



**2023  
NeuroCoachPro  
Training**

**Current  
Trauma  
Strategies  
Don't Beat  
Placebo!**

***Why Not?***



**Mark Waldman 8-15-23**

Faculty, Holmes Institute (2011-Present)

Executive MBA Faculty, Loyola Marymount University (2009-2019)

## 2016 Systematic Review H-INDEX 143



“The majority of [15] emerging interventions

for the treatment of PTSD

currently have an insufficient level of evidence

supporting their efficacy,

despite their increasing popularity.”

Metcalf, Olivia et al. “Efficacy of Fifteen Emerging Interventions for the Treatment of Posttraumatic Stress Disorder: A Systematic Review.” *Journal of traumatic stress* vol. 29,1 (2016): 88-92. **H-INDEX 143**

# 2021: Systematic Review of 61 Studies

## Trauma therapies create FALSE memories & beliefs



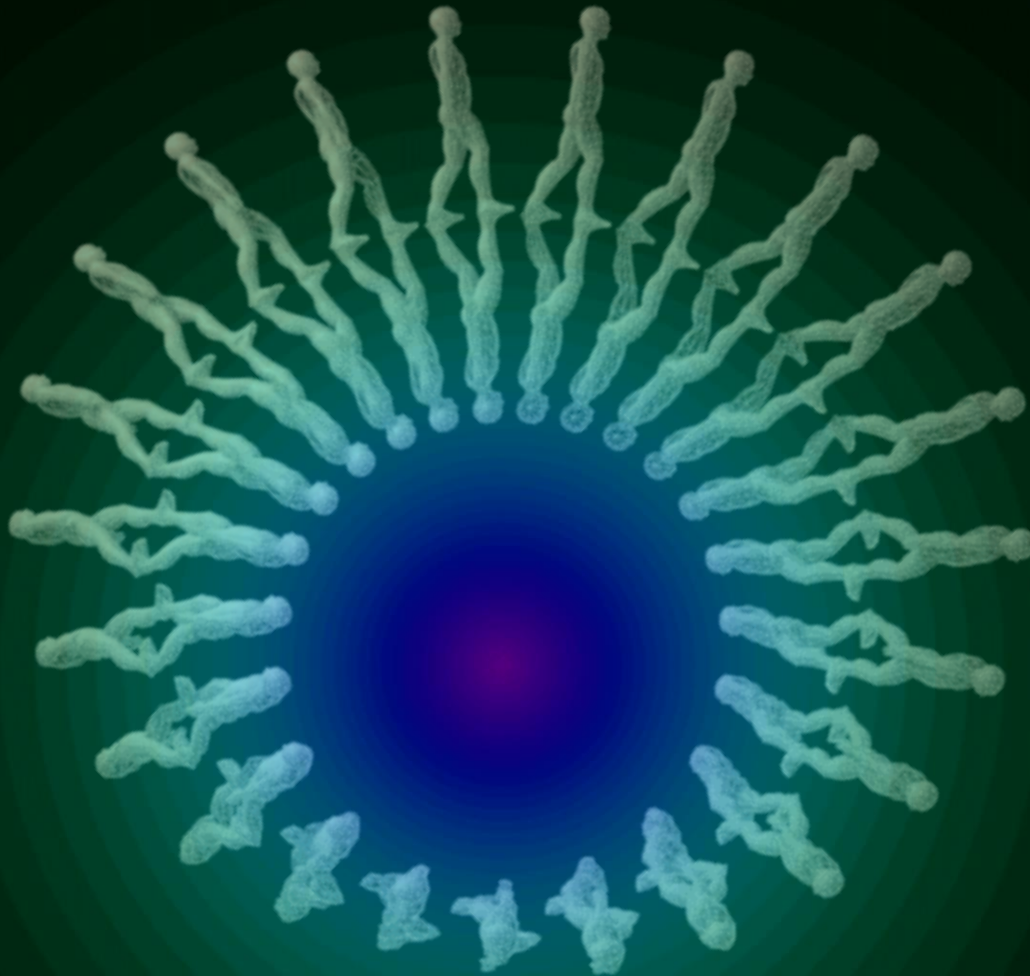
- Suggestive statements: 20-70%
- Guided imagery: 20-70%
- Self-reflection & wondering if abuse occurred: 20-50%
- Dream interpretation: more than 50%
- Hypnosis: 50-82%

Muschalla B, Schönborn F. Induction of false beliefs and false memories in laboratory studies-A systematic review. Clin Psychol Psychother. 2021 Sep;28(5):1194-1209. H-INDEX 86



# Walking the Thin Line of Placebo

Statistical Significance, Controlled Studies, & the H-INDEX

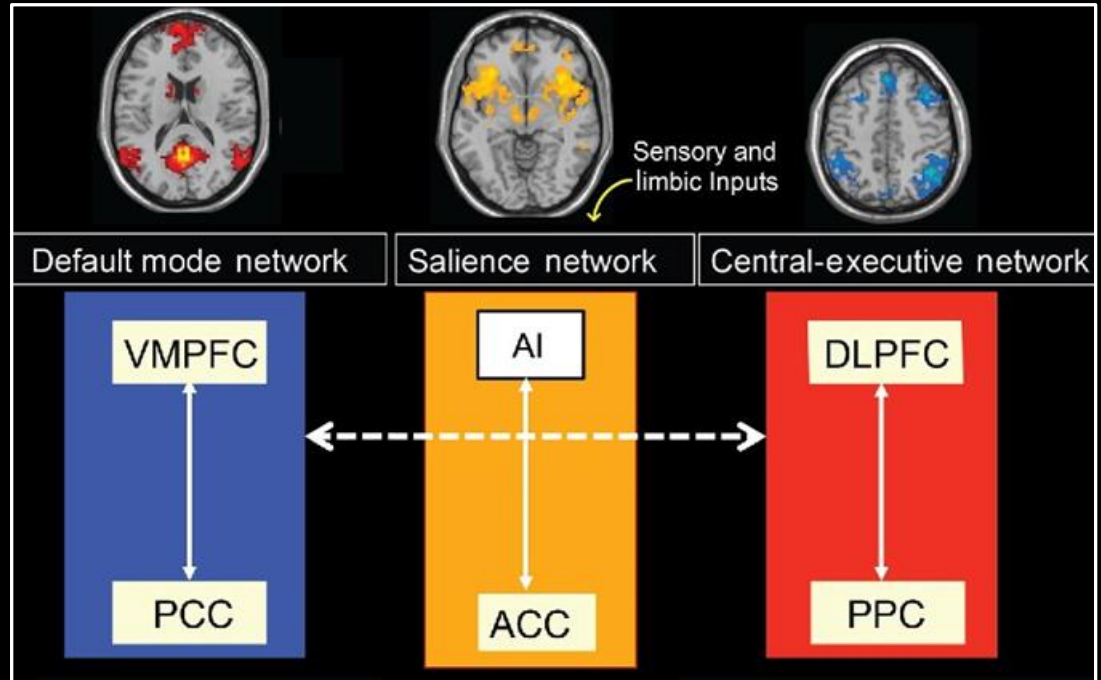
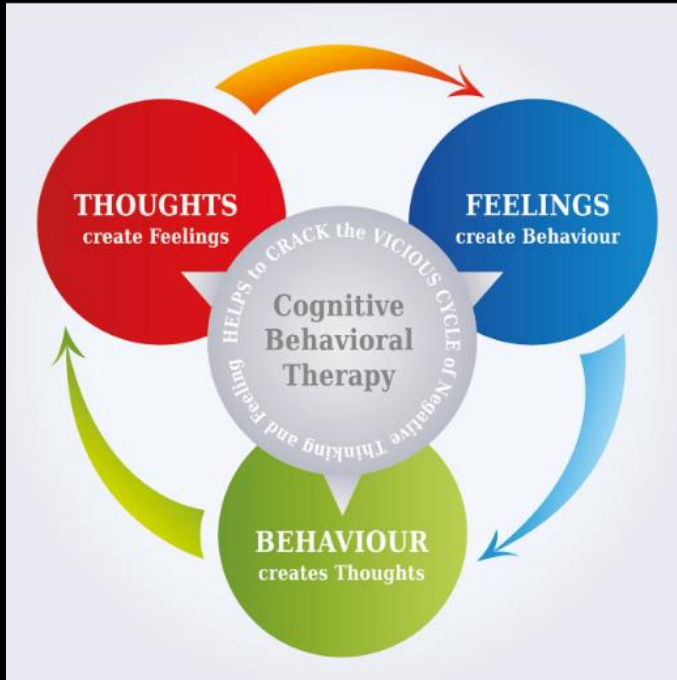


2020:  
“Cognitive insight  
predicted greater  
lack of self-  
compassion”



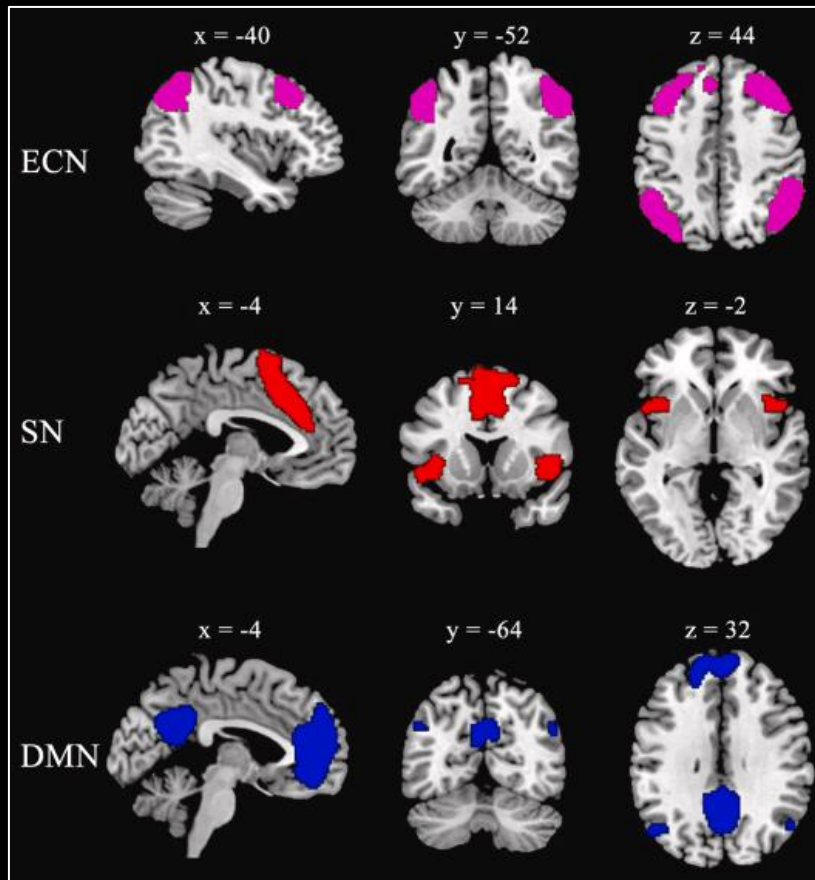
Hochheiser J, Lundin NB, Lysaker PH. The Independent Relationships of Metacognition, Mindfulness, and Cognitive Insight to Self-Compassion in Schizophrenia. *J Nerv Ment Dis.* 2020;208(1):1-6. **H-INDEX 133**

2023: CBT *causally* reduces anxiety symptoms in 29% of patients, but only 10% had improved functioning



Smith, Otto R F et al. "The Importance of Symptom Reduction for Functional Improvement after Cognitive Behavioral Therapy for Anxiety and Depression: A Causal Mediation Analysis." *Psychotherapy and psychosomatics* vol. 92,3 (2023): 193-202. **H-INDEX 110**

# 2022: Psychiatry Research **H-INDEX 159**



Mindfulness-based  
cognitive therapy


**CAUSALLY RESTORES**

balance between DMN &  
EN in bipolar patients

*Supportive psychotherapy  
does not!*

Chou, Tina et al. "Restoration of default mode network and task positive network anti-correlation associated with mindfulness-based cognitive therapy for bipolar disorder." *Psychiatry research. Neuroimaging* vol. 319 (2022): 111419.





