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Brainspotting as a treatment modality after trauma, for emotional regulation, or to unlock potential

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Summary Brainspotting, discovered in 2003 by Dr. David Grand, is an innovative method for emotional regulation and trauma processing. Evidence for the therapeutic efficacy of Brainspotting is available (i.e. D'Antoni et al. 2022; Hildebrand et al. 2017).
The article explains the fundamentals and practice of Brainspotting, supported by case studies and neuro-biological hypotheses. Its effectiveness is described not only for trauma and its long-term effects but also for unlocking potential. Finally, the method is presented as a valuable addition to any therapeutic setting.

Keywords Brainspotting - Therapeutic method - Emotional regulation - Trauma processing - Integration - Therapeutic relationship - Potential development - Post-traumatic stress reactions - Development of self-healing abilities - Trauma integration

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An accidental discovery became a popular treatment method worldwide

Dr. David Grand worked with Karen, a young ice skater, in his practice in New York in 2003 (Grand 2013). She had a block in performing the triple loop on the ice. During an EMDR (Eye Movement Desensitization and Reprocessing) session related to this issue, as he slowly moved his finger back and forth in her field of vision, he noticed uncontrolled, reflexive eye movements at one point. He intuitively held his finger still. Karen continued to look at it. He was surprised when, over the next ten minutes, she processed deep, traumatic material from her childhood. The patient had already been in treatment with him for a year and a half, and during these minutes, he learned revealing information that he had not known until then.

The next morning, the athlete called him enthusiastically and told him that she could now jump the loop flawlessly.

Dr. Grand sensed that "holding the point" had triggered a significant emotional change and followed up on it. This very session, in which Dr. Grand integrated emotional activation with physical responses and the visual system into trauma processing, was the starting point for rapid development in the professional world.

