



# A BRIEF SURVEY OF PSYCHOLOGICAL THERAPIES FOR CHRONIC PAIN AND MENTAL HEALTH

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# Presenter Disclosure

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# Learning objectives

1. Locate the development and proliferation of psychological interventions for chronic pain and mental health within historical context
2. Identify unique and common elements of psychological interventions for chronic pain and mental health
3. Evaluate evidence for the efficacy and effectiveness of psychological interventions for chronic pain and mental health

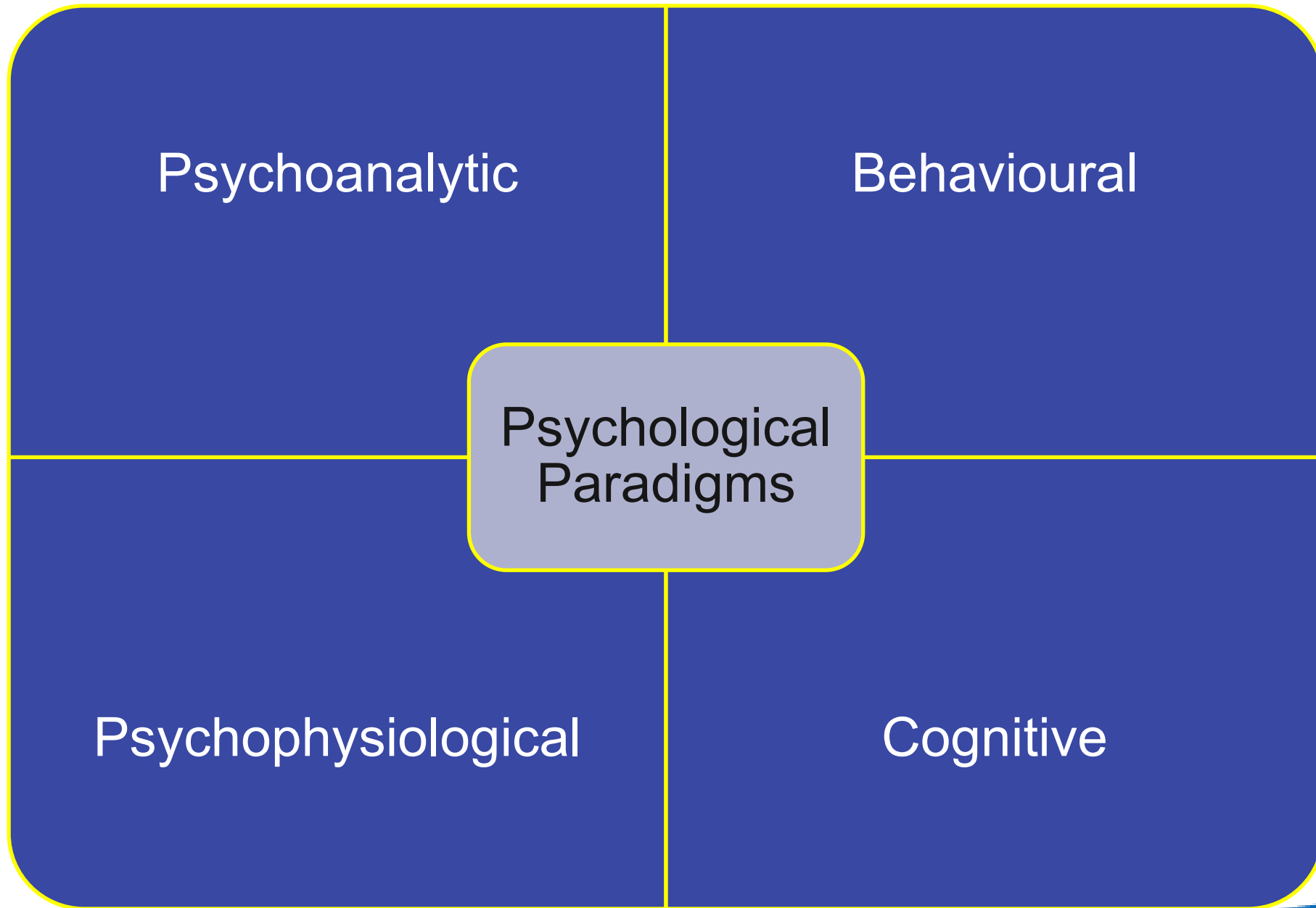
# Pain Psychology in Historical Context

Academic Psychology developed out of experimental physiology and philosophy in the late 19<sup>th</sup> century

