A Cognitive Behavioural Approach to Dealing with Headaches in Children & Teens

Presented by
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Goals of Session

• Gain an introductory understanding of Cognitive-Behavioural Therapy (CBT)

• Understand how CBT strategies can be applied to coping with headache

• Receive an introduction to some of the strategies used to manage headache
Pediatric Headaches – An Overview

• Headaches can be a common problem in children (40%).

• Somewhere between 4% and 10% of children have migraine headaches.

• Many adults with headaches started having their headaches as children, with 20% reporting the onset before age 10.

• Most headaches in children are benign – meaning they are not symptoms of some serious disorder or disease.

• Migraine headaches often run in families, so information on other family member's headaches are important.

• Headache may interfere with participation in activities and school and can be a significant health problem.
Multidimensional Pain - Impact on Function

- Emotions
- Exercise
- Activity
- Self-Esteem
- Disability
- Muscle Tension
- Stress
- Work/School Performance
- Relationships
- Sleep & Fatigue
- Person with headache

Dean (2009)
Multidimensional Pain - Coping

- Sleep
- Cognitive Therapy
- Pacing
- Healthy diet & Hydration
- Exercise and Regular Activity
- Relaxation
- Stress Management
- Medications
- Psychotherapy
- Trigger Management

Person with headache
Gate Control Theory of Pain
Melzack & Wall (1965)

• The pain experience is influenced by pain sensations from our body and thoughts and feelings

• Our brain sends signals from our spinal cord to either open the gate (more pain) or close the gate (less pain)

• You have control - you are the 'gatekeeper' of your thoughts, which influences your feelings ...this impacts the 'gate' which impacts on the pain you experience
Gate Control Theory of Pain
Melzack & Wall (1965)

• Your thoughts can influence the gate and therefore the pain experience

• **Negative thoughts/feelings**
  = gate open = ↑ pain experience

  Positive thoughts/feelings
  = gate closed = ↓ pain experience
Cognitive-Behavioural Therapy (CBT)

- Psychological strategies often follow a Cognitive-Behavioural Therapy (CBT) approach

- CBT includes a variety of techniques that focus on influencing emotions, behaviours (actions) and cognitions (thoughts)

- The CBT model for headache is based on the belief that thoughts influence feelings which influence our behaviours/experience (including pain)

- CBT is an evidence-based treatment
Cognitive-Behavioural Therapy (CBT)

- CBT strategies for headache management may include the following strategies:
  - Cognitive therapy
  - Relaxation
  - Pacing
  - Stress Management
  - Trigger identification and management
  - Lifestyle adjustments
  - Psycho-education etc.
Goals of CBT

- CBT management of headache aims to:
  - ↓ disability
  - ↓ depression, anxiety and stress
  - ↓ school absenteeism
  - ↑ confidence of coping (self-efficacy)
  - ↑ activity
  - ↑ mood
  - ↑ school attendance

Dean (2009)
Advantages of CBT

- There are a number of advantages of CBT approaches to headache management:
  - You are in control (empowering)
  - Portable (you can do it anywhere)
  - All natural (no chemicals)
  - No side effects
  - CBT is shown to be as effective (or more so) than traditional medical Tx
  - Not a quick fix, but worth the effort!
Behavioural Strategies

- Trigger identification and management
- Lifestyle adjustments
- Pacing
- Stress Management
- Relaxation

Dean (2009)
Trigger Identification & Management

• Lack of sleep (or too much sleep)
• Dehydration
• Missing meals and getting hungry
• Stress increases our susceptibility
• Weather changes (e.g. Chinooks)
• Occasionally food
  - MSG, lots of chocolate or cheese
• Sometimes heightened emotions or exercise

• 75% of children are helped by addressing triggers

Dean (2009)
Trigger Identification & Management

• Become aware of potential triggers
e.g. stress, caffeine, foods, weather, overdoing it etc.