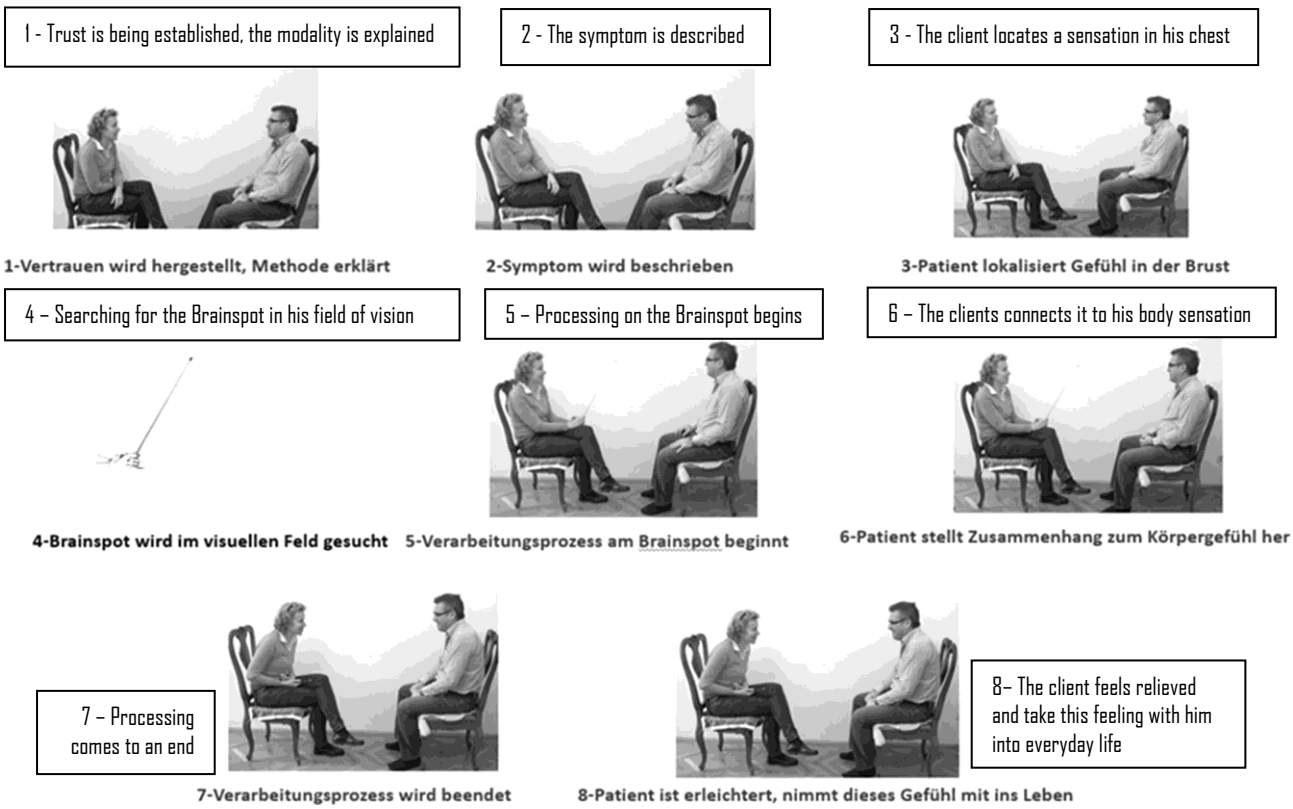

Fig. 1 Example of a mock Brainspotting therapy session (based on Baumann 2023)

The belief that Brainspotting allows profound changes is supported by testimonies, general neurobiological explanations and studies (see Porges 2017; Raju et al. 2015; Siegel 2010; Siegel and Bryson 2011). A comparative study between EMDR and Brainspotting by Hildebrand et al. (2017) found that both approaches can significantly reduce emotional stress caused by negative trauma-related cognitions. In Anderegg's research[1], in which empirical comparisons were made regarding the effectiveness of Cognitive Behavioral Therapy (CBT), EMDR, and Brainspotting in 78 patients with generalized anxiety disorder, Brainspotting proved to be superior in terms of its sustainability in the follow-up examinations. The same applies to the study on the Newton Sandy Hook school massacre (Newton Sandy Hook Community Foundation 2016). A more recent study showed positive effects of individual sessions of EMDR, Brainspotting or Body Scan Meditation in the processing of stressful memories in healthy adults (D'Antoni et al. 2022).

[1] Anderegg, J. (n.d.). Effective treatments for generalized anxiety disorder, Clinical experimental study. Anderegg Institute. Unpublished report. Institute Anderegg, C/Músico José Méndez 6, 03110 Alicante, Spain. E-mail: anderegg@cop.es

How can you imagine a Brainspotting session in practice?

The following images and descriptions provide an insight into what a Brainspotting session might look like (Fig. 1).

The symptoms are discussed in a trusting conversation, during which the practitioner also observes the body language of the client(s).

1. A decision is made as to whether there is sufficient autonomy and stability to apply Brainspotting.
2. The symptoms and their effects are analyzed.
3. When asked about a physical sensation, the client could describe a pressure in the chest.
4. With this feeling, the pointer is used to find the spot in the visual field where the client indicates that they feel the problem best.
5. What follows is a present, silent "waiting" on the part of the practitioner. In this way, the client is given permission to go to where the processing can be useful. These can be experiences from the past and/or emotions, as well as body feelings/body reactions. If we are unable to find words for something, the body memorizes the "feeling of dread".
6. While the patient looks at the pointer, they process, for minutes or sometimes much longer, in a therapeutic presence held by the therapist.

7. After (trauma-) integration has been achieved, relief, inner peace, or a similar sense of well-being emerges.
8. This is then consolidated and taken into everyday life following the session.

With regard to the symptoms, a triad is established between the *emotional experience*, the *physical sensation,* and the *visual point* (usually the pointer) at which these two feelings are most perceptible.

The following example describes a session in terms of moving past a block.

