

Cooperation between Mind, Body and Soul in Healing Trauma

Ștefania (Frigioiu) Ciucur¹

Abstract: Although theoretically we humans belong to an extremely powerful species, enduring over time endless wars, natural or man-made disasters, losses, violence and personal betrayals, all these traumatic experiences have left marks both in history as well as on a personal or family level. At the same time, these marks permeate our minds and emotions, our ability to enjoy and experience happiness, and even our immune system and biology. Trauma affects not only those directly involved but also those around them, who are put under extra pressure, namely to give them their energy and strength in the desire to help them continue to function, despite the fact that they are overwhelmed by the memory of the pain and shame of going through those traumas.

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How Could We Describe Trauma?

In real life, trauma cannot be tolerated or endured. In the vast majority of rape victims, although they try to forget what happened to them, it seems that the part of the brain that is involved in the survival process does not so easily accept the denial of trauma, because although it's been a long time since the end of the traumatic experience, it can be reactivated relatively easily at the slightest danger stimulus, mobilizing again those brain circuits that have been disrupted and secreting huge amounts of stress hormones. This situation generates strong emotions and very intense physical sensations, overwhelming and difficult to process. It is not

¹ Psychologist, Faculty of Communication and International Relations, specialization: Psychology, Danubius University of Galati, Romania, Adress: 3 Galați Blvd, 800654 Romania, Tel.: +40372361102; Fax: +40372361290, Corresponding author: stefaniafrigioiu@yahoo.com.

surprising that trauma survivors often feel damaged in the structure of their being and do not give themselves a chance to heal.

Research on the impact of trauma on the development of the mind and brain have shown that these traumas produce real physiological changes, including changes in the alarm system of the brain and even that area responsible for the physical sensation of being alive. These people, instead of being involved in daily life, become hyper vigilant in the face of dangers and moreover, they repeat the experiences, unable to learn from the lessons and traumas experienced. Thus we understand that this behaviour is not caused by lack of will, wisdom or morality but simply by the changes that have occurred in their brains. This understanding allows us, those who are entitled to offer healing, to look with more compassion, empathy, and benevolence, and to try to help reconnect them with other people, but primarily with themselves, by giving them methods which involve the natural neuro -plasticity of the brain, helping them to feel integrated and complete in their lives to continue.

The challenge I launch is the understanding that the core of any nervous disorder exists not only in the traumatized person's mind, but also at the physiological level, in other words, in his body, and the symptoms of post-traumatic stress are found in the body's reaction to trauma. Under these conditions, it becomes sustainable that the imprints left by traumas can be changed by experiencing physical experiences, in direct and strong contrast with the states of anger, despair and helplessness, naturally included in the trauma, instead returning self-control.

We need to do this because these fingerprints in the mind, brain and body continue to produce consequences, affecting the survival of the human body. Unfortunately, trauma reorganizes the way the brain manages perceptions, the way we think, and the ability to think, and verbalizing the traumatic experience is not enough because it cannot instantly alter the physical and hormonal reactions in a body in a state of hyper-vigilance that is ready at any time to be assaulted or raped. In order for real change to occur, the body must understand that danger no longer exists and learn to live in the reality of the present moment. Therefore, in understanding the traumas, we will analyze the structure of the mind, as well as the processes by which it can be healed, as well as how the victim's body keeps the memory of the trauma, because she/he would not manage her/his life effectively unless she/he knew the reality of his body.

Our brain is a huge network of interconnected parts that are arranged in such a way as to help us survive and evolve. The way which all these parts work together is

essential for understanding how trauma affects every part of the human body and could guide us in deciphering and healing trauma. Danger is part of the normality of life and the brain has the mission to detect it and to generate our reactions to the outside world. These sensory reactions are found in the thalamus, the area inside the limbic system that mixes all the information it receives from our senses of perception and directs them in two directions: down to the amygdala and up to the frontal lobes, our conscious area. The central mission of the amygdala is to decide to what extent the information received is relevant to our survival, it acts quickly and automatically using the feedback received from the hippocampus, this structure near it that associates the new information received with the previous experiences. When amygdala perceives a threat, it sends a rapid message to the hypothalamus and brainstem causing the release of stress hormones and a generalized reaction of the whole body.

Due to the fact that the amygdala is the first to process the information received from the thalamus, being faster than the frontal lobes, it decides whether the information received is a danger to our survival, so by the time we become aware of danger, our body is already moving triggering the strong secretion of cortisol and adrenaline which leads to an increase in pulse, blood pressure and respiratory rate, preparing us to fight or run. While the amygdala is the fire detector inside the brain, the frontal lobes, through the prefrontal cortex located just above the eyes, can be considered a watchtower that provides an overview of the situation, which the amygdala cannot do, it could only prepare us to fight or run, before the frontal lobes could weigh the situation. When we are not very agitated, these frontal lobes easily restore the state of balance and help us understand the severity of the situation and calm down easily enough so that the reaction to stress could not happen again. Normally the capacity of the prefrontal cortex allows us to observe what is happening, to anticipate what may happen and to be able to make a conscious choice, using our ability to calmly and objectively analyze our feelings, thoughts and emotions.