• Determine your personal headache triggers
(headache diaries can help)

• Avoid/minimize triggers you can control

• Develop a coping plan for times when triggers cannot be controlled (e.g. travel)
Lifestyle Adjustments

- **Fluids**
  - Drink plenty of fluid (4-8 glasses per day)
  - Caffeine should be avoided

- **Diet**
  - Eat balanced meals at regular times
  - Skipping meals can cause low blood sugar, hypoglycemia, which can trigger a headache
  - Avoid foods that trigger headaches

- **Sleep**
  - Regular and sufficient sleep
  - Most children and adolescents need to sleep 8-10 hours/night
Lifestyle Adjustments

- **Exercise**
- Ensure regular and adequate exercise
- Stretching and strengthening exercises to support good postural habits
- Practice daily relaxation techniques

- **Stress**
- Minimize stress and overcommitments
- Avoid overcrowded schedules or stressful and potentially upsetting situations
Pacing

• Headache often has a direct impact on your activity and function

• ↓ activity can impact your physical and psychological well-being

• Pacing refers to balanced activity and may involve:
  - Breaking a task into smaller parts
  - Taking regular breaks
  - Setting goals and priorities

• The most important factor is that YOU decide on your activity (not your headache!)
Pacing

• To decide on an activity starting point:
  - Time yourself doing an activity 'trial' until the point of pain and/or fatigue
  - Record the amount of time/number of actions
  - Perform another ‘trial’ using the same method
  - Calculate an average of your trials \((T1 + T2/2)\) and then reduce to 80%
  - This is your starting goal or baseline

Gradually ‘pace up’ your goals despite the pain

Dean (2009)
Stress Management

• The stress response is known as the 'Fight or Flight' Response

• Involves our autonomic nervous system

• Historically designed to protect us from 'danger'

• In today’s society, response may get triggered by situations with no immediate danger

Dean (2009)
Stress Management

• **Fight or Flight Response** - changes in body:
  - ↑ blood pressure, heart rate, breathing
  - ↑ muscle tension
  - Cold hands and feet
  - Slowed digestive system
  - ↑ blood sugar
  - ↑ mental activity
  - Shut-down of immune system
Stress Management

• **Relaxation Response** - changes in body
  - ↓ heart rate
  - ↓ blood pressure
  - Slow, deep breathing
  - ↓ muscle tension (i.e. muscle relaxation)
  - Hands and feet become warm again
  - Liver stops moving sugar into bloodstream
  - Digestive and immune systems resume
  - Brain’s ‘alarm-system’ shuts off and nervous system settles down
# Common Stress Symptoms

<table>
<thead>
<tr>
<th>Intellectual (affecting your mind)</th>
<th>Emotional (affecting how you feel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory problems</td>
<td>Moody, irritable and hypersensitive</td>
</tr>
<tr>
<td>Difficulty making decisions</td>
<td>Restlessness and anxiety</td>
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<tr>
<td>Confusion</td>
<td>Depression</td>
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<tr>
<td>Focusing on the negative</td>
<td>Anger and resentment</td>
</tr>
<tr>
<td>Repetitive or ‘racing’ thoughts</td>
<td>Inappropriate laughter/crying</td>
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<tr>
<td>Taking things personally</td>
<td>Feeling ‘overwhelmed’</td>
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</table>

<table>
<thead>
<tr>
<th>Physical (affecting your body)</th>
<th>Behavioural (affecting your actions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headaches 😶</td>
<td>Eating ↓↑</td>
</tr>
<tr>
<td>Sleep disturbances</td>
<td>Angry outbursts</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Crying spells</td>
</tr>
<tr>
<td>Weight ↓↑</td>
<td>Isolating yourself from others</td>
</tr>
<tr>
<td>Upset stomach and diarrhea</td>
<td>↓ productivity</td>
</tr>
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<td></td>
<td>Relationship conflicts</td>
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Relaxation

• Helps counteract the stress response, manage negative emotions, enhance sleep and manage pain

• Can be used to help prevent headaches or to stop headaches in their early stage.

