USA.

## Correspondance

Email enquiries can be sent to the author at [seyuiht@outlook.com](mailto:seyuiht@outlook.com)

---

*Corresponding Author: Anthony Parmenter,*  
[aparmenter@bellevue.edu](mailto:aparmenter@bellevue.edu)

*Authors: A Parmenter*

*Author Affiliations:*

*1 Vermont Agency of Human Services – Department of Vocational Rehabilitation / Invest EAP – Centers for Wellbeing*

## References

1. Corazon SS, Stigsdotter UK, Jensen AGC, Nilsson K. Development of the nature-based therapy concept for patients with stress-related illness at the Danish healing forest garden Nacadia. *Journal of Therapeutic Horticulture*. 2010;20:30-48.
2. Trøstrup CH, Christiansen AB, Stølen KS, Nielsen PK, Stelter R. The effect of nature exposure on the mental health of patients: a systematic review. *Quality of Life Research*. 2019;28(7):1695–1703. Available from: <https://doi-org.ezproxy.bellevue>
3. Toews B., Wagenfeld A, Stevens J. Impact of a nature-based intervention on incarcerated women. *International Journal of Prisoner Health*. 2018;14(4):232–243.
4. Nazarov A, Fikretoglu D, Liu A, Richardson JD, Thompson M. Help-seeking for mental health issues in deployed Canadian Armed Forces personnel at risk for moral injury. *European Journal of Psychotraumatology*. 2020;11(1):1–11. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1080/2008198.2020.1729032>
5. Dondanville KA, Borah EV, Bottera AR, Molino AT. Reducing Stigma in PTSD Treatment Seeking among Service Members: Pilot Intervention for Military Leaders. *Best Practice in Mental Health*. 2018;14(1):15–26.
6. Poulsen DV. Nature-based therapy as a treatment for veterans with PTSD: what do we know? *Journal of Public Mental Health*. 2017;16(1):15–20. Available from: <https://doiorg.ezproxy.bellevue.edu/10.1108/JPMH-08-2016-0039>
7. Bennett J, Piatt J, Van Puymbroeck M. Outcomes of a Therapeutic Fly-Fishing Program for Veterans with Combat-Related Disabilities: A Community-Based Rehabilitation Initiative. *Community Mental Health Journal*. 2017;53(7):756–765. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1007/s10597-017-0124-9>
8. Bennett J., Van Puymbroeck M, Piatt JA, Rydell RJ. Veterans' Perceptions of Benefits and Important Program Components of a Therapeutic Fly-Fishing Program. *Therapeutic Recreation Journal*. 2014;48(2):169–187.
9. Craig PJ, Alger DM, Bennett JL, Martin TP. The Transformative Nature of Fly-Fishing for Veterans and Military Personnel with Posttraumatic Stress Disorder. *Therapeutic Recreation Journal*. 2020;54(2):150–172. Available from: <https://doi-org.ezproxy.bellevue.edu/10.18666/TRJ-2020-V54-12-9965>
10. American Psychological Association. Ethical principles of psychologists and code of conduct. 2017. Available from: <https://www.apa.org/ethics/code>
11. Shapiro F. Efficacy of the Eye Movement Desensitization procedure in the treatment of traumatic memories. *Journal of Traumatic Stress*. 1989;2(2):199–223.

