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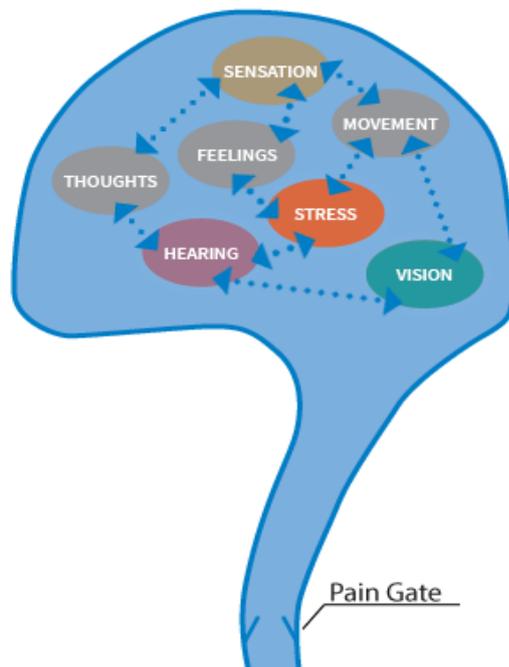
Bwrdd Iechyd Prifysgol
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University Health Board

Pain Management Programme

Psychology Week

How the different centres in the brain work together to influence pain.

- Pain signal gets to the brain.
- Signal causes the sensations centre of the brain to light up.
- Sensations centre gets “activated” by the pain.
- Many other brain centres light up at the same time.
- Thought centre, feeling centre, vision centre, hearing area, and areas near the feeling centre that react to stress.



Scientists are learning how different centres in the brain work together to influence the experience of pain.

Scientists can put a person in an imaging machine and use a stimulus to cause the person to feel pain.

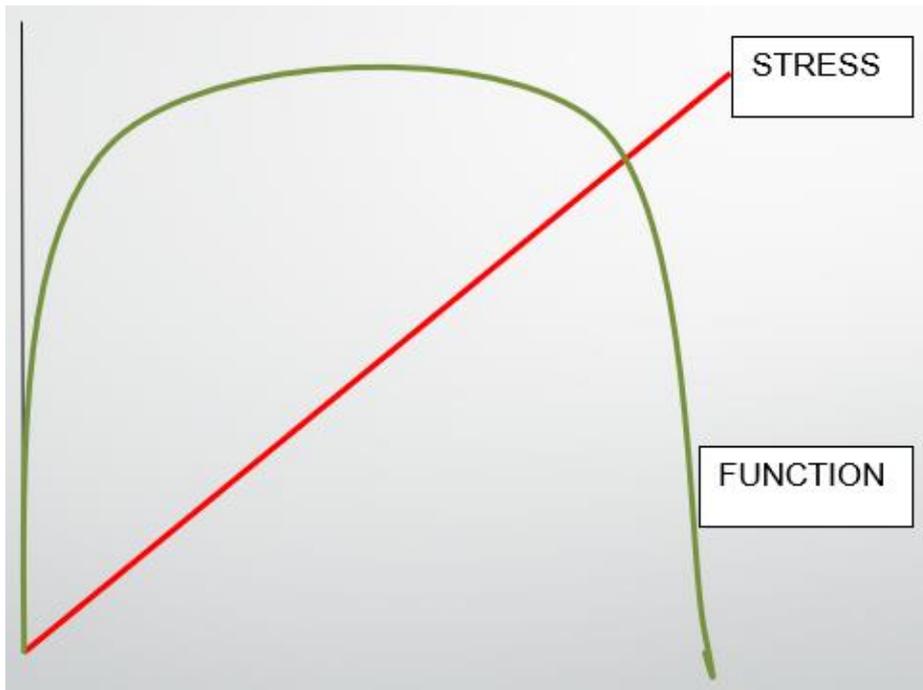
When the pain signal gets to the brain, the signal causes the sensation centre of the brain to light up. It gets “activated” by the pain. But many other brain centres light up at the same time. These include the thought centre, feeling centre, vision centre, hearing area, and areas near the feeling centre that react to stress.

What is the stress response and why do we experience it?

A stress response is perceived threat in the presence of a stressor leading to: -

- Biological level changes in the endocrine and autonomic nervous systems.
- Psychological level change in emotional and cognitive states.

One of the reasons we experience these responses is because it is evolutionary. It helped our ancestors survive by triggering the 'fight/flight response'. Another reason is that at low levels it can improve our motivation and performance though increased arousal.