The ability to organize and inhibit the automatic reactions that are pre-programmed in the emotional brain allows us to manage relationships with our peers in the sense that if our frontal lobes work properly, we would manage not to lose our temper and patience when things do not happen the way we expected and the most important thing is to understand that the anger and threatening reactions of other people are a manifestation of their emotional state. If the system does not work properly, we become like conditioned animals, in the sense that when we identify a danger, we automatically enter the “fight of flight” mode.

Achieving an effective balance between the fire detector and the “watchtower” leads to effective stress management, and if we want to control our emotions as good as possible, the brain offers us two possibilities: to learn to adjust them, top- bottom or bottom- up. In these conditions it is vital to know the difference between the two directions to understand and treat trauma. By adjusting from top to bottom, a monitoring of the body sensations is obtained by improving the capacity of the “watchtower” and by adjusting from the bottom up we obtain the recalibration of the autonomic nervous system. Awareness meditation, various yoga techniques, tai chi, through breathing, movement or touch can help us improve the processes of regulating emotions from top to bottom or from bottom to top. For example, the respiratory process is one of the few processes that can be controlled both consciously and autonomously.

During the recovery process, a new perspective is the re-assumption of self-identity because the trauma deprives you of the feeling that you have control over yourself. The challenge of healing is to restore ownership of your mind and body, that is, your own self, thus becoming free to feel what you feel, because what you do not feel you cannot control. The trauma of abuse, rape, aggression, rejection, abandonment is a horrible event and no one can treat it because what happened cannot be undone, we can instead alleviate what that event left on the body, soul and mind.

Visceral sensations are perceived on body level, rapid and shallow breathing, palpitations and pain in the heart, stiff and hoarse voice, chest contractions that are often associated with anxiety and depression, fear of uncontrollability, and body movements characteristic of the state of collapse and stiffness. The whole suite of physical sensations and emotions that were imprinted during the trauma are not experienced in the form of memories, but as reactions of the physical body that disrupt the present moment. These physical reactions are manifested by the emotional brain, which is different from the rational brain, which expresses itself through thoughts and cannot negate emotions and sensations, such as the thought that you are a horrible person, even if you rationally know it wasn't your fault, that you were assaulted. The fact that you understand the reasons why you feel a certain thing does not change at all what you feel.

According to research in the field of neuroscience, the only way we could change what we feel is to be aware of our inner experiences and develop the ability to make friends with what is happening inside us. Thus, the various forms of therapies, including yoga, tai chi, qigong, rhythmic drum beats, as well as body therapies such

as sensorio-motor psychotherapy and somatic experimentation are just a few examples in this direction. The principles underlying these forms of therapy refer to the awareness of the present moment, non-violence, organicity and mind-body unity.

Traumatized people experience terrible pain in the solar plexus or in the chest, so they are afraid to feel something, and this fear of unbearable sensations keeps the body in a state of stillness, as well as the blocked mind. When we become aware of our own body, we come into contact with our inner world and the mere observation of a state of nervousness, of anger, is enough to change our perspective and open us to other options related to our daily reactions. Lucidity connects us to the transient nature of the feelings and perceptions we have and when we consciously focus on our bodily sensations we have the opportunity to recognize the fluctuation of emotions and thus amplify our control over them.

Learning to breathe calmly and remain in a state of approximate physical relaxation even when accessing traumatic and painful memories is an essential tool in the healing process because when you breathe consciously and deeply several times you can immediately notice the brake effects of the parasympathetic system on the state of agitation, and the more you focus on breathing, the benefits will be greater and greater. In order to make the change, it is necessary to open up to your inner experiences, and the first step is to allow the mind to focus on the sensations you feel by noticing that the physical sensations are transient and react to the slightest changes in body position, of breathing or thinking. After you learn to pay attention to physical sensations the next step is to label them, for example when you feel anxious you feel a contraction sensation in the chest area so you need to focus your attention on that sensation and see what changes if you exhale prolonged or when you knock your chest under the collarbone. By practicing lucidity you will get a calming of the sympathetic nervous system, thus becoming less prone to automatically enter the fight or flight reaction.

Developing the ability to observe and tolerate your physical sensations will lead to a security of the conditions in which you re-experience the traumatic past. Once we accept that the bodily sensations are constantly changing, we would be able to tolerate much greater discomfort. The next step will be to observe the play that takes place between thoughts and physical sensations. Awareness of how the body organizes certain specific emotions and memories will facilitate the possibility of releasing and removing certain sensations that we have blocked at some point in trying to survive.

