Novel Directions in the Psychological Treatment of Chronic Pain

Mark A. Lumley, Ph.D.
Distinguished Professor
Director of Doctoral Clinical Psychology Training
Department of Psychology
Wayne State University
Detroit, Michigan
mlumley@wayne.edu

Pain

- Acute pain is _____
  - a friend!
  - a “true danger / threat alarm”

- Chronic pain is _____
  - mostly learned
  - a “false danger / threat alarm”
  - possibly reversible!

From Acute to Chronic Pain

- Genetics / epigenetics (likely, but not known)
- Physiological: Poor sleep, obesity, muscle tension, autonomic dysregulation
- Behavioral: Fearful avoidance of healthy behavior
- Cognitive: Thoughts of tissue damage, helplessness
- Emotional: Negative mood; unresolved stressors
- Interpersonal: How others respond to pain
- Socioeconomic: Disability status, $ related to pain
- Sociomedical: Cultural & biomedical validation of pain
- **Question: What do these have in common?**

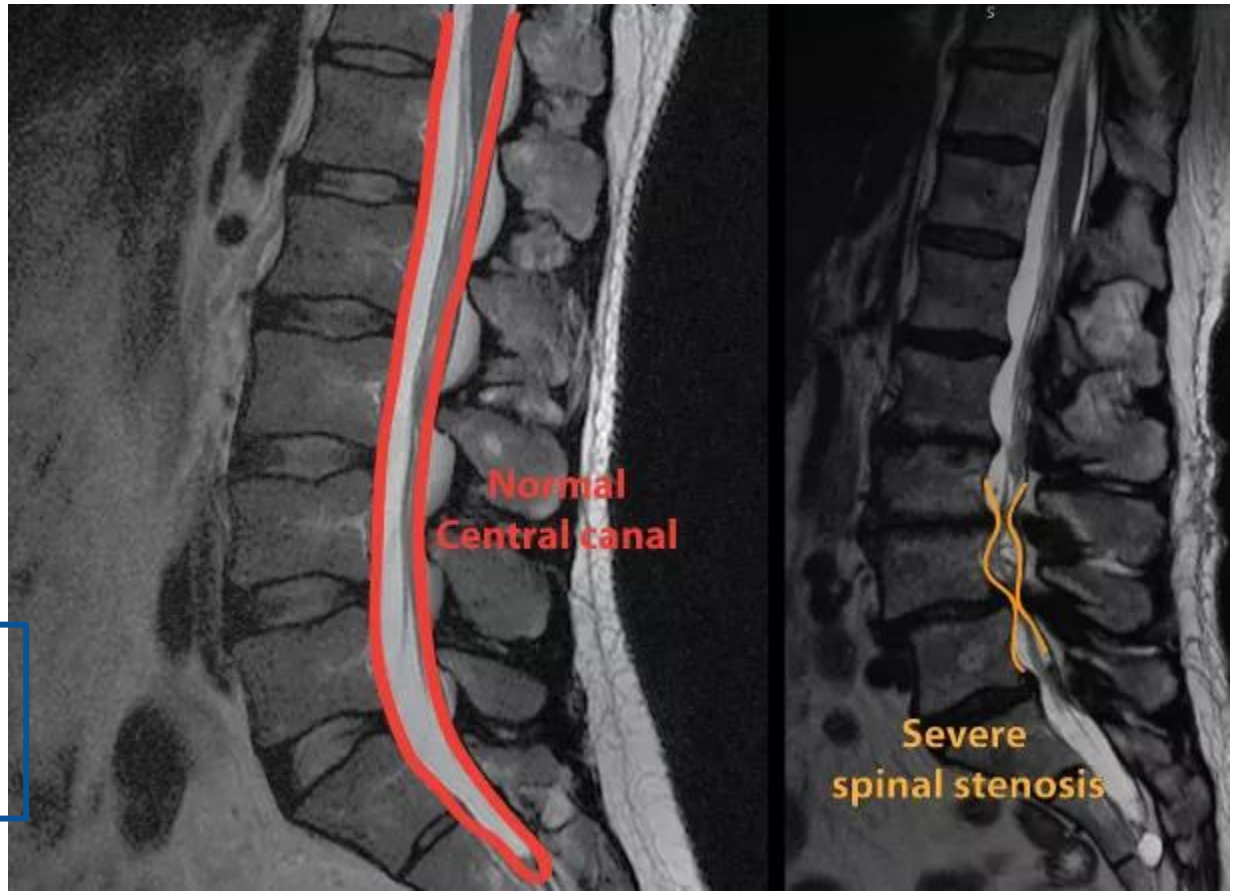
The mind / brain

- *My Fair Lady*: "The rain in Spain….
  - falls mainly on the plain"
- "The reign of pain lies mainly in the brain"
- Sensation vs. perception
  - Nociception vs. interoception
- The brain "predicts" (predictive coding, construction)
  - Integrates nociception with beliefs, emotions, expectations from personal history, family, culture, etc.
  - Brain's interoception constructs symptoms (e.g., pain)

Key to Chronic Pain

- More brain (psychosocial) & less nociception
- Pain as a warning of tissue damage has become….
  - a **false** danger / threat alarm
- **Q: What increases a person's sense of danger to their bodies and turns on their pain alarm?**

Lab tests (x-rays, imaging…)



Person with chronic low back pain

Pain-free person

Table 2: Age-specific prevalence estimates of degenerative spine imaging findings in asymptomatic patients[a]

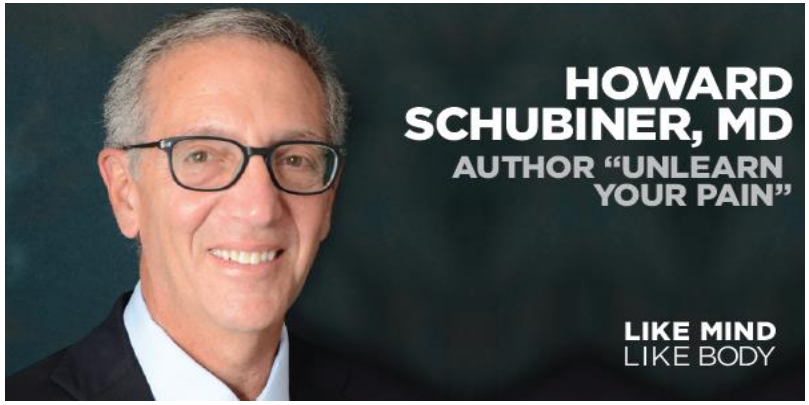
Imaging Finding	Age (yr)						
	20	30	40	50	60	70	80
Disk degeneration	37%	52%	68%	80%	88%	93%	96%
Disk signal loss	17%	33%	54%	73%	86%	94%	97%
Disk height loss	24%	34%	45%	56%	67%	76%	84%
Disk bulge	30%	40%	50%	60%	69%	77%	84%
Disk protrusion	29%	31%	33%	36%	38%	40%	43%
Annular fissure	19%	20%	22%	23%	25%	27%	29%
Facet degeneration	4%	9%	18%	32%	50%	69%	83%
Spondylolisthesis	3%	5%	8%	14%	23%	35%	50%