- Early psychologists (Wundt, Titchener, Hall etc) very interested in sensation and perception
- Pain perception became a near-immediate area of study (Dallenbach, 1939)
  - Contributed to debate on specificity v. intensity v. pattern theories

Gate Control Theory of Pain (Melzack and Wall, 1965)

1950s – Academic and clinical interest in chronic pain



Turner, 1982;  
Gamsa, 1995

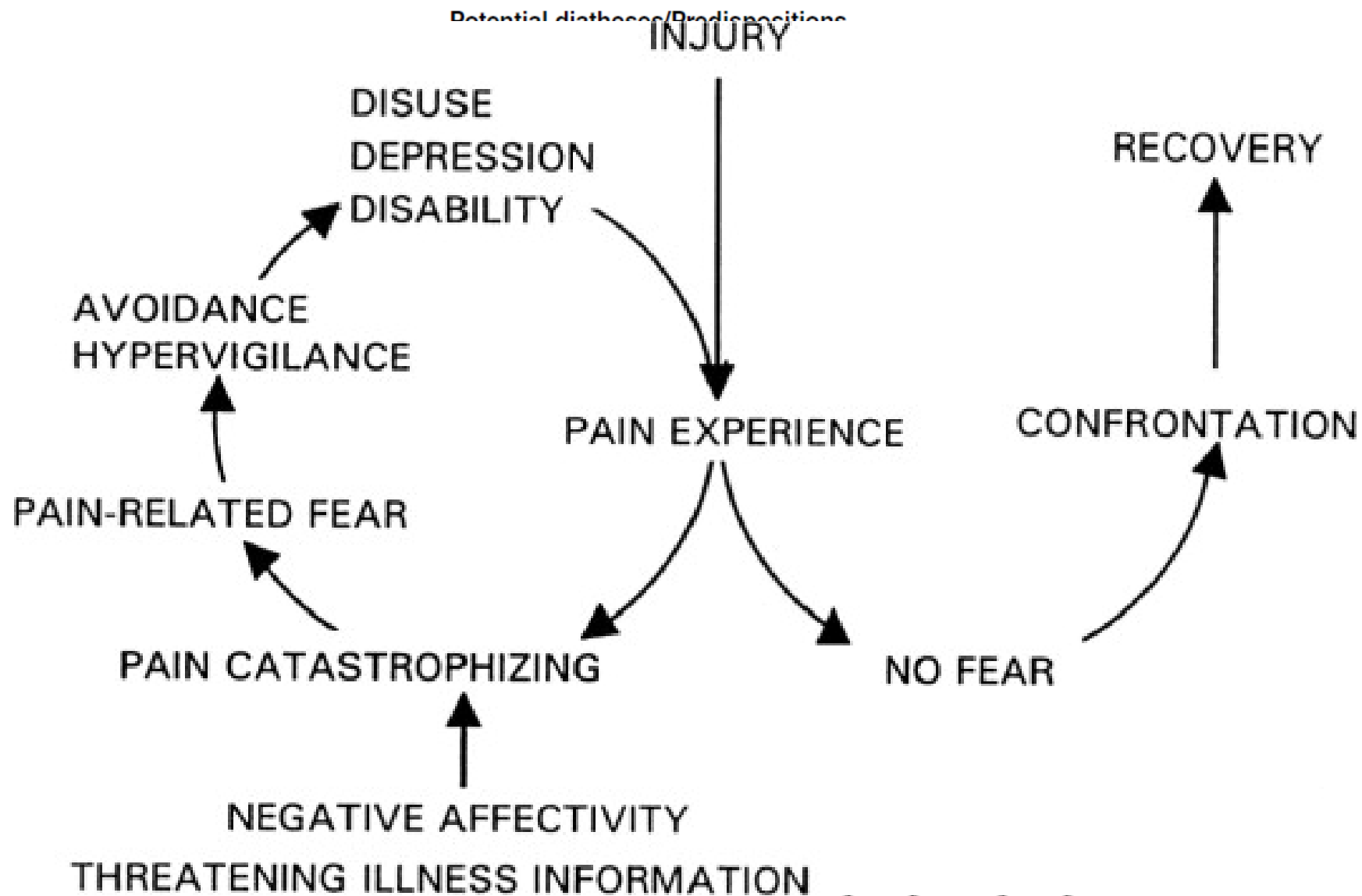


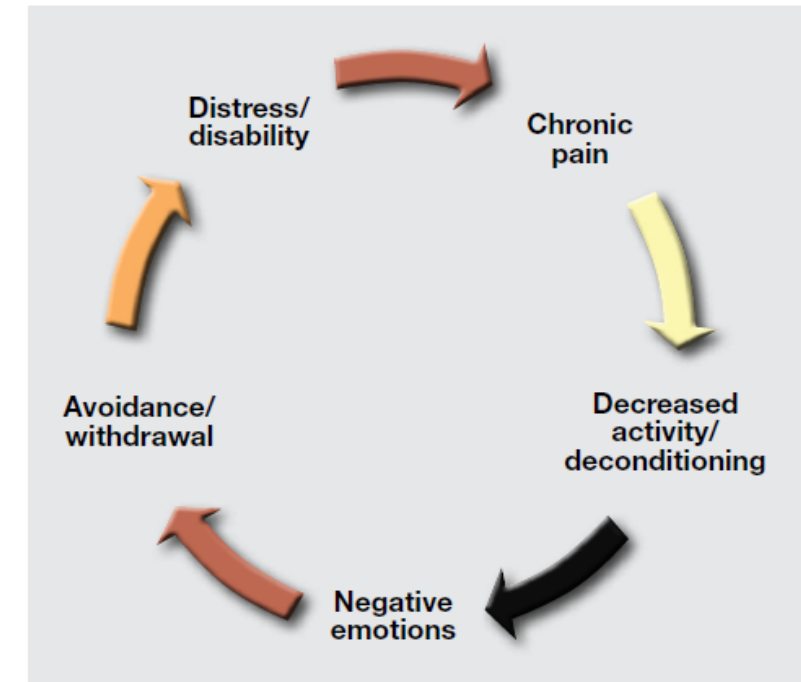
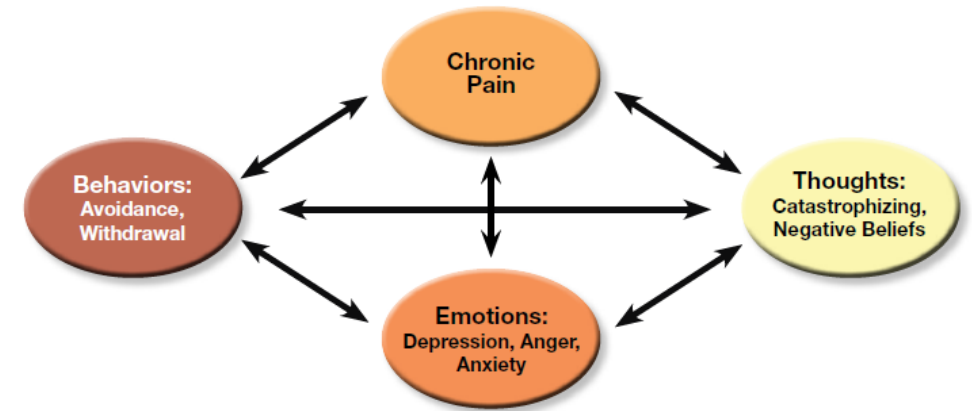
Figure 1 The diathesis-stress biopsychosocial model of chronic illness.

# Cognitive Behavioural Therapy

Emerged as dominant paradigm in 1980s

Sample protocol:

- **Psychoeducation**
- **Graded exercise**
- **Relaxation**
- **Pacing**
- **Behavioral Activation**
- **Cognitive Restructuring**
- **Sleep hygiene**



# Meta-Analysis 1999 (Morley, Eccleston, & Williams, *PAIN*, 1999)

First large scale meta-analysis of RCTs examining CBT for Chronic Pain (k=25)

Outcome domains: Pain experience, mood/affect, cognitive coping and appraisal, pain behaviour, physical fitness, social role functioning, health care utilization

Medium effect size across domains compared to wait-list controls

Compared to active control:

- Improvement in pain experience, positive coping and appraisal, pain behavior
  - Small-medium effect size
- No effect on mood/affect or negative coping and appraisal