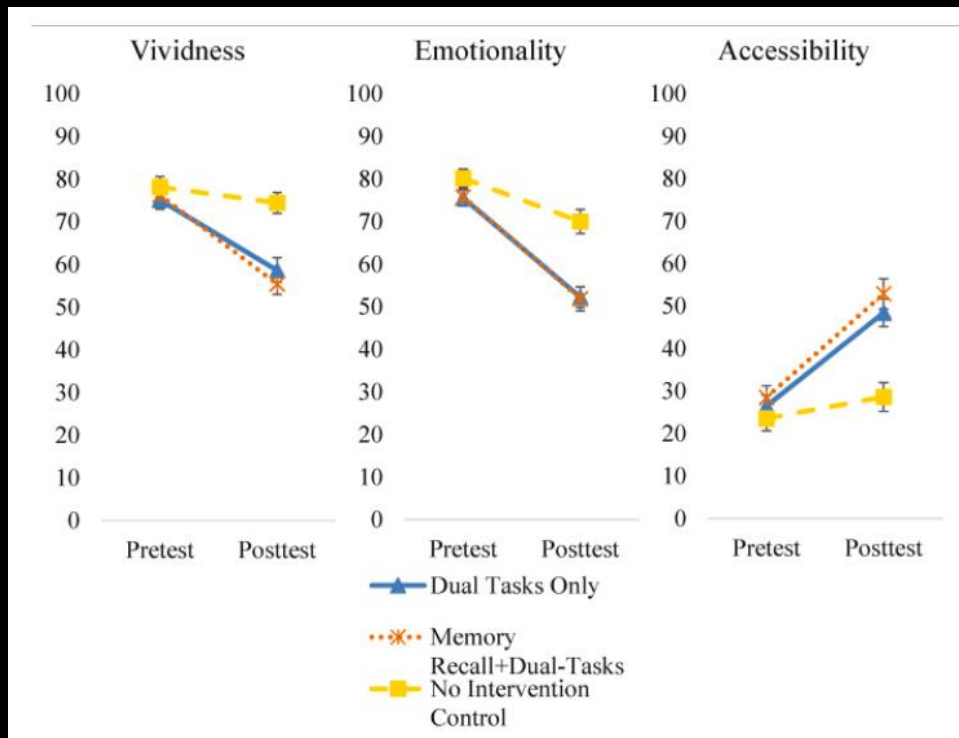
## 2022: Exposure therapy ineffective for extinguishing fear/threat/anxiety reactions

- Exposure to a **pleasant experience** during memory recall enhances fear extinction
- Rewarded extinction **improves** network connectivity

Keller, Nicole E et al. "Rewarded Extinction Increases Amygdalar Connectivity and Stabilizes Long-Term Memory Traces in the vmPFC." *The Journal of neuroscience : the official journal of the Society for Neuroscience* vol. 42,29 (2022): 5717-5729. **H-INDEX 488**

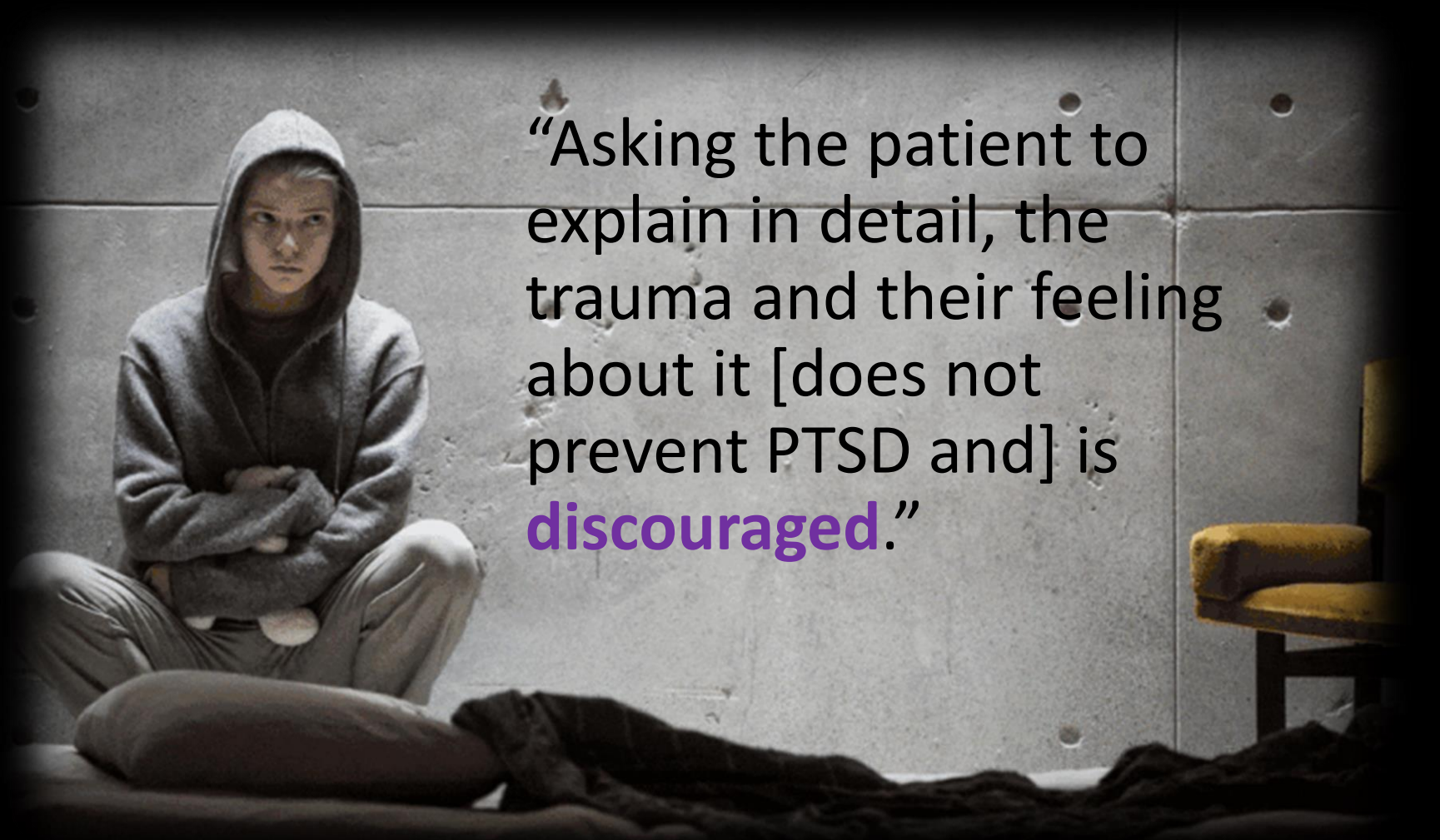
## EMDR 2023:

“Omitting continuous memory recall ...  
does **NOT** reduce intervention effectiveness”



- “Dual-task interventions ... resulted in the largest reductions in memory vividness, emotionality, and continuous memory recall.”
- “Continuous memory recall ... in EMDR might not be beneficial.”

## 2021: Describing a traumatic experience INCREASES SYMPTOMS

A person wearing a grey hoodie and light-colored pants is sitting cross-legged on a bed in a room. The wall behind them is grey and has several bullet holes. The person has a serious expression. To the right, a yellow chair is partially visible. The overall atmosphere is somber and suggests a traumatic environment.

“Asking the patient to explain in detail, the trauma and their feeling about it [does not prevent PTSD and] is **discouraged.**”

Fanai M, Khan MAB. Acute Stress Disorder.  
In: StatPearls. Treasure Island (FL): StatPearls Publishing; July 17, 2021



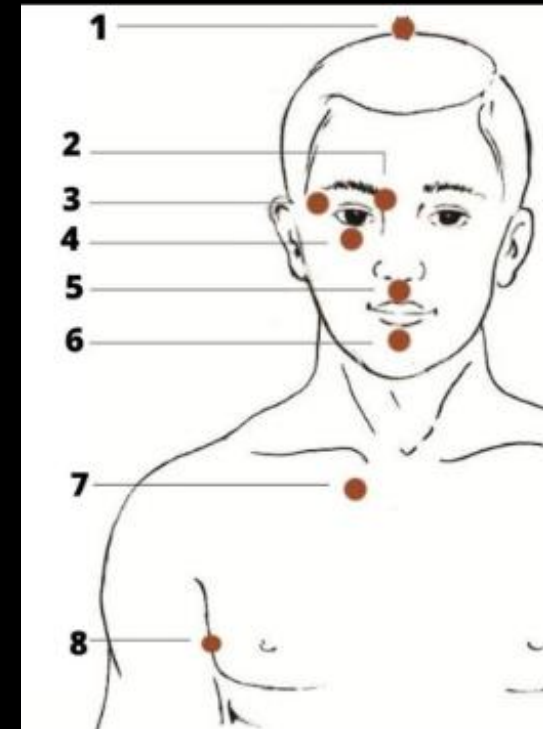
# 2022: Tapping excites amygdala, increases PTSD

*2020: No evidence to support  
acupoint tapping*

“Tapping fared no better than comparison groups  
[and] comparison groups were **not bona fide  
therapies.**”

“Substantial methodological problems and  
inaccurate statistical analyses, which render their  
**results invalid.**”

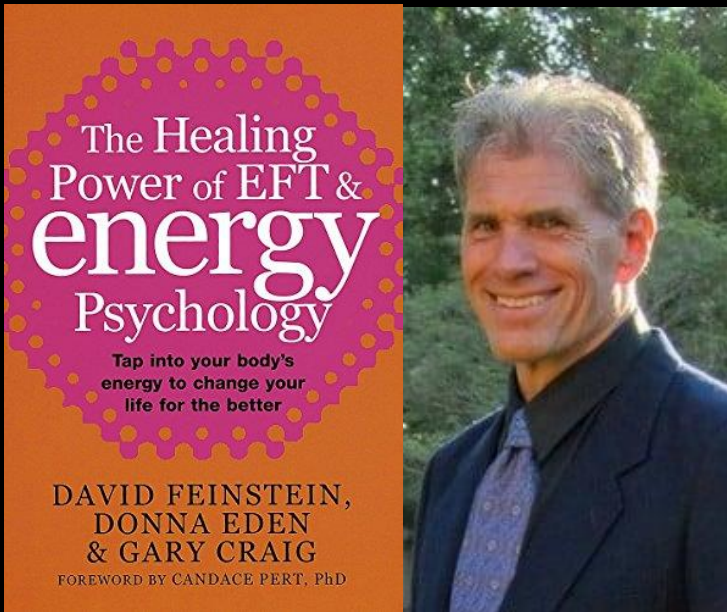
“We conclude that the Church et al.'s meta-  
analysis actually found **no specific mental health  
benefits** for acupoint tapping.”



Wittfoth, Dina et al. “Bifocal emotion regulation through acupoint tapping in fear of flying.” *NeuroImage. Clinical* vol. 34 (2022): 102996. **H-INDEX 399**

Spielmanns G, Spence-Sing T. “Tapping Away at a Misleading Meta-analysis: No Evidence for Specificity of Acupoint Tapping”. *J Nerv Ment Dis.* 2020 Aug;208(8):628-631. **H-INDEX: 128**

# Feinstein, 2022: “Uses of Energy Psychology Following Catastrophic Events” - *Frontiers in Psychology*



- “Reports ... based on interviews with this paper’s author.”
- Contains anecdotal stories, cites low ranking journals, ignores dismissed studies.
- “Publisher’s Note: All claims expressed in this article ... do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.”

