EMDR: A danger in disguise?

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EMDR is being used more and more as a treatment method. Why? And is that right? De Voogd is one of many who has researched what would be effective in EMDR. Is she right when she says that research has shown that EMDR can calm the amygdala through the eyes?

Treatments are constantly being devised for problems that have always existed and will continue to exist. Science can only partly help us. This also applies to such a young subject as EMDR (Eye Movement Desensitization Reprocessing), a treatment method within the field of trauma. EMDR is about reducing the feelings of anxiety associated with the trauma. The method means that two activities happen simultaneously. The trauma story is told by the client who at the same time follows the moving finger of the practitioner with his eyes. In principle, the most traumatic part of the (traumatic) experience is being told. There are variations on this theme, for example not following with the eye but through sound or light, not telling the whole story and many other variations. One of the variations is that EMDR is applied to children through story writing and reading aloud. The symptoms of PTSD (Post Traumatic Stress Disorder) would decrease with the help of EMDR.

Research takes a lot of time, a lot of researchers and a lot of money to thoroughly map one theme scientifically. In the beginning it all seems clear and proven; it is called *beginner's luck* in science and then it usually crumbles down and only a small piece of knowledge remains. It takes decades. There is nothing against that.

Some subjects can hardly be scientifically researched because the rules of the ethics committee are very strict. This committee assesses whether a scientific research project may be conducted. And that ethical check is justified. In particular in case of research with minors, the rules of the ethics committee are very alert to possible damage. The method by which EMDR is performed on children cannot therefore be investigated. The risk of damage is too big because of the consequences of being exposed to the memory of the trauma. It cannot be proven that it does not cause any damage, because for that purpose they should first be exposed to the traumatic memory. There is therefore no evidence-based study on EMDR in children. Still, it happens that researchers manage to avoid the ethics committee, for instance by publishing in a journal that does not follow the ethics committee rules and where the 'conflict of interests' of the researchers do not play a role. This is only clear to the scientific community, however, not for society as a whole.

An extra complication is that trauma - big or small - is something that everyone experiences and that is how commercial interests arose around EMDR. The target group is almost inexhaustible. It is a method that fairly easy to implement and seems to be within the reach of every care provider. An attractive fact in a world that bears the vision of a manageable society.

Children are the most powerless in this, even more so than adults with trauma / PTSD. They are not easy to treat with EMDR, because they usually cannot tell their trauma, their story or do not want to, and as a result do not cooperate. It is also not easy to find out whether they have experienced a trauma and if so what they have actually experienced.

Example 1: *A mother makes a story for a 7-year-old girl who is supposed to have been abused when she was one and a half years old about the abuse. She reads it out and in the meantime the therapist taps the child's knee with a doll. Why not go with your finger in front of the eyes? The child did not want to cooperate ...*

Example 2: *The parents make a story of the major floods in the country of origin of their adopted children and read it aloud to them. They do not know whether the children have experienced the floods. The finger goes back and forth. It becomes a long series of sessions, in which the children become more and more aggressive, until the sessions are stopped. Aggression is one of the expressions of fear. The stories were frightening for the children ...*

In these two examples it is therefore not about what children have experienced, but what the parents or social workers think they have experienced. However, this experience is stored as memory and, as far as we know from memory research, as 'false memory'. Extremely scary , two figures of authority for the child (mother and therapist) make the child's life history and form memory in the child. Terrible traumas, of which the young child no longer knows or does not have a verbal memory of, have not experienced it that way and have not stored it through verbal paths. It is the story of the parent or practitioner that is stored in the child's memory as trauma. As far as we know, the famous psychologist Piaget suffered a great part of his childhood from a trauma that he did not experience as a baby. It was a made-up story of his nanny. She made up the story that he was abducted as a baby during a walk and a piece of jewelry was stolen, all this to hide that she had stolen it herself. For Piaget, however, it was his reality.

The fact that the child from example 1 afterwards functions well does not mean that she has not been harmed, but it may mean that she never wants to experience this again and therefore behaves well. Probably during puberty this will come out without people recognizing the source.

This is the practice of working with EMDR with children. I would say harmful. Research shows that memory can be made. The diagnoses MPS (Multiple Personality Disorder) and DIS (Dissociative Identity Disorder) were responsible for the conducting of many scientific studies in the 1990s in particular. This has created a social awareness that this is about false memories and suggested memory. It seems as if we have forgotten this and we are just doing this to children again through EMDR.

The success of EMDR calls for substantiation. De Voogd (2017) did research into what the effective effect with EMDR would be. What De Voogd discovered is that the eyes play a role in storing in memory through a part of the brain, the amygdala. It was presumably discovered that the operation of the amygdala would be 'suppressed' by EMDR. The truth, however, is much more complex.