12. Mavranouzouli I, Megnin-Viggars O, Grey N, Bhutani G, Leach J, Daly C, Dias S, Welton NJ, Katona C, El-Leithy S, Greenberg N, Stockton S, Pilling S. Cost-effectiveness of psychological treatments for post-traumatic stress disorder in adults. *PloS One*. 2020;15(4):e0232245. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1371/journal.pone.0232245>
13. van den Berg D, de Bont P, van der Vieuvel B, de Roos C, de Jongh A, Van Minnen A, vander Gaag M. Prolonged Exposure vs Eye Movement Desensitization and Reprocessing vs Waiting List for Posttraumatic Stress Disorder in patients with a Psychotic disorder: A randomized clinical trial. *JAMA Psychiatry*. 2015;(3):259-267. doi:10.1001/jamapsychiatry.2014.263772
14. Matthijssen SJMA, Lee CW, de Roos C, Barron IG, Jarero I, Shapiro E, Hurley EC, Schubert, SJ, Baptist J, Amann BL, Moreno-Alcázar A, Tesarz J, de Jongh A. Status of EMDR therapy, target areas, and goals. *Journal of EMDR Practice and Research*. 2020;14(4):241-248.
15. Castelnuovo G, Fernandez I, Amann BL. Present and future of EMDR in clinical psychology and psychotherapy. *Frontiers in psychology*. 2019;10:2185. DOI:10.3389/fpsyg.2019.02185
16. Stickgold R. EMDR: A putative neurobiological mechanism of action. *Journal of Clinical Psychology*. 2002;58:61-75.
17. Maxfield L, Melnyk WT, Hayman GC. A working memory explanation for the effects of eye movements in EMDR. *Journal of EMDR Practice and Research*. 2008;2(4):247-261.
18. Siegel D. The Developing Mind and the Resolution of Trauma: Some Ideas About Information Processing and an Interpersonal Neurobiology of Psychotherapy. In F. Shapiro (Ed.), *EMDR as an integrative treatment approach: Experts of diverse orientations explore the paradigm prism*, Washington, D.C.: American Psychological Association Books. 2002.
19. van den Hout MA, Engelhard IM, Beetsma D, Slofstra C, Hornsveld H, Houtveen J, Leer A. EMDR and mindfulness. Eye movements and attentional breathing tax working memory and reduce vividness and emotionality of aversive ideation. *Journal of Behavior Therapy and Experimental Psychiatry*. 2011;42(4):423-431.
20. Coventry PA, Meader N, Melton H, Temple M, Dale H, Wright K, Cloitre M, Karatzias T, Bisson., Roberts NP, Brown JVE, Barbui C, Churchill R, Lovell K, McMillan D, Gilbody S. Psychological and pharmacological interventions for posttraumatic stress disorder and comorbid mental health problems following complex traumatic events: Systematic review and component network meta-analysis. *PLoS Medicine*. 2020;17(8):1-34. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1371/journal.pmed.1003262>
21. Brown CL, Van Doren N, Ford BQ, Mauss IB, Sze JW, Levenson RW. Coherence between subjective experience and physiology in emotion: Individual differences and implications for well-being. *Emotion*. 2020;20(5):818-829. Available from: <https://doi-org.ezproxy.bellevue.edu>
22. Straight B, Needham BL, Onicescu G, Wanitjirattikal P, Barkman T, Root C, Farman J, Naugle A, Lalancette C, Olungah C, Lekalgitele S. Prosocial emotion, adolescence, and warfare: DNA methylation associates with culturally salient combat variables. *Human Nature*. 2019;30(2):192-216. Available from: <https://doiorg.ezproxy.bellevue.edu/10.1007/s12110-019-09344-6>
23. Kunzmann U, Schilling O, Wrosch C, Siebert JS, Katzorreck M, Wahl H-W, Gerstorf D.. Negative emotions and chronic physical illness: A lifespan developmental perspective. *Health Psychology*. 2019;38(11):949-959. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1037/hea0000767.supp>
24. Schuman DL, Bricout J, Peterson HL, Barnhart S. A systematic review of the psychosocial impact of emotional numbing in US combat veterans. *Journal of Clinical Psychology*. 2019;75(4):644-663. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1002/jclp.22732>
25. Parnell L. *A therapist's guide to EMDR: Tools and techniques for successful treatment*. New York: W.W. Norton. 2007
26. Shapiro F. *Eye Movement Desensitization and Reprocessing: Basic Principles, Protocols and Procedures* (2nd ed.). New York: Guilford Press. 2001.
27. Shapiro F. *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures* (3rd ed.). Guilford Press. 2017