[a] Prevalence rates estimated with a generalized linear mixed-effects model for the age-specific prevalence estimate (binomial outcome) clustering on study and adjusting for the midpoint of each reported age interval of the study.

(Brinjikji et al., 2015; American Journal of Neuroradiology)

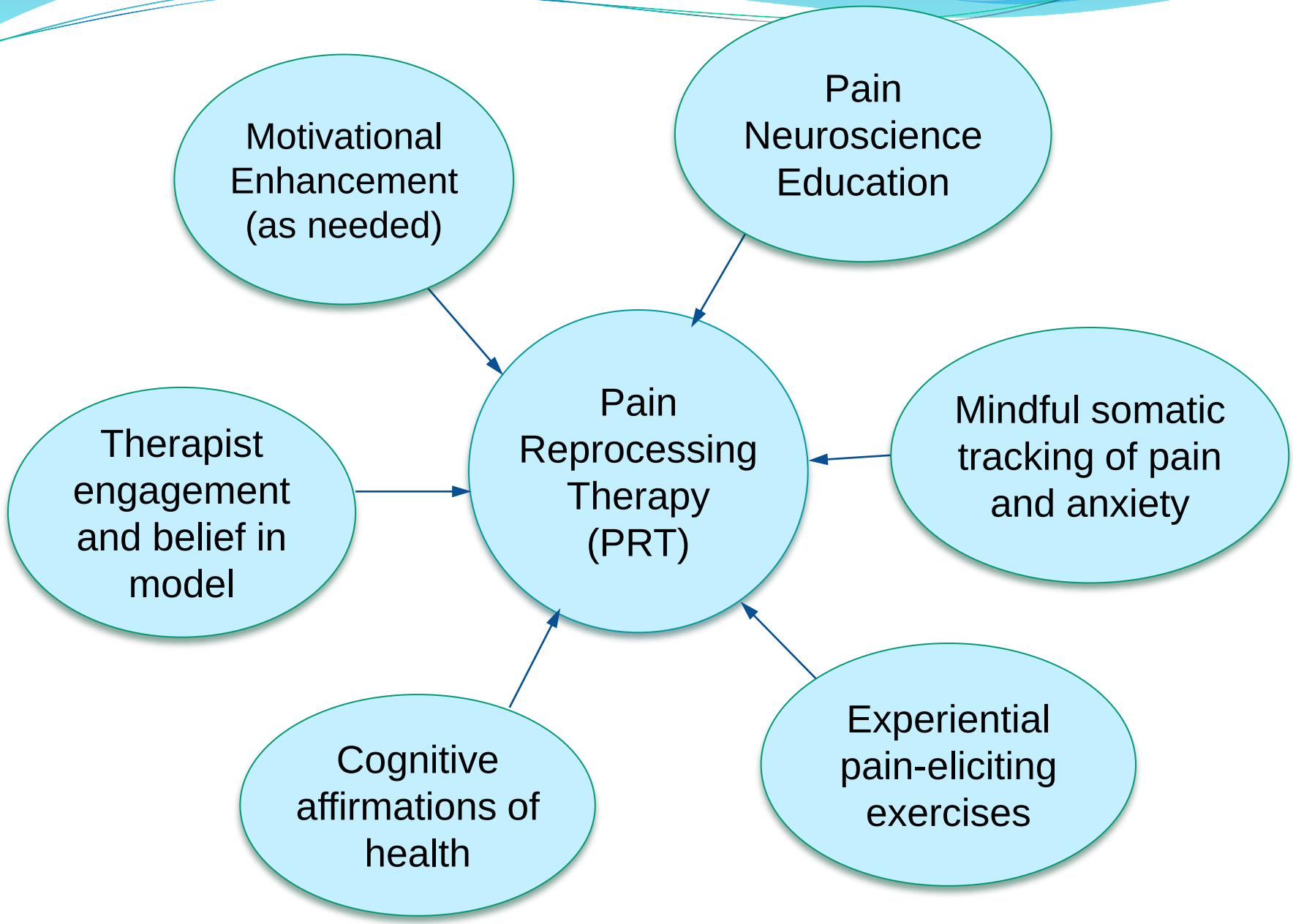
Spinal Abnormalities

- “Spinal abnormalities are normal! It’s like grey hair. Unless you look in the mirror, it’s not painful!”



Pain Reprocessing Therapy (PRT)

