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# EMDR Drumming Protocol and Processes: Embedding Expressive Arts into EMDR for work with Adolescents

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**Abstract**

The integration of expressive arts into trauma therapy has garnered significant attention for its ability to enhance healing and emotional processing. This article explores a proposed EMDR Drumming Protocol and therapeutic process for at-risk youth. It is a novel approach that combines the therapeutic power of Eye Movement Desensitization and Reprocessing (EMDR) with the expressive, rhythmic qualities of drumming. Grounded in neuroscience and trauma-informed care, this protocol aims to deepen the therapeutic experience by using drumming as an embodied tool to facilitate emotional release, enhance bilateral stimulation, and support neural integration. The article examines how drumming can create a sensory-rich environment that complements EMDR's traditional methods, promoting increased emotional regulation, memory processing, and adaptive coping skills. Additionally, it explores the theoretical underpinnings of this innovative fusion of expressive arts and EMDR, offering practical insights and case studies for clinicians seeking to integrate drumming into their therapeutic practices. Through a blend of clinical observations and experiential analysis, this article highlights the potential of the EMDR Drumming Protocol to transform trauma treatment, providing a deeper, more holistic approach to healing.

*Key words:* EMDR, Expressive Arts, Therapeutic Drumming, And Trauma

## Introduction

The Eye Movement Desensitization and Reprocessing (EMDR) Drumming Protocol represents an innovative fusion of traditional EMDR therapy and the creative power of expressive arts. This approach integrates rhythmic drumming with EMDR's standard bilateral stimulation techniques to enhance trauma processing and emotional regulation. By combining the therapeutic benefits of sound, rhythm, and movement, the EMDR Drumming Protocol facilitates deeper emotional release and a more embodied healing experience. The process allows individuals to engage both the mind and body, offering a holistic method for addressing trauma, fostering resilience, and promoting emotional balance. Through this innovative blend of art and therapy, clients can tap into the subconscious, reprocessing trauma in a way that is dynamic, engaging, and transformative. Although this protocol is specifically administered to the adolescent population, it can easily be adapted and implemented across demographic populations.

## EMDR

Eye Movement Desensitization and Reprocessing (EMDR) is a psychotherapy treatment originally developed to alleviate the distress associated with traumatic memories among participants in clinical practice (Shapiro, 1989). Since its inception, EMDR has been identified as an effective intervention for decreasing trauma-based symptoms reported by individuals who have experienced a specific or multiple traumatic event. Examples of trauma-based symptoms often reported by individuals who have experienced a traumatic event include but are not limited to the following: difficulty sleeping. These reported responses within the studies support the use of EMDR in the treatment of symptoms caused by trauma in children and adolescents (Karadag, Gocken, & Sarp, 2020; Meentken et al, 2020). Although EMDR is indicated as an effective intervention for individuals who have experienced trauma, we understand that the large need found within our communities make individualized trauma-based interventions less appealing to community-based practice in high-risk areas (Mazzoni et al, 2022). Group therapy is a well-proven form of treatment for traumatized children and adolescents (Meentken et al, 2020; Karadag, Gocken, & Sarp, 2020), and EMDR also has an effective group protocol for children and adolescents. To support and treat more clients who have experienced trauma within a trauma informed process, EMDR group protocol was developed (Mazzoni et al, 2022).

## EMDR Group Protocol

Because of the increased awareness that our communities need more consistent access and more evidence-based interventions for addressing the impacts of trauma on their abilities to function, the EMDR Group protocol was developed (Lange, et al 2022). The EMDR Group Protocol for Children was developed to support the needs of the participants to accomplish the following: normalize symptoms and responses they may be experiencing; be part of a comprehensive program for trauma treatment; reduce posttraumatic symptoms; confront traumatic material; offer the patient support and empathy; increase patient's perception of mastery over the distressing elements of the traumatic experience; treat more clients for the same experience (Jarero, I., &.Artigas, L. (2020). Results of the EMDR group protocol show the same positive outcomes for supporting the healing of individuals exposed to trauma in addition to reducing their posttraumatic symptoms as seen in the individualized protocol (Kaptan et al, 2021). Although group-based protocols assist clients with normalizing their responses to stress and support the client in being more willing to share their experiences in the supportive group environment, there are still several participants who fear the concept of addressing their specific traumatic experience and will often avoid all service support whether it is individual or group programming. Much research has shown that the inclusion of expressive arts techniques in trauma-based work can improve client participation in programming and fully processing their past experiences. Expressive arts programming can be provided in several different modalities. For the purposes of this article, we will focus on the expressive arts activity of drumming.