Feinstein, David. “Uses of Energy Psychology Following Catastrophic Events.” *Frontiers in psychology* vol. 13 856209. 25 Apr. 2022 **H-INDEX 133**



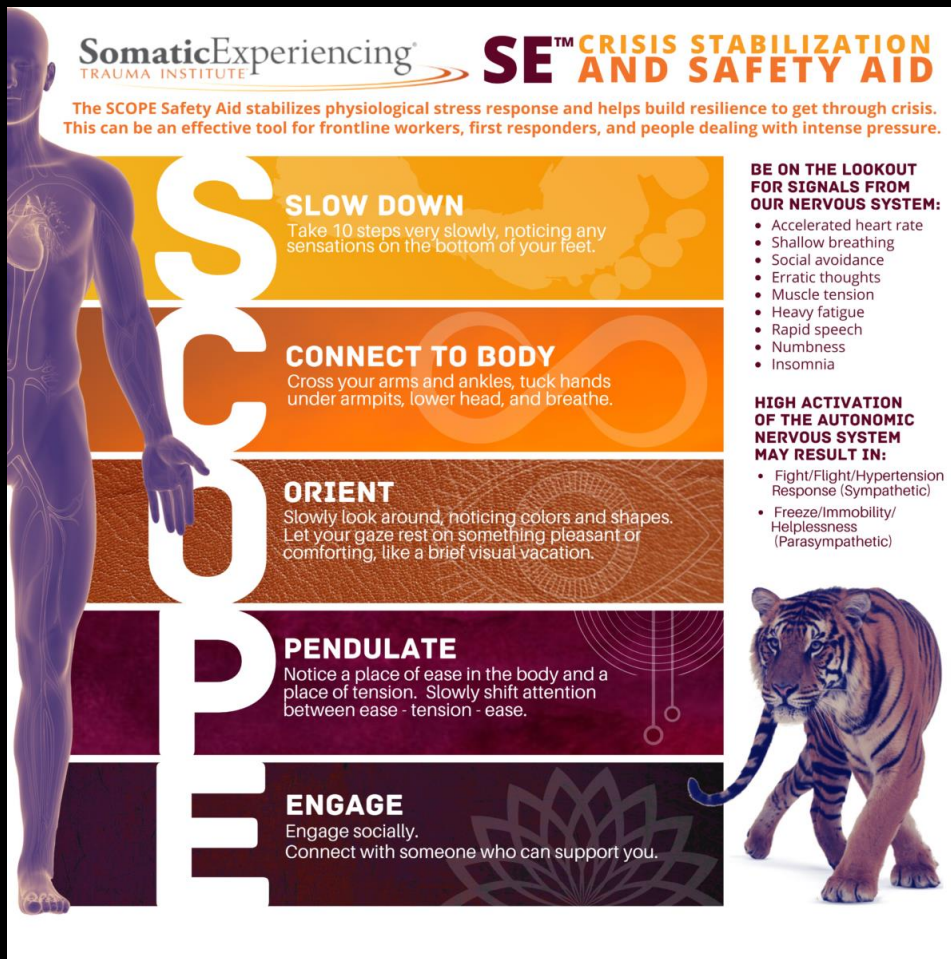
## 2022 Systematic Review:

“Reiki consistently demonstrates a GREATER therapeutic effect over PLACEBO for SOME symptoms of mental health.”



- High effectiveness for CLINICAL stress & depression
  - Moderate to high for clinical anxiety
- LOW for NORMAL levels of depression and anxiety.

# 2017: Somatic experiencing adds little improvement to PTSD, back pain, or fear of movement



**Somatic Experiencing**  
TRAUMA INSTITUTE

**SE™ CRISIS STABILIZATION AND SAFETY AID**

The SCOPE Safety Aid stabilizes physiological stress response and helps build resilience to get through crisis. This can be an effective tool for frontline workers, first responders, and people dealing with intense pressure.

**S** **SLOW DOWN**  
Take 10 steps very slowly, noticing any sensations on the bottom of your feet.

**C** **CONNECT TO BODY**  
Cross your arms and ankles, tuck hands under armpits, lower head, and breathe.

**O** **ORIENT**  
Slowly look around, noticing colors and shapes. Let your gaze rest on something pleasant or comforting, like a brief visual vacation.

**P** **PENDULATE**  
Notice a place of ease in the body and a place of tension. Slowly shift attention between ease - tension - ease.


**E** **ENGAGE**  
Engage socially. Connect with someone who can support you.

**BE ON THE LOOKOUT FOR SIGNALS FROM OUR NERVOUS SYSTEM:**

- Accelerated heart rate
- Shallow breathing
- Social avoidance
- Erratic thoughts
- Muscle tension
- Heavy fatigue
- Rapid speech
- Numbness
- Insomnia

**HIGH ACTIVATION OF THE AUTONOMIC NERVOUS SYSTEM MAY RESULT IN:**

- Fight/Flight/Hypertension Response (Sympathetic)
- Freeze/Immobility/Helplessness (Parasympathetic)



2020: “SE intervention did not result in any additional benefits in any of the outcomes.”

Andersen, T. et al. “Somatic Experiencing® for patients with low back pain and comorbid posttraumatic stress symptoms - a randomised controlled trial.” *European journal of psychotraumatology* vol. 11,1 1797306. 18 Aug. 2020 **H-INDEX 49**

Andersen, Tonny Elmose et al. “A randomized controlled trial of brief Somatic Experiencing for chronic low back pain and comorbid post-traumatic stress disorder symptoms.” *European journal of psychotraumatology* vol. 8,1 1331108. 30 May. 2017

# 2021: Somatic Experiencing Systematic Review: Effects only marginally statistically significant

- 16 acceptable articles out of 83, but ...
  - There was no consistency of technique
  - No identification of trauma severity
    - No controlled studies
    - Did not use validated questionnaires
      - high risk bias

Peter Levine & Bessel van der Kolk



Van der Kolk, 2000: "Traumatic memories are imprints of the past that keep coming back that you may or may not know are related to the past."

Kuhfuß, Marie et al. "Somatic experiencing - effectiveness and key factors of a body-oriented trauma therapy: a scoping literature review." European journal of psychotraumatology vol. 12,1 1929023. 12 Jul.

2021 **(H-Index 49)**

## 2022: Porges' Polyvagal Theory

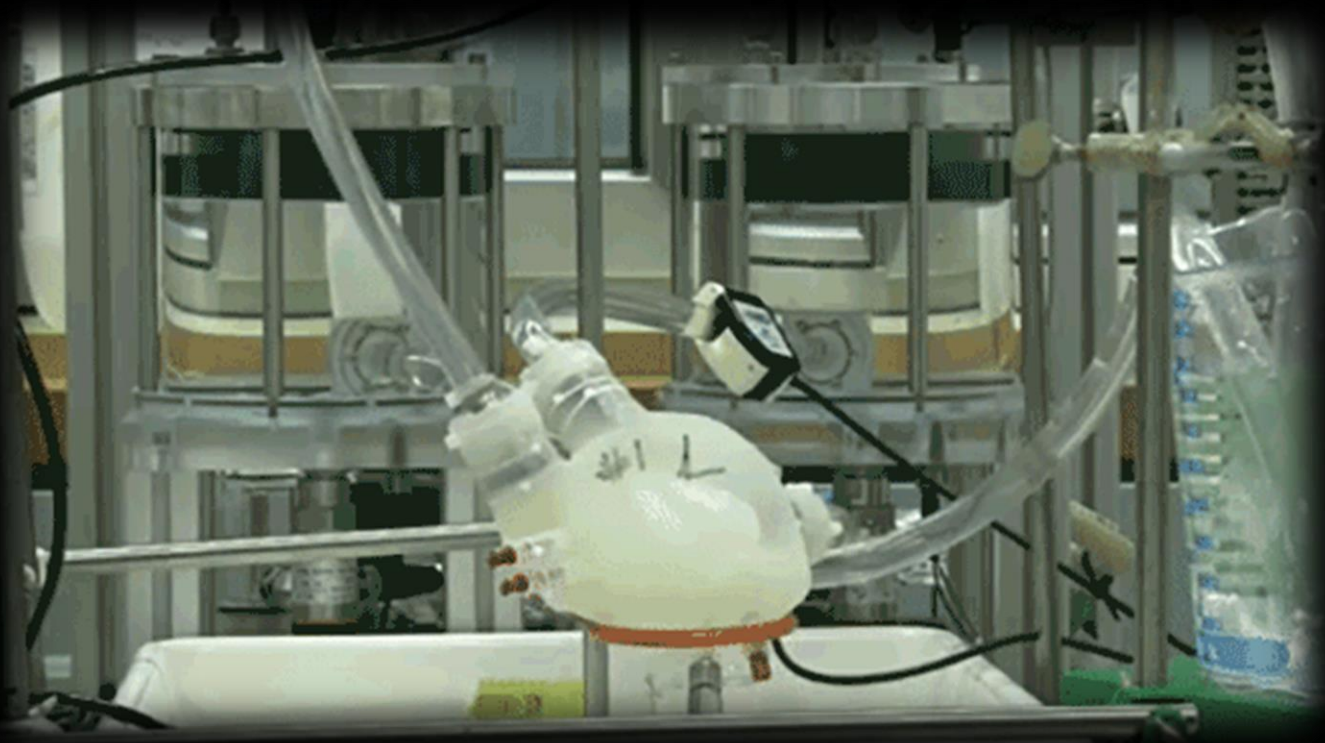
- “Basic ... tenets do not withstand closer scrutiny.”
- “Does not support a role ... in freezing as proposed by [Porges].”
- “Should not be linked to passive defensive behavior.”
- *Vagus nerve ends at base of brainstem*

Neuhuber, Winfried L, and Hans-Rudolf Berthoud. “Functional anatomy of the vagus system: How does the polyvagal theory comply?.” *Biological psychology* vol. 174 (2022): 108425.



## 2023 Systematic Review:

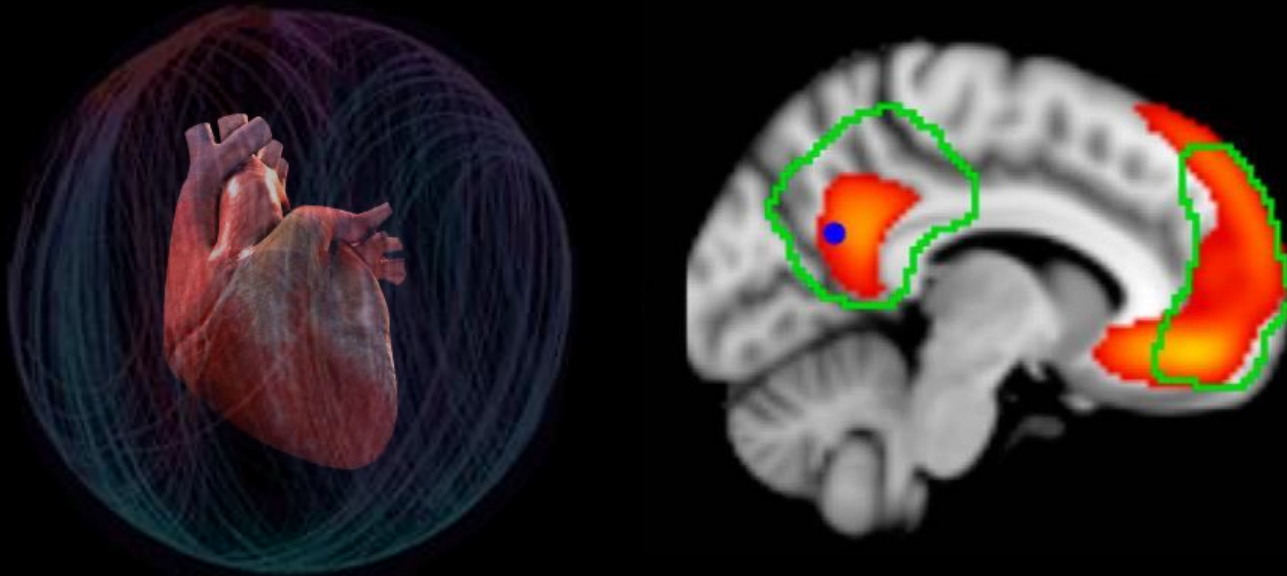
“No evidence of a significant association between emotional dysregulation”  
and heart/vagus nerve functioning