# Broader developments in Psychology

## Mindfulness

- **1979 – Jon Kabat-Zinn founded the Mindfulness Based Stress Reduction Clinic**
  - 1990 – Full Catastrophe Living was published

## Third-Wave Behavioural Therapies

- **Mindfulness-Based Cognitive Therapy**
- **Acceptance and Commitment Therapy**
- **Dialectical Behavior Therapy**

## Application of these to pain management

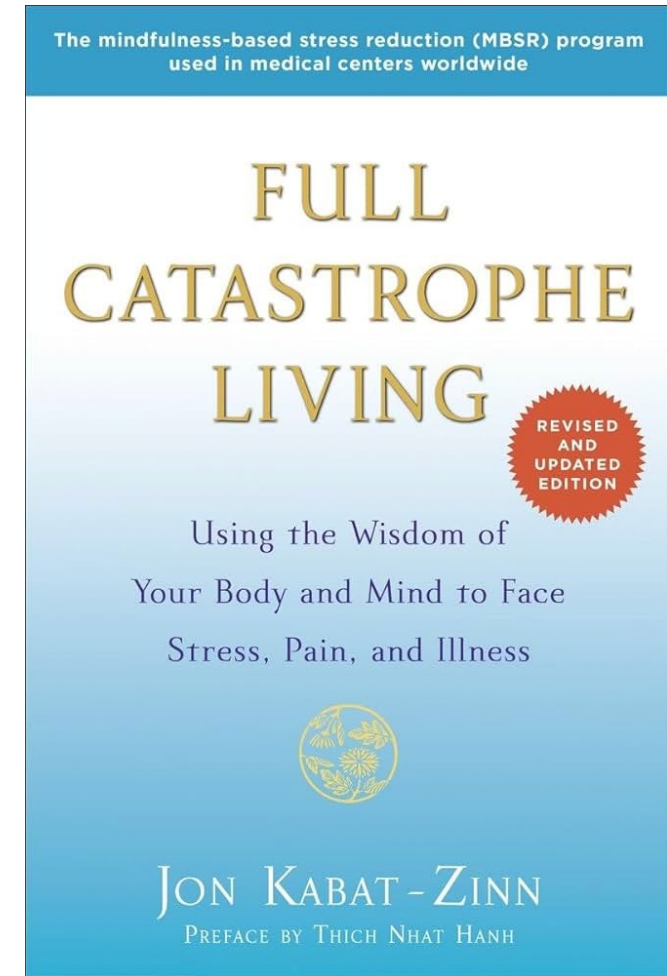
# Mindfulness-based stress reduction

Designed to be 8 week protocol

- 2.5 hour weekly sessions
- 1 full day retreat

Sample Protocol:

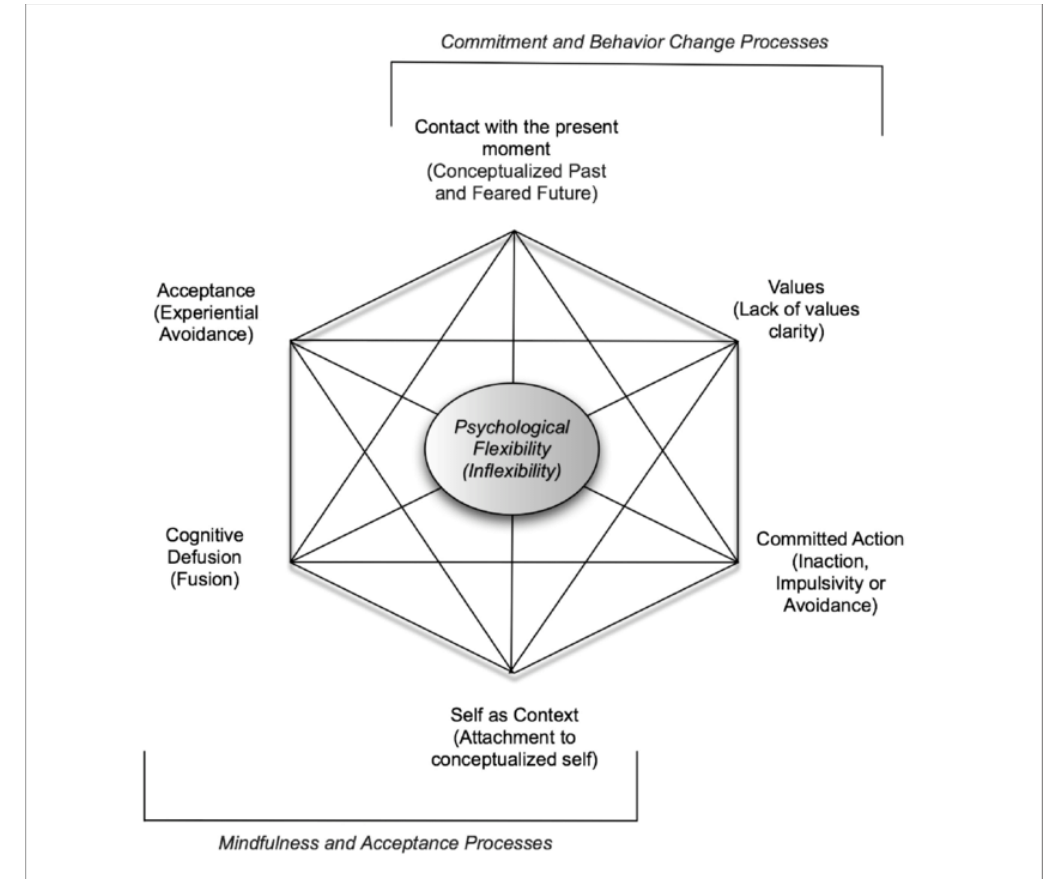
- Body Scans
- Breath meditation
- Movement meditations
  - Yoga, mindful walking
- Being present with routine activity
- Acceptance and non-judgment of present moment experience