## The Power of Drumming: The integration of Drumming into the EMDR Protocol

Music has been shown to have positive psychological and other therapeutic benefits that include reducing stress. Group drumming is included as a component of music that can increase feelings of well-being, promote a sense of calmness, enhance group cohesion and connection, and

contribute to people being able to empower themselves (Rodwin et al, 2022). The African drum is a cultural asset that can be to promote bilateral simulation. So, as practitioners think about Drumming in EMDR we need to be aware of the concept of bi-lateral stimulation processes and the adaptive information processing (AIP) and how these processes are evident in the process of therapeutic drumming. Bilateral Stimulation (BLS) is a technique that involves a unique procedure in which a therapist exposes the patient to bilateral stimulation (BLS), which involves alternating bilateral visual (eye movement), auditory, or sensory stimulation (e.g. tactile stimulation). The standard EMDR protocol consists of two main stages, desensitization of traumatic memories and development and installation of a "resource", such as safe and pleasant thoughts. The latter is called resource development and installation phases of treatment (Amano & Tiochi, 2016). In the standard protocol, both stages use alternating BLS. BLS is performed concurrently with the recall of the worst image of the trauma and the resources installation. Within the Drumming Protocol, Drumming is the process used for BLS within the EMDR protocol.

In the context of EMDR (Eye Movement Desensitization and Reprocessing), BLS stands for Bilateral Stimulation. This is a key component of the EMDR therapy approach. Bilateral Stimulation involves stimulating both sides of the body in a rhythmic, alternating pattern, typically through eye movements, taps, or sounds. The goal of BLS is to activate both hemispheres of the brain, which is believed to help process and integrate traumatic memories, reducing their emotional charge. During an EMDR session, the therapist asks the client to focus on a distressing memory while engaging in BLS, such as following the therapist's finger with their eyes, listening to alternating tones through headphones, or feeling tactile sensations like light taps on both sides of the body. The idea is that BLS helps the brain process traumatic memory in a more adaptive way, reducing the emotional distress associated with it.

AIP is one of the key components of EMDR practice. One of the key tenets of the AIP model predicts that dysfunctionally stored and not fully processed memories are the cause of several mental disorders, including, e.g., PTSD, affective disorders, chronic pain, addiction, and various other disorders (Shapiro and Laliotis, 2011). The AIP model focuses on the patient's resources. Within the AIP model, one assumes that the human brain can usually process stressful information to complete integration. In the view of the AIP model dysfunctionally stored memories form the basis for future maladaptive responses, because perceptions of current situations are automatically linked with associated memory networks of these unprocessed, dysfunctionally stored memories (Hase et al., 2017).

In the following paragraphs, the researchers will describe their process and developed protocol for group-based EMDR with therapeutic drumming included. The results of this intervention for at-risk youth were positive and promising for future programming. The prescribed protocol is found below.

**Procedural Steps in Drumming Protocol for Youth and Adolescents**

**Pre-Screening** to meet criteria for services is highly encouraged. To determine if the referred individual is appropriate for the group EMDR Drumming Protocol, the authors suggest a pre-screening procedure. The pre-screening procedure includes an individual intake session with

each referred participant, and the individual is screened with the following instruments: Life Events Checklist (LEC), a Post-Traumatic Stress Disorder Symptom Scale (i.e. CPSS), and a Subjective Unit of Distress Scale (SUD). These suggested measures will be described further in the results section. Additionally, parental consent and youth assent need to be obtained during this pre-screening period.

**Phase 1: Client History Taking-** The first phase is a history-taking session(s). The therapist assesses the client's readiness and develops a treatment plan. The client and therapist identify possible targets for EMDR processing. These include distressing memories and current situations that cause emotional distress. Other targets may include related incidents in the past. During phase 1 of the protocol, team members educate caregivers, mothers, and relatives about the course of trauma and enlist these individuals to identify children who have been exposed to the traumatic event, previously identified by the pre-screening process. Team members need to be aware of the needs of the clients within their extended family, community, and culture.