Bellato, Alessio et al. “Systematic Review and Meta-analysis: Altered Autonomic Functioning in Youths With Emotional Dysregulation.” *Journal of the American Academy of Child and Adolescent Psychiatry*, S0890-8567(23)00075-8. 23 Feb. 2023



2016: “The DN is truly engaged in physiological regulation”  
*HeartMath is pure pseudoscience*



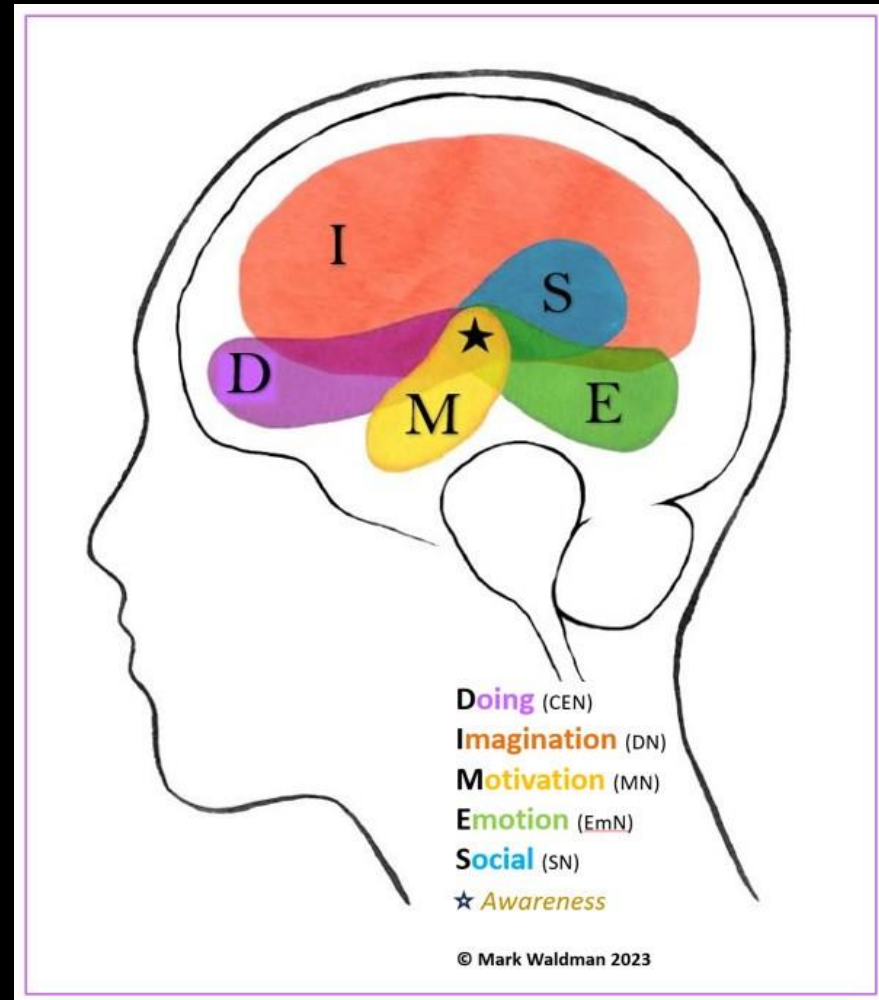
“The DN is also involved in central autonomic processing ... and modulates heart rate”

Babo-Rebelo, Mariana et al. “Neural Responses to Heartbeats in the Default Network Encode the Self in Spontaneous Thoughts.” *The Journal of neuroscience : the official journal of the Society for Neuroscience* vol. 36,30 (2016): 7829-40.

Barrett, 2021:  
Your imagination &  
awareness regulate  
your body  
*(not the other way around)*

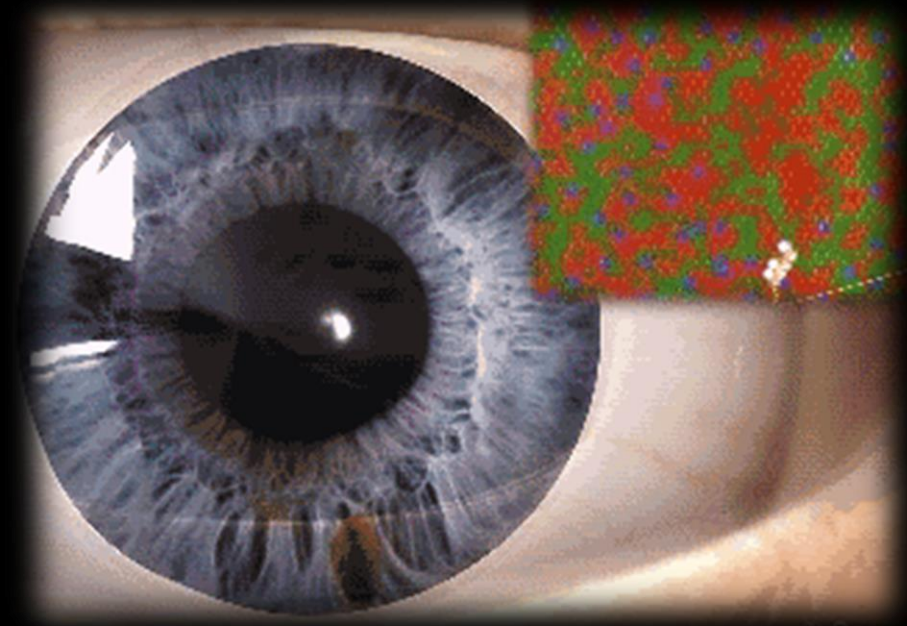
- Your Default and Salience Networks “control the autonomic nervous system, immune system, and endocrine systems.”

- *Top-down process*



# “Insufficient evidence to recommend use of NLP for **ANY** individual health outcome.”

- “No agreed definition of NLP”
- Pseudoscience: People do not “show a bias for a particular sensory modality (visual, auditory, kinesthetic, olfactory or gustatory).”
  - Interpreting eye movements is pseudoscience.
- Only 4 studies between 2014-2023, no fMRI studies



Sturt, Jackie et al. “Neurolinguistic programming: a systematic review of the effects on health outcomes.” The British journal of general practice : the journal of the Royal College of General Practitioners vol. 62,604 (2012): e757-64. H-INDEX 113

# Trauma-Sensitive Yoga: “Marginally significant to no effects on PTSD”



Trauma-Sensitive Yoga Interventions and Posttraumatic Stress and Depression Outcomes Among Women: A Systematic Review and Analysis of Randomized Control Trials. Kysar-Moon A, Vasquez M, Luppen T. *Int J Yoga Therap.* 2021 Jan 1;31(1):Article\_23. doi: 10.17761/2021-D-20-00005. **H-INDEX 13**



# 2019 Systematic Review of Yoga

- “Did not find strong evidence for the effectiveness of yoga as an intervention for PTSD, depression, and anxiety”

Nguyen-Feng, Viann N et al. “Yoga as an intervention for psychological symptoms following trauma: A systematic review and quantitative synthesis.” *Psychological services* vol. 16,3 (2019): 513-523. **H-INDEX 53**





# Yoga for trauma, depression, and PTSD: Weak but Encouraging Evidence



Macy, Rebecca J et al. "Yoga for Trauma and Related Mental Health Problems: A Meta-Review With Clinical and Service Recommendations." *Trauma, violence & abuse* vol. 19,1 (2018): 35-57. **H-INDEX 92**

2022 Systematic Review:  
Feldenkrais Method Very Effective for Pain  
*“Awareness Through Movement”*



“Therapeutic effects comparable to other physiotherapy techniques”

“Improvements in mobility and balance were seen in the elderly and people”

“Improved pain, functional balance ... and interoceptive awareness.”

Berland, Rémi et al. “Effects of the Feldenkrais Method as a Physiotherapy Tool: A Systematic Review and Meta-Analysis of Randomized Controlled Trials.” *International journal of environmental research and public health* vol. 19,21 13734. 22 Oct. 2022. **H-INDEX 138**

# Non-Evidence- Based Practices are NOT Effective

2017: Mindfulness  
interventions

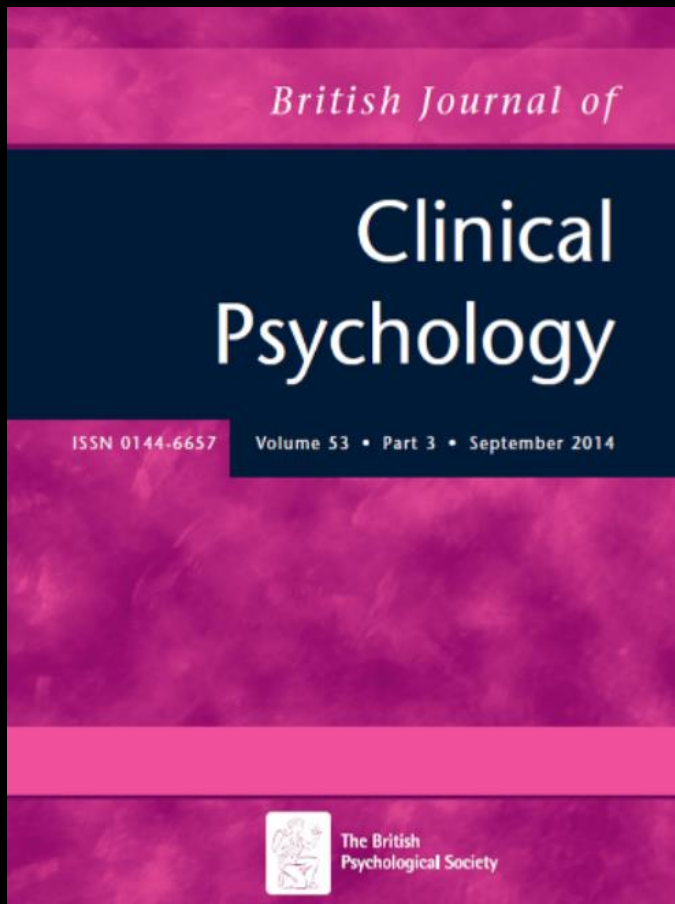
“consistently outperform  
non-evidence-based  
treatments”

such as “relaxation training  
and supportive  
psychotherapy.”

Hofmann, Stefan G, and Angelina F Gómez. “Mindfulness-Based Interventions for Anxiety and Depression.” *The Psychiatric clinics of North America* vol. 40,4 (2017): 739-749.



# 2012: Meta-analysis of 19 controlled studies



“Mindfulness- and Acceptance-Based Interventions are associated with **robust and substantial** reductions in symptoms of anxiety and comorbid depressive symptoms.”