# Acceptance and Commitment Therapy

## Contextual Behavioural Therapy

- Based in functional contextualism and relational frame theory
- Strongly influenced by Radical Behaviorism
- Six processes grouped in two foci
  - Mindfulness and acceptance
  - Commitment and behavior change



# Meta-Analyses 2020(ish)

Cochrane review follow-up to 1999 review (Williams et al., 2020)

- **Conservative meta-analysis – examined effects on Pain, Disability, and Distress**

**CBT (k=59) – Moderate Quality Evidence**

- **Very small effect sizes vs active control**
- **Small effect sizes vs TAU**

# Meta-Analyses 2020(ish)

Cochrane review follow-up to 1999 review (Williams et al., 2020)

BT (k=8) – very low quality evidence

- **No evidence of efficacy**

ACT (k=5) – very low quality evidence

- **No evidence of difference v. active control on pain or distress**
  - Two studies showed large benefit for disability at follow-up (SMD = -1.22)
- **Two studies compared ACT to TAU, large benefit for pain at treatment end (SMD = -0.83), no effect on disability or distress**

# Meta-Analyses 2020(ish)

## Mindfulness meditation (Hilton et al., 2017)

- Small effect size benefit for pain v. passive controls (SMD = 0.32; K=30)
- Very small effect size benefit for depression (SMD = 0.15, K = 12)
- Moderate effect size for mental health quality of life (SMD = 0.49, K = 16)
- Small effect size benefit for physical health quality of life (SMD = 0.34, K = 16)

# Dual targeted treatments?

## Long believed psychotherapy for pain also treated mental health

- **It really doesn't** (Driscoll et al., 2021)
- **Modest outcomes for depression and anxiety** (Williams et al., 2020)

## Insomnia

- **Significant post-treatment effects on sleep (SMD = 0.89), pain (SMD = 0.2), and depressive symptoms (SMD = 0.44)** (Selvanathan et al., 2021)

## Posttraumatic Stress Disorder

- **Several promising treatments but little conclusive evidence** (Driscoll et al., 2021; Lumley et al, 2022)

## Severe Mental Illness

- **60% of RCTs exclude, 1 trial included specific diagnoses** (Onwumere et al., 2022)

# Common treatment elements

**Specific treatments have similar effect sizes** (Burns et al., 2003, 2020; 2023; Day et al., 2020)

## Cognitive-Affective Mechanisms

- **Catastrophic thinking about pain, pain self-efficacy** (Burns et al. 2003; 2020; 2023)
- **Emotion regulation and emotion processing** (e.g. Aaron et al., 2020; Lumley et al., 2021)
- **Experiential Avoidance, Psychological Flexibility**(e.g. McCracken & Vowles, 2014)

