Working with the Body in Trauma

Working with the Neurobiological Legacy of Trauma 2015-16

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“Long-lasting responses to trauma result not simply from the experience of fear and helplessness but from how our bodies interpret those experiences.”

Yehuda, 2004

Assumptions of Neurobiologically-Informed Trauma Treatment

• Under conditions of trauma and neglect, the human body becomes self-protective: defensive responses of fight-flight-freeze-submit-attach are automatic under stress
• Since triggered emotions and actions are not experienced as memory, clients often lack any clear sense of “why” they are feeling or behaving ‘this way.’ Because trauma responses are autonomically driven, they happen suddenly, often without warning, taking the client by surprise
• Another consequence of trauma is that other human beings, including therapists, feel threatening rather than comforting, threatening rather than calming

Fisher, 2009
**Assumptions of Neurobiologically-Informed Treatment, p. 2**

- The emotions, sensations, and impulses triggered by traumatic reminders, divorced from their original context, are **misinterpreted** as indicators that the individual is still in danger, still powerless or helpless. Though the client may be safe now, the body doesn’t know or believe that.

- When traumatic activation is interpreted as a sign of life threat, past and present become hopelessly confused. For example, if the client was abused by a male parent, all male people become suspect; if abused in the late afternoon, the late afternoon stimulates panic and rage; if neglected and abused, others who seem indifferent or who are slow to respond are experienced as ‘unsafe.’

  *Fisher, 2008*

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**Brain and body organize to adapt to our circumstances**

- In childhood, the brain undergoes numerous growth periods followed by "**pruning.**" Frequently-used neural pathways become automatic and less-used pathways are eliminated. These brain changes are called "**neuroplastic**"

- When adaptation is shaped by trauma, the **brain and body develop patterns of response most likely to ensure survival under threat.** The resulting pathways become "kindled" or sensitized, increasingly habitual and efficient.

- When these patterns are no longer effective years later, they are no longer "plastic" or under conscious control: they are automatic responses

  *Fisher, 2012*

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**The nervous system mobilizes to defend**

- **Freeze:** "The deer in the headlights" Mute, physically immobilized Still, ‘invisible’

- **Hyperarousal:** Hypervigilant, restless, ready to act Anxiety and fear prime the body to defend Fight/flight responses Angry, self-destructive behavior

- **Parasympathetic Hypoarousal**

  "Window of Tolerance"*

  Optimal Arousal Zone

- **Hypoarousal:** Compliant, weak, no energy, cannot defend Numb, ‘empty’ or ‘dead’ Cognitively dissociated, unable to think Helpless and hopeless

  *Ogden and Minton (2000) Sensitization Psychokinesis Institute


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Bodies Remember Feelings and Sensations but also Actions

“Long after environmental conditions have changed, we remain in a state of readiness to perform the [same] actions that were adaptive in the past. . . . Once [these] procedures become automatic tendencies, we no longer use top-down processes to regulate them.”

Ogden, Minton & Pain, 2006, p. 22

Post-traumatic stress = the trauma is re-enacted or re-lived. It never ends

“[Traumatized] patients ... are [repeatedly] continuing the action, or rather the attempt at action, which began when the thing happened, and they exhaust themselves in these everlasting recommencements.”

Pierre Janet
1859-1947

Experience is Organized on Multiple Levels: Cognitive, Emotional and Somatic

• As we respond to others or the world, what we actually experience is determined by the interplay of thoughts, feelings, body sensations, perceptions and movement impulses: first, we have a feeling, then a body sensation, then a thought or another feeling—together, these inputs give us a “feeling of what happens” (Damasio, 1999)

• To become more efficient, we develop “procedurally-learned” habits of responding: we react to all future experience with the most adaptive combination of automatic cognitive, emotional, motor, visceral, and behavioral reactions learned from past experience. (Fisher, 2007)
Procedural Learning and Memory

- Procedurally-learned habits or responses, representing the safest strategies available at the time, get encoded in our bodies and operate as automatic “default settings”
- Procedural learning theory suggests that reactivating memories by talking about old experiences “may actually perturb procedural learning” (Grigsby & Stevens, 2001). When we recount an old experience, we evoke sensory and emotional aspects as well as the narrative memory
- To resolve childhood trauma and attachment failure, the theory suggests that cultivating new experiences in therapy may be more useful in challenging procedural learning than talking about old experiences! Fisher, 2007

“The neural substrate for procedural learning appears to develop prior to the capacity for declarative learning. This means [that] templates for habitual behaviors may be acquired, and the behaviors become relatively automatic and routine, before the child has an episodic memory system capable of remembering the events that produced these behaviors. [Thus,] very young children are likely to experience a kind of learning . . . that is dissociated from the content.”

Grigsby & Stevens, 2002

The Expectation of Danger is a Procedurally Learned Response

 “[Procedural] memory shapes how we experience the present and how we anticipate the future, readying us in the present moment for what comes next based on what we have experienced in the past.”