Vøllestad, Jon et al. “Mindfulness- and acceptance-based interventions for anxiety disorders: a systematic review and meta-analysis.” *The British journal of clinical psychology* vol. 51,3 (2012): 239-60. **H-INDEX 98**



# 2021 Meta-analysis of 4097 RCTs: Mindfulness interventions more effective than CBT for anxiety.



Li, Jingjing et al. "Mindfulness-based therapy versus cognitive behavioral therapy for people with anxiety symptoms: a systematic review and meta-analysis of random controlled trials." *Annals of palliative medicine* vol. 10,7 (2021) H-INDEX 29



# 2021: fMRI Randomized Clinical Trial

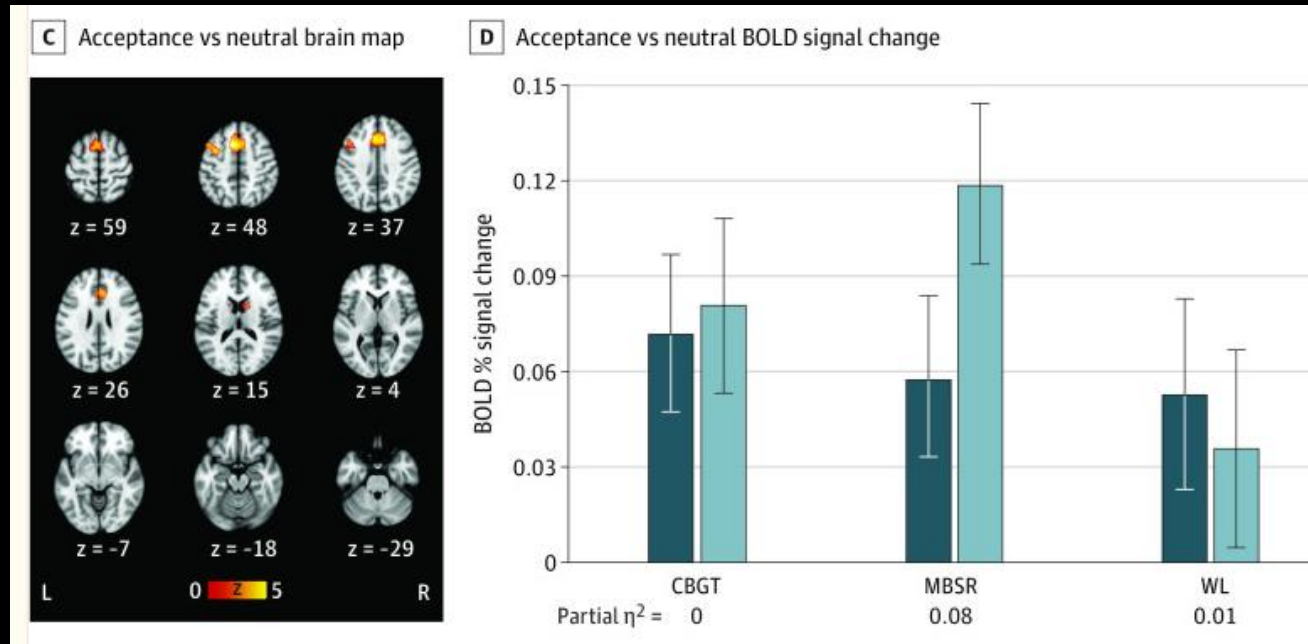
## MBSR vs Group CBT, 1 year post-treatment

### Acceptance MORE effective than cognitive reappraisal


- Mindful acceptance more effective in decreasing negative emotion

- and for weakening negative self-beliefs

- Mindful acceptance is a form of Meta-Awareness



Goldin, Philippe R et al. "Evaluation of Cognitive Behavioral Therapy vs Mindfulness Meditation in Brain Changes During Reappraisal and Acceptance Among Patients With Social Anxiety Disorder: A Randomized Clinical Trial." JAMA psychiatry vol. 78,10 (2021): 1134-1142. **H-INDEX 394**



2017, 2019:  
Meta-Awareness –  
*not self-  
awareness or  
metacognition* –  
reduces intrusive  
trauma related  
thoughts

Takarangi, Melanie K T et al. “Do meta-cognitive beliefs affect meta-awareness of intrusive thoughts about trauma?.” *Journal of behavior therapy and experimental psychiatry* vol. 54 (2017): 292-300. H-INDEX 86

Bernstein, Amit et al. “Metacognitive processes model of decentering: emerging methods and insights.” *Current opinion in psychology* vol. 28 (2019): 245-251. H-INDEX 73

# 2023: “Meta-awareness of mind-wandering *prevents* psychological disorders”

“A single 20-min  
conditioning  
session”

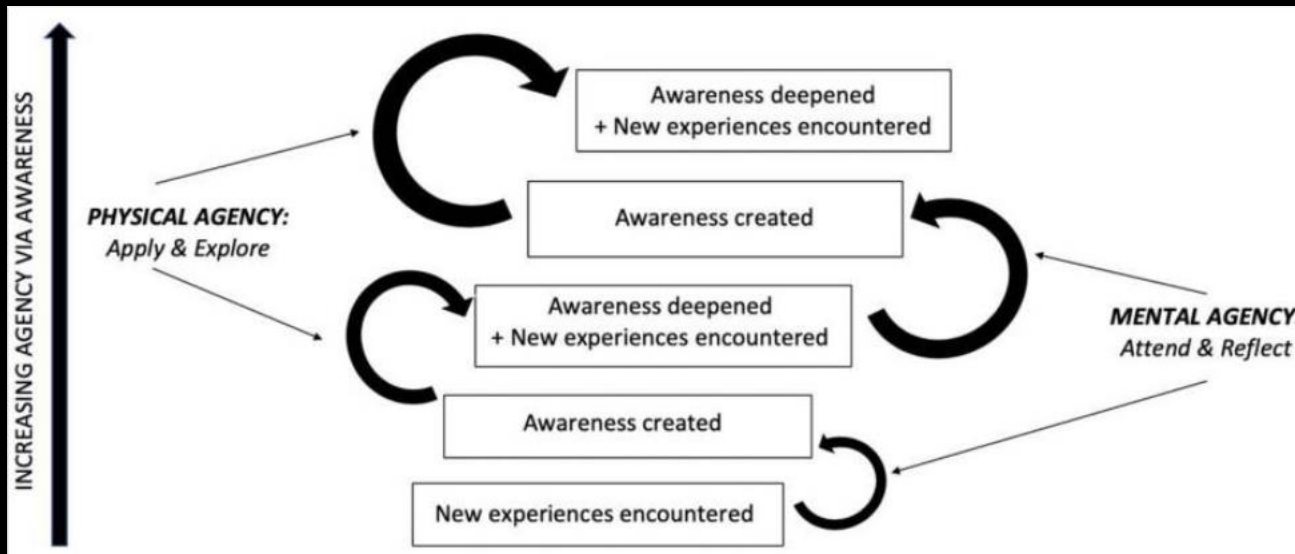
*MW: How easy  
would it be to bring  
this into your  
current practice?*



Kawashima, Issaku et al. “Pavlovian-based neurofeedback enhances meta-awareness of mind-wandering.”  
Neural networks vol. 158 (2023): 239-248. **H-INDEX 164**

# 2021: “Awareness: A Unifying Meta-Process in Psychotherapy”

“fostering exploration and drawing attention to new knowledge”

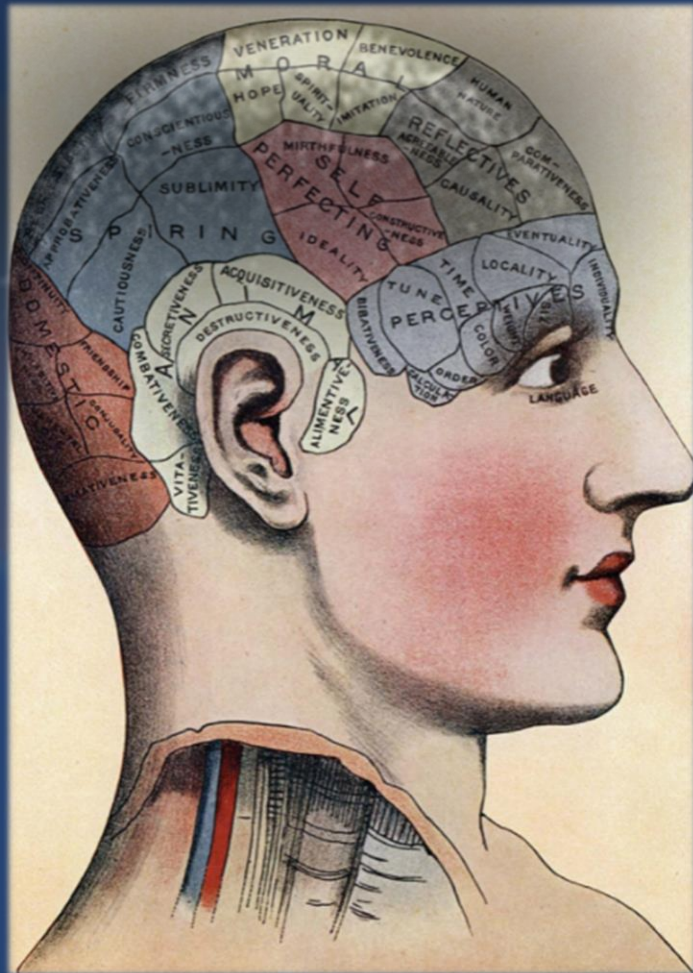


“The psychotherapy field suffers from a serious and persistent lack of theoretical unity”

Gorlin, Eugenia I, and Vera Békés. “Agency via Awareness: A Unifying Meta-Process in Psychotherapy.” *Frontiers in psychology* vol. 12 698655. 14 Jul. 2021 **H-INDEX 157**



# Without META-AWARENESS all therapies are equally effective ... *and ineffective*



2019: Psychology can **erroneously** “infer hidden **causal** mechanisms to explain and predict observed behavior and mental processes.”

2016 JAMA: “This meta-analysis found no outcome differences between psychodynamic psychotherapy and other bona fide therapy models.”

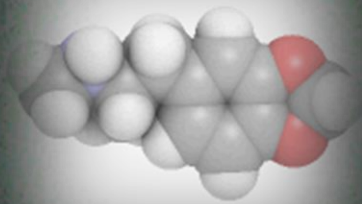
**Substantial evidence that mindful awareness can predict moderate to robust emotional health.**

Thomas, Michael S C et al. “Annual Research Review: Educational neuroscience: progress and prospects.” *Journal of child psychology and psychiatry*, vol. 60,4 (2019) **H-INDEX 234**

Abbass AA, Town JM. Bona Fide Psychotherapy Models Are Equally Effective for Major Depressive Disorder: Future Research Directions. *JAMA Psychiatry*. 2016;73(9):893–894. **H-INDEX 394**



# What's MORE effective than Meta-Awareness for severe PTSD?



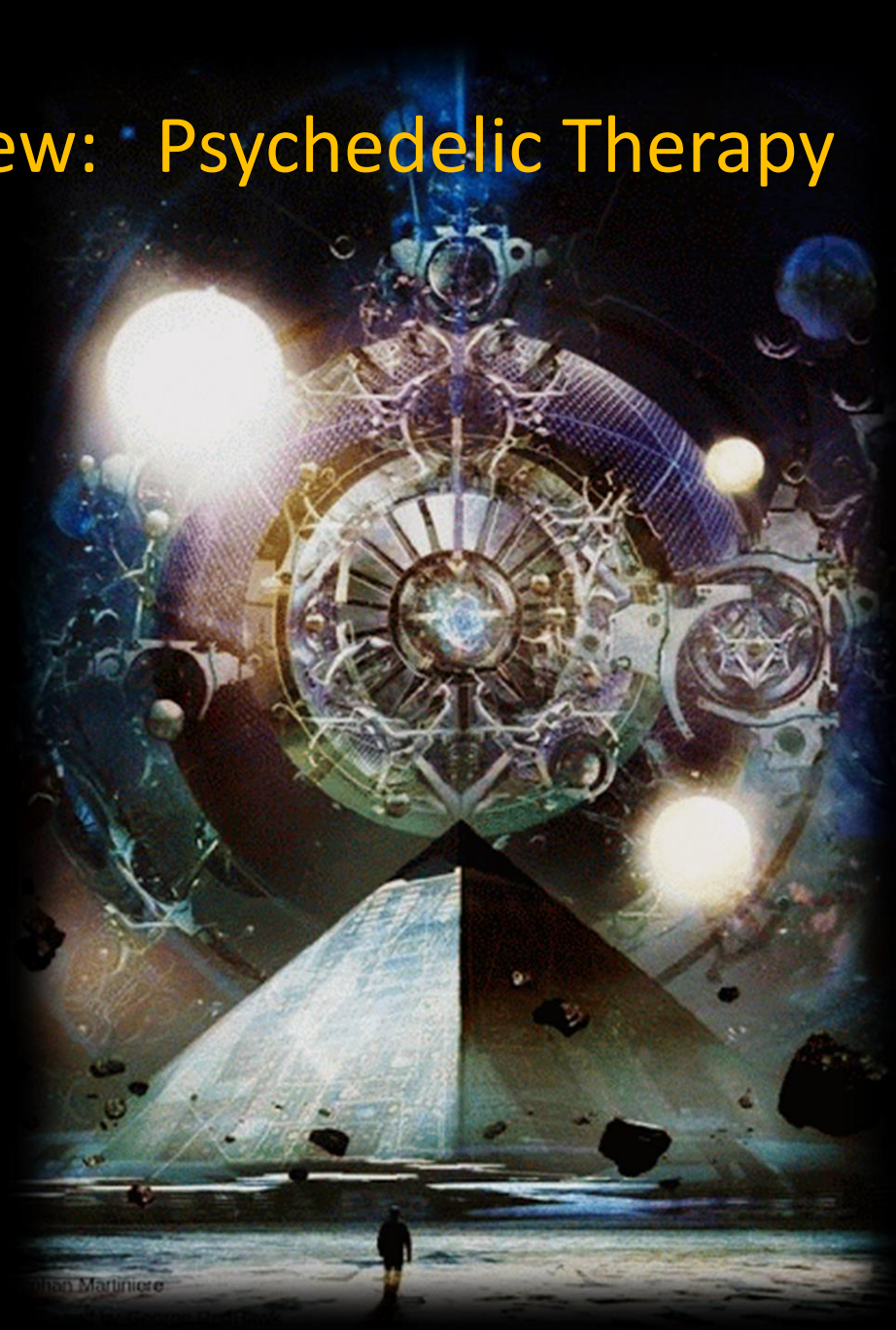
- **2021: Nature Medicine H-INDEX 605**
- Randomized, double-blind, placebo-controlled phase 3 study
- “MDMA-assisted therapy is **highly efficacious** in individuals with severe PTSD, and treatment is safe and well-tolerated.”