If something new is discovered, we must not forget what is already known about it. The amygdala are nuclei in the brain that are used to discriminate between danger-or-no-danger. The first decision made by the amygdala is whether there is a danger and this decision is independent of whether this danger is real. The body is immediately hormonally activated to cope with the danger (heart beats faster, oxygen to muscles for thinking and running, pupils dilated to see everything). For the second decision, the information is sent from the amygdala to the prefrontal cortex in the brain, where it is assessed for reality and hormonal activity may be phased out.

Perhaps this already makes it clear that it would not be so safe for humans to 'calm down' the amygdala, which is not really possible, because the amygdala remain an important signal point for danger.

How then does the 'calm' evoked by EMDR work? By speaking about the trauma, the testing against reality comes into the brain (prefrontal cortex) and testing means that the trauma *is not* the reality, but that it *has been* a reality. Something that causes considerably less fear. Just like with an exciting movie, your heart starts beating, but it also comes to rest again.

For the amygdala, the eyes are only one of the senses through which information comes in, including about danger. Without eye movements telling the story also helps, especially if it takes place in a friendly, warm, accepting environment (it is already relieving to tell your story ..). Marcel van den Hout already indicated that the repetition may cause the awareness that the fear images are not so bad. Engelhart suspects that through practice the anxious experiences are viewed and edited with emotional distance. So no, De Voogd has not found the active ingredient of EMDR, for example, sound also works with EMDR, but less well. More importantly though, when the anxiety diminishes, the problem itself is not solved, because what happens to the trauma itself?

It is good to realize that this physical reaction to danger is also present in *gaming*, where the unreal danger is signaled - *for example, a gun aimed at you* - but the reality test - *it is only a game* - can hardly take place, because of another new unreal danger comes already up. This easily leads to an alert, hyperactive body.

But what should we do if science cannot help us in an experimental sense? There are two possibilities: testing the theory on which it is based and secondly the scientific logic. Beyond that, nothing remains for us but our experience (precious) and our intuition, which is still difficult to test.

There are many examples of scientific 'facts' that have become obsolete over time. Science is advancing and that is not only knowledge, but also and above all interpretation of that knowledge.

Hyperventilation, for example, received a great deal of attention, particularly in the 1980s and 1990s. Fast breathing was a problem and many people, more women than men, suffered from it. A theory was built on the basis of the biological discovery that carbon dioxide plays a role in hyperventilation. It was interpreted that important substances were breathed out by breathing quickly, so they had to be inhaled again. The treatment consisted of breathing in and out in a plastic or paper bag. Women walked with a bag in their handbag, in case they were attacked by an attack of hyperventilation. Just as in the past centuries stress induced *fainting* and treatment was smelling-salts.

In 1996, Hornsveld discovered that the symptoms of hyperventilation were not caused by rapid breathing but by stress hormones. The bag disappeared and Hornsveld stated that *everything* would help if you just did something: singing, cleaning up. That's why the bag helped, because it was you doing something. Stress was the underlying source and thereunder the problem or trauma that caused the stress. So 'doing something' helps!

Hyperventilation has more or less disappeared, the treatment method too, because the substantiation was incorrect and the cause was different and required a different treatment.

Where EMDR is concerned, it appears that much is still unclear and needs to be investigated. Because a positive effect is regularly seen during treatment, it is thought that it is the EMDR that is effective. But EMDR already has so many variations that it is reminiscent of the conclusion of Hornsveld (1996) after her research on hyperventilation: 'doing something helps'!

People look for substantiation through the functioning of the brain. A very difficult matter, because the instruments for brain research have been refined (fMRI, EEG, PET scan, etc.), but their interpretation leaves much to be desired. In short: that something lights up in the brain does not explain why it lights up.

The investigation into harmful consequences is very complicated because of the ethics committee. We must therefore refer to self-reports and links to already known research and logic. With self-reports that are negative, people do not easily come out about them ; they already feel bad; it seems such a success for others and not for them. I have heard many harrowing stories.

Research shows that targeted, repeated attention to trauma can strengthen the trauma. The disappearance of fear is more an anesthetic than a solution. These days anesthesia is often desirable, certainly in the perspective of a manageable society, otherwise there would be no drugs, alcohol and psychotropic drugs, but it does not solve the underlying problem.

***CHILDREN AND YOUNG PEOPLE**:*
*It is very easy to say what the ethically justified evidence-based research in the field of EMDR and children is: **not present**. We cannot ethically investigate whether this can be harmful, the ethics committee does not allow that, rightly so. The method used, writing and reading stories, runs the risk of creating 'false' memory. Children will suffer from what they have not experienced.*

The empirical studies cannot help sufficiently. What can we say about the theory behind EMDR? The concept of trauma / PTSD is still very young (since 1980) and scientific research into what trauma is and how you should treat it is still going on. Although much is still unclear, the use of EMDR is expanding from treatment for trauma, difficult events, chronic pain, etc.