According to the theory of John Kabat-Zinn, one of the pioneers of mind-body medicine, cultivating lucidity has a positive effect on many symptoms both psychic and psychosomatic associated with stress, depression and chronic pain. As he mentioned: “One way to think about this process of transformation is to imagine lucidity as a lens that takes the wasted and reactive energies of the mind and focuses them on a coherent source of energy for life”, “for problem solving and healing”. The immune system is also improved, as is blood pressure and cortisol levels in the blood. Studies have shown that the practice of lucidity also reduces the activity of the brain fire detector, namely the amygdala, and reduces the reactivity of potential triggers for the “fight or flight” response.

When accumulates too much emotion, the body becomes physically restricted, the shoulders become tense and the facial muscles contract. People consume a lot of energy in an effort to hold back tears or any sounds or movements that could betray their inner state. Once the physical tension is released, these emotions can also be finally eliminated. The movement helps the breath to be deeper and when the tensions are eliminated expressive sounds can be used, the body thus becoming freer, breathing easier and integrating better in the reality of life. Touching also helps you live in a body capable of moving on its own, not influenced and conditioned by the mind. Scared people do not know where their body is, what their boundaries are, in these conditions a firm and soothing touch will help them realize what is outside and where their body ends. The touch assures them that they are safe and that they do not have to be on guard all the time.

Somatic therapies help patients reintegrate into their bodies at the present, experiencing the fact that this time they can move safely, restoring self-control and the feeling that they can defend and protect themselves. The memory of helplessness and despair is recorded in the body by muscle tension or a feeling of disintegration in body areas such as the head, back and limbs in victims of accidents, and genitals in victims of sexual abuse. Other people who suffer chronically from fear or anger experience constant muscle tension that over time leads to back pain, migraines, spasms, fibromyalgia and other chronic pain.

As previously mentioned, our state of health, of optimal integration in the external environment but also in ourselves depends on how the two systems within the autonomic nervous system, the most important element of survival, work together. The sympathetic nervous system uses chemicals such as adrenaline and cortisol to stimulate the body and the brain to take action, while the parasympathetic nervous

system uses a neurotransmitter called acetylcholine to restore the body's basic functions to homeostasis such as digestion, wound healing, sleep and dreams.

The one that establishes the balance between the parasympathetic and the sympathetic nervous system is the variability of the heart rate; when we inhale we stimulate the sympathetic nervous system and accelerate the pulse, when we exhale we stimulate the parasympathetic nervous system and thus reduce the pulse. A balanced automatic nervous system gives us a reasonable degree of control over our reactions to minor frustrations and disappointments, allowing us to calmly assess everything that happens, while people with a less balanced autonomic nervous system easily lose the mental and physical balance. In addition, poor heart rate variability has negative effects on thinking and feeling and how the body reacts to stress, with a lack of coherence between breathing and heart rate making people vulnerable to many physical illnesses such as cardiovascular disease and cancer as well as mental illnesses such as depression or post-traumatic stress.

Fortunately, research has shown that changing the way you breathe improves the management of anger, depression and anxiety and yoga is a tool that has a positive effect on a wide range of medical problems, such as hypertension, asthma, back pain, high secretion of stress hormones. Yoga programs consist of a combination of postures and breathing techniques as well as meditation. Different variations of the intensity of the speed and depth of respiration are used, but also in the use of the nostrils, throat, mouth, generating effects on body energy.

The purpose of these techniques is to create a rhythm between tension and relaxation, and patients will begin to perceive the same rhythm in their daily lives and have the courage to observe what is happening in different parts of the body from one posture to another, because it is difficult for traumatized people to feel completely relaxed or safe in their body. So the major challenge of healing from a trauma remains the ability to achieve a complete state of relaxation and safe abandonment.

Yoga helps you focus inside yourself and not on the outside world and causes you to listen to your body because your body has a lot to tell you, try to listen to it. During yoga practice you focus your attention on the breath and sensations in the body at all times and you begin to notice the connection that exists between emotions and the body because for example anxiety can prevent you from maintaining your balance during postures. By exercising you restore your balance and to the same extent you experience the change of your inner states.

Focusing on exhaling can induce a state of calm or free you from shoulder tension, and simply observing the sensations would regulate your emotions and help you stop ignoring what is going on inside you. The body has a consciousness and this can change our sense of time because trauma can make you feel like you are forever captive. Yoga teaches you that sensations have a moment of apogee after which they fade. Achieving a particularly difficult posture involves at the beginning a feeling of inner resistance that would give you the impression that you would not be able to tolerate the sensations but knowing that you have to maintain your posture a certain number of breaths, this would help you anticipate the end of discomfort and would strengthen your ability to cope with this physical and emotional discomfort, so the awareness that all life experiences are fleeting changes your perspective on yourself.

Trauma forces us to face our vulnerability, our fragility, but also our amazing capacity for resilience and healing, by exploring human resources, creativity, joy, connection, that is, those things that make life worth living in the presence of a relationship based on love with one's own body, one's own mind and one's own soul. Trauma is an urgent health problem that we face more and more nowadays, but the good news is that we have effective tools and knowledge to react effectively to it, it depends only on us and how we would get involved and if we are open enough to the heart and mind.

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