**Phase 2a: Client Preparation – Part 1-** Phase 2 of the protocol begins with an exercise intended to familiarize the children with the space and objects included in the intervention, to establish rapport and trust, and to facilitate group formation. Discussion about the purpose of the group, confidentiality, and treatment programming will be covered. Introduction of the drumming process discussed, and then the drumming activity starts.

- SUD Scale and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion.
- SUD Scale and Feelings Thermometer- Post-session

**Phase 2b: Client Preparation- Part 2-Phase** 2-part b of this protocol the children are guided through a safe/secure place exercise (guided imagery) which provides them with an emotion regulation skill and introduce the bilateral stimulation (BLS) through the multiple techniques which will also include the drumming process as BLS. The children are repeatedly validated regarding their feelings and other post-traumatic symptoms.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

**Phase 3: Assessment Phase: Selecting the target of intervention-** Instead of being asked to visualize the target incident, as in the standard EMDR protocol, the children are instructed to think about the aspects of the event that make them feel most frightened, angry, or sad now, and to draw that image on the paper provided or write about that part of the target event. They are then shown a diagram that depicts different emotions, a feelings thermometer, and a list of feeling works, so they can identify their emotions during this exercise. This phase can take up to two sessions.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

**Phase 4: Desensitization-** The children are asked to look at their picture/ writing that they completed in Phase 3, and to complete a drumming process and activity. The participants then

complete the drumming activity. The participants are then instructed to draw another picture/ writing of their own choice, related to the event, and to rate it according to its level of distress (0-10 on the Feelings Thermometer). Processing with the child looking at the second picture and using the drumming activity are led by the facilitator. The process is repeated twice more so that there are four pictures/ writing samples. The level of distress associated with the incident is then assessed by asking the participant to focus on the drawing/writing that is the most disturbing and to identify the current SUD level. This number is then written on the back of the paper. SUD level of subjective emotional disturbance should reach zero or an ecological level of disturbance in order to have the memory of the incident completely desensitized. Not all the children can reach this level of disturbance during the group protocol. This phase can last two to three sessions.

- SUD Scales and Feelings Thermometer- Pre-session
- CPSS Mid-point assessment
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

**Phase 5: Future Vision (Instead of Installation)-** Phase 5 of the standard EMDR protocol cannot be conducted in large groups since each participant may have a different SUD level. Also, some children cannot progress any further in the group protocol to reach an ecological level of disturbance. This may be because they have blocking beliefs, previous problems, or trauma, and/or require additional time for processing. Consequently, the Group Protocol uses the future vision to identify adaptive or non-adaptive cognitions (e.g., I want to die and be with my dad in heaven) that are helpful in the evaluation of the child at the end of the protocol. The children draw a picture/ write a story that represents their future vision of themselves, along with a word or a phrase that describes that picture. The drawing and the phrase are then paired with the Drumming Activity. This phase can take up to two sessions.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

**Phase 6: Body Scan-** Phase 6 is conducted in large groups even though each participant may have a different SUD level and may not reach zero. During this phase the children are instructed to close their eyes, scan their bodies, and do the Drumming Activity.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

**Phase 7: Closure-** Phase 7 is a repeat of Phase 6 and is conducted in large groups even though each participant may have a different SUD level and may not reach zero. During this phase the children are instructed to close their eyes, scan their bodies, and do the Drumming Activity. Finally, the children are instructed to return to their safe/secure place.

- SUD Scales and Feelings Thermometer- Pre-session
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session

**Phase 8: Re-evaluation and Follow up**- Phase 8 takes place one week after Phase 7 concludes. The research team members have a debrief about which identified children may need individual attention and which may need thorough evaluation to identify the nature and extent of their symptoms, and any comorbid or preexisting mental health problems. This evaluation is made by considering the reports of teachers and relatives, the results of screenings and progress monitoring of the re-screenings, the entire sequence of picture/ story and SUD ratings, the body scan, and the future vision cognition. After the evaluation, the team members work with the identified children by using the EMDR-IGTP in smaller groups or by providing a referral for individual treatment to a more intensive service provider.