Mitchell, Jennifer M et al. “MDMA-assisted therapy for severe PTSD: a randomized, double-blind, placebo-controlled phase 3 study.” Nature medicine vol. 27,6 (2021): 1025-1033.

# 2021 Systematic Review: Psychedelic Therapy

“A single administration of a psychedelic produces rapid changes in plasticity mechanisms on a molecular, neuronal, synaptic, and dendritic level.”

de Vos, Cato M H et al. “Psychedelics and Neuroplasticity: A Systematic Review Unraveling the Biological Underpinnings of Psychedelics.” *Frontiers in psychiatry* vol. 12 724606. 10 Sep. 2021 **H-INDEX 96**





# 2021: Combine mindfulness, compassion & values training at work

- **Robustly** reduced psychological distress by 20%, emotional exhaustion by 8%, and cognitive weariness by another 10%.
- 
- When **personal values** are compromised psychological distress and physical fatigue increased by 10-12%.



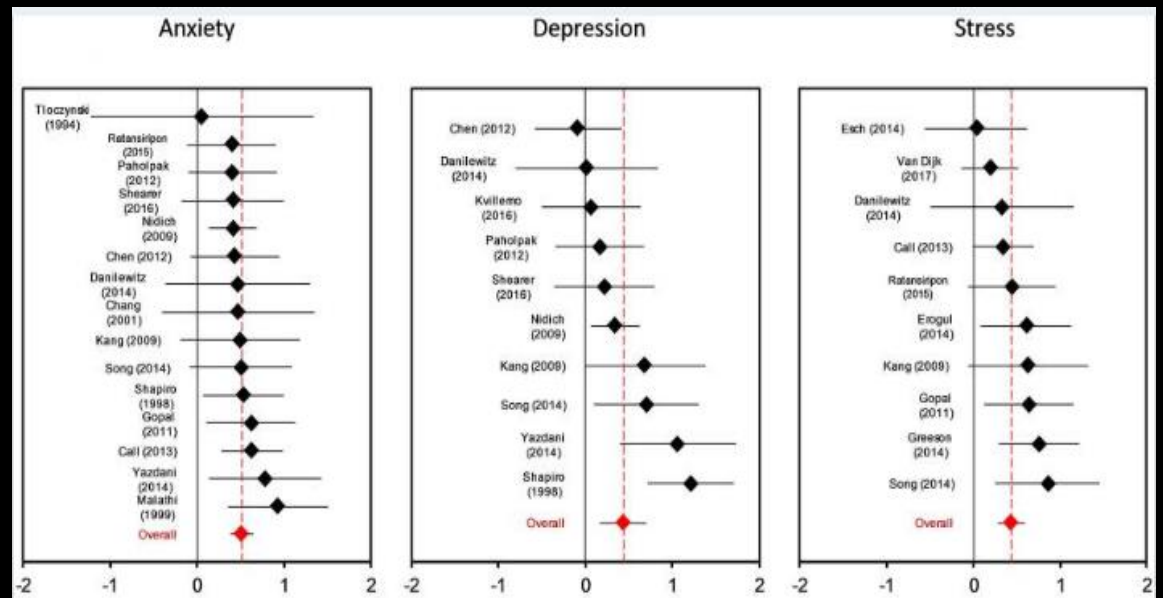
Prudenzi, A. et al. "Wellbeing, burnout, and safe practice among healthcare professionals: predictive influences of mindfulness, values, and self-compassion." *Psychology, health & medicine*, 1-14. 15 Apr. 2021

H-INDEX 73

2019: Meta-analytic review  
24 randomized controlled studies  
Moderate to **ROBUST** benefits  
for anxiety, depression, and stress

“We found moderate positive effects for **mindfulness, yoga or meditation**-based interventions on symptoms of depression, anxiety, and stress.

It has a **robust** effect on anxiety.”



Breedvelt, Josefien J F et al. “The Effects of Meditation, Yoga, and Mindfulness on Depression, Anxiety, and Stress in Tertiary Education Students: A Meta-Analysis.” *Frontiers in psychiatry* vol. 10 193. 24 Apr. 2019 H-INDEX 96



# Image Rehearsal Therapy more effective than other treatments & drugs

- Risperidone
- paroxetine
- cognitive behavioral therapy
- prolonged exposure therapy

## 2022 Systematic Review:

2214 trauma survivors

29 randomized clinical trials

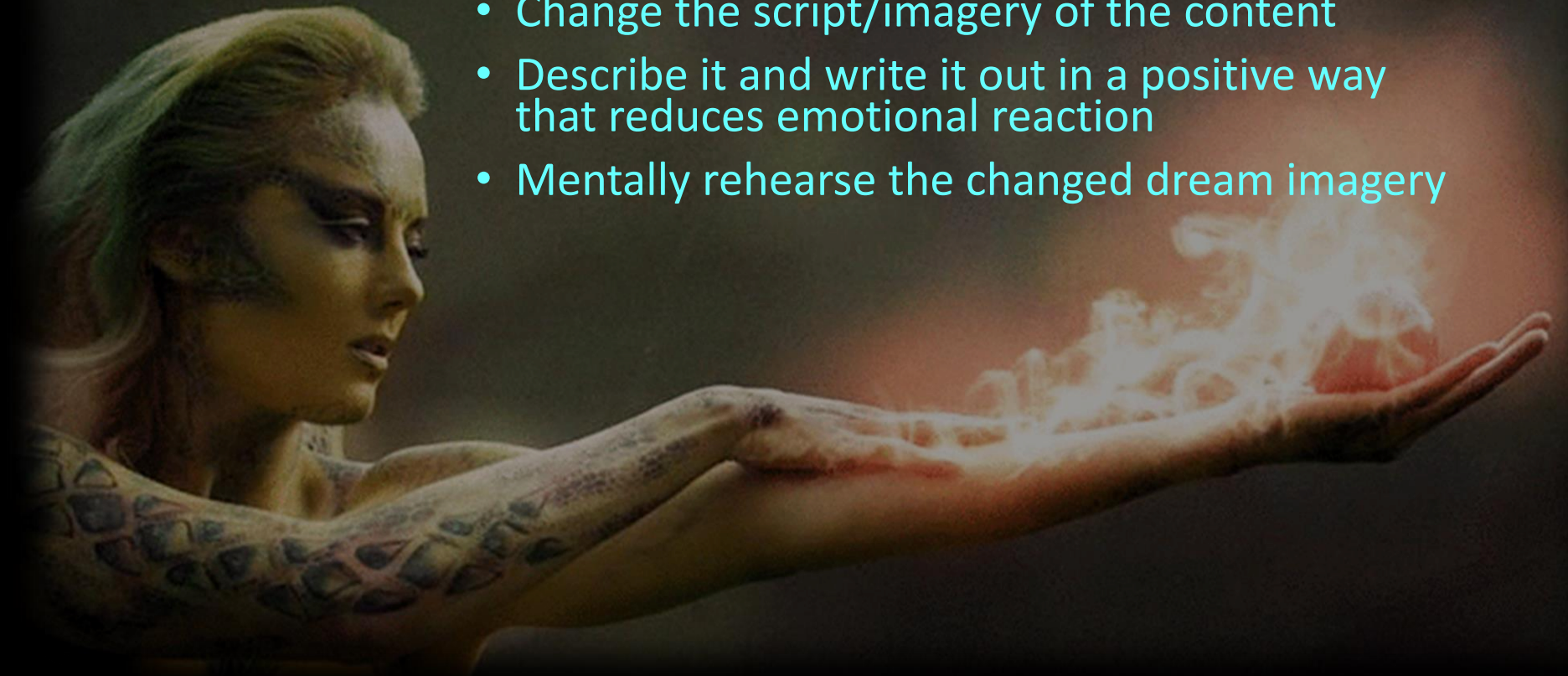
14 types of interventions



Zhang, Ye et al. "Efficacy and acceptability of psychotherapeutic and pharmacological interventions for trauma-related nightmares: A systematic review and network meta-analysis." *Neuroscience and biobehavioral reviews* vol. 139 (2022): 104717. **H-INDEX 271**

# 2023: Image Rehearsal Therapy for adults & children

- Select a repetitive trauma-related nightmare
- Change the script/imagery of the content
- Describe it and write it out in a positive way that reduces emotional reaction
- Mentally rehearse the changed dream imagery



Gill, Peter et al. "Psychosocial treatments for nightmares in adults and children: a systematic review." BMC psychiatry vol. 23,1 283. 21 Apr. 2023 **H-INDEX 123**