Siegel, 2006
Procedural Learning is Oriented to the Past, not the Present

[Scaer, 2006]

"The more the patient is driven by procedurally learned, conditioned responses, the less time the patient experiences the present moment:

- The ‘lived’ story: what is happening right here, right now
- Moment-to-moment internal/external awareness
- Working memory: holding ideas and information in mind and manipulating them
- Intentional, rather than automatic, responses"

Fisher, 2006

Years later, do we treat the memories? or the body responses?

“While telling ‘the story’ provides crucial information about the client’s past and current life experience, treatment must address the here-and-now experience of the traumatic past . . . Thus, ‘in the moment’ trauma-related emotional reactions, thoughts, images, body sensations and movements that emerge spontaneously in the therapy hour [must] become the focal points of exploration and change.”

Ogden, Minton & Pain (2006)

Sensorimotor Psychotherapy

- Sensorimotor Psychotherapy is a body-oriented therapy developed by Pat Ogden, Ph.D. and enriched by contributions from Alan Schore, Bessel van der Kolk, Daniel Siegel, Onno van der Hart, and Ellert Nijenhuis.
- Sensorimotor work combines traditional talking therapy techniques with body-centered interventions that directly address the somatic legacy of trauma.
- Using the narrative only to evoke the trauma-related bodily experience, we attend first to discovering how the body has “remembered” the trauma and then to providing the somatic experiences needed for resolution

Sensorimotor Psychotherapy Institute
Regulation of arousal is a prerequisite for successful treatment. When clients are hyper- or hypoaroused, their frontal lobes shut down instinctively, interfering with therapeutic collaboration and integration. Whatever intervention we are using, it must regulate arousal. Keeping the frontal lobes ‘online’ must be a priority. Both mindfulness and psychoeducation facilitate this.

Procedurally learned patterns must be identified as the “culprits” keeping the trauma ‘alive’ in the client’s body. Whether we identify those to the client or not, they must become the focus of treatment.

Sensorimotor Principles of Treatment

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We can address “procedural learning” in two ways:

- The first is to observe, rather than interpret, what takes place, and repeatedly call attention to it. This in itself tends to disrupt the automaticity with which procedural learning ordinarily is expressed.

- The second therapeutic tactic is to engage in activities that empathically but directly disrupt what has been procedurally learned and create the opportunity for new experiences.
**Sensorimotor Principles of Treatment, cont.**

- Observation and disruption of procedurally learned patterns must be done without dysregulating the client! If we dysregulate the client, there is no new learning.

- As we observe the client, we keep in mind at all times that the habitual patterns of response represent once creative adaptations to traumatic experiences. Rather than becoming frustrated with the client who can’t feel anything, we get curious about how that helped him/her to survive.

- Even self-destructive behavior is viewed as an attempt at a solution, not just as a problem. Numbing, acting out, self-judgment, shame are all ‘survival resources’

  Fisher, 2010

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**Transforming Procedural Learning**

“Change happens through discovering how a client habitually organizes experience in response to selected stimuli and then changing how that experience is organized. . . The ‘tool’ that we use to discover and then [transform] the habitual organization of experience is mindfulness.”

  Ogden, 2005

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**How does Mindfulness Challenge Procedural Learning?**

- To be mindfully observant and curious requires activation of the prefrontal cortex. Whereas traumatic activation inhibits frontal lobe activity, mindfulness engages it.

- Mindfulness is also believed to increase activity in the thalamus and anterior cingulate, increasing awareness of new perceptual data (via the thalamus) and sustain attention to it (via the anterior cingulate)

  Lanius, 2005

- Rather than responding to traumatic triggers with impulsive action, mindful awareness allows the client to study what happens as “data” as ‘just’ body responses, ‘just’ emotions, ‘just’ trauma-related cognitions.

  Fisher, 2006
Mindfulness Skills

- “Notice . . .”
- “Be curious, not judgmental. . .“
- “Let’s just notice that reaction you’re having inside as we talk about your boy friend”
- “Notice the sequence: you were home alone, bored and lonely, then you started to get agitated and feel trapped, and then you just had to get out of the house”
- “What might have been the trigger? Let’s be curious—go back to the start of the day and retrace your steps”

Fisher, 2004

Introducing Attention to Somatic Experience

Because somatic awareness can be threatening for trauma survivors, as well as helpful, we introduce attention to the body slowly and carefully and track the patient’s response:

- “When you talk about feeling scared, how does that feel inside?”
- “That’s the thought that goes with that scared feeling: what’s the visceral sensation that goes with it?”
- “What sensations tell you that you’re scared? How does your body tell you that?”

Throughout, attention is paid to signs that the patient is becoming more, rather than less, dysregulated
When you feel the panic come up, what happens? Do you feel more tense? More jittery? Or do you want to run?

