How Trauma Affects Children & the Benefits of EMDR Processing
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What is Trauma for Children?

In her book *Children in a Violent Society Joy Osofky* describes trauma as, "An exceptional experience in which powerful and dangerous stimulus overwhelms the infant/child's capacity to regulate his affects". How a child reacts emotionally to a situation may vary greatly, depending on the context of the trauma and their living environment: Did the child feel helpless or think his life was at risk? Did the child have a secure or insecure attachment with the caregiver? Was a family member, friend or pet involved? Was the child comforted and made to feel safe afterwards by her caregiver? How often was trauma experienced, once or multiple times? At what age and stage of development was the child at the time of the trauma? Does the child have a history of other upsetting events or losses?

Dr. Peter Levine has described the effects of trauma in his book called *Waking the Tiger* as untransformed energy which has become fixated within the organism. "Traumatic symptoms stem from the frozen residue of energy that has not been resolved and discharged. This residue remains trapped in the nervous system where it can wreak havoc on our bodies and spirits." If resolution has not occurred, the brain and the body store the information within the neural networks and at the cellular level where it is constantly available to be re-experienced. For children, the meaning they ascribe to an event is what determines whether the event was traumatizing for them or not. When parents or caregivers are not available or able to comfort a child because of their own needs/trauma, often the trauma is reinforced, locking it into the psyche and physical body of the child.

Unfortunately, trauma can compromise all areas of child development: identity formation, experience of body integrity, affect tolerance, ability to manage behaviors, cognitive processing, ability to trust self and others and spiritual and moral development. Following trauma, the child can easily become overwhelmed and develop emotional behavioral or physical problems which are problematic. Often not recognized in children, PTSD symptoms develop largely because of the child's attempts to block feeling the negative emotions. These symptoms may show up as avoidance, dissociation and numbing, or impulsive and/or aggressive acting out. Because these symptoms are frequently repeated they become debilitating, self perpetuating, and accumulate over time affecting all areas of the child's development.

Peter A. Levine with Ann Frederick, Waking the Tiger, Healing Trauma, Berkeley, California, North Atlantic Books: 1997. p.19

How Does Trauma Affect the Brain/Body?

Trauma first enters the body as sensory information. What the child has experienced visually, auditorally, kinesthetically and emotionally is picked up by the brain and is communicated throughout the body. This triggers key primitive brain/body reactions which switches on either the sympathetic or para-sympathetic nervous systems. Immediately the biochemical balance in the brain is upset causing the perceptions of the trauma to become "locked" into the central nervous system, blocking adaptive resolution of the trauma.

When the sympathetic nervous system is activated by trauma, it revs up the body and triggers the fight or flight response generating feelings of terror and panic. Conversely, if the parasympathetic nervous system is triggered, it slows down the central nervous system numbing or immobilizing the emotional center in the brain. This causes dissociation or the frozen response where the child is physically but not mentally or emotionally present.

Scientists have discovered that unlike positive memories, trauma memories are stored on the right side of the brain. Since the right hemisphere of the brain has a more direct link to the limbic system deep in the center of the brain, the emotions which are connected to those memories are more intense and trigger a higher degree of distress. Another difference with traumatic memories is the way they are stored in the brain as a large chunk of interconnected information rigidly held together. When these memories are activated, the child experiences the whole intensity of the trauma again with all of the visual images, physical sensations, and emotional reactions. Since the right hemisphere does not have an awareness of time, the child is unaware that the trauma is over and in the past.

Normal memories on the other hand are stored in various locations of the brain and upon activation are collected instantaneously from all over the brain. This type of memory tends to be more balanced since the left hemisphere processes in a more logical, rational way. Without the intensity of feelings, the sympathetic and parasympathetic nervous systems are not triggered to respond and the child can more calmly choose how to respond to the memory.

When the memories of a traumatic event are triggered, the child is re-experiencing the same physical sensations, images and emotions as when the trauma first happened. This floods the central nervous system with sensory overload causing intense distress and eventually symptoms of Post Traumatic Stress Disorder (PTSD). If the trauma is of significant intensity, the hippocampus is flooded with chemicals leading to its damage resulting in more problems with dissociation. Of course the earlier in the child's life the brain is programmed with trauma reactions, the more long term the damage since the organization of neural pathways is key to how the brain will function in the child's future.

