Evidence-Based Interventions:
Improving Patient Self-Efficacy

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Overview

1. Why are cognitive behavioral approaches important to pain prevention and treatment?
2. What are some of these approaches and the evidence for their use?
3. What are the barriers & potential solutions to their integration in pain prevention and treatment?
Terminology

Cognitive behavioral = what we think and do

• Other commonly used terms include:
  – Self-management skills | behaviors
  – Coping skills
  – Mind-body
  – Behavioral interventions
  – Lifestyle interventions
  – Psychosocial treatments
  – Non-pharmacological approaches
Pain is **Biopsychosocial**

Predictors of Pain-Related Disability After Injury

- Pre- and post-injury inactivity
- Acute pain severity (in catastrophic injury)
- Recovery expectations
- Self-efficacy for managing pain & its effects
- Anxiety | fear avoidance
- Catastrophic thinking | beliefs
- Physical & psychosocial characteristics of the job

*List is not comprehensive*
Hey Doc Have You Figured It Out Yet? (Mark Collen), Mixed Media.

Pain Exhibit © 2017. All rights reserved. painexhibit.org
Who Manages Pain?

The person with pain is the primary pain manager

< 0.5%

- Yellow = health care providers
- Blue = Individual with pain
What is Self-Management?

• The behaviors we do to manage our health, including chronic conditions and skills
• It includes having the confidence to deal with
  • Medical aspects
  • Roles
  • Emotional impact of condition

Institute of Medicine, 2004
Teresa Brady, 2011
Pain Self-Management Promotes Self-Efficacy & Participation

• ...the critical question is not, “How or why did I get the pain?” It is:
• “What can I do to manage my pain so that I can get on with my life?”

Evidence-Based Cognitive Behavioral Approaches to Pain
Cognitive Behavioral Therapy (CBT)

• Prevailing type of pain self-management
• Based on cognitive behavioral theory of pain: what we think and do influences how we feel and function
• Common ingredients include:
  – Relaxation training
  – Cognitive therapy (changing unhelpful thinking)
  – Behavioral strategies, including adaptive coping strategies & behavioral activation
Figure 1
Summary of Cognitive-Behavioral Therapy (CBT) Techniques

Cognitive Techniques
- **Cognitive Restructuring**: Direct challenge to alter negative thoughts and/or conviction in maladaptive beliefs, reducing fear of activity
- **Problem Solving**: Defining problems, planning responses, trying out problem solutions, evaluation of success, use as needed

Behavioral Techniques
- **Relaxation Skills**: Deep breathing, mindfulness–meditation, distraction, imagery, progressive muscle relaxation
- **Pacing**: Changing activity structure, breaking up activity in smaller chunks throughout day
- **Behavioral Activation**: Graded activity, increasing physical activity, increasing enjoyable activity, reduce avoidance

Supportive Educational Techniques
- **Psychoeducation**: Provision of information about pain, information about etiology and treatment
- **Supportive Psychotherapy**: Continued monitoring, encouragement, motivational interviewing

Other Techniques
- **Hypnosis**: guided by a hypnotherapist to respond to suggestions for change in subjective experience, alteration in perception, sensation, thought, or behavior
- **Biofeedback**: awareness of physiology using instruments that provide information in order to manipulate these functions
- **Relapse Prevention Strategies**: Self-monitoring schedules, discussion of triggers for relapse, coping skills and situation matching

Mindfulness Based Interventions

• **Mindfulness**: Paying attention, on purpose, non-judgmentally, in the present moment.

  *Jon Kabat-Zinn*

**Mindfulness Meditation**: The intentional practice of mindfulness.

Mindfulness-based interventions are comparable to CBT interventions: both reduce pain severity and disability and improve psychological functioning.
CBT & Mindfulness Implementation

• Typical delivery:
  – Can be delivered via 1:1 or group interventions
  – Classes or self-help
  – In person or via technology (including phone)

• Often low intensity: 1 – 8 sessions/classes

• More likely to be used if a self-management mindset is in place
Can We End the Meditation Madness?

OCT. 9, 2015

I AM being stalked by meditation evangelists.

They approach with the fervor of a football fan attacking a keg at a tailgate party. “Which method of meditation do you use?”

I admit that I don’t meditate, and they are incredulous. It’s as if I’ve just announced that the Earth is flat. “How could you not meditate?!”

I have nothing against it. I just happen to find it dreadfully boring.

“But Steve Jobs meditated!”

Yeah, and he also did L.S.D. — do you want me to try that, too?
Evidence: CBT is Effective

- Multiple meta-analytic reviews have concluded that CBT interventions are efficacious in adults and children with chronic pain in:
  - Reducing pain severity & interference
  - Improving functioning (including mood)
- Effective for a wide range of pain conditions
- Also beneficial adjunct for acute pain

Barriers To Adoption of Self-Management Approaches

• Mindset re pain

• Societal & system

• Access

Happy Pills Ain’t So Happy (Mark Collen)
Mindset of Providers, Patients, & Society

• **Focus on:**
  – The quick fix
  – Pain relief rather than function or participation
  – Passive strategies rather than self-management

• **Behavioral treatments are often viewed as:**
  – An afterthought or ”extra” treatment
  – Less effective
  – What to try when other treatments have failed
  – Stigmatized
Societal & System Barriers