Stress Bucket



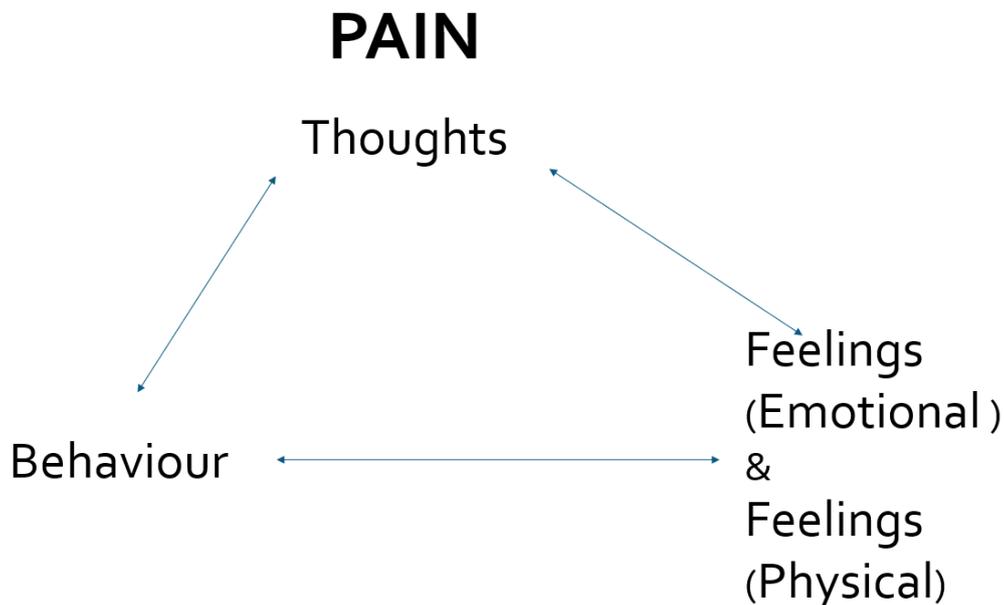
What fills your stress bucket?

Some examples could include day to day hassles, life events, relationships/family difficulties, work or home demands, financial issues, housing/environment, dealing with change or a lack of sleep.

What drains your stress bucket?

Some examples of this could include relaxation/breathing exercises, physical exercise, taking a break or having a change of scenery, change of environment, being around nature, art, music, film, sleep or rest.

The Thoughts Cycle



The cycle shows that there is a link between thoughts, feelings, both emotional and physical and with our behaviour.

Identifying and replacing unhelpful thoughts

Rationale:

To have a more balanced and realistic view of the situation. Replacing unbalanced thoughts with more accurate ones will help you cope better and allow you to practice more effective pain management.

Ask questions such as:

- *Is this 100% true?*
- *Is there a different way to look at this issue?*
- *What would I tell a close friend if they had this thought?*

- *Is this thought helpful to me?*
- *Is there evidence that I am not considering?*

Distractions

An activity that diverts attention away from thoughts about pain (or the pain sensation itself).

Based on the idea that the brain can only really attend to one thing fully at a time. Multi-tasking is 'flitting'.

The distraction needs to compete with the pain signal (if trying to distract from the pain itself).

A useful coping strategy for respite from thinking about the pain.

Some distractions of pain could be –

- Social interactions
- Mind Exercises
- Physical activities
- Film, Music, TV
- Hobbies

Mindfulness

"Mindfulness is awareness that arises through paying attention, on purpose, in the present moment, non-judgmentally."

Jon Kabat-Zinn

Mindfulness can help manage negative or worrying thoughts about pain. It can help reduce depression and anxiety associated with pain. Evidence shows there is less activation in the areas of the brain that manage pain messages amongst people who practice mindfulness. Mindfulness addresses the 'crowding out' of other thoughts and sensations by pain and it counters the 'battle' with pain that can be exhausting.

Practicing mindfulness –

It is possible to do anything mindfully such as listening to sounds or music, eating, walking, breathing, washing up!

Feelings

It is important to ensure you are validating and feeling a sense of self compassion towards your emotions and sensations. Breathing exercises can help with this along with relaxation techniques.

Behaviours

Looking at our behaviours such as our value-based goals, like the goal ladder, and trying out the behavioural 'experiments', for example practicing mindfulness can change our behaviours in a positive way enabling us to help with pain.

It is very important when scheduling activities that you follow the three P's.

PACING, PRIORITISING, PLANNING

Mental Health Resources

www.mind.org.uk

www.melo.cymru

Psychological Health Practitioners in GP Surgeries

**This document is available in Welsh /
Mae'r ddogfen hon ar gael yn Gymraeg**