A young adult approached a Brainspotting practitioner to talk about his performance block when auditioning with the cello. He had read about the effectiveness of Brainspotting in Hildebrand et al. (2017), which stated that Brainspotting helps to clear a mental block. He was studying cello at university and has performed countless times in his life - without any nervousness. Then his beloved father's birthday was coming up, at which he wanted to perform some pieces. The client had no difficulty with the technique of the pieces and was looking forward to his father's birthday party, with whom he had a very good relationship and to whom he wanted to give a musical gift. Nevertheless, he had been sleeping poorly for a few days and had the feeling that his fingers no longer cooperated when it came to rehearsing for the performance.

In one of the Brainspotting sessions on insomnia and "the fingers don't play along", he processed a childhood experience.

After the two issues were identified, he shared that he was currently feeling pressure in his chest. This was rated a 7, on a scale of 0 to 10. The practitioner started using the pointer. While it was slowly moved from left to right, some reflex-like reactions were observed. For example, He sometimes breathed very heavily, twitched his eyelids, or backed away reflexively. It was decided to hold the pointer at the point at which the cellist reacted in a startled manner.

While the client was looking at that spot, the pressure in their chest increased slightly. After about five minutes of silence, he shared an incident from his adolescence. At the age of 12, he was at a camp where he wanted to give his friends an artistic treat, but was ridiculed for it. The memory was painful, as he was just starting to "burn for" music at that time. He realized that his peers did not share this enthusiasm and relived his previous feelings of shame all over again.

He recognized and felt the similarity to his father's birthday party. The young man was able to physically perceive very well how he felt at that time - during the session, he even blushed - and in this way, he allowed himself to integrate the humiliation from his childhood. He realized that this experience had happened in the past and that nothing harmed him in this session, despite the intense reliving of his shame and blushing - on the contrary, his story and his feelings had a good place in the therapeutic relationship.

When asked about his body feeling, the value on the scale was now a 2. He felt calm and joyful when he thought about his father's birthday party. The practitioner lowered the pointer and ended the session by consolidating the anticipation.

In the next Brainspotting session, the client brought his cello and looked for a resource point in the room (without a pointer). Once he had a truly good feeling, he picked up the cello and rehearsed the pieces with his eyes fixed on the resource point. He described the "lightness" of his fingers and his ability to flow with the music.

After the birthday party, the practitioner received the following text message: " I rediscovered the joy of playing and was able to pass it on to my father. This time, I received a lot of attention from my father's friends - my twelve-year-old self is delighted. A very, very big thank you from a musician who is sleeping well again!"

Neurobiological explanations and assumptions

Theories and studies

As outlined at the beginning, David Grand intuitively incorporated the emotional stress related to a particular topic, the physical sensations or reactions, and a point of focus into the treatment of the figure skater. These three aspects describe the core of Brainspotting, based on the supportive relationship between patients and professionals.

An attempt to explain the interaction of these aspects is outlined in the next section.

Peter Levine is considered a pioneer in trauma psychology. He explains: "Trauma is not in the event itself; rather, trauma is in the nervous system. . the basis of an 'isolated trauma' is more physiological than psychological in nature." (Levine 2007, p. 4).

Levine (2007) recognizes that the body plays an essential role in the trauma reaction and in the processing of it. The oldest brain region, the "deep limbic system," or commonly referred to as the "reptilian brain," is the connection between the brain and the body. This is the area that reacts intuitively and involuntarily when something threatening happens. Imagine a loud noise coming from the room next door. Before you can even react, you flinch. This reaction cannot possibly be prevented by reason or calming down. Only after the initial startle can the neocortex, the brain's action planner, calmly kick in and,

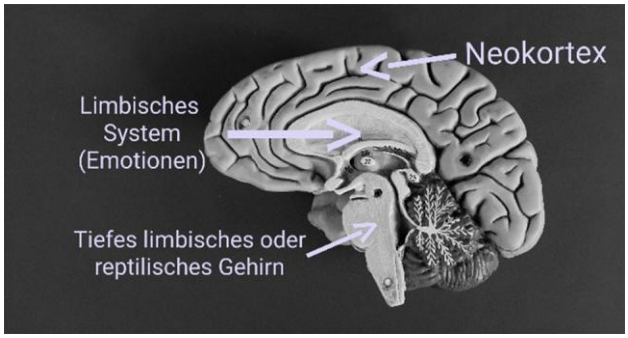

Fig. 2 Limbic system, reptilian brain and neocortex

for example, remind us that there are boxes piled up in the adjacent room with unbreakable contents and that one of them has probably fallen to the ground. Also, the limbic system, or emotional center, calms down only after the initial flinch, once it has verified that no further trauma response is necessary (Fig. 2).