- SUD Scales and Feelings Thermometer- Pre-session
- CPSS post-test assessment
- Drumming activity and then group conclusion
- SUD Scale and Feelings Thermometer- Post-session
- Referral to individual services if needed if progress not noted

Because many of the phases described above may be repeated across sessions to support the needs of the participants, the typical EMDR Group Drumming Protocol can run for 10-15 weeks, or longer if needed based on participant responses. The EMDR Group Drumming Protocol was assessed using a 12-week model with youth and adolescents ranging in age from 12-18 in an after-school therapeutic intervention within the local community. The findings of this work are described below.

## Methods

The study involved 88 at-risk adolescents aged 13 to 18 years, recruited from a local after-school program. Inclusion criteria included self-reported experiences of trauma or adverse childhood events on a Life Events Checklist (LEC) and a specific score on the Child PTSD Scale, as well as willingness to participate in group-based interventions. Participants and their guardians provided informed consent prior to enrollment. The authors received IRB approval for the use of the EMDR Drumming protocol prior to implementation. The authors utilized a pretest posttest quantitative process across subjects to examine change in reported behaviors, symptoms, and outcomes after participating in the EMDR Group Drumming Protocol. The researchers utilized quantitative data to support the outcomes and future work. The research team utilized Likert scale, self-report screening tools.

At the outset, participants completed the pre-test battery individually, with trained facilitators providing assistance as needed. Following baseline assessment, participants engaged in a structured group intervention combining Eye Movement Desensitization and Reprocessing (EMDR) and therapeutic drumming over a period of 12 weeks, with weekly sessions lasting approximately 90 minutes.

EMDR components were tailored for group delivery, focusing on processing traumatic memories and reducing distress, while therapeutic drumming was employed to promote emotional regulation, grounding, and social cohesion within the group. Therapeutic drumming was layered into the intervention throughout the 21-week process.

Upon completion of the intervention, the post-test assessments were administered to measure changes in trauma symptoms and emotional well-being. Data was collected from participants and analyzed to determine the effectiveness of the intervention and identify the specific needs of the adolescent participants.

**Research testing the efficacy of the Drumming protocol for Youth and Adolescents**

Findings of this drumming protocol for the youth and adolescent populations have been tested and yielded positive results. The EMDR group drumming protocol was implemented with a cohort of 88 youth aged from 12-18 at a local after school program that identified their student population needed therapeutic interventions to address unresolved trauma.
The specific screenings were collected at both pre- and post-intervention for purposes of outcome analysis. The assessments administered to the student participants were as follows: The Life Events Checklist (LEC), Child PTSD Symptom Scale (CPSS) and a Subjective Units of Distress (SUD) measure.

The Life Events Checklist (LEC) is a yes or no self-report inventory that is used to identify the level of exposure to adversity and the intensity of that exposure. The LEC is an initial screening to determine if the participant has any life events that would be considered traumatic. If the participant has at least ONE positive indicator (i.e. answered YES to at least one item), then they meet the criteria to move to the PTSD symptom screening process described next.
The CPSS was used to gather a self-report trauma symptom of the participant and monitor possible reduction in symptoms at pre and post-assessment through the use of the Child PTSD Symptom Scale (CPSS) scale developed by Foa et al. in (2001). The Child PTSD Symptom Scale (CPSS) is a DSM-IV criteria-based assessment and yields PTSD scores related to symptomology. The Likert-scale assessment measures PTSD symptom across domains of re-experiencing, avoidance, and hyperarousal. The CPSS comprises 24-items, 17 of which correspond to the DSMIV symptoms. Scores range from 0 -7, with higher scores indicating greater functional impairment. This assessment is administered at baseline (prior to the intervention to determine appropriateness for the group intervention and to determine levels of impairment), and the administered again after the last intervention session is concluded. To participate in the EMDR Group Drumming protocol, the participant must score a 14 or higher on the CPSS inventory.

Participant's ability to communicate and utilize learned skills to regulate emotions and feelings within the group and beyond is obtained using Subjective Units of Distress Scales (SUDS) assessment administered throughout the group intervention. The original Subjective Unit of Distress Scale was developed by Joseph Wolpe in (1969). A Subjective Units of Distress Scale (SUDS) is used to measure the intensity of distress or anxiety/ depression in people with impairments. The SUDS is a self-assessment tool rated on a scale from 0 to 10. The SUDS is a subjective tool used by the clinician to evaluate student progress and the success of the student's current treatment and intervention. In this way, it can be used regularly over the course of monthly treatment, or even in each session of your treatment to gauge different areas of disturbance that require additional work. The SUD scales are obtained pre- and post-for every intervention EMDR Group Drumming session. This is a common technique in cognitive therapy as a tool to gauge one's distress or emotional state. This SUD scale also supports the practitioner

with gauging the level of dysregulation a client may be experiencing in a session to monitor and support them during and after the group intervention if needed. The goal is to decrease the individuals SUD scale number in each session from pre intervention to post intervention and across therapeutic sessions.