Unfortunately trauma is not merely perceived within the brain and cognitive processing. It also is communicated to the physical body through the nervous system as electrical and

electromagnetic impulses. This disrupts the flow of energy within the body leading to physical sensations such as tightness, tenseness, and a feeling of heaviness or discomfort. Since negative thoughts create different energetic patterns, the results are often disturbing feelings such as fear, panic, feelings of helplessness and terror. When there is no resolution of the negative feelings or uncomfortable physical sensations, unhealthy coping strategies are adopted to keep the child from re-experiencing the same frightening thoughts, feelings, and physical sensations. Unfortunately any attempts on the child's part to block their thoughts and feelings, leads to the trauma becoming further entrenched within the child's unconscious causing heightened anxieties or a state of perpetual fear, regressive behaviors, aggressive acting out, or dissociation and numbing. The trauma is never gone, it is simply waiting to be reactivated often when the child least expects it.

Using EMDR to Help Children Process Trauma

There are many different factors which need to be taken into account in order to help children resolve the physical, emotional and mental difficulties caused by unresolved trauma. One of the most important factors is having a therapy technique which first desensitizes the trauma memories and then repatterns how the brain stores the previously traumatic information. Eye Movement Desensitization & Reprocessing (EMDR) provides this type of unique treatment which is highly effective for resolving emotional difficulties and traumatic experiences.

Gaining in world wide acceptance, there are currently over 40,000 mental health professionals trained to provide this valuable therapy technique. EMDR combines elements of several well-established clinical theoretical orientations (e.g. psychodynamic, cognitive, behavioral, and client centered) to assist with the processing. Combining the negative beliefs, current thoughts and aroused emotions, with "bilateral stimulation" is a unique and novel way to dissipate the level of upset and to stimulate the reprocessing of trauma memories. Bilateral stimulation refers to the use of alternating eye movements, auditory signals, or kinesthetic tapping on opposite sides of the body while the person is picturing the upsetting event and connecting to the feelings associated with the original trauma.

Originally EMDR was used with Vietnam veterans and adults suffering from Post Traumatic Stress Disorder (PTSD). However with adaptations to the adult protocol and creative ways of engaging children in the use of EMDR it has been found to be highly effective with children when implemented by well trained clinicians. In addition to using EMDR with children who have suffered from experiencing something traumatic, it has been found that EMDR can be used to enhance a child's positive view of himself as well as creating new strengths and resources for coping with the trauma memories. EMDR has also been found to help children cope with problems associated with ADD/ADHD, anxiety problems, depressive disorders and attachment issues.

How EMDR Was Discovered

Psychologist, Francine Sharpiro, discovered EMDR by chance in 1987 when she was taking a walk in a park. She noticed that while she was thinking about some negative life issues and voluntarily moving her eyes back and forth, the intensity of the negative thoughts and feelings were reduced. Dr. Shapiro first studied the impact of EMDR on Vietnam combat veterans who were still suffering from post traumatic stress disorder. She found that this new technique when combined with a specific protocol showed good results reducing their nightmares, flashbacks, and intrusive negative thoughts.

By 1989 Dr. Shapiro was teaching her EMDR techniques including her basic protocol to trained clinicians and researchers from around the world. Since that time EMDR has evolved into a complex method that brings together elements from many major therapy streams. Although EMDR is still a relatively new therapy technique there are currently more scientific studies proving the efficacy of using EMDR to resolve trauma and post traumatic stress disorder (PTSD) than any other psychotherapy method.

In spite of the significant amount of research that has been carried out by neuroscience researchers, they still have not been able to explain exactly how EMDR works in the brain to bring about the significant changes that are visible. However, there is evidence which points to an innate processing system which is in operation when bilateral stimulation is combined with an activated trauma memory system. With the use of dual attention, which provides some form of external bilateral stimulation while observing the internal shifts, the memory system is able to facilitate the reprocessing of sensory stimulation and allow it to be desensitized and then stored in a new way in the brain.

Stages of EMDR Use with Children

EMDR is part of an integrated treatment approach often used in conjunction with other therapy techniques. With children, EMDR combines well with play therapy, cognitive or behavioral therapy and some forms of family therapy. When EMDR is used to process a child's traumatic experiences, it has been found not only to be highly effective but also to reduce the amount of time the child needs to spend in therapy. When looking at the different stages of EMDR therapy for traumatized children, there are five distinct parts to the overall treatment. The first stage involves gathering information through an intake interview normally without the child present, the second and third stages introduces the child to EMDR and builds positive resources within the child to help them tolerate re-experiencing the trauma, the fourth stage is the desensitization phase and the last phase is reevaluating and termination of the EMDR therapy.