## Therapeutic Common Factors

- **Therapeutic alliance associated with pain intensity improvement** (Day et al., 2020; Lumley et al., 2018)



# New developments and future directions

**Further development of third-wave behavior therapies in pain** (e.g. Glombiewski et al., 2018; Boersma et al., 2019; Barrett et al., 2021)

**Move toward process-based and individualized therapy** (McCracken, 2020; 2023)

**Integration of multiple theoretical orientations**

- **Pain Reprocessing Therapy** (Ashar et al., 2021)
- **Emotion Awareness and Expression Therapy** (Lumley et al., 2017)

**More science!**

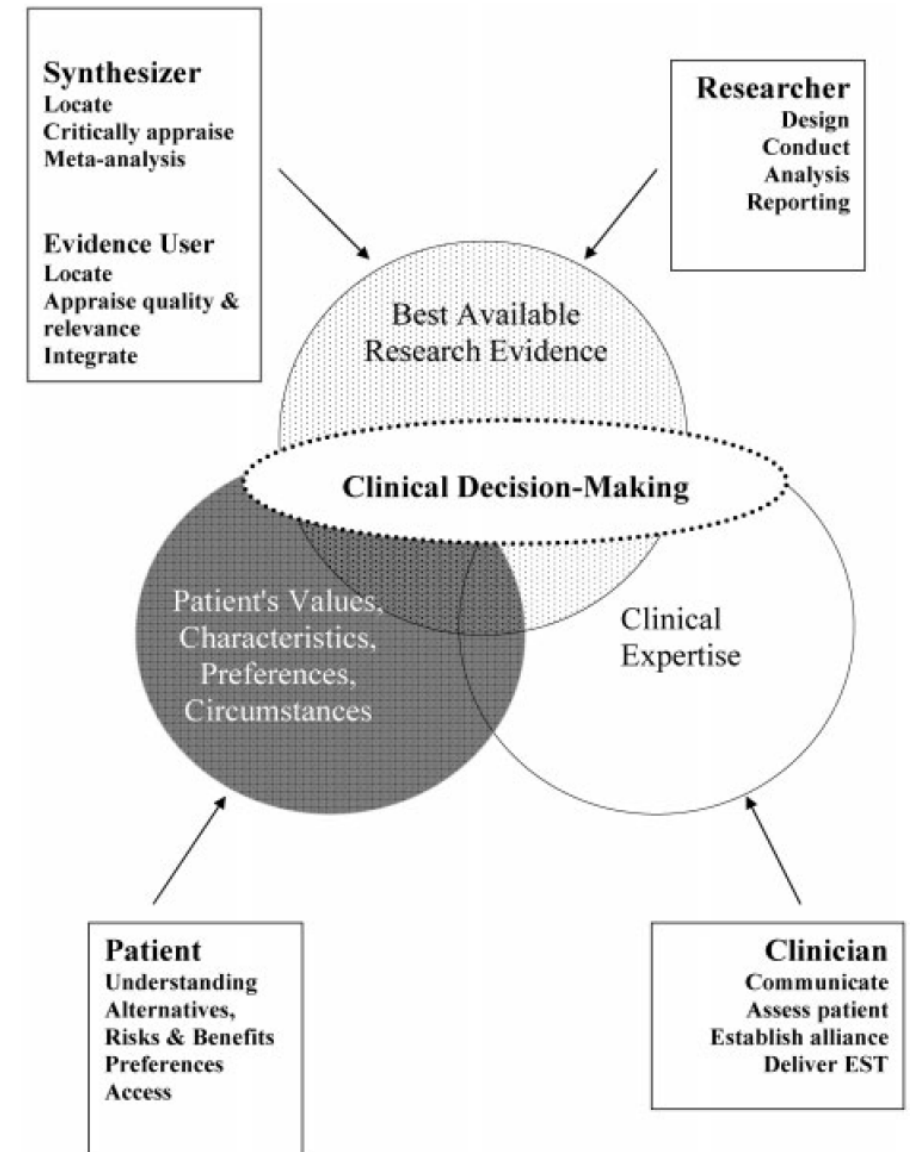
# Evidence-Based Practice

(e.g. Spring, 2007)

“Conscientious, explicit, judicious use of current best evidence in making decisions about the care of individual patients”

Evidence-supported treatments are one component of EBP

Flexible implementation of best practices in real-world settings



# Questions?