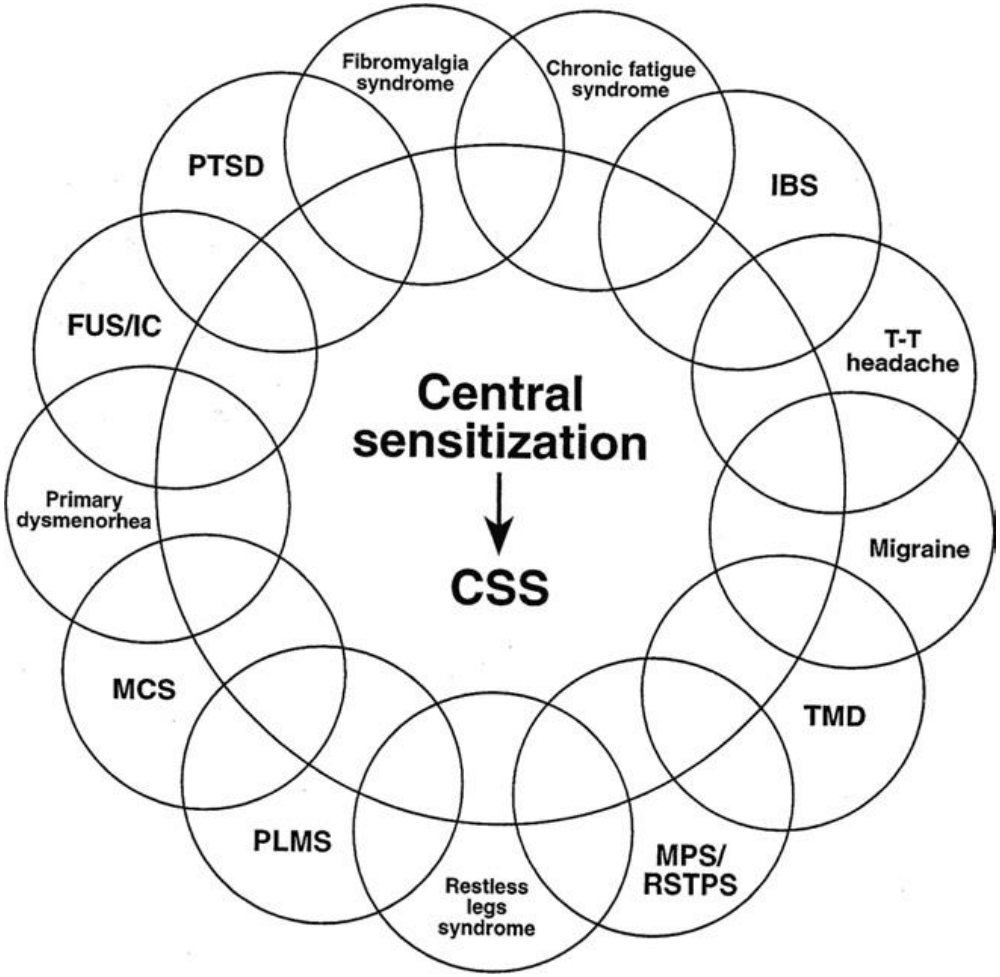
- Help patients change fearful beliefs and behaviors:
  - from “damaged body” to “brain-pain”
  - from false alarm of tissue damage to message of safety


Motivational Enhancement (as needed)
Pain Neuroscience Education
Therapist engagement and belief in model
Pain Reprocessing Therapy (PRT)
Mindful somatic tracking of pain and anxiety
Cognitive affirmations of health
Experiential pain-eliciting exercises

What contributes to the pain danger alarm?

- Fear of tissue damage / injury / pain
- AND more general fears….of many stimuli

Centralized (Pain, Symptom) Syndromes (Sensitization, Augmentation, Generation)



IBS: Irritable bowel syndrome
TMD: Temporomandibular disorder
MPS: Myofascial pain syndrome
RSTPS: Regional soft pain syndrome
PLMS: Periodic leg movement syndrome
MCS: Multiple chemical sensitivity
FUS: Female urethral syndrome
IC: Interstitial cystitis
PTSD: Post-traumatic stress disorder

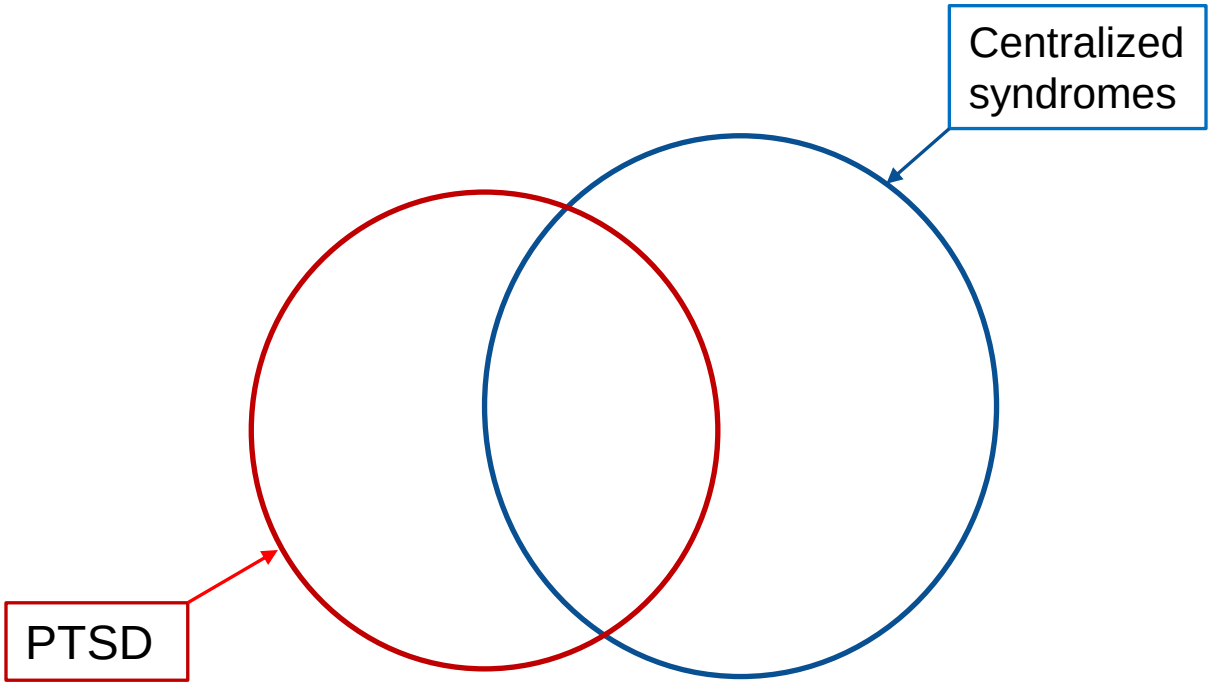
Also:
Premenstrual syndrome
Vulvodynia/vulvar vestibulitis syndrome

Yunus, M.B. (2007) *Semin Arthritis Rheum* 36: 339-356

PTSD in Centralized Pain Conditions

- “My drunk father would beat my mom; I sat frozen in fear.”
- “I was on a date, he raped me in the front seat of his car.”
- “I was robbed and beaten up in that building.”