The first stage of EMDR treatment consist of conducting an intake interview with the parents or caregivers to collect as much information about the child and his history as possible. In the appointment it is important to gather specific details about the trauma and how the child has responded to it. Finding out the child's current level of functioning and the problem behaviors, somatic symptoms, and how the trauma has impacted on the

larger family system are also important details which can influence the child's processing. When the child's caregivers and immediate family are still struggling with the trauma themselves, it may be hard to stabilize the child enough to conduct EMDR. It is also very helpful to find out from the parents/caregivers what they see as the child's strengths and what negative beliefs the child may have about themselves as a result of the trauma. Conducting a discussion with the parents about EMDR, how it works and answering any questions the parent may have about its use is another important part of the first interview.

Establishing the therapeutic relationship and building rapport and safety are key components of the beginning stage of the child trauma therapy. When the child's trauma symptoms appear to have stabilized somewhat and the parents/caregivers are informed and supportive, EMDR is introduced to the child. In this stage the child may be asked to imagine a safe and protected place where he feels relaxed and comfortable or to remember a time when he felt strong and confident. These positive images, thoughts and feelings are then combined with the "bilateral stimulation" to help the child feel safe again and to enhance how the child thinks of himself. These beginning experiences with EMDR typically give a child increased positive feelings and demystify the process of EMDR so that children know what to expect.

Another helpful step in preparing a child to process intense feelings or memories is having the child imagine a strong, sturdy container in which she can safely store her intense and overwhelming memories. Bilateral stimulation is added while the child is picturing the secure placement of the negative feelings inside the container where she can store them until she feel ready to process them. In addition, imagining special helper figures or safety devices while conducting EMDR may also enable the child to feel more powerful and ready to work through the painful feelings. Helping the child build up enough positive resources to feel empowered to face their trauma is an important step in preparing the child for re-experiencing the negative feelings which is required in the next stage of EMDR.

When the child appears ready to face the trauma, he is asked to bring up an upsetting image of the trauma memory and/or the negative thoughts/feelings the child has. Bilateral stimulation is again used while the child focuses on the upsetting experiences and reprocesses the memories, feelings and associated beliefs. When the upsetting memory or event is "desensitized" meaning the child can face the past event or memories and no longer feel disturbed, frightened or avoidant of the thoughts and feelings attached to it, then the child will have a more healthy perspective on the upsetting event. The meaning attached to the event is no longer distorted nor interferes with the child's development and functioning. When the event is reprocessed, the child can relax and believe, "I am safe now", "It wasn't my fault", "I did the best I could", or "I have choices now".

As part of the EMDR set up, the therapist often utilizes a scale which indicates how upsetting the trauma memory is for their client. Younger children can show with their hands how big the trauma is while older children can use a scale from 0 to 10 to indicate

the level of upset. Throughout the processing, checking in to see what level the disturbance is now, is one way of gauging how the EMDR therapy is progressing. When the child reaches 0 or they report that the memories are no longer upsetting to them, then they are ready for the closing part of the EMDR therapy.

As a way of terminating the EMDR part of the therapy session, a positive belief which fits for the child such as "The accident is over and I am ok now." is used with the bilateral stimulation. Installing a positive belief further enhances the child's good feelings about themselves and how they handled a difficult situation. Since children are not great at reporting improvements in behavior or symptoms, parents may be an important link helping the therapist know whether the EMDR therapy was successful or if there may still be remaining aspects of the trauma to be processed.

The amount of therapy time spent on direct processing with EMDR will be different for each child depending on the problems she is experiencing, age and stage of development, child's ability to trust the therapist and the child's willingness to process her feelings. The therapist familiarity and skill level in using EMDR and the variety of creative ways it can be used with children will also influence the length of the EMDR treatment. Even though there are specific protocols or steps to use when conducting EMDR, it is also clear that the EMDR process is different for each child experiencing it. This is influenced by the child's unique way of storing trauma within the brain and the body and the neural networks established within the memory system.

Even though EMDR is an internal mind/body process which is guided from within, the outside support from therapist, parents and family is significant in helping the child feel safe enough to bring up the intensity of the feelings and sensations so she can let go of them. When the rapport and trust with the therapist is strong enough, often the child will try out the EMDR techniques to see if they will help resolve their difficult and uncomfortable feelings. Using play therapy before and in conjunction with EMDR and for soothing after an EMDR session as well as playful ways of setting up and conduction the EMDR creates an elegant, effective way of helping children resolve trauma and build positive coping strategies.

Children in a Violent Society edited by Joy D. Osofsky, 1997 The Guilford Press, New York, NY

Waking the Tiger, Healing Trauma by Peter A. Levine with Ann Frederick, 1997 North Atlantic Books, Berkeley, California