Determining the Practicality of Utilizing Eye Movement Desensitization Reprocessing Therapy with Substance Abusing and Co-Occurring Disordered Populations in a Prison Treatment Environment

Robert D. Hanser
University of Louisiana at Monroe, USA.
E-mail: hanser@ulm.edu

Anissa Horne
University of Louisiana at Monroe, USA.
E-mail: horne@ulm.edu

Mkay Bonner
University of Louisiana at Monroe, USA.
E-mail: bonner@ulm.edu

Abstract
This manuscript provides a thorough overview of Eye Movement Desensitization Reprocessing (EMDR), demonstrating that this approach to treatment goes beyond mere technique and, instead, comprises an entire theoretical and therapeutic modality. Further, support for the use of EMDR to not only aid those in trauma but individuals with substance abuse and co-occurring disorders is given, along with an example of such use in prison environments. Because such therapeutic service delivery is uncommon in such environments and because there is a dearth of research of EMDR in the field of corrections, our current overview suggests that EMDR should be made more frequently available and more frequently studied with substance abusing inmates who are in prison environments.
Keywords: Eye Movement Desensitization Reprocessing, Substance Abuse, Co-Occurring Disorders

Eye Movement Desensitization Reprocessing as part of the Adaptive Information Processing Theory
Eye Movement Desensitization and Reprocessing (EMDR) has its genesis and initial development in 1987 through observations made by Dr. Francine Shapiro. Who took note of the effect of eye movements on emotional-cognitive processing. During the initial years of development, ranging perhaps from 1987 through to the late 1990's, EMDR was widely thought of as a technique, rather than a full theory. Indeed, Gerald Corey refers to EMDR as an exposure-based therapy that uses flooding and cognitive restructuring through the use of bilateral stimulation as a form of treatment traumatic stress disorders (Corey, 2016). While this is true, there is actually much more to this form of treatment than Corey (2016) and, as we will see, EMDR holds potential to serve a much wider array of clientele than those with stress disorder. In short, EMDR is not just for PTSD anymore. Indeed, since its inception, research has proliferated that has both validated the effectiveness of EMDR and has also added support to the notion that

EMDR consists of more than a simple technique approach and instead, is grounded in a full-fledged theoretical perspective related to behavior modification for numerous client populations.
As recent as July of 2016, Dr. Byron Simoneaux's training session on Exposure Therapy included comments on the dissension regarding the legitimacy and effectiveness of EMDR. This session included over 200 mental health professionals from many specialties including psychologists, social workers, licensed professional counselors, and rehabilitation counselors. Many of the attendees were vehement in their support or opposition of EMDR. Interestingly, the opposition occurred primarily from professionals who had no training in the full theory or even in the application of EMDR.
While not relying solely on EMDR, Juzwin (2016) cited some of the principles of EMDR as a component in a program for stress management in the field during an active high-risk public safety situation. She utilized portions of the EMDR technique during active critical incidents with law enforcement and other public safety personnel in a manner similar to the frontline therapy in military psychology. After the conclusion of the critical incident and in subsequent sessions with affected personnel, she continued to use the techniques, building upon what she started in the field. She stated that she has found particular success in reducing or managing PTSD by beginning these techniques at the scene of the critical incident, especially if the incident was of protracted duration.
Similarly, several professionals (McCoy-Arballo, Silveria, Inwald, & Price-Sharps, 2016) discussed the benefits of EMDR following the San Bernardino Terrorist Attack. Primarily they worked with first responders to the attack. But, some of them did work with civilians and the families of first responders. It was admitted that, as a whole, professionals do not agree with whether EMDR works or how it works, but some have found value in utilizing the techniques in an attempt to prevent or mitigate PTSD and the repercussions of trauma.
While there are competing explanations among researchers as to why and how EMDR works, for the purposes of this midterm, emphasis will remain on the tenets set forth by the founder, Francine Shapiro (1995), who has developed extensive empirical support for her theoretical model behind the effectiveness of EMDR. This theoretical framework is referred to as Adaptive Information Processing (AIP) and is what serves as the basic construct from which EMDR treatment planning and strategies are developed. This theoretical construct is fairly similar to the psychodynamic information processing model, "which proposes that one's natural 'completion tendency' continues to rework the traumatic information in active memory until it can be reconciled with one's internal models of the world (Shapiro, 2001: 21).
Shapiro (2001) contends that there is a neurological balance in a distinct physiologic area of our central nervous system (CNS) that promotes processing of information into an adaptive resolution. What makes the processing adaptive is if the experience is connected to associations that can be used constructively within the emotional and cognitive-schema of the individual. Shapiro (2001: 30) states simply that "what is useful is learned and stored with appropriate affect and is available for future use". During routine or even troubling experiences, people tend to think about what they experience, perhaps dream about the, and talk about them. After a while, this becomes a routine part of the schema where the experience and/or processing is no longer bothersome.
However, when an individual experiences a severe psychological trauma, it Shapiro (2001) contends that an imbalance sometimes occurs in the nervous system where, changes in neurotransmitters, adrenaline, and such, provide a physiological basis whereby the information acquired is maintained neurologically in the disturbing state of awareness are the time of the

