

Cancer Pain

Behavioral management of cancer pain

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Christine Rini has documented that she has nothing to disclose.

This presentation does not contain off-label or investigational use of drugs or products.

Learning objectives:

1. Describe key features of cognitive-behavioral approaches to managing chronic pain
2. Identify 2-3 reasons to incorporate them into clinical pain management
3. Describe ways to connect patients with these therapies, for use as adjunct treatments for chronic pain

Literature references:

1. Thorn, B. E. (2020). Ronald Melzack Award Lecture: Putting the brain to work in cognitive behavioral therapy for chronic pain. *Pain, 161*, S27-S35.
2. Keefe, F. J. et al. (2005). Psychological approaches to understanding and treating disease-related pain. *Annu Rev Psychol, 56*, 601-30.
3. Miaskowski et al. (2020). A biopsychosocial model of chronic pain for older adults. *Pain Medicine, 21(9)*, 1793-1805.

What is behavioral management of cancer pain?

- Most common approaches informed by **cognitive-behavioral therapy (CBT)**
- **2 components:** (1) **education** about how thoughts, feelings, and behaviors can influence and be influenced by pain, (2) **skills training** to change *patterns* of cognitive, emotional, and behavioral responses related to pain/impairment¹
 - **Behavioral:** Excessive guarding of painful area, avoidance of physical activity, overdoing physical activity without taking breaks, social isolation/social withdrawal, decreased involvement in potentially rewarding activities
 - **Cognitive:** Beliefs, expectations (e.g., catastrophizing, pain self-efficacy)
 - **Emotional:** Anxiety and depressive symptoms/depression
- Relevant theories: Gate control theory², neuromatrix model³

1. Keefe et al., 2005;
2. Melzack & Wall, 1965
3. Melzack, 1999, 2005

Evidence for CBT-informed behavioral pain therapies

- Meta-analyses and systematic scientific reviews show benefits for various chronic pain conditions, e.g.,
 - Migraine/tension headache¹
 - Low back pain²
 - Osteoarthritis/musculoskeletal pain³
 - Fibromyalgia⁴
 - Mixed chronic pain populations⁵
 - Patients on opioids for clinical pain⁶
 - Cancer pain⁷(and perhaps neuropathic pain⁸)

1 Bae et al, 2021; Probyn et al., 2017

2 Petrucci et al., 2022 ; Richmond et al., 2015 ; Hoffman et al., 2007

3 Fordham et al., 2021; Wang et al., 2021

4 Mascarenhas et al., 2021 Glombiewski et al., 2010

5 Williams et al., 2020 ; Khoo et al., 2019 Niknejad et al., 2019

6 Garland et al., 2019

7 Sheinfeld Corin et al., 2012 ; Tatrow and Montgomery, 2006

8 Cassileth and Keefe, 2010;

They are also recommended, e.g.,...

- **AAPM Pain Management Best Practices report:** Recognizes impact of psychological factors on pain experiences/responses; states that behavioral health approaches should be a key component of multidisciplinary pain management. Specifically mentions CBT in addition to other behavioral pain management approaches.
- **National Comprehensive Cancer Network (NCCN):** Guidelines for managing adult cancer pain specifically mention referrals for mental health referrals that may include training in adaptive coping skills (e.g., imagery, distraction, relaxation training, active coping, setting goals, pacing, etc.)
- **Joint Commission:** Views them as part of multidisciplinary care for complex pain management needs, although notes barriers to access and suggests that providers support access by providing information about local resources for patient reviewer
- **American Society of Clinical Oncology (ASCO):** There is strong evidence for psychological interventions for reducing cancer pain in patients with advanced cancer, such as cognitive behavioral therapy, hypnosis, and relaxation with imagery.

Other reasons to use them

Besides being evidence-based and recommended, they ...

- Can reduce pain caused by various factors (e.g., tumor progression/invasion, cancer medications/treatments)
- May be especially appealing to patients who are concerned about using pain medications (e.g., about addiction, tolerance, side effects)
- Are a safe adjunct to medical pain management
- Are well-liked by patients—they allow patients to feel more engaged in managing their pain

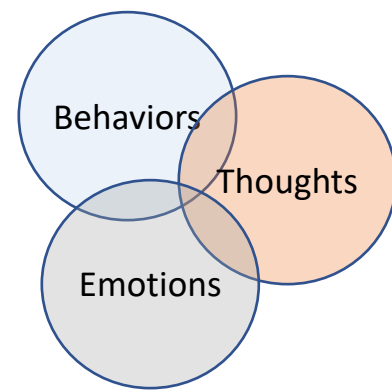


Two most common CBT-informed behavioral pain therapies

- Pain Coping Skills Training (PCST)
- Acceptance and commitment therapy (ACT)