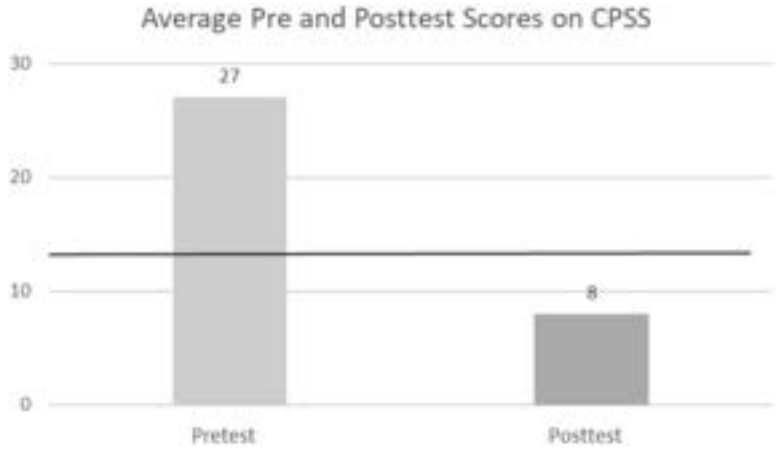
## Results

### LEC

For this work, 125 students were screened using the LEC and 100 of these students had at least 1 "YES" indicating that all the youth screened had at least one adverse life event in their lifetime warranting participation in this work based on our entrance criterion for this study.

### CPSS

The Child PTSD Symptom Scale (CPSS) is used to assess the participants level of reported PTSD symptomology before and after the intervention. The ***CPSS*** is also used to determine if a student meets the criteria for inclusion in the intervention. One hundred students who attended the community partner program were screened with the ***Child PTSD Symptom Scale (CPSS***) to determine their appropriateness of participation in the EMDR Group Drumming Protocol. Of the 100 students who screened position on the LEC were screened with the CPSS, a total of **88** (**88%** of these children) met the criteria for the intervention group, based on the assessments and were offered the opportunity to participate. Of the 88 students who were offered the opportunity to participate in this research, 100% of them signed assents and were included in this research. The following graph (Fig. 1) shows the average pre- and post-scores for the 88 students who participated in this intervention and EMDR Group Drumming Protocol.