actual incident. Thus, the original information remains in a disturbance state the impedes resolution and also is susceptible to a variety of environmental and internal cognitive triggers.

Through the use of bilateral stimulation (BLS), whereby stimuli such as directed eye movements and the simultaneous focus on traumatic memory are joined in the information processing can aid in reprocessing memories that are stored in a non-adaptive manner. It is thought that this is a process that "incudes an altered brain state that modifies the behavior of the information-processing system" (Shapiro, 2001: 33). It is interesting to point out that the dual-stimulation process is thought to also include tactile and auditory sensory processes where stimulation through alternating hand-taps or alternating noises from ear-to-ear can have similar effects in activating the information processing system.

For purposes of this exam, focus will remain on the eye movement approach to EMDR in kick-starting the physiological neural circuitry of the information processing system so that adaptive resolution can be implemented between the therapist and the client. It is thought that the AIP model theory is linked to research regarding rapid eye movement during REM stage sleep, where the resolution of emotional and stress-related information is optimally active during sleep (MacCluskie, 1998). Indeed, several researchers have showcased similar forms of working mechanisms between REM sleep and EMDR that do seem to be very plausible bases of how EMDR works (Hassard, 1996; Greenwald, 1995; MacCluskie, 1998). Researchers such as Hassard (1996) contend that the human brain hold layers of information that is connected by some unifying characteristic of the memory. Rapid Eye Movement (REM) sleep is thought to rework, relive, and reorganize information from prior experiences in a manner so that it can further the efficiency and effectiveness of our neurological functioning. This process is called "reverse learning" (MacCluskie, 1998: 120). Some researchers have concluded that the reverse-learning hypothesis is such that, unlike routine memories, traumatic memoires may be so embedded, through electro-physiological process, as to be inaccessible to respond to the reverse learning process during REM. They have simply been too well wired into the brain's circuitry to be addressed through normal channels of healing (Hassard, 1996; MacCluskie, 1998). This means, as MacCluskie (1998: 120) so succinctly summarized, "that induced eye movements recreate the reverse learning conditions normally present in R EM sleep".

Because there is support but not inconclusive evidence for these assertions, the entire array of notions associated with the Adaptive Information Processing (AIP) model are still considered to be largely theoretical. Nevertheless, Shapiro and other EMDR proponents have not shied away from empirical exploration and investigation of these assertions. In fact, Shapiro has received numerous accolades from the American Psychological Association due to her transparent research. This then seems to point toward the validity of the assumptions associated with the AIP model as well as the efficacy of the EMDR process, providing a fully developed, research-driven, theoretical construct and set of evidence-based intervention techniques. Thus, the connection between Eye Movement Desensitization Resolution (EMDR) and Adaptive Information Processing (AIP) would seem to have emerged and evolved into a coherent theoretical construct.

Evidence-Based Use with Substance Abusing & Co-Occurring Disordered Populations

With the issue of demonstrating the theoretical components underlying EMDR now complete, it should be noted that this section will demonstrate the research support for using EMDR with substance abusers and well as those with various co-occurring disorders. While EMDR is most often associated with the treatment of post-traumatic stress disorder (PTSD), research is showing that it can used effectively to treat a wide range of conditions.