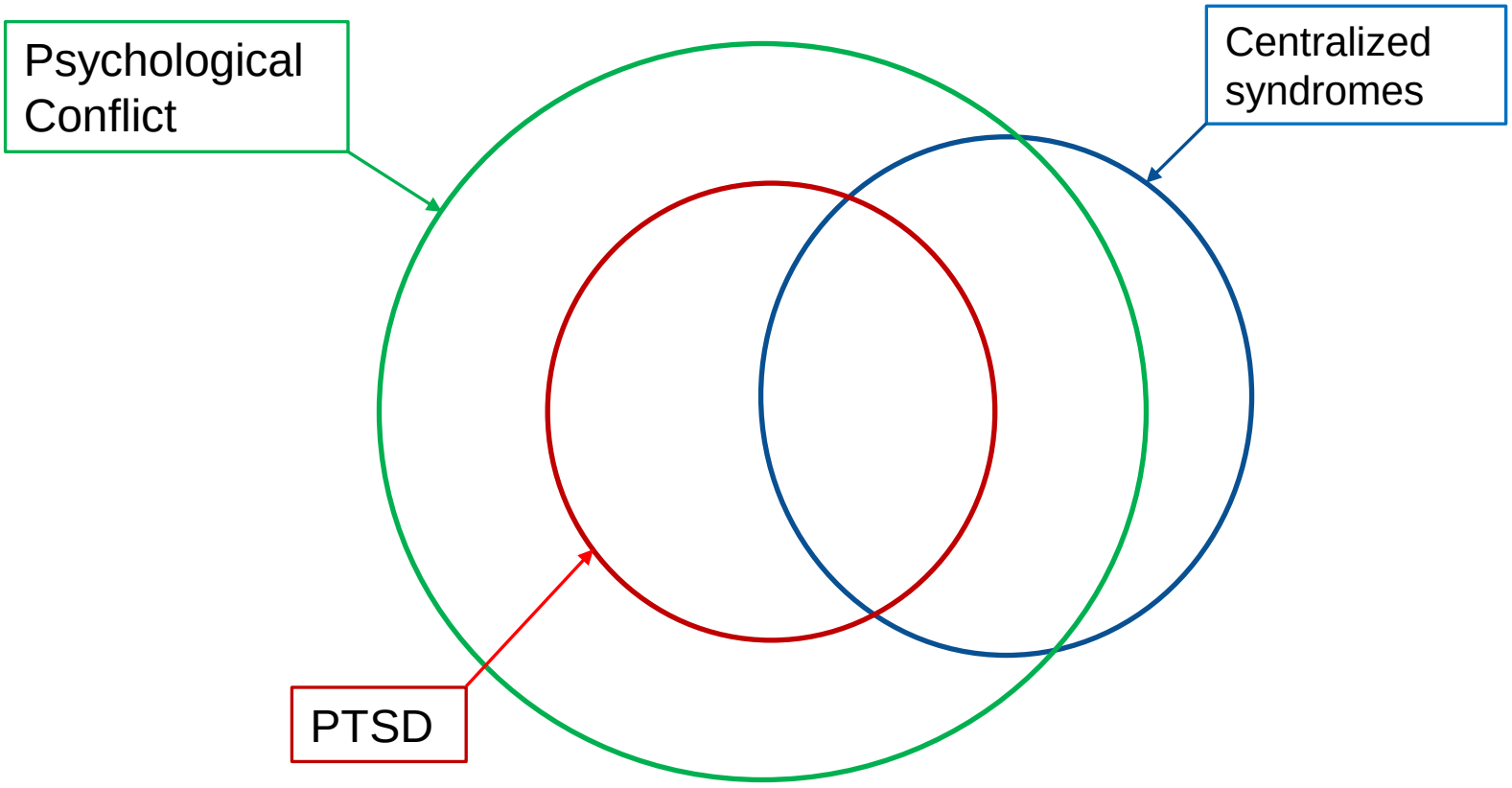
PTSD and Centralized Pain



What about these patients?

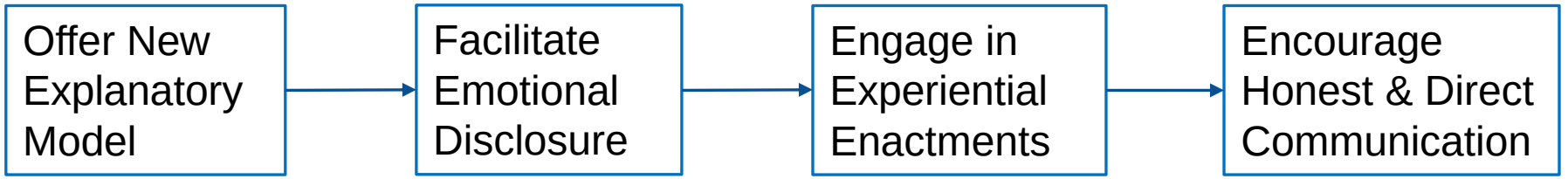
- “30 years ago, I yelled “shut up” at my mom and made her very mad. I watch my mouth and try to avoid her now.”
- “My father did not accept that I was gay…….now my pain flares when I’m home for the holidays.”
- My daughter’s drug use humiliates me, but I have to take care of her, and I can’t be mad at her.

Too focused on Trauma?




Intensive Psychodynamic Therapy
Pain Exposure Therapy
Cognitive-Behavioral Exposure Therapy
Emotional Awareness and Expression Therapy (EAET)
Assertiveness Training
Experiential Therapy
Rescripting Therapy
Written Emotional Disclosure