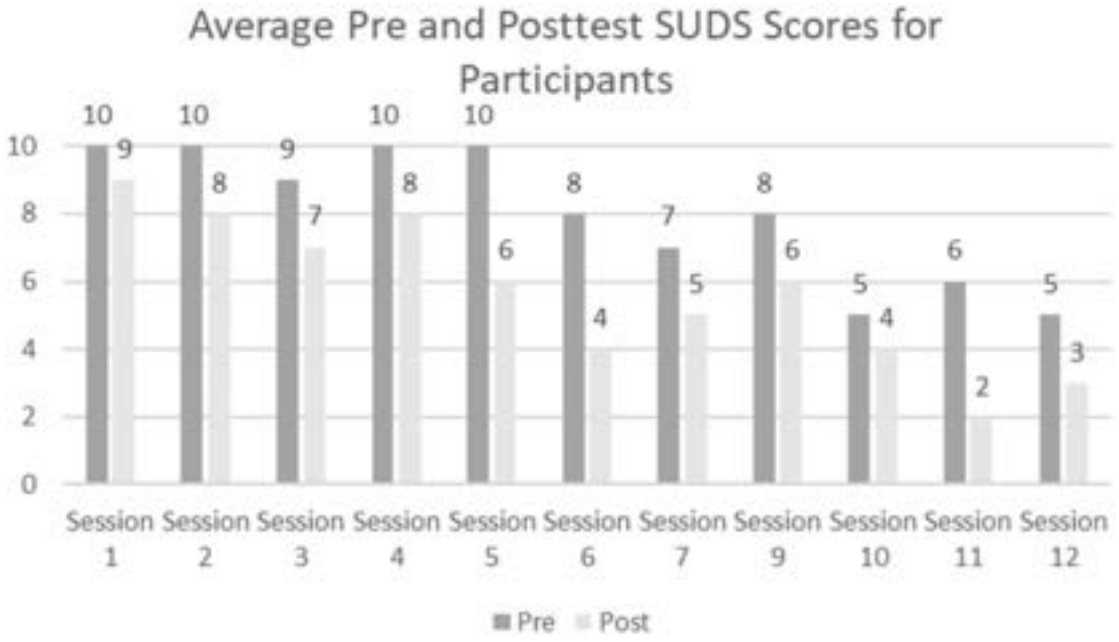



A score of 14 or higher on the CPSS indicates the need for clinical intervention. The average pre-test CPSS scores fall within the clinical range for need, and after the intervention the CPSS average scores show not only a significant improvement but CPSS scores well below the inclusion criteria score of 14. The average CPSS score for the 88 participants was 27 at pretest; the average CPSS score for the 88 participants post intervention was a score of 8. These

outcomes represent a clinically significant improvement in participants reported PTSD symptomology from pre to post assessment.

**Subjective Units of Distress Scale (SUDS)**

Subjective units of distress (SUD) were obtained both pre- and post-intervention for each participant in every. session across the proposed 12-week intervention. There was an 85% completion rate for the pre-and post-session SUDS for all 88 participants across the 12-week intervention. Due to unanticipated absences of some participants across the 12-week intervention, we were unable to obtain 100% completion rate for the pre- and post-session SUDs for every participant; however, SUD scale findings were positive. Figure 2 below shows the average SUD scale reports for participants for each of the 12 sessions.




It is evident from this data, that most of the participants displayed higher SUD scale scores at the beginning of the intervention (Session 1), and as they moved through the program and received additional supports and coping skills- as well as exposure to processing their trauma within the group via the drumming protocol- their reported SUD scale scores decreased over time. This data is in line with the reported average pre and post-CPSS outcomes that were previously discussed. Additionally, you can see a decreasing trend in the average reported SUDS across each session. There was a noticeable spike in the reported SUDS pretest for Sessions 4 and 5, and the researchers attribute this to the participants beginning their individual trauma work and an increase in anxiety around that portion of the intervention; however, we continued to see a decrease in SUDS reports post-session for every session across the 12 weeks.

**Future Implications**

EMDR is an evidence-based treatment modality that has proven positive results in many clients meeting a multitude of therapeutic needs. Drumming as BLS has proven to become a therapeutic

intervention used not only during EMDR but utilizing several other therapeutic applications. Music is cross-cultural, and multi-generational, and can not only speak to our humanity but can mean many things to many different individuals. Drumming in a circle can build teamwork, increase feelings of self-worth due to being a part of a group of like-minded people, and be utilized for self-expression which builds confidence. Drumming also appeals to young people more than traditional therapeutic approaches, which can then be utilized to reach more young people who need therapeutic interventions in order to have increased opportunities for academic success. The researchers for this work found that Eye Movement Desensitization and Reprocessing (EMDR), with the addition of drumming, were promising therapeutic techniques for at-risk youth, each with its own potential benefits.

Child and adolescent therapists who are interested in identifying a new approach to working with adolescents who are not open to traditional treatments, the use of EMDR and drumming can be a possible avenue for exploring therapeutic impact. It's essential to note that the future implications of both EMDR and drumming will depend on continued research, clinical trials, and the integration of these practices into existing mental health treatment models.

## Conclusion

In conclusion, the integration of group-based EMDR and therapeutic drumming protocols has demonstrated promising results in supporting at-risk youth. This combined approach not only facilitated emotional healing and trauma resolution but also fostered a sense of community and empowerment among participants. The success of this intervention underscores the potential of innovative, multisensory therapies to address complex psychological needs in vulnerable populations. Moving forward, expanding access to such holistic treatments could play a crucial role in promoting resilience and long-term well-being for at-risk youth. Additionally, more specialized training for EMDR practitioners in the use of novel EMDR approaches, such as therapeutic drumming, should also be considered.

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