Mindfulness Techniques In Pain Management

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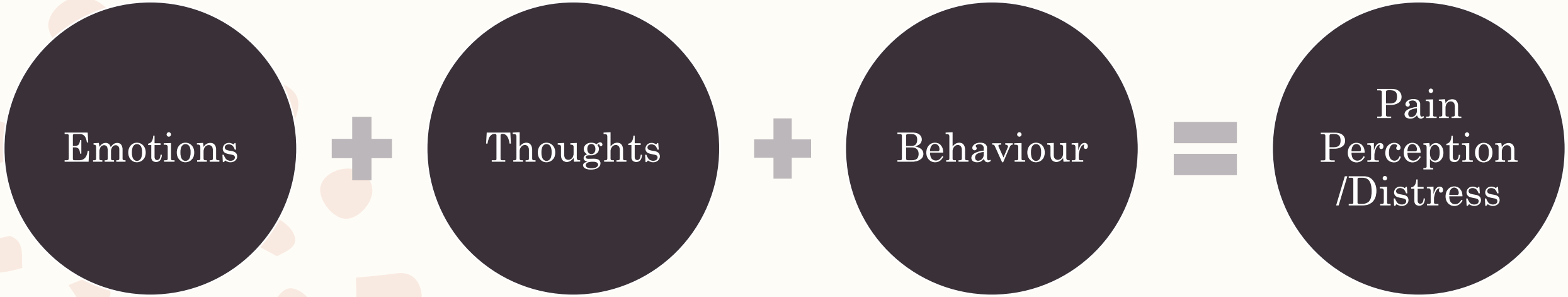
Today's Goals

- Outline the non-physiological factors that influence pain perception.
- Describe what mindfulness is and how it can be applied to pain management.
- Describe the physiological brain changes associated with mindfulness techniques.

Non-Physiological Factors Influencing Pain Perception

(Shankland 2011)

Non-Physiological Factors Influencing Pain Perception



- **Fear**
- **Anger**
- **Resentment**
- **Loss**

- **“Why did this happen to me?”**
- **“I can’t bear this.”**
- **“My life will never be the same.”**

- **Withdrawing from others**
- **Neglecting self-care**
- **Avoiding activities**

More severe distress and reduction in quality of life

Non-Physiological Factors Influencing Pain Perception

- **Acceptance**
- **Hope**
- **Gratitude**

- **“Some things in life are out of my control.”**
- **“This is difficult but I can learn how to cope.”**
- **“My life will change but I can adapt.”**

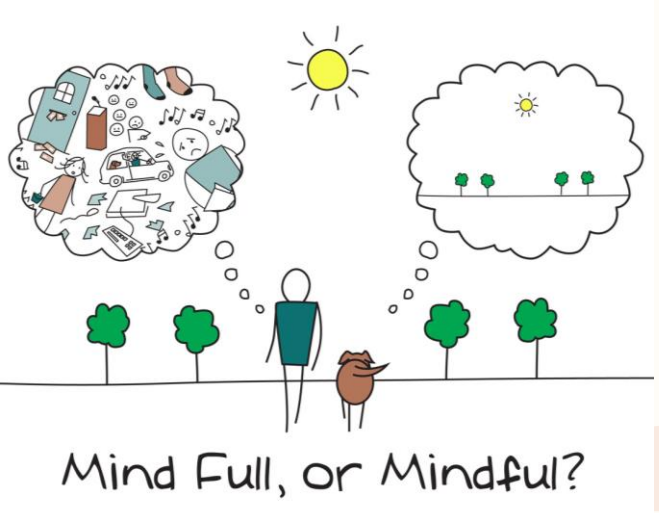
- **Seeking support**
- **Prioritizing self-care**
- **Adapting activities**

Less distress and more optimal quality of life

Patient Education On Non-Physiological Factors Influencing Pain Perception

- It's not just "all in your head."
  - Psychological factors can produce or worsen physical pain and psychological treatments can help to reduce physical pain.
- Example of positively perceived pain e.g. soreness after a workout vs negatively perceived pain e.g. joint pain with viral illness.
  - Can have the same level or type of physical pain but amount of distress depends on the perception of the experience and the thoughts and expectations surrounding it.

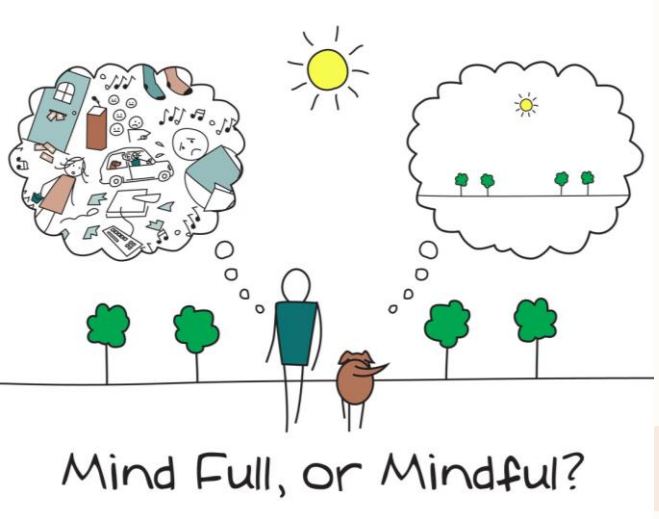
Mindfulness is…



- Non-elaborative, non-judgmental awareness of the present moment experience.
- Regulated, sustained attention to the moment-to-moment quality and character of sensory, emotional and cognitive events.
- The recognition of such events as momentary, fleeting and changeable.
- A consequent lack of emotional or cognitive appraisal and/ or reactions to these events.