This section of this midterm response will simply showcase several studies and/or sources that help to substantiate the evidence-based nature of EMDR with substance abuse, substance abuse and PTSD, as well as substance abuse and other co-occurring disorders. In presenting this research, some introductory comments should be provided. First, this research will be provided in the order of most recent to most distant, to demonstrate fresh results from the research first as this proves that EMDR is still active in the research literature as a topic of investigation. Second, this the studies presented will first focus around the use of EMDR with substance abuse, as this is the primary area of interest in this response, followed by research supporting the use of EMDR with substance abuse and co-occurring PTSD. Focus will not be provided in regard to PTSD treatment, alone, simply because there is an overwhelming and quite well-known abundance of research supporting EMDR and PTSD. What is less known is the applicability of EMDR to the treatment of substance use disorders and/or substance use disorders with comorbid PTSD. Third, the research provided is derived from multiple areas of the world and is not just based in the United States. This is a deliberate approach to showcasing research as this is thought to suggest that EMDR is generalizable to the entire worldwide community.

When considering the efficacy of EMDR in treating various forms of substance use disorder, one very recent study by Dutch researchers Qurishi, Markus, Habra, Bressers, and De Jong (2017) tested the use of EMDR in the treatment of the drug gamma-hydroxybutyric acid (GHB). The interventions targeted both negative and positive addiction oriented memory representations from the past, present, and future. This approach is nearly identical to the process used to train new EMDR therapists (see Shapiro, 2014), thus, there was likely a good deal of fidelity to the EMDR model in this study. At the conclusion of the study, progressive and long-term reductions in craving were reported. Urinalyses were conducted to ensure compliance to abstinence during the six months that followed EMDR therapy. Though this study had many limitations in its implementation (among them, a very low sample size), the rigor involved and fidelity to the EMDR protocol allow this study to still be useful in supporting the potential for EMDR. Further still, this research was conducted with a fairly under-researched drug-of-choice, making it even more important in the quest to determine whether EMDR is a viable treatment procedure for addicts.

The work of Franklin (2015) was both extensive and also encompassed of a variety of addictive disorders (i.e. gambling addiction, sex addiction, substance abuse addiction, and so forth). In relation to substance using participants, Franklin had 29 who completed both pre-test, post-test, and additional follow-ups for some type of substance use disorder. Franklin (2015) found that subjective units of distress, known as SUDS in the EMDR community, as well as cravings for alcohol significantly decreased in approximately 61 percent of the participants. Among those reporting some type of substance use disorder other than alcohol, about 81% reported significant reductions in craving symptoms. Statistically significant drops in the overall mean score for both groups remained throughout the study and during follow-up measures.

Abel and O'Brien (2014) have written a book that discusses, in detail, the use of EMDR along with stages-of-change applications (see Prochaska, DiClemente, & Norcross, 1992) in the treatment of substance abusers. This comprehensive text is grounded in a number studies that present different facets of treatment trauma and different facets of treatment addictions. These authors provide a very detailed and comprehensive examination of literature that supports the connection between life-course traumas and substance abuse; something that they contend is central to the recovery of many addicts who present for treatment. Using the stages-of-change and providing a good overview of the EMDR 8-phase process, Able and O'Brien (2014) connect these three concepts into a very coherent model for treating addictions.

Lastly, Shapiro, Vogelmann-Sine, and Sine (1994) wrote an early article on the efficacy of EMDR with the substance abusing population. This article was more an overview of how EMDR should be utilized and contained only anecdotal support, at best. The point in providing this article as part of the review is to demonstrate that even as long as 23 years ago, Shapiro and her colleagues had envisioned EMDR as being a viable tool in substance abuse treatment. Thus, the application of EMDR, in thought, is not a new idea and, given that in 2010 the Substance Abuse and Mental Health Services Administration (SAMHSA) has listed EMDR in the National Registry of Evidence Based Programs and Practices (NREBPP), it would appear that the use of EMDR with the substance abuse population is an accepted practice in contemporary times.

Substance Abuse & PTSD

One study by Perez-Dandieu, Lenoir, Othily, Tapia, Cassen, and Delile (2015) examined the outcomes of symptoms for both PTSD, addiction severity, and cravings, among 7 women in a treatment program in France. During the initial phases of treatment, Perez-Deandieu at al. (2015) found support for EMDR effectiveness in reducing subjective units of distress, PTSD symptoms (using the PCL-S) as well as early maladaptive schemas. However, improvement regarding cravings and addiction severity did not decrease during initial points of the study. During later stages of therapeutic programming, when Schema Therapy was added into the process, craving symptoms and addiction severity symptoms both decreased. These improvements were statistically significant and exceeded results on prior uses of the Schema Therapy approach, used alone, in prior sessions with these women.