• Pain primarily treated from medical model
• Ease of prescribing opioids or medications relative to other therapies
• Better insurance coverage for medications
• Inadequate provider training on CBT benefits
• Inadequate time for providers to address lifestyle/behavioral approaches to pain
Access Barriers

• Geographic barriers
• Insufficient workforce with CBT pain expertise
• Disparities in access to CBT for those with language, cultural, or cognitive differences
• Rigid focus on delivering CBT for pain via:
  – 1:1 or group-based psychotherapy which often occurs during “business hours”
  – By highly trained providers
Innovations to Address Barriers: Community-based Implementation

• Community-based pain self-management programs (e.g., Ersek et al., 2008, for older adults; also Stanford Chronic Disease Self-Management Program)

• Rural, low-literacy programs (Thorn et al., 2011)
Capitalize on Technology

• Telehealth
  – Telephone
  – Web-based
  – Teleconference groups

• Wearable technology

• Technology use does not always translate to behavior change

• Web-based interventions are beneficial but suffer from poor uptake & high drop-out
Efficacy of Telephone-Delivered Cognitive Behavioral Therapy for Chronic Pain in Disability Conditions

**TIPS Study**

**Funding:** NCMRR, NICHD: R01 HD057916, HD057916-03 S1

ClinicalTrials.gov Identifier: NCT00663663
The TIPS Trial

• RCT comparing CBT and pain education
  – 8 weekly 50-60 minute phone sessions
  – Delivered by master’s level to PhD
  – Detailed therapist & participant manuals

• Enrolled adults with:
  – amputation, spinal cord injury, or multiple sclerosis
  – pain of > 6 mo duration & > 4 pain intensity in past week
National Recruitment

188 participants randomized

- 39% SCI
- 43% MS
- 18% AMP
Treatment Adherence

- **CBT:**
  - 83.2% completed all 8 sessions
  - 90.6% complete ≥4 sessions

- **Pain Education:**
  - 92.5% completed all 8 sessions
  - 94.7% complete ≥4 sessions
Telephone Delivery

Benefits

• “Easier” & “convenient”: 53%
• No travel or driving: 47%
• Don’t have to “dress up”: 30%
• Physically more comfortable: 24%
• Other comments:
  – “Services not available in my rural, small town”
  – “I can attend sessions even if I’m not feeling well”
  – “Beats just reading about it”

Drawbacks

• None: 71%
• Not having face-to-face communication/seeing the person: 24%
• Other comments:
  – “Harder to get a connection with someone over the phone” (1 participant)
  – “Pain in neck from phone call length” (1 participant)
TIPS Responder Analysis

% who reported \( \geq 30\% \) reduction in average pain intensity

CBT: 35.8%
Ed: 28.6%
\( p = 0.31 \)

(pre- to post-treatment)

Ehde et al., under review.
Therapeutic Alliance Was High

Therapeutic Alliance

<table>
<thead>
<tr>
<th>Timepoint</th>
<th>Therapeutic Alliance</th>
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<tbody>
<tr>
<td>Midtx</td>
<td>CBT</td>
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<tr>
<td>Posttx</td>
<td>ED</td>
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* p = .01

Working Alliance Inventory-Short Revised (Hatcher & Gillaspy, 2005)
Integrate CBT Into Healthcare

• Delivery by non-psychologists such as physical therapists (*e.g.*, Archer et al., *J of Pain*, 2016) or dental hygienists (*e.g.*, Turner et al., *Pain*, 2011)

• Integration of *pain* behavioral health specialists or care managers into primary and specialty care teams
Improving the Quality of Care for Pain & Depression in Persons with Multiple Sclerosis

The MS Care Study

Funding: Patient-Centered Outcomes Research Institute: IH-1304-6379 (PI: Ehde)
MS Care Study

• **Asks:** Is a patient-centered collaborative care approach for pain & depression (*MS Care*), compared to usual care, effective at improving chronic pain, depression, and care quality outcomes in patients with MS?

• 16-week single-blind RCT comparing MS Care to usual care in the UW MS Center

• 195 outpatients with MS and chronic pain of at least moderate intensity and/or major depression
MS Care Study: Telephone Promotes Reach

75% of sessions delivered by phone
MS Care Study Results

• At post-treatment, participants in collaborative care (vs. usual care) reported significantly less:
  – Pain severity & interference
  – Depression severity
  – Disability
  – Fatigue

• ...and greater satisfaction with pain and depression care, as well as overall healthcare

• See www.uwmscare.org
Labor & Industries Pain & Behavioral Health Collaborative Care Program

• Target population: injured workers with pain and/or behavioral health issues at risk for time loss and disability
• Implementing collaborative care targeting injured workers early in the claim process
• Addressing a critical gap in care for injured workers
Future Innovations

• Mechanism research: aims to build more effective & better targeted treatments
  
  • Secondary prevention

• Combination interventions
  – Physical activity & CBT
Conclusions

• Cognitive behavioral approaches to pain self-management are effective in reducing pain and, particularly, disability

• Too few people have access to these approaches

• Technology, integrated models of healthcare, and community-based programs show considerable promise for addressing pain

• Need a portfolio of services to prevent and treatment chronic pain
Acknowledgements

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http://www.uwmscare.org/