Basic Components of EAET

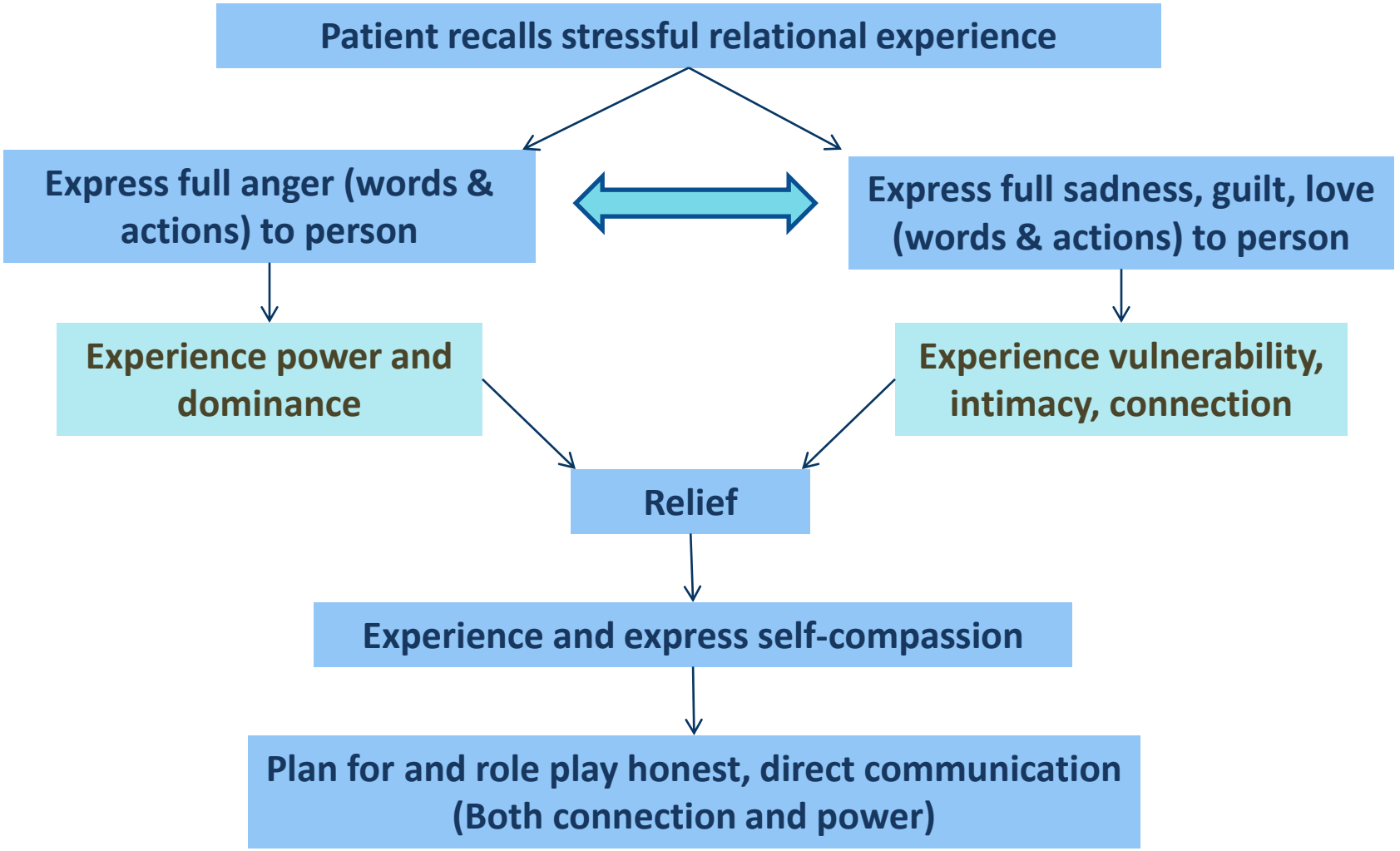


Emotional disclosure

- Ask patients to put into language unresolved stressors, emotional conflicts, or secrets
  - In session, to therapist / group
  - At home expressive writing / written emotional disclosure (WED)
    - Free writing
    - Unsent letter
  - May be used in next session to prompt experiential enactments

Experiential Enactment

(in session)



Our Clinical Trials of EAET

- Fibromyalgia (n = 3)
- Musculoskeletal pain (n = 2)
- Headaches
- Irritable bowel syndrome
- Chronic pelvic pain
- Medically unexplained symptoms

- NOTE: Trials vary in control conditions, number of sessions, configuration of techniques, follow-up points

Pain and Stress Treatment for Fibromyalgia Trial (PAST-FM)

Research Paper

PAIN

2017; 158: 2354-2363

Emotional awareness and expression therapy, cognitive behavioral therapy, and education for fibromyalgia: a cluster-randomized controlled trial

Mark A. Lumley[a,*], Howard Schubiner[b], Nancy A. Lockhart[a], Kelley M. Kidwell[c], Steven E. Harte[d,e], Daniel J. Clauw[d,e,f], David A. Williams[d,e,f,g]