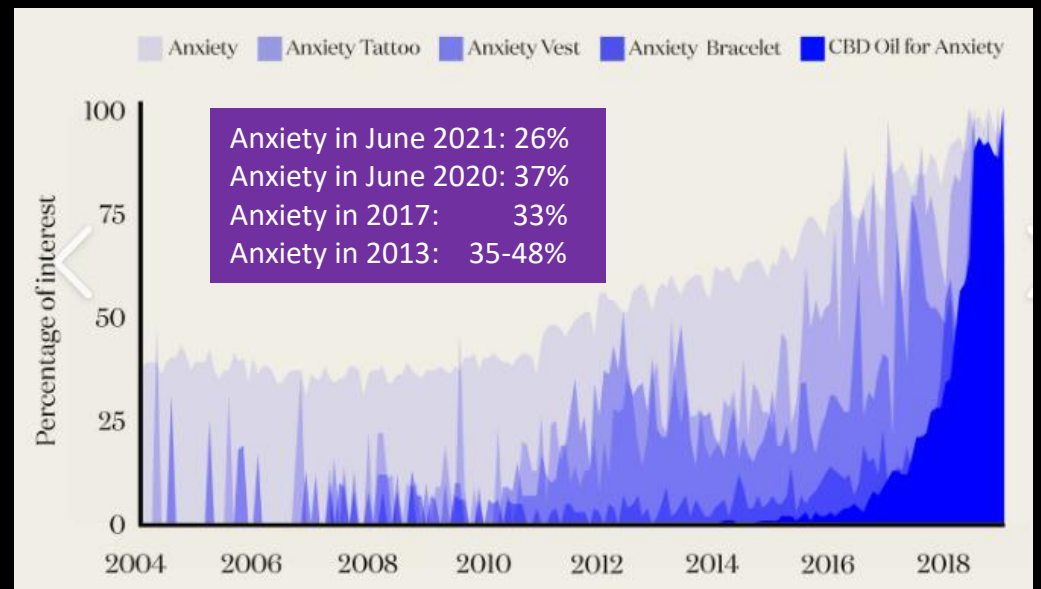
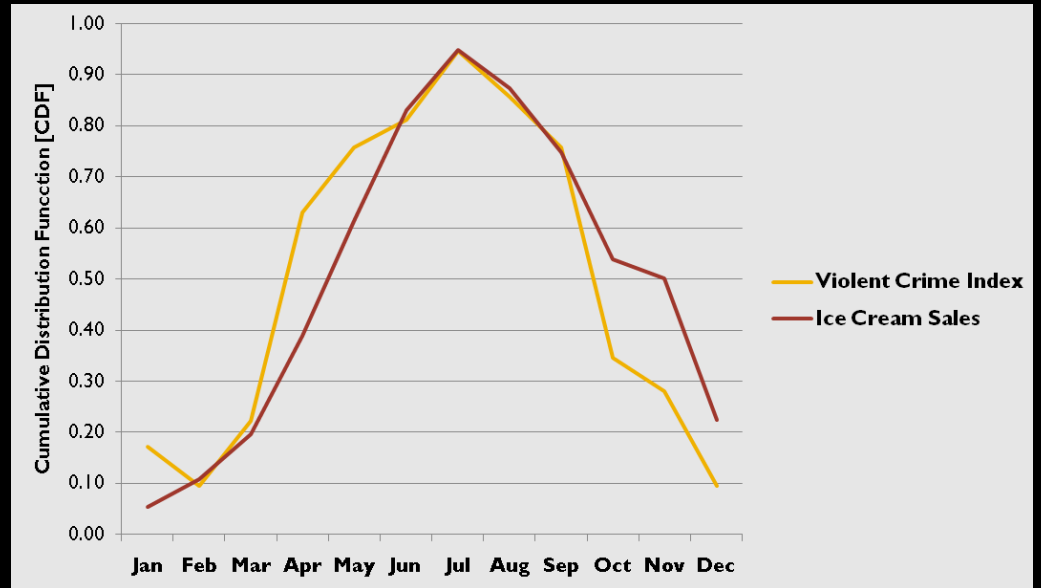
TRAUMATIC  
MEMORIES  
ARE MYTHS

Please review the  
following slides that  
were not part of the  
recorded  
presentation



# Correlations, Associations, Causality

- Does eating ice cream cause you to be more violent?
- Did anxiety increase during COVID?
- Does Mindfulness improve your health? Will it lower anxiety, depression, or PTSD?
- Mindfulness studies in 1978: 18  
Mindfulness studies in 2022: 3896




## Common Weaknesses in many Therapeutic Models



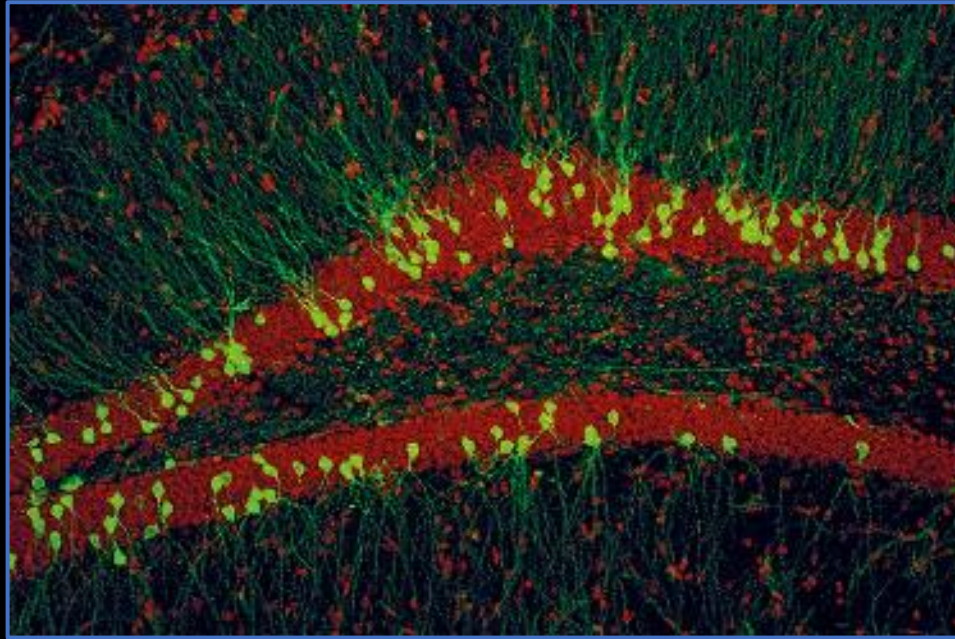
- Poor understanding of core emotional processes
- Little understanding of communication processes
- Undervalues pleasure/nurturing strategies
- Little in-the-moment awareness during session
- Unaware of the importance of mind-wandering
- Rarely integrates imagination & creative processes
- Minimal discussion of therapist's & client's cognitive biases during session
- Few tools for stimulating instinctual motivation
- Few tools for building a client's autonomy
- Rarely encourages client's intuitive insights
- Little understanding of memory reconsolidation

Brain scan  
research  
suggests these  
changes to  
coaching and  
psychotherapy

- 
- **Suspending beliefs & theoretical orientation**
  - **Integrating mindful dialogue**
  - **Creating a relaxed mind/body state**
  - **Introducing present-moment awareness**
  - **Nonjudgmentally observing thoughts & feelings**
  - **Encouraging deliberate mind-wandering**
  - **Seeking client's intuitive insights**
  - **Identifying intrinsic values**
  - **Integrating pleasure using hedonic strategies**



## 2021: Any new positive learned experience destabilizes memory retention



New neurons (green) growing into the hippocampus (red bands) helps to degrade old memory traces.

Sabandal, John Martin et al. "Dopamine-based mechanism for transient forgetting." *Nature* vol. 591,7850 (2021): 426-430.





## 2021: Systematic Review of 59 Articles Imagination/Visualization Exercises Can Induce False Memories and Beliefs

- Inductions involved “imagination inflation, false feedback, and memory implantation.”
- “Guided imagery, as well as suggestive statements, could induce false beliefs or false memories in, on average, 20%-50% of the participants who underwent experimental manipulation concerning false past events.”
- “A false belief induction may occur after dream interpretation or hypnosis in more than 50% of participants.”
- “Personalized suggestion is more effective in inducing memory.”

Muschalla B, Schönborn F. Induction of false beliefs and false memories in laboratory studies-A systematic review. *Clin Psychol Psychother.* 2021;28(5):1194-1209.

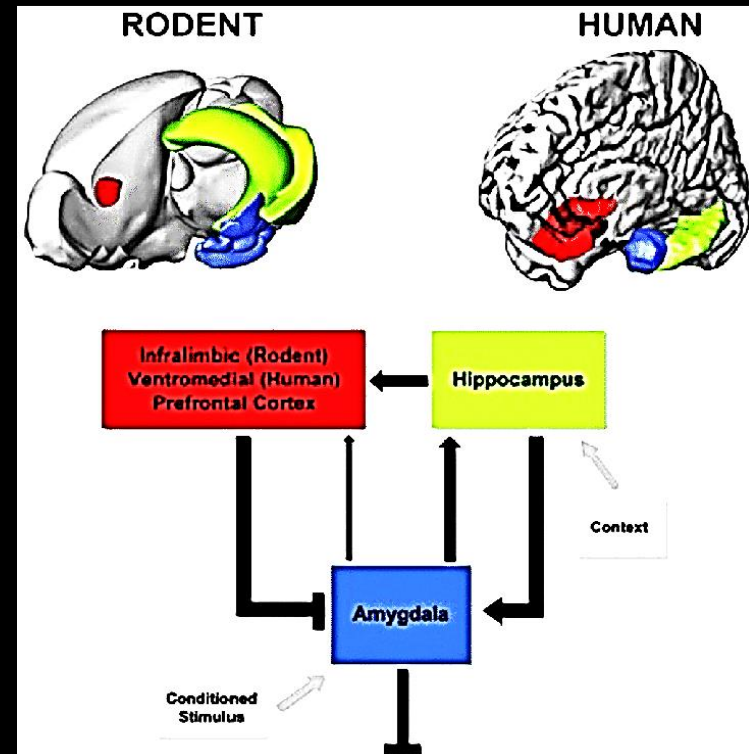
# Exposure therapy focuses on Central Executive Network control; does not diminish DMN/anxiety activity.

- “Controlling learned defensive responses through extinction does not alter the threat memory ... This finding suggests that exposure-based techniques may actually be least effective ... [for] anxiety disorders.”
- “Timing extinction to coincide with **threat memory reconsolidation** would ... prevent the return of defensive reactions ... diminishing vmPFC involvement.”

Schiller, Daniela et al. “Extinction during reconsolidation of threat memory diminishes prefrontal cortex involvement.”

Proceedings of the National Academy of Sciences of the United States of America vol. 110,50 (2013): 20040-5.

*Image from a different article*



2022: Systematic review *INVALIDATES* key theory in body-oriented therapies

“Unable to provide robust evidence that ... dissociation is associated with hypoarousal, questioning the validity of distinct psychophysiological profiles in PTSD.”

Beutler, Sarah et al. “Trauma-related dissociation and the autonomic nervous system: a systematic literature review of psychophysiological correlates of dissociative experiencing in PTSD patients.” *Eur J Psychotraumatol.* y vol. 13,2 2132599. 2 Nov. 2022



## Peter Levine & Bessel van der Kolk



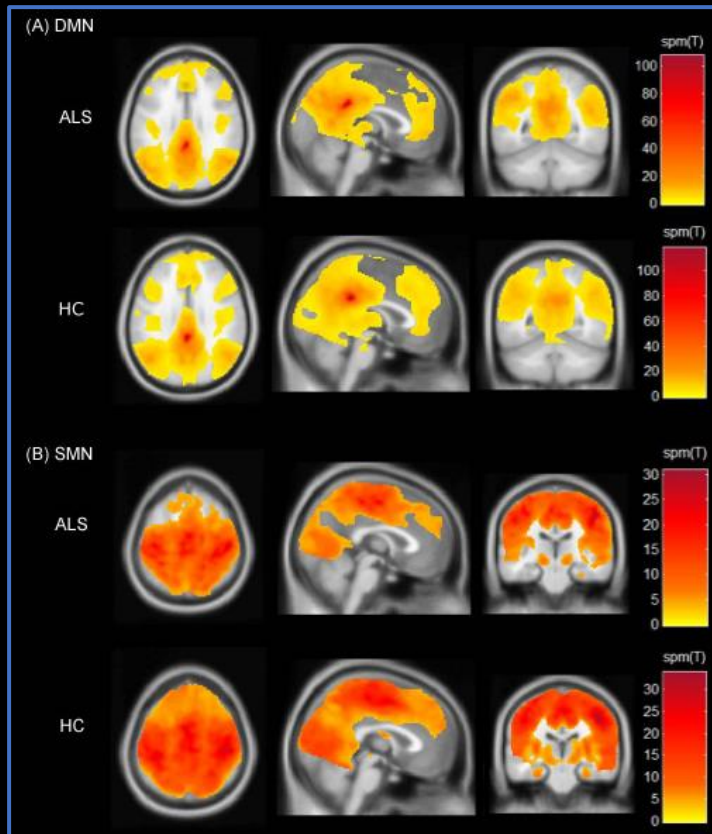
2000: “Traumatic memories are primarily imprinted in sensory and emotional modes ... [and] often remain stable over time.”