Pain Coping Skills Training (PCST)



- Evidence for efficacy in cancer and non-cancer populations¹
- Skills to reduce cognitive, behavioral, and emotional responses that exacerbate pain severity and interference
 - Relaxation: Progressive muscle relaxation, brief relaxation methods to reduce muscle tension
 - Distraction techniques: Pleasant imagery, pleasant activity scheduling
 - Managing activity: Using activity/rest cycling to avoid overdoing activities or resting excessively
 - Cognitive restructuring: Reduces pain catastrophizing
 - Problem solving: Avoid situations that exacerbate pain and determine which coping skills to use at what time
 - Maintenance: Methods for maintaining new behaviors

¹ Keefe et al., 1990, 1992, 2005, 2013; Waters et al., 2007; Syrjala et al., 2014

Videoconference-delivered mobile PCST

- Somers, Keefe, and colleagues¹ translated PCST for delivery via a mobile health platform (mPCST)
 - Trained therapists delivered skills training in four 45-minute sessions
 - Online companion resource: Materials, education, social networking, and daily assessments used to personalize sessions
- Non-inferiority trial compared mPCST to traditional in-person PCST
 - Breast, lung, prostate, or colorectal cancer patients; dx <2yrs, pain ≥ 3 on 11-pt scale, life expectancy ≥ 6 mos
 - mPCST more feasible: lower attrition & time to complete, greater adherence & skill use
 - mPCST non-inferior at post-intervention and 3-mos follow up for pain severity and interference as well as nearly all other outcomes
- Makes it easier and less expensive for patients to access PCST

1 Kelleher et al., 2019

Self-completed, web-based PCST

- Translated Keefe's pain coping skills training for delivery as a self-completed (no therapist), web-based training program (painTRAINER)¹
- Eight 35-45 min. training sessions completed over 8 weeks
- Self-completed—No therapist
- “Virtual coach” is guide/educator—enhances engagement
- Tailoring and interactive features apply expertise of therapists who deliver traditional PCST to retain key therapeutic features²
- Minimal reading—Information presented in audio (coach's voice) with only most important text on screen
- Easy to use—simple navigation

1 Rini et al, 2014, 2015

Acceptance and Commitment Therapy (ACT)

- Helps patients accept and learn to live with pain so they can limit the control it has over their life
- Change expectations from the elimination of pain to living as well as possible with pain¹
- Increase engagement in valued activities
- Training focuses on thoughts, feelings, sensations that may act as pain cues
- Teaches patients skills such as:
 - Accepting pain (vs. trying to avoid situations that may cause a flare up)
 - Cognitive defusion (coping with uncomfortable or unhelpful thoughts and feelings)
 - Mindfulness—present moment awareness (vs. past/future focus)

Other relevant therapies

- **Psychoeducation** (usually on how to use pain medications and how to communicate with providers about unrelieved pain) is effective for reducing pain in people with cancer¹
- Some individual components of CBT-informed therapies have been shown to reduce pain (e.g., **relaxation**²)
- Other behavioral approaches (e.g., **mindfulness, hypnosis, acupuncture**) have also been evaluated, yielding various degrees of empirical support³
- Behavioral methods for managing **acute pain** (breathing techniques)⁴

1 Devine, 2003; Sheinfeld Gorin et al., 2012

2 Leubbert et al., 2001

3 Deng 2019

4 Jafari et al., 2017

Balancing use of pain medications and behavioral pain therapies

- May be difficult for patients to decide when to use medical vs. behavioral approaches to managing chronic pain¹
- Patient education can teach them how to use full array of tools available to them¹
- Could also help them reduce use of pain meds—research is needed
- CBT techniques may be useful for managing pain while preventing opioid misuse² and facilitating opioid tapering³

1. Keefe et al., 2005
2. Van Denburg et al., 2018
3. Davis et al., 2020

How to connect patients with these therapies

- They are often underused in clinical care, e.g., due to:
 - Lack of familiarity
 - Reimbursement problems¹
 - Patient demands
 - Ease of prescribing medications
 - Time pressure
- Telemedicine, delivery during procedures (e.g., infusions), online self-completed versions make them more accessible and convenient
- Referrals
 - Your institution may have health psychologists for referrals
 - Assoc for Behavioral and Cognitive Therapies (“Find a Therapist”: abct.org)
 - American Psychological Assoc (“Psychologist Locator”: locator.apa.org)
- Be supportive—Your perspective on behavioral pain management may affect patients’ willingness to try it¹

1. Keefe et al., 2005

Thank you! Questions?

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