As you feel that anger, is it more like energy? Or muscle tension? Or does it want to do something?

When you talk about feeling ‘nothing,’ what does ‘nothing’ feel like? Is it more like calm? Or numbing? Or like freezing?

'Ogden 2004

• Does that sensation feel good or bad? Is it more pleasurable or unpleasurable?”

• Does it feel like something that will hurt you from the inside or the outside?”

• “When you say those words, ‘I’m a loser,’ does the shame get better or worse?”

'Ogden 2004; Fisher, 2005

Mindful experiments encourage thoughtful “trials” of new responses and non-biased study of their impact. The experimental attitude is one of openness, without investment in a particular outcome or “right” vs. “wrong” answers.

• Let’s see what happens if you just take a breath—or sigh very loudly...” “Let’s see what happens if you lengthen your spine just a little bit... What do you notice?”

• Notice what happens if you assume that the depression belongs to just one part of you... Does that feel better or worse?”

• “Let’s study what happens to your anxiety when you repeat those words, ‘I’m a hopeless case.’ Does it go up or go down?”

'Ogden, 1999

Sensorimotor Psychotherapy Institute
Experiments Move the Treatment

• Experimenting is sometimes done formally: e.g. the client is asked to ‘study’ when s/he has more self-critical, shaming thoughts and when s/he has fewer in order to look at the relationship between shame and stress

• Sometimes, experiments must be spontaneous to avoid shaming or triggering the client. Eg, the client’s narrative always leads to anger and blaming of others. Rather than ‘talk about’ these feelings, the therapist might ‘experiment’ with what inhibits this pattern. Does it help the angry client if the therapist matches his energy and words? Or does that increase the hyperarousal? Or is it more helpful to help the client notice what triggered the anger? Or to reframe it as a fight response?

Common Kinds of Experiments

• Client is preoccupied with negative beliefs, such as:
  “I am hopeless”
  “I am worthless”
  “I will never be loved”

• Therapist asks the client to “notice what happens in the body when you say those words?” After getting a report, the therapist suggests trying an experiment to see “what could help you feel better.” “Notice what happens when you lengthen your spine?” “Notice what happens if you focus on the ground under your feet?” “Notice what happens if you place your hand over your heart...”

Treatments for Trauma Must Attend to Regulating Autonomic Arousal

“Because the stress response disrupts general information processing, survivors of trauma live in a somatic world rather than a world of language.”

McFarlane, 2005
Attention to Autonomic Arousal

• As the client begins to talk about emotional or traumatic experience, we track signs of dysregulation: *What happens when she thinks* about telling you what happened?
• When hyper- or hypoarousal responses are noticed, *clients are asked to pause, notice what is happening, and let the arousal settle before continuing.* Somatic resources are used to increase the ability to *"think about thinking about it"* without becoming overwhelmed and dysregulated.
• The key is thinking *"bottom-up"* (Ogden & Minton, 2002): taking the time to regulate will facilitate inhibiting habitual responses and remaining in a mindful, witnessing state.

Sensorimotor Experiments for Hyperarousal

• *Limit* amount of material in mind: the more information to process, the more overwhelmed the client will feel. Focus on *"just thinking about thinking about it"* or one "sliver of memory".
• "Frame" the piece of work very narrowly: *"Let’s just stay with that part of the story when you began to feel angry"* or *"Let’s just stay with that gesture—would that be OK with you?"*
• Keep the client in mindful state: *"Just keep observing your heart rate . . . Your breathing . . . "* "What’s happening now as you just stay with those body sensations?"
• Ground emotions or cognitions in the body: *"Where do you feel those feelings in the body?"* "When you express that belief that you are stupid, what happens in the body?"

Sensorimotor Experiments for Hypoarousal

• Remember that hypoarousal is a survival response: attempts to increase arousal will often backfire, causing either increased hypoarousal or an escalation into hyperarousal.
• *Increase* amount of information to be processed, rather than trying to stimulate feelings: *"study the numbness; find out what words or emotions go with it; what images*.
• Foster curiosity: *"study how ingeniously hypoarousal "works."
Study its details: how far the numbing goes down or in, whether there is any other sensation, such as fuzziness, fogginess, heaviness*
• Admire the hypoarousal! *Fisher, 2006*
Modulation of Hypoarousal, cont.

• Conduct small experiments to increase arousal: use humor, raise your level of arousal, work multi-modally, use body language, do something unexpected or silly

• Ask the client to evaluate how “pleasurable or unpleasurable” the hypoarousal feels in the body: experiment with what increases the arousal to a more pleasurable level

• Encourage movement: change posture, trade seats with the client, or work standing up

• Strengthen the client’s resources before pushing for more arousal: hypoarousal means that the client is dysregulated and affect intolerant. Pushing for affect too soon will increase hypoaurosual, rather than addressing it.

Fisher, 2005

For further information about Sensorimotor Psychotherapy, contact:

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