Levine (2007) describes at least 20 different physiological reactions that become active in order to defend or protect. The "flinch" can be thought of as one of these reactions. The basis for this is described as "flight - fight - freeze" reactions.

"Under high levels of stress, the fight, flight, or freeze response floods the body with the hormone cortisol, a chemical that disrupts the function of the hippocampus. This probably triggers something similar to a blackout - i.e., a chemically induced form of dissociation" (Siegel 2010). A calming effect like in the “box example” would then not be achievable. In these often traumatic situations, a reaction is required. This can be, for example, running away, fighting, screaming, or even freezing. After a traumatic experience in which individuals are unable to calm down (integration), they can become “stuck” in this behavior. This is when mental blocks, accumulations in the body, and often linked psychosomatic symptoms arise.

Another neuroscientist of our time is Steven Porges. He founded the polyvagal theory. It explains the connection between the brain and the organs - largely supported by the vagus nerve (Porges 2017; Van der Kolk 2104). This is responsible for the fact that popular sayings such as “That weighs heavily on my stomach” or “I have a lump in my throat” are uttered.

In the Brainspotting trainings, all of this is summarized and taught: "What is in the body is in the brain, and what is in the brain is in the body!" (Grand 2014).

Incorporating physical sensations into the treatment process alongside emotional processing is an essential component and highly beneficial in integrating unprocessed issues. Thus, traumatic experiences can not only be emotionally “reclassified,” but the associated physiological symptoms can also be resolved.

"The eyes are the windows to the soul" is an old saying of unknown origin. Adding the visual system to the treatment allows patients to lock focus on a spot during their processing. Depending on the treatment goal, the "brain spot" is chosen where the stress is most noticeable (activation point or stress point) or where the client feels most comfortable (resource point).

Corrigan and Grand (2013) provide a detailed explanation of why Brainspotting utilizes the visual system to access the midbrain, where traumatic experiences are stored. They describe the periaqueductal gray (PAG) and superior colliculi as crucial areas. By fixing one's gaze on a particular spot, they enable one to experience strong emotional and physiological sensations, generally similar to those experienced during the traumatic event. In applied work with Brainspotting, these are the moments when clients go through the processing. This is characterized by memories or bodily sensations and emotions. Phrases like "I can literally smell it, I feel like it's now, I feel paralyzed" illustrate this assumption.

The "oculocardiac reflex" (Merill and Bowan 2008) contributes to a calming effect while focusing on a spot.

The reliving - facilitated by the therapeutic relationship and the experience: “I am reliving it, I'm safe, I am not being left alone, and my therapist is sticking with me” - differs from the original traumatic experience. Clients can, now well-grounded, take this new experience, which they feel with all their senses, with them, causing all previous experiences to be less significant, and this is believed to be the “key” to integration. The two specialist articles by Corrigan, Grand, and Raju (2013, 2015) substantiate these assumptions with neuropsychological facts.

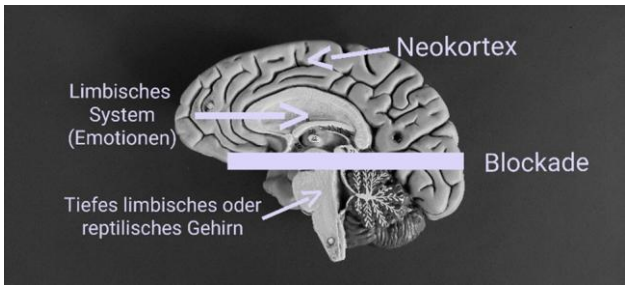

Fig. 3 Block or protective reaction in the brain

Simplified explanation

The hypothetical attempt to explain neurobiology should be adapted to the client's age and level of knowledge: When our brain is emotionally overwhelmed, it reacts intuitively from the deep limbic area with "flight - fight - freeze" or similar behavior. It is often possible to withdraw from this shock behavior as soon as safety is assured. ("Don't worry, these are just boxes with no fragile contents"). Sometimes, however, the shock reaction and thus the "protective reaction" in the brain continues. People remain in the protective reaction behavior. This is illustrated as a block in Fig. 3. Here, a connection to the described symptom is established. The cello player reported: "The fingers no longer play along." The brain has expressed that playing in front of friends is "dangerous".