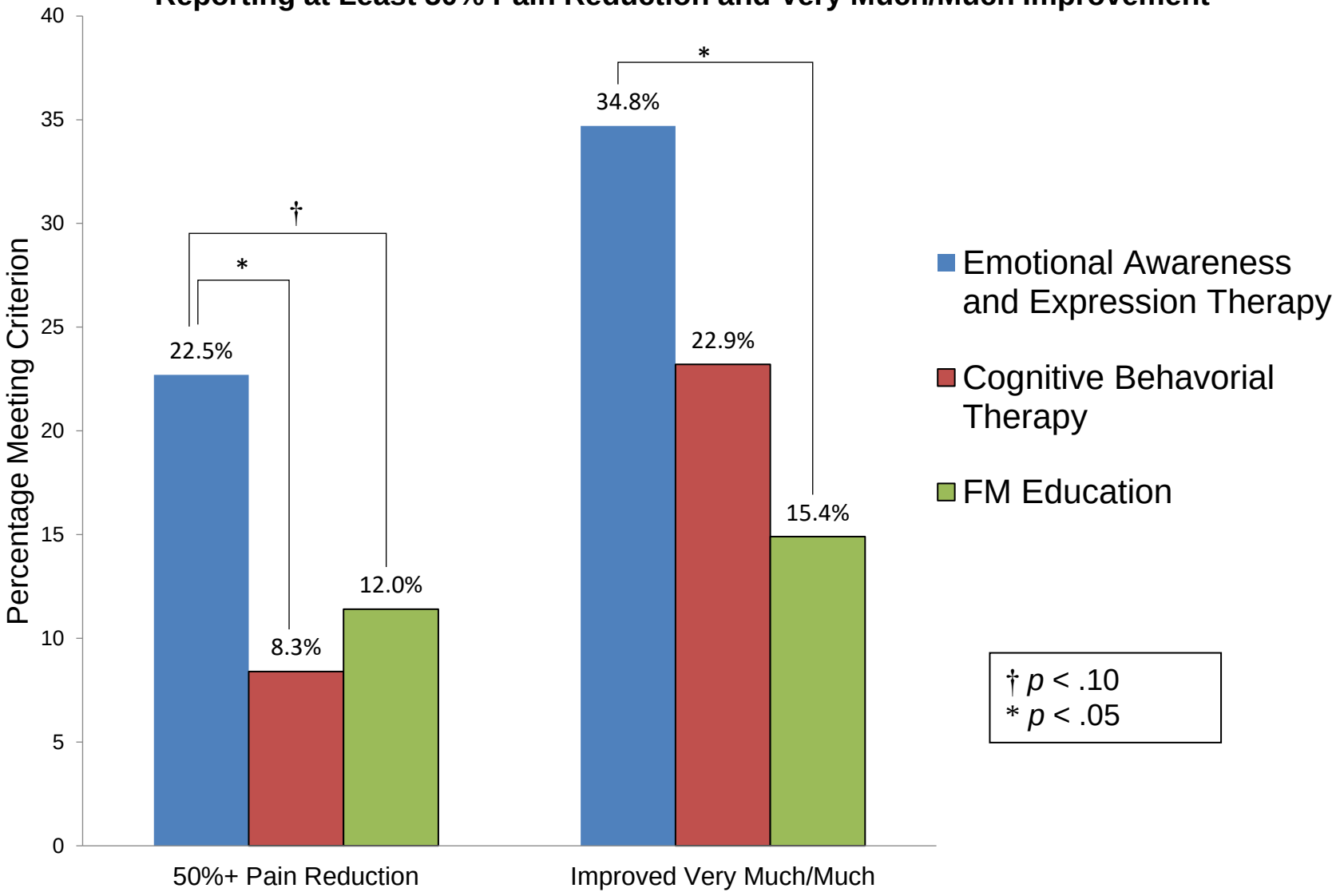
PAST-FM Trial

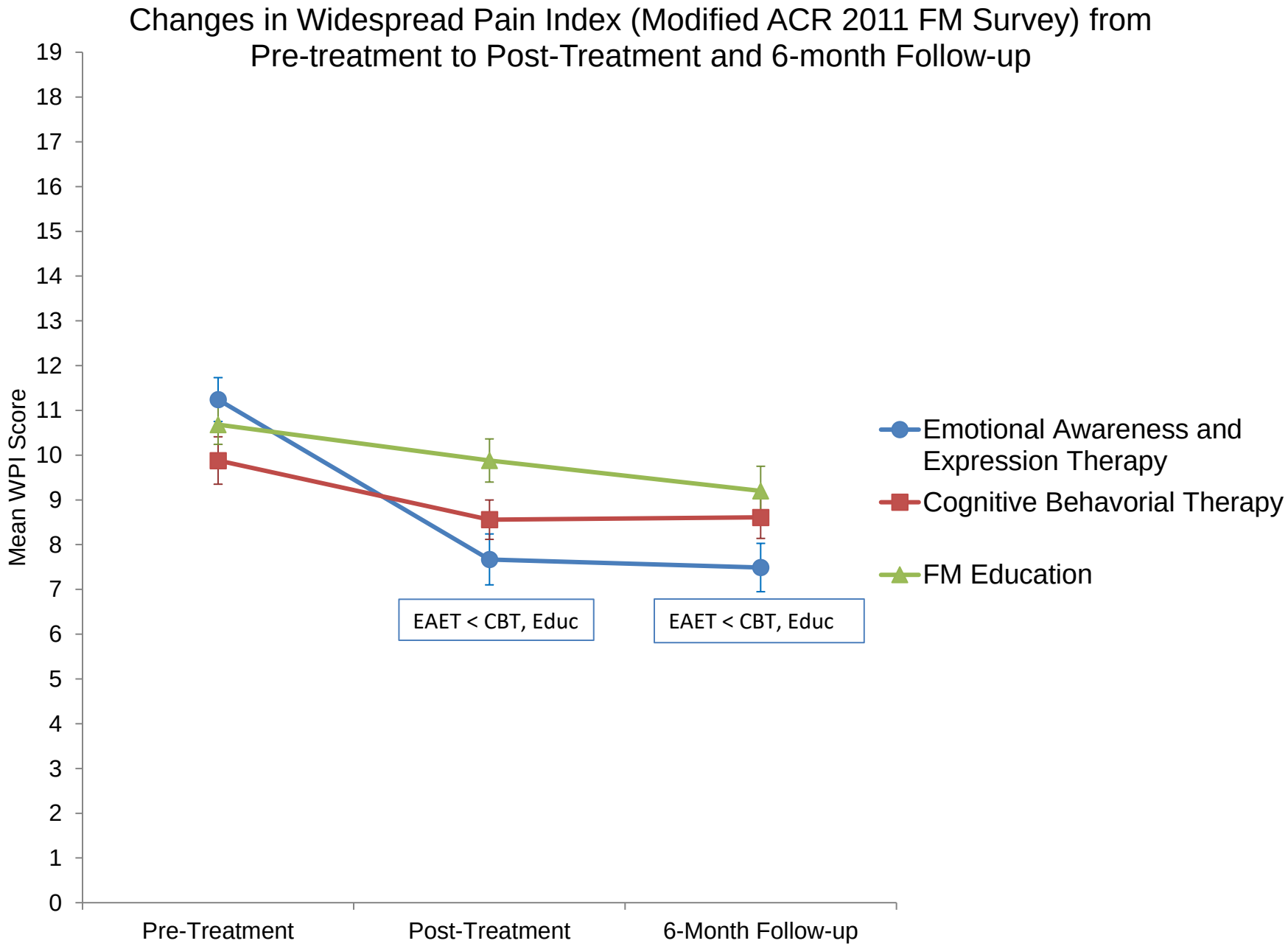
- NIH-funded, 2-site, 3-arm, allegiance-controlled RCT
  - Wayne State University and University of Michigan
- Patients: N = 230 (94% female, M = 49 years old)
- 8 sessions, 90-min, once per week, small groups
- Assessments:
  - Baseline, post-treatment, and 6-month follow-up
  - Over 90% retention through follow-up

Allegiance-controlled Treatments

- Emotional Awareness and Expression Therapy
  - (Mark Lumley, PhD, & Howard Schubiner, MD)
- Cognitive-behavioral therapy for FM
  - (Dave Williams, PhD)
- FM Education (control)
  - (Dan Clauw, MD & Nancy Lockhart, MSN)
- Different set of 3 therapists for each; skilled in and committed to that model