• Relaxation is an active process

• Goal = to relax wherever & whenever you need

• Regular use of relaxation techniques may lead to ↓ headaches (& ↓ pain intensity) for most individuals with migraine and tension headaches
Relaxation - Deep Breathing

• Breathing is best from your diaphragm
• When we’re tense, stressed or in pain, our breathing tends to become shallow
• Deep breathing calms our nervous system and helps reduce migraines
• Breathing acts to ↓ heart rate, respiratory rate, muscle tension and blood pressure
• Overall, an important part of balanced health and fitness
Relaxation - Deep Breathing

- Place one hand on your chest and another on your abdomen
- Breathe normally and watch your hands move - your abdomen should ‘inflate’

- Find a comfortable location and position
- Loosen any tight or restrictive clothing
- Gently inhale through your nose
- Slowly exhale through your mouth, pushing all the air from your lungs and allowing your abdomen to ‘deflate’
Relaxation - PRACTICE

• Rate your pain/muscle tension BEFORE

• Practice relaxation and breathing

• Rate your pain/muscle tension AFTER
Cognitive Therapy

• The way we think and feel and what we do can impact upon stress and headaches

• Cognitive therapy is important to address mood related issues (eg. anxiety, depression)

• Anxiety & depression is ↑ in persons with headache

• Untreated mood concerns make headache management more difficult
Cognitive Model

• Our **cognitions** (what we think) influence both our **feelings** (what we feel) and **behaviour** (what we do)

• **TRIGGER** \[\rightarrow\] **COGNITION(S)**

**FEELINGS & BEHAVIOUR**
Cognitive Model

- Our feelings often seem automatic but we can alter them by examining our cognitions.

- Improved awareness and management of cognitions = ↑ mood, ↑ coping, & ↑ confidence.

- You can change your pain experience by examining your cognitions.

- ↑ Cognitive skills related to headache = ↓ distress & ↑ confidence to manage your headache.

Dean (2009)
Cognitive Model

• Our thoughts happen automatically

• We usually don’t think about what we’re thinking (meta-cognition)

• Automatic thoughts are called ‘self-talk’

• Sometimes our thinking contains errors or distortions

• Thinking can be helpful/unhelpful and realistic/unrealistic
Cognitive Errors

- **Filtering**—taking negative details and magnifying them, while filtering out all positive aspects of a situation
- **Polarized thinking**—thinking of things as black or white, good or bad, perfect or failures, with no middle ground
- **Overgeneralization**—jumping to a general conclusion based on a single incident or piece of evidence; expecting something bad to happen over and over again if one bad thing occurs
- **Mind reading**—thinking that you know, without any external proof, what people are feeling and why they act the way they do; believing yourself able to discern how people are feeling about you
- **Personalization**—thinking that everything people do or say is some kind of reaction to you; comparing yourself to others, trying to determine who’s smarter or better looking
- **Shoulds**—having a list of ironclad rules about how you and other people "should" act; becoming angry at people who break the rules and feeling guilty if you violate the rules
- **Emotional reasoning**—believing that what you feel must be true, automatically (e.g., if you feel stupid and boring, then you must be stupid and boring)

- Beck (1976)
Catastrophising

• When thinking is **unhelpful** and/or **unrealistic**, it is called 'catastrophising'

• Catastrophising is expecting disaster; jumping to a negative conclusion

• Who catastrophizes?.............EVERYONE!!!

• Some **general examples** include:
  - I’m freezing
  - I’m starving/so hungry I could eat a horse!
  - I’m so angry I could kill you!

  - Everything bad always happens to me
  - If I don’t get invited to that party, it’s the end of the world!
Catastrophising

• Some **headache examples** of catastrophising include:
  - My head’s killing me
  - It’s like hot skewers piercing my eyes
  - These migraines always ruin my day
  - My head’s going to explode!

• **Catastrophising leads to unpleasant feelings**
  - e.g. sad, frustrated, anger

• **Catastrophising leads to unhelpful behaviour**
  - e.g. ↓ activity, ↓ socializing, ↑ conflict

**Catastrophising has been shown to be the greatest predictor of distress in people with pain!**
Catastrophising - Management

• Become aware of catastrophising in general

• Become aware of your own catastrophising (cognitive monitoring)

• Become aware of the consequences of your catastrophising (e.g. emotions, behaviour)

• Start to challenge your catastrophic thoughts
Catastrophising - Management

- To help evaluate your thoughts, ask yourself:
  - Does this thought contribute to my stress and/or headache?
  - Does this thought help me cope with the situation?
  - Is there any evidence that this thought is accurate/true?
  - Am I caught in any thinking traps?
Where to go from Here?

- Headache Diary (to identify triggers)
- Lifestyle Changes (e.g. diet, sleep)
- Activity Monitoring (e.g. pacing)
- Stress Management (e.g. relaxation)
- Cognitive Monitoring
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