One study by Perez-Dandieu and Tapia (2014) examined the effect of EMDR in the treatment of chronic substance abuse dependence among twelve participants. Participants in this study were randomly assigned to either a *treatment as usual* group or *treatment as usual plus EMDR*. The results of this showed that the group receiving the usual treatment and EMDR as an adjunct therapy showed significant reductions in symptoms of PTSD, but not in addiction symptoms. EMDR participants also experienced significantly fewer bouts of depression (with reduced overall symptoms) while the "treatment as usual" group showed no improvement in depression-related symptoms. Participants in the EMDR treatment group also exhibited higher levels on self-esteem indicators as well as their ability to identify and describe and emotions (reduced alexithymia indicators). What is also important to note is that the *treatment as usual* group did not improve on substance abuse indicators and did not improve on any of the other co-occurring indicators. Thus, Perez-Dandieu and Tapia concluded that, if nothing else, EMDR can be used as an effective approach to resolving PTSD among drug addicted individuals.

The results found by Perez-Dandieu and Tapia (2014) are actually very important because EMDR was found to be effective in alleviating symptoms for numerous aspects of addiction. Further still, depression is a disorder that directly impacts the prognosis for substance abusers; a

depressed client is an unmotivated client and correspondingly, an unmotivated client will not do well in treatment. Further, PTSD is most assuredly likely to impair client recovery and lead to poor prognosis for treatment. Therefore, the fact that neither program saw improvements in addiction measures simply shows that, all things being equal, neither group approach worked better than the other in treating the substance abuse issues (in fact, neither worked at significant levels at all in this category). This does not invalidate the positive findings that were found to be significant and, as we will see in the next couple of paragraphs, Walker (2015) indicates that exposure to EMDR seems to be particularly effective with 'revolving door' clients. In sum, it could well be that when these individuals return to treatment-and many do just that, return again and again-their prognosis and outcomes on their next effort at treatment will be much improved to others who are not as fortunate.

The work of Abel and O'Brien (2010), though a simple case study, does demonstrate that EMDR may be useful with individuals suffering from substance abuse and comorbid anxiety and PTSD. Prior to engaging the study, the client of focus had been to several mental health professionals for treatment of her substance abuse disorder. The participant had a positive response to EMDR and achieved sobriety for over a two-year period. This was much longer than had been achieved in prior programs.

While not specifically empirical, an article by Walker (2015) does very well in examining insights from numerous doctoral-level educated clinicians who have worked extensively with the substance abuse population and also are familiar with EMDR interventions. What is interesting and insightful about this article is that much of the discussion focuses on the 'revolving door' among addicts who return, again and again, to drug treatment. While anecdotal, clinicians interviewed noted that, among these repeat customers, EMDR seemed to be particularly efficacious. The reason-most of these repeating clients have a trauma from a variety of life course experiences and these traumas are not sufficiently treated in most addiction-related programs. In many cases, it would seem that the addiction is simply medication to numb or block-out the trauma.

According to Walker (2015), it is speculated that, in other circumstances, the use of substances put addicts are increased risk of victimization and it is during these substance-using incidents of victimization that traumas occur (especially with sexual assaults). In such cases, though the substance abuse came first, it leads to significant trauma. Both substance abuse and the traumatic event become inexplicably linked and the addict internalizes negative cognitions about self from both. Thus, addiction and trauma are common partners; EMDR is capable of addressing both, when in the hands of a sufficiently trained and equipped treatment provider.

Evidence-Based Use with Prison Populations

There have been few studies in regard to EMDR being utilized to treat Post-traumatic Stress and other disorders in prison settings across the country. It should be noted, the use of EMDR in prison settings has yielded mixed treatment outcome results overall. As it turns out, there are multiple issues associated with being sentenced for extended periods of time when considering EMDR as a therapeutic intervention. Depression, trauma, Post-traumatic Stress Disorder (PTSD), and substance abuse issues continue to persist and in turn the symptoms of the illness are manifested through maladaptive behavior. Prison culture very often breeds violence and commands a sense of mental fitness. In addition, the undertone of racial identity is detrimental to survival. The pressure to mask emotions and not succumb to reality is the expectation of most inmates by peers and security staff. It could be difficult to traverse the daily norms and mores

that are apart of routine customs without compounding the situation with unsolved mental health concerns.