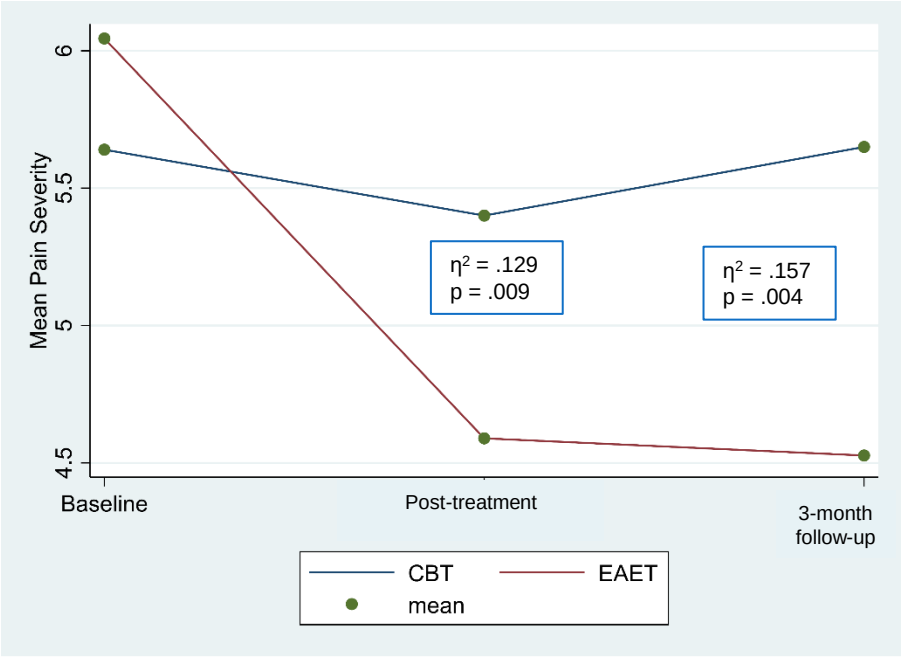
Figure 2. Percentage of Patients in Each Treatment at 6-month Follow-up Reporting at Least 50% Pain Reduction and Very Much/Much Improvement

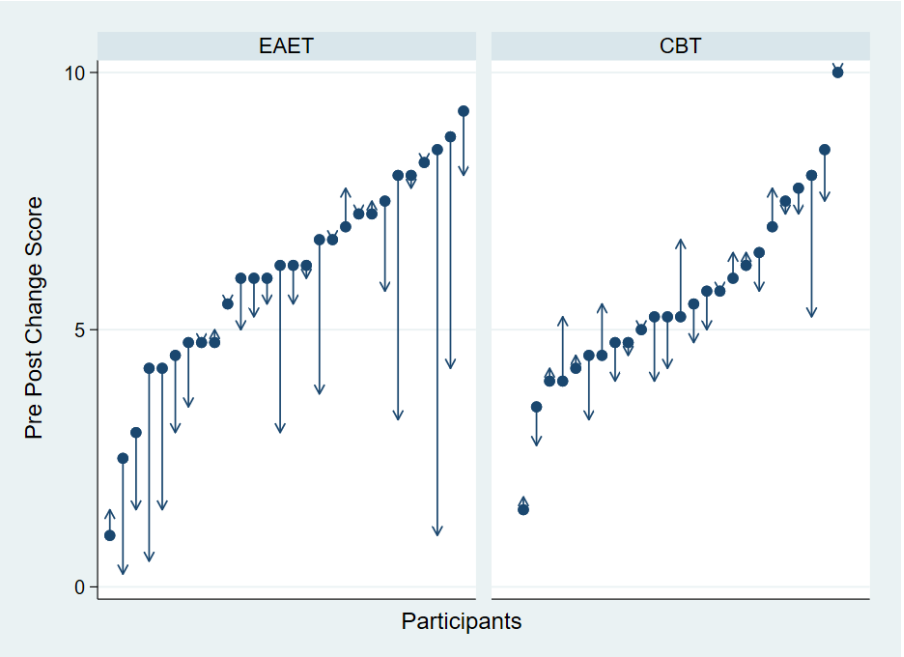



Changes in Widespread Pain Index (Modified ACR 2011 FM Survey) from Pre-treatment to Post-Treatment and 6-month Follow-up
Mean WPI Score
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
Pre-Treatment
Post-Treatment
6-Month Follow-up
EAET < CBT, Educ
EAET < CBT, Educ
Emotional Awareness and Expression Therapy
Cognitive Behavorial Therapy
FM Education

EAET vs. CBT in Older Veterans with Chronic Musculoskeletal Pain (Brandon Yarns, West LA VA)

Vets (age = 73.5) randomized to 8 sessions of group EAET (n = 28) or CBT (n = 25)





Emotional Awareness and Expression Therapy for Chronic Pain: Rationale, Principles and Techniques, Evidence, and Critical Review

Mark A. Lumley[1] · Howard Schubiner[2]

Current Rheumatology Reviews (2019)

Abstract

Purpose of Review Patients with chronic pain, especially primary or centralized pain, have elevated rates of psychosocial trauma and intrapersonal or intrapsychic conflict. To address these risk factors and potentially reduce pain, the authors developed emotional awareness and expression therapy (EAET). This article presents the rationale for EAET, describes its principles and techniques, reviews its development and early testing as well as recent clinical trials, and critically analyzes the evidence base.

Recent Findings Four initial trials (between 2006 and 2011) demonstrated the efficacy of earlier versions of EAET. Four recent randomized, controlled trials of different EAET durations (1 to 8 sessions) and formats (individual or group) in patients with fibromyalgia, irritable bowel syndrome, pelvic pain, or medically unexplained symptoms support the earlier findings. EAET reliably reduces pain and interference, although improvements in anxiety and depression are less reliably achieved and may be delayed. The largest and best conducted trial found superiority of EAET over cognitive-behavioral therapy for fibromyalgia. Patient retention in EAET is high, and adverse events are rare.