“Traumatic memories are imprints of the past that keep coming back that you may or may not know are related to the past.”

van der Kolk, B. “Posttraumatic stress disorder and the nature of trauma.” *Dialogues in clinical neuroscience* vol. 2,1 (2000): 7-22



# 2016-18: If the theories are wrong, why might somatic approaches help?



- Client's Self-Initiating Behavior
- Mutual Empathic Rapport
- Positive Belief / Imagination / Placebo
- 2018: \* *SENSORIMOTOR AWARENESS* \*
- *Better hypothesis (2016)*: You might:
  - lower DN activity (anxiety, PTSD)
  - via Sensorimotor Network (SMN)
  - through relaxed mindful movements.

Wang, Li et al. "Altered Default Mode and Sensorimotor Network Connectivity With Striatal Subregions in Primary Insomnia: A Resting-State Multi-Band fMRI Study." *Frontiers in neuroscience* vol. 12 917. 6 Dec. 2018

Chenji, Sneha et al. "Investigating Default Mode and Sensorimotor Network Connectivity in Amyotrophic Lateral Sclerosis." *PloS one* vol. 11,6 e0157443. 20 Jun. 2016

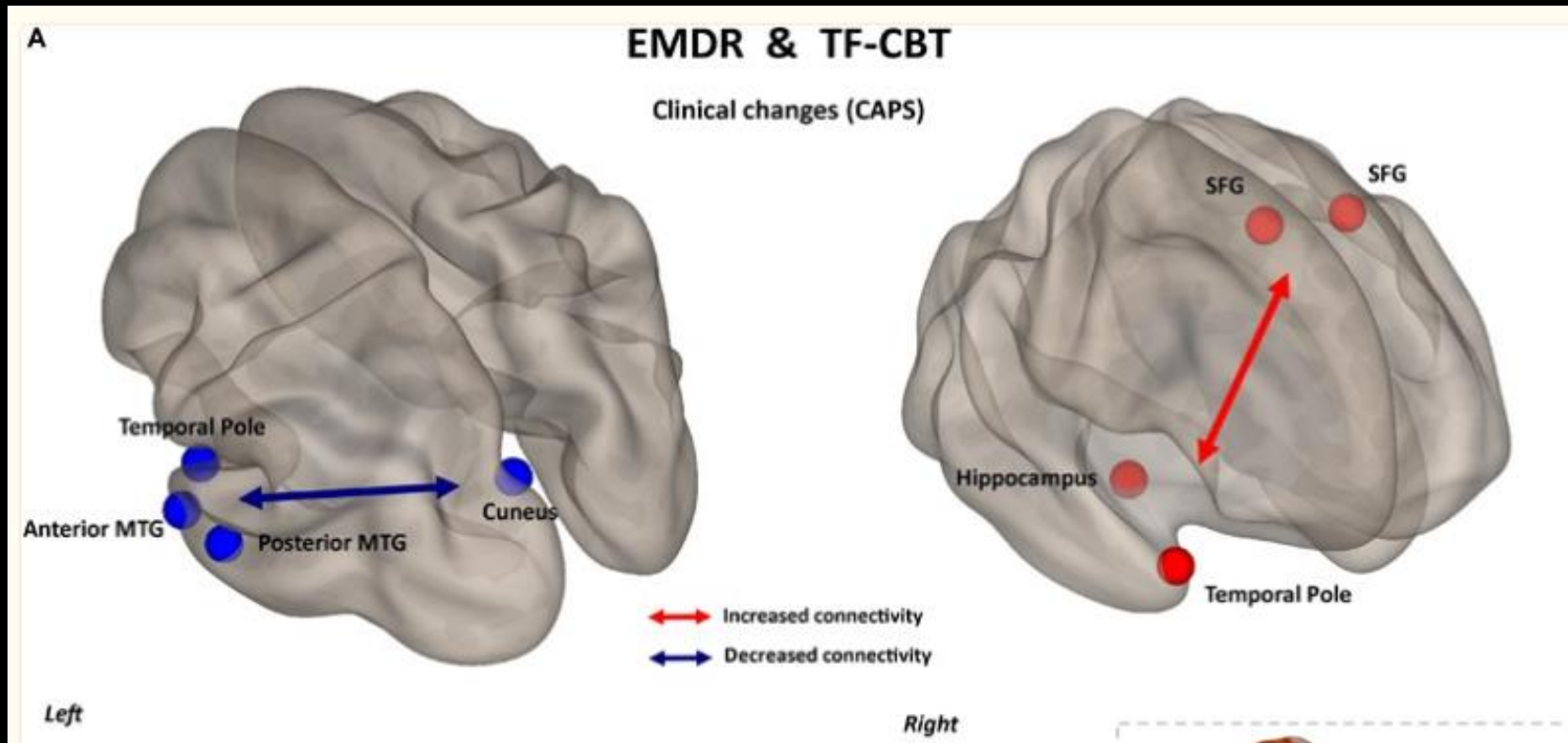
A composite image. The top half shows a woman with dark hair and eyes, wearing a black top, holding up three fingers in a gesture. The bottom half shows two pairs of hands, one with red nail polish, holding two green vibrators connected by black wires.

## 2021 – Correcting EMDR theory, instructions, & technique

- Brain bilateral stimulation is pseudoscience
- EMDR is effective without finger movement or vibrator
- Instructions use 2 myths:
  - *“Memory works as a video camera”*
  - *“Individuals can have a photographic memory.”*
- This “might pose problems for the therapeutic alliance and therapy outcome.”

Houben, Sanne T L et al. “Psychological Myths as Therapeutic Instructions in Eye Movement Desensitization and Reprocessing.” *The Journal of psychology* vol. 155,2 (2021): 129-139.

# 2019: EMDR & TF-CBT show similar changes



Santarnecci, Emiliano et al. "Psychological and Brain Connectivity Changes Following Trauma-Focused CBT and EMDR Treatment in Single-Episode PTSD Patients." *Frontiers in psychology* vol. 10 129. 25 Feb. 2019

## 2023: Combine “Mindful Emotion Awareness Training” with other strategies for greater improvement



- Combining “cognitive reappraisal and mindful emotion awareness ... in combination was especially beneficial when treating ... anger and aggression.”

Larsson, Johannes et al. “Anger profiles among individuals seeking treatment for maladaptive anger: Associations with emotion regulation.” *Clinical psychology & psychotherapy*, 10.1002/cpp.2821. 6 Jan. 2023

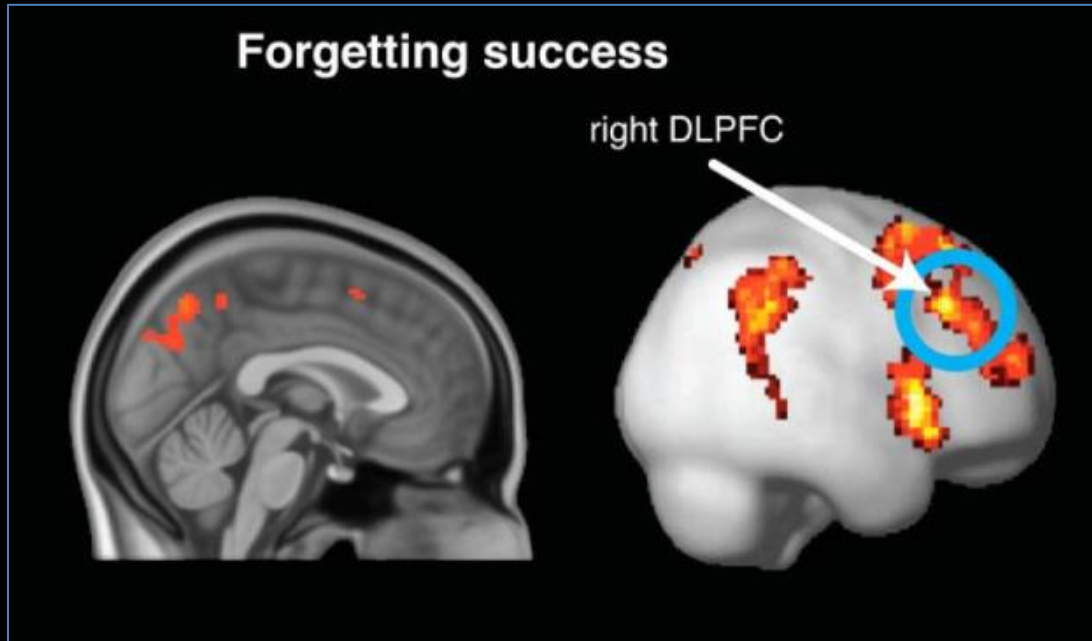


2015: Mindful emotion regulation “resulted in reduced emotional and physiological reactivity [and] in increased pleasantness”



Grecucci, Alessandro et al. “Mindful Emotion Regulation: Exploring the Neurocognitive Mechanisms behind Mindfulness.” *BioMed research international* vol. 2015 (2015): 670724.

# 2019: Deliberate *FORGETTING* of past traumas is healing



- “The intention to forget can produce long-lasting effects...”
- “linked to suppression ...of unwanted memories.”

Wang, Tracy H et al. “More Is Less: Increased Processing of Unwanted Memories Facilitates Forgetting.” *The Journal of neuroscience*, vol. 39,18 (2019): 3551-3560.

**2021 Systematic Review:**  
**Tai Chi, Qigong, & Yoga integrate brain networks  
via the Salience Network**



“Movement-based contemplative practice ... mainly induced structural changes in the insula and cingulate cortex.”

# YOGA

- “The systematic review and quantitative synthesis did not find strong evidence for the effectiveness of yoga as an intervention for PTSD, depression, and anxiety symptoms following traumatic life experiences”

Nguyen-Feng, Viann N et al. “Yoga as an intervention for psychological symptoms following trauma: A systematic review and quantitative synthesis.” *Psychological services* vol. 16,3 (2019): 513-523. **H-INDEX 48**



# 2022: Randomized Controlled Trial on Hypnosis



- “No significant differences between the experimental and control conditions on any outcome measures.”
- MW: Hypnosis is suggestive, asking a person to create imaginary scenes; increases DN activity

Wiechman, Shelley A et al. “The Impact of Virtual Reality Hypnosis on Pain and Anxiety Caused by Trauma: Lessons Learned from a Clinical Trial.” *The International journal of clinical and experimental hypnosis* vol. 70,2 (2022): 156-173. **H-INDEX 48**

2022: Hypnosis reduced anxiety, increased SN & CEN connectivity, decreased DN activity  
*but only in highly suggestable people*

- MW: Highly suggestable people may have excessive DN activity
- Wolf, Thomas Gerhard et al. “Functional Changes in Brain Activity Using Hypnosis: A Systematic Review.” *Brain sciences* vol. 12,1 108. 13 Jan. 2022
- Jiang, Heidi et al. “Brain Activity and Functional Connectivity Associated with Hypnosis.” *Cerebral cortex (New York, N.Y. : 1991)* vol. 27,8 (2017)

# 2022 Meta-Analysis: Hypnosis for Anxiety? Probably Not

- Compared to “relaxation training, benzodiazepine premedication, self-hypnosis by audio therapy, hypnotherapy, hypnosis, and nitrous oxide sedation, CBT ... showed the most evidence for the efficacy of reducing anxiety.”
- Hypnosis can be used “for anxiety reduction, while there are also studies with a small or even slightly **NEGATIVE** effect.”

Wolf, Thomas Gerhard et al. “Efficacy of Hypnosis on Dental Anxiety and Phobia: A Systematic Review and Meta-Analysis.” *Brain sciences* vol. 12,5 521. 20 Apr. 2022 **H-INDEX**

# Criticizing Feinstein's Studies

- “Important Energy Psychology studies were omitted from the review that did not confirm the claims.”
  - “Lack of specific inclusion and exclusion criteria.”
  - “Mis-portrayal of criticism of EP.”
- “Incorrectly characterizing one of the studies as a randomized clinical trial.”
  -
- “Lack of disclosure regarding an EP-related business.



Pignotti M, Thyer B. Some comments on "Energy psychology: A review of the evidence": Premature conclusions based on incomplete evidence? *Psychotherapy (Chic)*. 2009 Jun;46(2):257-61