(Kabat-Zinn 1990)

Mindfulness is…



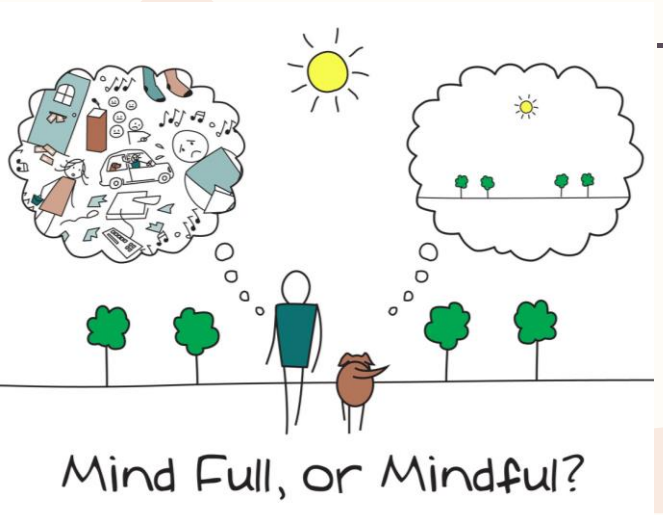
- A process of cognitive control, emotional reappraisal and reduced judgment.
- Can be developed by mental training such as meditation practices, mindfulness based stress reduction or mindfulness based cognitive behavioural therapy.

Applying Techniques: Mindfulness Meditation

- Focused attention
  - Maintaining focus on a specific object like the flow of the breath or an external object. (Takes focus away from pain sensation) (Lutz et al. 2008)
  - Suitable for brief training. (No difference in results between novice and seasoned practitioners.)

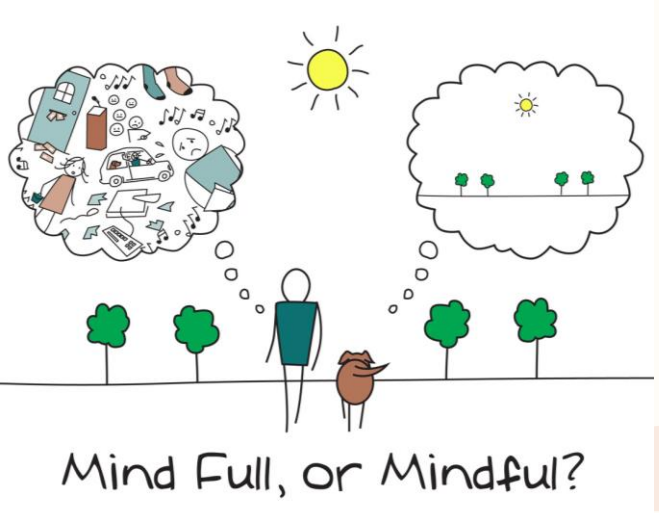
(Perlman et al. 2010)

Applying Techniques: Mindfulness Meditation



- Open monitoring
  - Non-directed acknowledgment of any sensory, emotional or cognitive event that arises in the mind.
  - Without evaluation, interpretation or preference. (Removes the negative associations of the pain sensation.) (Lutz et al. 2008)
  - Better results with long term practice or combined with focused attention for brief trainings. (Transition from reappraisal of sensations to refraining from appraisal entirely.) (Perlman et al. 2010)

Mindfulness Based Stress Reduction And Cognitive Therapy



- MBSR:
  - Eight week mindfulness meditation programme.
- MBCT:
  - Combines principles of mindfulness and mindfulness meditation with cognitive behavioural therapy.
  - Being aware of incoming thoughts and accepting them rather than attaching to or reacting to them.

Mechanisms of Pain Modulation With Mindfulness

- Improvement of
  - Anxiety
  - Depression
  - Stress
- Enhancement of
  - Cognitive control
  - Emotional regulation
  - Positive mood and acceptance

(Grossman et al. 2004)

Mechanism of Pain Modulation With Mindfulness

- Activation in areas responsible for encoding sensory aspects of noxious stimulation.
- Deactivation of memory and appraisal-related brain regions.
- In experienced meditators, thicker grey matter in regions that overlap with the functional effects.

(Zeidan et al. 2012)

Summary

- In addition to managing physiological aspects of pain, management of the non-physiological factors that influence pain perception and associated distress is important.
- Mindfulness is an option available to help patients manage distressing emotions, thoughts and behaviours associated with pain, and can help to improve quality of life.

References

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Thank You For Your Attention