Although, many inmates may acquire mental health issues as a direct or indirect result of being incarcerated the clinical approach for their treatment mirrors one another. Indeed, Cognitive-Behavioral Therapy (CBT) and EMDR has been found to be effective in meta analyses and some studies (Seidler & Wayner, 2006). Further, some have suggested that commorbity produces an adverse effect to treatment outcomes (as cited in Lublin & Schneider, 2009, pg. 1). Goff, Rose, and Purves cited the comparison of diagnosed PTSD in prison settings is 21% but the National Center for PTSD, 2008 cited only 8% in society have the disorder (see Lublin & Schneider, 2009). There is a disparity in the number of cases in prison versus society but one must consider multiple factors for the percentages that are represented; indeed, the prison environment is likely to intensify the effects of PTSD.

In a study by Lublin and Schnieder (2009) conducted at San Quentin Prison with an inmate sentenced to life in prison, a framework was provided for inventions such as EMDR. The inmate was a veteran of the Vietnam War and had been diagnosed with PTSD. The synopsis of the study below illustrates the importance of utilizing the right therapeutic intervention.

This inmate described experiences like "waking up screaming in agony as I relived the moment when I lost my left leg. PTSD makes you paranoid as hell," he continues, "with questions like 'Why are these people so close to me?' and 'Where is the nearest cover?' always on your mind" (Lublin & Schneider, 2009: 1). The following case study describes the treatment of an inmate with PTSD using EMDR. This was a random control trial that produced a positive outcome. The traumatic memories were addressed first and the inmate benefited from therapy. The case history is provided and details regarding the progression of treatment. The single case study highlights the risks associated with developing a disabling anxiety disorder following a traumatic incident (Kitchiner, 2000: 27-30).

Client History

Andy (not his real name) is a 22-year-old single unemployed man with no children who was serving a 3-year sentence for two burglaries and breach of parole. He was referred to the prison clinical nurse specialist by the medical officer because of 'suicidal feelings and wanting to talk to someone'. Andy was assessed on four occasions, over a total period of 4 hours.

His main problems were daily flashbacks and nightmares of his girlfriend having a miscarriage while they were at home. These symptoms trigger physiological arousal, e.g. 'jelly' legs, palpitations, stomach churning and sweating, with the result that he believed that he was about to die. He attempted to cope with these symptoms by lying down, he avoided looking at blood, or engaging in conversations regarding violence or the miscarriage. He felt angry and irritable following these episodes and experienced low mood.

The onset of his symptoms was delayed; he witnessed his partner have a miscarriage in May 1998, and was terrified by the sight of blood and the emotional distress he observed in his partner. He wanted to escape and run from the house. He felt helplessness and horror at the time of the incident. However, he did not develop any PTSD symptoms until 6 months later while he was starting his sentence. This was triggered when his partner had a miscarriage for a second time. From that point his symptoms worsened and on experiencing arousal he believed that he was about to die.

The inmate was provided an overview of EMDR and Andy was given literature to read about PTSD. The inmate was instructed to focus on security or a safe place mentally prior to beginning

therapy. Following the framework designed by Shapiro (1995), Andy was assigned homework that consisted of maintaining a log of any thoughts or stressors that evoke negative emotions.

Session 1: The first session was 1 week after the preliminary one. Andy shared details about his safe place. He used the technique to assist with managing accelerated physiological thoughts. Andy confided during the session that he had begun to self-mutilate due to his girlfriend informing him over the phone that their relationship was over. The stress from that phone call triggered multiple flashbacks and suicidal ideations.

Andy began his EMDR treatment during this session. He was instructed to visualize and focus on the most traumatic part of the miscarriage. During the assessment phase, Andy was able to identify his negative cognition regarding the miscarriage. The cognition was that he was at fault for the miscarriage. He developed the goal of being able to challenge and change that negative cognition into a positive one. Therefore, his goal became to be able to genuinely verbalize and accept that "It was no one's fault" (Kitchiner, 2000: 27).