THEORY TESTING:
The original theory behind EMDR involves new connections being made in the brain through eye movements. That is what Shapiro called 'reprocessing'. This theory has since been let go for the most part. Firstly, the link between the cause and the treatment was very weak. Shapiro had the experience during a walk in the forest that she felt uncomfortable. Shortly thereafter her eyes moved back and forth very quickly (Nystagmus) and then she felt comfortable. This is an autonomous process of the brain itself, from within, using existing connections. That is not the same as a process that is stimulated from the outside by letting eyes follow the movement of a finger, which incidentally does not move back and forth very quickly. The treatment with EMDR means that the eyes - and therefore the brain - from outside are forced to do something by the finger movement. Luckily this is not how it works, because unintentional changes could arise at any time in this way. Reprocessing has not been supported by research. New synaptic connections are not made that easily in the brain. That would even be dangerous if brains would make all kinds of connections by following a finger's movement with eyes so easily.

NEW THEORIES
EMDR is entirely based on the effect of PTSD (especially anxiety). The DSM (diagnostic manual) is also based on this, but this is only part of the consequences of trauma. Trauma also has a formative effect, as a result of which a negative perspective on the world, on humans and a negative self-image can be developed. That means that if you remove the effect, you run the risk of making the deeper molding inaccessible for awareness and treatment. Ergo: the fear disappears, but the problem remains. Trauma must therefore be viewed from a development perspective.

Effect, such as anxiety, is easy to imagine, but how should one imagine *molding* through trauma?

Example 3 (from an attendee to a lecture I gave): *In a lecture for teachers about refugees and trauma I spoke about the effect of molding. I explained that what happens with a trauma is associated to age. That when you experience a loss by death when you are five years old, this is totally different from the same loss at fourteen or forty years old. At five years old death is just sleep or an absence; whereas when you grow up at eight years old you know it is not reversible. So at five years old you do not experience deep loss or sadness when someone dies. This to explain that the interpretation of the event can go very far and mold a wrong self-image. After the lecture one of the teachers came to me and said she was shocked listening to me, and even had to cry. She explained that I spoke about a loss at five years old and that she had lost her brother when she was five. "I kept looking for him," she said. "Riding my bicycle in the polder, I thought* *what do I do when I see him? What should I tell my parents, they will be shocked." She knew it was something strange within her. She knew her brother was dead, but this still continued. She did not speak about it, because she understood that is was a little bit weird. And now she realized what had happened. Later, when she was gone, I realized that the crying was crying about the death of her brother for the first time. She had told me she never cried and everyone cried at the funeral, she did not. In fact her brother 'died' some thirty years later at the lecture…*

Example 4 (from my therapy practice): *A young man of 17 comes in for therapy. He is friendly, shy and does not have many words. After a while it becomes clear what image he has of himself. He is a monster, he says. A hefty statement, voiced thoughtfully and without doubt. Completely inconsistent with the gentleness he radiates. At one point he says to the therapist: "You are afraid of me". The therapist responds truthfully and kindly: "No." "That's not right," is his response. His certainty about him being a monster is big. A while later attention is paid to the trauma that the young man has undergone in his early childhood, the death of his father. He was then four years old. The therapist asks: "Do you remember anything?" The young man makes a motion of screwing with his hand and a moment later he cries out the word screwing. It is clear that he has never talked about it, the words still have to be found to be able to speak about it, the gesture came earlier. Something that also corresponds to the still strong pre-verbal phase of before seven years. He talks about the coffin in which his father was lying and that he had to take part in screwing to close the coffin.*

When we place ourselves in the little boy at the age of four, it becomes clear that the awareness of the irreversibility of death is not yet present; he is still before the development phase of five to eight years. At that age, death is mainly 'long sleep' or 'long gone'. Five-year-old children can look at an adult radiantly and say, "You will die, right?" Proud of the fact that they understand everyone will die. They do not yet have the awareness of the irreversibility of death, that realization is slowly being formed in the following years. Between the ages of five and eight, children are trying to understand and mold the basic concepts of life: death, the father, school, animals, boy, girl and so many others. This forms the basis for their vision of the world and themselves.

In the boy in this example, the realization of the irreversibility of death was not yet present when his father died. That means that he feels he has screwed his 'living' father into a coffin. Not surprising that he feels like a monster. It is then no longer solely tied to the death of his father; he is aware of this, because it has become his vision of himself without the reason being clear to him and without having spoken to others about it as a four-year-old. His self-image was therefore not tested against reality. Now that it was tested against reality because it emerged in therapy, this self-image dissolved.