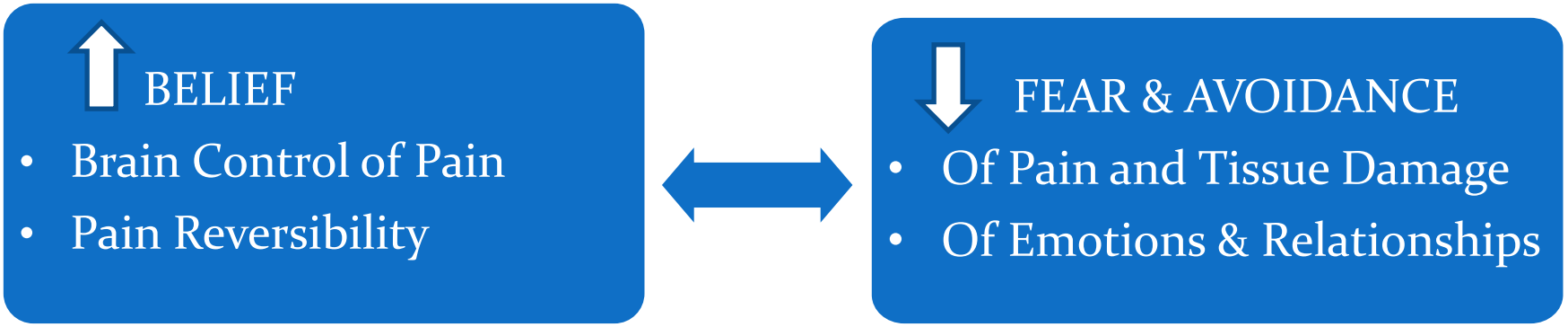
Summary EAET merits inclusion as a treatment option for primary pain conditions, and it may be the preferred treatment for some patients. Research is needed on EAET with other pain conditions and samples, using better controls and comparison conditions, and on additional ways to motivate and help patients engage in successful emotional processing.

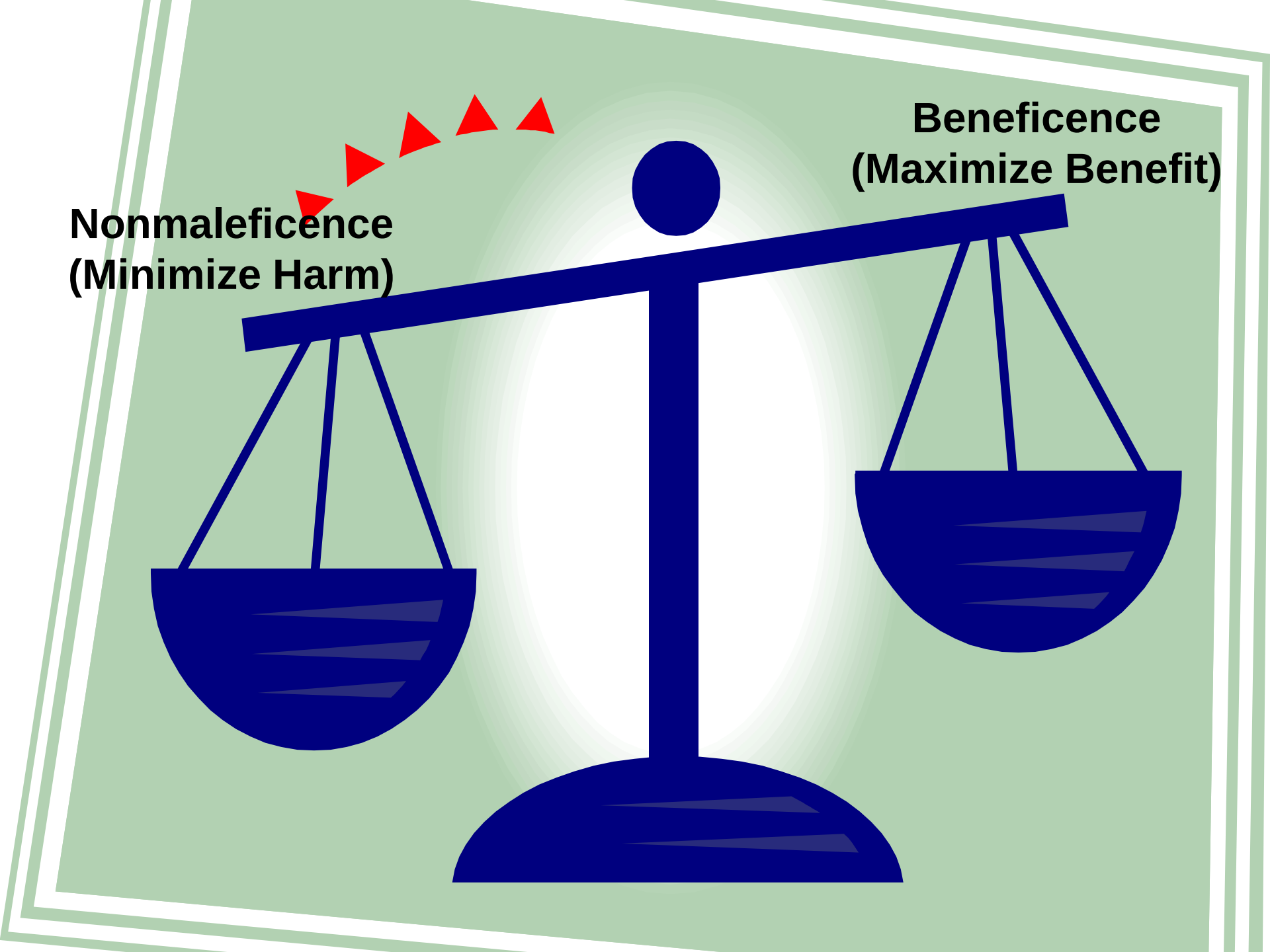
May 2019

Section 2.5: Behavioral Health Approaches

- Behavioral therapy
- Cognitive behavioral therapy
- Acceptance and Commitment Therapy
- Mindfulness-based Stress Reduction
- **Emotional Awareness and Expression Therapy**
- Self-regulatory / psychophysiological approaches

Summary : 2 Key Treatment Targets for Centralized Pain




Nonmaleficence
(Minimize Harm)
Beneficence
(Maximize Benefit)

The Ethics of Cost vs. Benefit

- "First, _____ !"
- **Principle A: Beneficence and Nonmaleficence** "Psychologists strive to benefit those with whom they work and take care to do no harm." (APA Ethics Code)
- What is the cost of continued pain and misery in patients who COULD BE HELPED?
  - "I've been in therapy for years. Why hasn't my therapist ever helped me like this?"

- Be curious, creative, and courageous
- Thank you, and express your feelings now

mlumley@wayne.edu