28. Levine MW. *Levine and Shefner's Fundamentals of Sensation and Perception* (3rd ed.). Oxford University Press. 2000.
29. Ward PA. Review of Levine and Shefner's fundamentals of sensation and perception (3rd ed). *Journal of Psychophysiology*. 2002;16(2):127–128. Available from: <https://doi.org.ezproxy.bellevue.edu/10.1027//0269-8803.16.2.127>
30. van der Kolk BA. Beyond the talking cure: Somatic experience and subcortical imprints in the treatment of trauma. In F. Shapiro (Ed.), *EMDR as an integrative treatment approach: Experts of diverse orientations explore the paradigm prism*, Washington, D.C.: American Psychological Association Books. 2002.
31. Frith E, Loprinzi PD. Interhemispheric Activation and Memory Function: Considerations and Recommendations in the Context of Cardiovascular Exercise Research. *Psychological Reports*. 2019;122(6):2396–2405. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1177/0033294118790906>
32. O'Hearn K, Asato M, Ordaz S, Luna B. Neurodevelopment and executive function in autism. *Development and Psychopathology*. 2008;20:1103–1132.
33. Saar-Ashkenazy R, Cohen JE, Guez J, Gasho C, Shelef I, Friedman A, Shalev H. Reduced corpus callosum volume in posttraumatic stress disorder highlights the importance of interhemispheric connectivity for associative memory. *Journal of Traumatic Stress*. 2014;27(1):18–26. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1002/jts.21887>
34. Schubert SJ, Lee CW, Drummond PD. The efficacy and psychophysiological correlates of dual-attention tasks in eye movement desensitization and reprocessing (EMDR). *Journal of anxiety disorders*. 2011;25(1):1-11.
35. Gainer D, Alam S, Alam H, Redding H. A flash of hope: Eye movement desensitization and reprocessing (EMDR) therapy. *Innovations in Clinical Neuroscience*. 2020;17(7-9):12–20.
36. Parnell L. *Attachment-focused EMDR: Healing relational trauma*. New York, NY, Norton. 2013
37. Chouinard Y, Mathews C, Mazzo M. *Simple fly fishing: techniques for tenkara and rod & reel* (revised 2nd ed.). Ventura, CA: Patagonia Books. 2019.
38. Galhardo D. *Tenkara - the book: The complete guide to tenkara*. Boulder, CO: Tenkara Publishing. 2017
39. Beere D. An EMDR protocol for dissociative identity disorder (DID). In Marilyn Luber (ed). *Eye Movement Desensitization & Reprocessing (EMDR) scripted protocols: Special populations* (387-426). New York: Springer. 2009
40. Korn DL, Leeds AM. Preliminary evidence of efficacy for EMDR resource development and installation in the stabilization phase of treatment of complex posttraumatic stress disorder. *Journal of Clinical Psychology*. 2002;58(12):465.
41. Dworkin M.. Integrative approaches to EMDR: Empathy, the intersubjective, and the cognitive interweave. *Journal of Psychotherapy Integration*. 2003;13(2):171–187. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1037/1053-0479.13.2.171>
42. Flint T, Elkins Y. F-TEP: Fragmented traumatic episode protocol. *Practice Innovations*, 2021;6(1):17–29. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1037/pri0000135>
43. Bosch J, Mackintosh MA, Wells SY, Wickramasinghe I, Glassman LH, Morland LA. PTSD treatment response and quality of life in women with childhood trauma histories. *Psychological Trauma: Theory, Research, Practice, and Policy*. 2020;12(1):55–63. Available from: <https://doi-org.ezproxy.bellevue.edu/10.1037/tra0000468>
44. World Health Organization. *Guidelines for the management of conditions that are specifically related to stress*. 2013. Available from: [https://apps.who.int/iris/bitstream/handle/10665/85111/9789241505406\\_eng.pdf;jsessionid=7203944A042F7CF6391E96F2D5A4EFD6?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/85111/9789241505406_eng.pdf;jsessionid=7203944A042F7CF6391E96F2D5A4EFD6?sequence=1)