Before the eye movement (EM) component of treatment, Andy rated his positive cognition and disturbance on the Subjective Units of Distress Scale. The results were 4 and 5, respectfully. Once the EMs were started, Andy was walked through each phase and his responses were monitored. "After each set of EM, Andy was instructed to blank out the image and take a deep breath, and then asked to give feedback on any change in the visualized image or any change in his level of physiological arousal, without judging whether the change should or should not be occurring". Andy was repeatedly guided through the EM process until there were no new changes in "images or physiological arousal" (Kitchiner, 2000: 27). At the end of the implementation of multiple EMs, Andy was able to visualize the most traumatic part of the miscarriage and still positively say that "it was not his fault".

Session 2: The session started with a review of the past week. Andy reported that he did not experience any flashbacks or nightmares during the previous week. He reported that he did have feelings of anger wherever he thought about the miscarriage. However, he was able to continue to verbalize and accept that the miscarriage was not his fault. Andy was also able to verbalize a direct link between thinking about partner and subsequently thinking about the miscarriage. Andy confided that during the previous week his girlfriend sent him a letter that officially ended their relationship. Andy reports that he handled the situation better and was able to wish her well. Upon review of psychometric data it was found that Andy had experienced "a 93% improvement with symptoms relating to PTSD" (Kitchiner, 2000: 28). Andy was instructed to return in 4 weeks in order to assess his sustained progress without continued exposure to treatment.

Session 3: The third session was conducted 4 weeks post-second session. Andy reported that since the last session "he had not experienced any nightmares or flashbacks of the miscarriage" He also reported that he was now engaging in watching television without fearing the sight of "blood or violence, or conversations regarding miscarriage". There was a decrease in anger directed internally and externally towards others. Andy's self-reported behaviors were verified by using psychometric testing. There was a follow-up appointment scheduled for 8 weeks and he was assigned homework to track and record "any nightmares, flashbacks or other incidents.

Session 4: During his final session or 3 months post treatment, Andy continued to report that he was not experiencing any PTSD related symptoms. "Andy said that he felt more able to concentrate and enjoy once pleasurable activities which included playing pool, football, and watching television". Andy was excited about his progress, as evidenced by his content of being "able to talk about the incident and see images of blood without any physiological concerns" (Kitchener, 2000: 30).

Psychometric testing was again performed in order to verify the validity of Andy's self-reporting. Psychometric data confirmed the sustained progress.

After working through several sessions with EMDR the inmate resolved issues with PTSD. He was provided follow up treatment sessions to evaluate treatment goals. Andy reported no reoccurring anxiety, nightmares.

Research

The single-case study approach adopted in the treatment of Andy has multiple benefits for everyone, including being regarded as a respectable methodology for collecting evidence from practice. The emphasis is on working collaboratively with the inmate, which provides an environment conducive to open disclosure, building rapport and permits a larger range of clinical intervention options. With EMDR there is an emphasis placed on introducing therapy in a phased and structured way given certain variables in the situation.

This suggests the clinical approach selected should start from a baseline assessment of the inpatient, which is then evaluated against the baseline after treatment has been applied to provide long term outcomes. In this instance the single case study approach has provided the therapist working in the prison a chance to monitor the efficacy of EMDR, an intervention which could be employed in all specialties to enhance patient care and treatment for the future (Kitchiner, 2000: 31).

Kitchiner (2000) has noted that it would be ideal for professionals in prison settings to link with community resources and render quality services that are of equal value. There should be an ongoing collaborative effort of health care professionals meeting to ensure best practice and evidenced based treatment inventions are priority in prison environments. Also, training on EMDR may be necessary for all levels of staff at the prisons to assist with minimizing counterproductive inference with treatment goals. Training and education of staff could help staff with referring inmates to mental health for treatment needs. It appears EMDR was successful considering the baseline of the inmate.

Conclusion

Our manuscript shows that EMDR, once thought of as only a technique, should now be considered part of a broader and more encompassing theory regarding behavior modification and client change. In addition, this response has shown that a variety of studies have been conducted that support the use of EMDR with the substance abusing population as well as those with substance abuse and comorbid PTSD. Lastly, an example of how this type of therapeutic approach can be utilized within the prison environment was discussed in detail. These multiple and seemingly unrelated points are important because in many state correctional systems, an large percentage of inmates present with substance abuse as well as co-occurring disorders. This means that there is a very great need for interventions like EMDR in prisons. The example provided shows that EMDR can be successfully implemented in such an environment, despite the debilitating effects of prison.