As long as this is the case, processing is not possible because the brain is still "signaling danger" and does not "allow" integration into the limbic system.

Distinct bodily sensations often accompany these reactions. In highly dissociative clients, the protective reaction can be so intense that they feel nothing physiologically; they even block bodily sensations.

The visual system is used to change this and allow integration. The sensitive visual pathways lead from the eye to the visual center (occipital lobe or occipital lobe). It is only there that images are created (Fig. 4).

On their way, the sensitive visual pathways cross an area of the brain (superior colliculus) in which our senses are represented. This allows us to feel "imagined experiences" as if they were now real.

If, in a trust-based relationship between practitioner and client, a spot is identified where both the emotional and physiological causes behind the symptoms can be felt, the block can be (gradually) overcome in a safe environment.

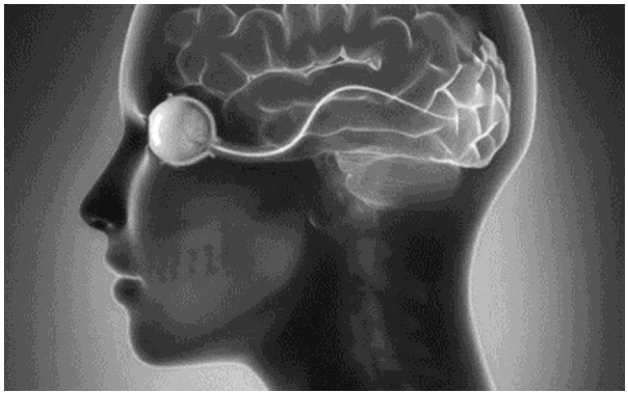

Fig. 4 The visual system (from Omeda 2020)

Fig. 5 From dysregulation to regulation, from imbalance to balance

The brain learns that there is no more danger and allows the integration of the stressful experience. From that moment on, the trauma reactions, i.e. the current symptoms from the deep limbic system, are no longer necessary.

Clients can recall traumatic experiences. These are not trivialized, but the post-traumatic stress reactions (such as the "not playing fingers") have become superfluous. The brain no longer needs to protect.

Aristotle summarized this beautifully with the saying: "We cannot change the wind, but we can adjust the sails" (Fig. 5).

Two studies and the practical relevance

Anderegg (2015) compared three therapeutic procedures for anxiety disorders. He summarizes the EMDR and Brainspotting methods as being similarly effective immediately after the use of them. In the follow-up study after 6 months, he used the STAI questionnaire to determine that clients had obviously processed in deeper regions of the brain with the Brainspotting treatment. This means that they continue to experience positive effects for months after treatment, which sets them apart from comparable methods.

I can confirm this from my practical experience. People who live in a stable environment and have mild symptoms can often regain their inner balance after just a few Brainspotting sessions.

Brainspotting can be used in a very wide range of areas: From mental blocks to stressful and psychosomatic symptoms, as well as posttraumatic stress disorders per international diagnostic criteria, etc. In addition, developing and strengthening potential (e.g., in creative professions or in athletes)

is also an essential part of this approach.

It is often "small blocks" from our childhood that slow us down or render us incapable of acting in the present, many years after.