His development stood still from that time on, eventually he did not go to school either. His philosophical attitude was discussed in therapy. He immersed himself in philosophy and discovered Nietzsche. He talked about Nietzsche with enthusiasm and said he experienced himself as a reincarnation of Nietzsche. After talking about Nietzsche's philosophy for some time, the therapist said, "I think Nietzsche has lost his father." The next session the young man enters with enthusiasm and says: "Nietzsche was just as old as I was when he lost his father!"

The philosophy of Nietzsche, and the recognition thereof by this young man, was thus placed in the context of the loss of a father at the age of four. Of course there are more factors, including the sharp intelligence of this young man and that of Nietzsche, but in the trauma their lifelines touched each other.

You have to go to the trauma to find the molding. The trauma itself is not so important, but rather the molding that starts and results from it.

I have been working with refugees since 1980. In The Netherlands the first big influx were the Vietnamese refugees in 1980, I therefore have an overview of more than 35 years of refugees in the Netherlands. Those who seemed to be most affected by the flight traumas were those who had suffered a painful trauma previously in their youth. It seemed as if the negative education resulting from childhood trauma was confirmed by the flight-trauma: *I am a bad child and therefore a bad person*.

If I look at the years of helping refugees so far, I agree with the result of the latest PTSD and refugee review research (review survey overview of all research in the area, 2017:

> *Tribe and colleagues conducted a review study in 2017 on help for PTSD in refugees (Tribe, RH, Sendt, KV, & Tracy, DK; Journal of Mental Health). They showed that in the case of PTSD, refugees achieved an average to high quality with treatment based on their own story (the narrative method). In addition, it appeared that CBT (Cognitive Behavior Therapy) and EMDR did not offer support for trauma treatment. The researchers warn of the lack of cultural connection between these two forms of treatment and mention the need to connect to the "real world".*

They indicate that the help based on their story, the narrative method, gives the best results.

REFUGEES

It has been stated earlier that EMDR with children has not been or cannot be investigated. Also, that EMDR with children can form 'false' memory and can therefore be harmful. Therefore no EMDR for refugee children.

Refugees always have a language and cultural barrier that makes (western) assistance in the country to which they have fled less suitable.

Adults suffer the most from childhood traumas. New traumas are so painful because they trigger and reinforce youth trauma. The molding that starts from youth trauma is powerful. If the signal disappears (the anxiety), the underlying is no longer resolved. In a training session, a woman indicated that she benefited greatly from EMDR. I explained that this is certainly possible, but that the underlying problem is not solved. She thought a while and said: "I understand. I had EMDR for my fear of dogs and I no longer have that fear. I no longer feel fear, but I still will take an alternative longer route when there is the risk of meeting a dog! " It is a simple example, but it shows that daily functioning continues to be affected while the fear has gone away. Of course nice in itself, but it makes it clear that it is artificial and that you have to watch out because you cannot apply this without risk.

In the case of people with autism, with their sharp thinking and their young social ages into adulthood, EMDR can be even more problematic, because they can hardly put the finger on their own thinking.

In the case of multiple, complex trauma, people already discovered that this cannot be treated with EMDR. The question is, however, whether everyone adheres to this now that the number of EMDR practitioners have increased enormously and scientific research seems to explain the effect.

A feeling often changes after EMDR. Sometimes the trauma is pulled loose roughly and the fear can no longer be controlled and people get seriously confused, *decompensation*. Not everyone hears those examples. There may also be traumas in which the anxious feeling effectively goes away. Then it often concerns something that the person himself could have done with the help of his immediate environment, such as the fear of dogs mentioned above. If he actually does it himself with support from his immediate environment, this reinforces the self-confidence: *I can handle it by myself!* If a therapist does it with a method, almost a trick, it will sooner weaken the self-confidence: *I cannot handle it myself!* With complex trauma the feeling of fear may be numbed, but the tangle of causes remains inside the brain without a signal that something must be done: like a plaster on a festering wound.

In short, it is quite a complex matter. EMDR is easy to learn and implement, but it requires a layered view of people, trauma and the consequences that treatment can have. Trauma is not something simple; it is a serious matter and deserves multiple expert actions.

ADULTS

Although some research has been done in the field of EMDR, it is mainly about which element works: eye or sound. What has not yet been investigated is the trauma and its consequences, plus the molding that ensues. At best EMDR removes a symptom, the anxiety-related problems. That is a pleasant effect. One can choose that, but then one must be aware of what it does. It also means that the signal that something is going on disappears, and with it the opportunity and motivation to tackle a problem. Symptom control. It is also possible that the confrontation with the trauma through EMDR leads to decompensation and leaves people behind without protection. With simple trauma one can wonder if it weakens the personality, because someone else has solved it and not the person himself.

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