References

Abel, N. & O'Brien, J. 2010. "EMDR Treatment of Comorbid PTSD and Alcohol Dependence: A Case Example." **Journal of EMDR Practice and Research** 4: 50-59.

Abel, N. & O'Brien, J. 2014. **Treating Addictions with EMDR Therapy and the Stages of Change.** New York: Spring Publishing Company.

Corey, G. 2016. **Theory and Practice of Group Counseling.** 9th ed. Massachusetts: Cengage Learning.

EMDR International Association. 2017. **EMDR Fidelity Scale.** Retrieved from www.emdria.org /?105.

Franklin, J. 2015. **The Effectiveness of EMDR on Clients with Addictions.** Doctoral Dissertation, Smith College.

Hassard, A. 1996. "Reverse Learning and the Physiological Basis of Eye Movement Desensitization." **Medical Hypotheses** 47: 277-282.

Hrouda, D. 2015. **Implementation of Evidence-Based Practices: What's Fidelity Got to with It?.** Ohio: Case Western Reserve University, Center for Evidence-Based Practices.

Juzwin, K. 2016. **Stress Management in the Field.** (A paper presented at the 42nd Annual Conference of the Society for Police and Criminal Psychology, Austin, TX.).

Kitchiner, N. 2000. "Using EMDR to Treat Post Traumatic Stress Disorder in Prison Setting." **British Journal of Community Nursing** 5 (1): 26-31.

Lublin, H. & Schneider, T. 2009. "Change is possible: EFT (Emotional Freedom Techniques) with Life-Sentence and Veteran Prisoners at San Quentin Prison." **Energy Psychology** 1 (1): 1-6.

MacCluskie, K. 1998. "A Review of Eye Movement Desensitization and Reprocessing (EMDR): Research Findings and Implications for Counsellors." **Canadian Journal of Counselling** 32 (2): 116-137.

McCoy-Arbailo, T., Silveria, D., Inwald, R., & Price-Sharps, J. 2016. **The San Bernardino Terrorist Attack: Helping First Responders.** (A paper presented at the 42nd Annual Conference of the Society for Police and Criminal Psychology, Austin, TX.).

Perez-Dandieu, B., Lenoir, H., Othily, E., Tapia, G., Cassen, M., & Delile, J. 2015. "The Impact of Eye Movement Desensitization and Reprocessing and Schema Therapy on Addiction Severity Among a Sample of French Women Suffering From PTSD and SUD." **Drug & Alcohol Dependence** 146: e68-e69.

Perez-Dandieu, B. & Tapia, G. 2014. "Treating Trauma in Addiction with EMDR: A Pilot Study." **Journal of Psychoactive Drugs** 46 (4): 303-309.

Prochaska, J., DiClemente, C., & Norcross, J. 1992. "In Search of How People Change: Applications to the Addictive Behaviors." **American Psychologist** 47: 1102-1114.

Qurishi, R., Markus, W., Habra, M., Bressers, B., De Jong, C. 2017. "EMDR Therapy Reduces Intense Treatment-Resistant Cravings in a Case of Gamma-Hydroxybutyric Acid Addiction." **Journal of EMDR Practice and Research** 11 (1): 30-42.

Shapiro, F. 2014. **The EMDR Approach to Psychotherapy. Basic Training Course: Part I.** California: EMDR Institute.

Shapiro, F. 2001. **Eye Movement Desensitization and Reprocessing: Basic Principles, Protocols, and Procedures.** 2nd ed. New York: The Guilford Press.

Shapiro, F., Vogelmann-Sine, S., & Sine, L. 1994. "Eye Movement Desensitization and Reprocessing: Treating Trauma and Substance Abuse." **Journal of Psychoactive Drugs** 26 (4): 379-391.

Simoneaux, B. 2016. **Exposure Therapy.** (Seminar presented at the 14th Annual Summer Symposium of Professional Training Resources, Inc., Marksville, LA.).

Substance Abuse Mental Health Services Administration. 2010. **National Registry of Evidence Based Programs and Practices: Eye Movement Desensitization and Reprocessing.** Maryland: Substance Abuse Mental Health Services Administration.

Walker, R. 2015. **What is EMDR and Is It Effective For Addiction Treatment?.** Retrieved from www.thefix.com/can-emdr-treat-addiction.