An adult client, who was stable in life but became increasingly isolated recounts the following episode from her childhood. ". . . everyone thought my picture for my mom for Mother's Day was so beautiful and marveled at it. I thought that if I drew a thick red line on it, the sun would even rise in it. So I secretly disappeared with the picture and colored it all red-orange. Now it was clear that the sun was rising. I proudly presented it to my mom. I was so curious whether the others would think it even prettier with the new addition. However, that wasn't the case. Mom was disappointed because she couldn't see the flowers anymore, and my uncle even commented on how clumsy I was. While all I wanted was to make everyone even happier. To this day. I can feel how I wanted to hide underneath the table."

People with severe symptoms can also find help with self-regulation through Brainspotting. In such a case, for example, it is feasible to use only resource Brainspotting to establish a framework of stability for further treatment. Another option is to combine Brainspotting with parts work repeatedly over an extended period.

If one part becomes imbalanced, incapable of acting, or even rigid, the entire system can go haywire (Schwartz 2000). Imagine the first violin in an orchestra always plays a note too late. This ruins the entire orchestral work, even if all the other instruments perform their tasks excellently. In such a case, it would make sense to work with the "first violin" separately and, once it has regained its balance, reintegrate it into the orchestra, which is otherwise functioning.

Brainspotting can also be used when working with inner parts. A “treatment-worthy” part is identified, and the traumatic stress from this part is processed at the Brainspot. Integration into this client's system helps all parts to function better together. This can be done "part by part" over an extended period of time.

A middle-aged woman was in a psychiatric rehabilitation clinic for moderate depression and was allowed to receive frequent Brainspotting treatment during these weeks.

The work with her was broken down into looking at her inner parts. The example of a jigsaw puzzle was used to explain that humans are composed of many different parts, like the pieces of a jigsaw puzzle.

A puzzle picture was created. She drew those she didn't like so much and self-deprecating parts darker than the others.

She was then asked about her inner guiding principles regarding the dark pieces. In the coming weeks, Brainspotting was used in every session with one of these pieces. The neighboring strengthening puzzle pieces or positive pieces were visually present. They served as a resource during the treatment.

The patient was thus able to integrate many stressful elements and left the clinic able to return to everyday life.

The examples just described show that Brainspotting can be used in difficult moments as well as in psychiatric illnesses.

A report from the US Newton Sandy Hook Community Foundation (2016) also showed the effectiveness of Brainspotting in acute crises. In Sandy Hook, about 150 km north of New York, a school shooting occurred in December 2012. Following this, a help center was immediately established with various therapeutic support services.

Dr. David Grand and Dr. Martha Jacobi visited there once a month for several years, offering Brainspotting sessions for both adults and children. After five years, a survey was conducted among the population in which Brainspotting was described as the most effective method.

In such difficult times, we experience severe post-traumatic stress reactions in many of our clients. Old, unprocessed traumatic experiences are "awakened".

During an acute crisis, the Brainspotting method helps regain your bearings. Often, it is also beneficial to work through past trauma to keep one's agency in the current crisis.

Brainspotting is a method that anyone can integrate into their therapeutic/psychological work. In short moments or intensive sessions, with individuals or couples, parents - children and groups.

The type of application is responsibly chosen by the professional, thus allowing for a gentle path to integration.

Conclusion and future prospects

Brainspotting can make a significant contribution to emotional regulation. Previous research studies and many practical experiences confirm this. In January 2024, the magazine "Psychotherapy Networker" published an interview with Dr. David Grand about the discovery and development of Brainspotting, completed by a case study.

Nowadays, trauma caused by war, personal experiences, natural disasters, and via media has become an often overwhelming experience. Brainspotting is a valuable and indispensable addition to the existing "trauma treatment methods". The fact that this also contributes to unlocking potential or an "easier life" confirms the ancient wisdom of Aristotle: So, it is not only in stormy times that “emotionally stressful sails can be set differently,” but also to foster emotional growth.

Compliance with ethical guidelines

Conflict of interest M. Baumann states that there is no conflict of interest.

Ethical standards The authors carried out no studies on humans or animals for this article. The ethical guidelines stated there apply to the studies listed. The patients have provided written consent for the anonymized use of their data in the context of this original work. The processing of their data was carried out in strict compliance with the applicable data protection regulations. The author has received declarations to this effect (informed consent).

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