Tri-Cities Pain Conference

Nonpharmacologic support for people with chronic pain: Evidence-based psychoeducational approaches

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Disclosures

- Empowered Relief® instructor
- Co-primary investigator for ERA Study

Objectives

- Review gaps in nonpharmacologic pain care access
- Examine three psychoeducational approaches to chronic pain management
- Understand how people with pain can access psychoeducational skills training

Nonpharmacologic interventions for chronic pain management

- Conventional pain management strategies focus on interventions to decrease pain intensity
- Nonpharmacologic interventions typically target pain coping, pain tolerance, strengthen adaptive responses
  - Some have been shown to decrease pain intensity

Garland et al., 2020; Braunwalder et al., 2022; Leung et al., 2024; Tick et al., 2018

Select systematic reviews of nonpharmacologic interventions

Citation	Key outcomes	Findings	Conclusion
Braunwalder et al., 2021 Positive psychology in RCT	Pain, physical function, emotional function	Improved pain intensity post intervention but not at follow up	Analysis limited by heterogeneity between studies (ALH)
Garland et al., 2020 Opioid treated acute & chronic pain	Pain intensity, opioid dose, physical function	Moderate effect for pain reduction, small effect for opioid reduction	Moderate to large effect on pain for meditation, therapeutic suggestion, CBT (ALH)
Leung et al., 2024 Chronic pain in ≥60y. adults	Pain intensity, catastrophizing, physical function, depression/anxiety	Large effect for physical activity on pain intensity	Overall small but significant effect for physical activity with psychological intervention (ALH)

Braunwalder et al., 2021; Garland et al., 2020; Leung et al., 2024; Tick et al., 2018

Clinical practice guidelines

Citation	Key nonpharmacologic (NP) recommendations
Dowell et al., 2022 CDC – prescribing opioids for pain	NP interventions improve CP and not a/w serious harms (Small – Moderate effect) #1 – Maximize NP therapies #2 – To guide selection of therapy clinician should evaluate and recommend appropriate approach: list
Qaseem et al., 2017 American College of Physicians (ACP) – chronic low backpain clinical practice guideline	#1 – NP treatment: heat, massage, acupuncture, spinal manipulation (low-moderate quality evidence; strong recommendation) #2 – NP; exercise, multidisciplinary rehab, MBSR (low-moderate quality evidence; strong recommendation)
Kolasinski, 2020 American College of Rheumatology(ACR) – guideline for osteoarthritis hand, hip, knee	Exercise, self-efficacy and self-management programs, Tai chi (strong recommendation)
Macfarlane, 2017 European League Against Rheumatism (EULAR) – fibromyalgia guideline	Focus first on NP Aerobic and strengthening exercise (strong) CBT, multicomponent, meditative movement (weak)

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Leung et al., 2024 Chronic pain in ≥60y. adults	Pain intensity, catastrophizing, physical function, dep/anx		

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Dowell et al., 2022 CDC – prescribing opioids for pain	NP interventions improve CP and not a/w seri (Low-Mod effect) #1 – Maximize NP therapies #2 – To guide selection of therapy clinician should eva commend appropriate approach: list
Qaseem et al., 2017 ACP – chronic low backpain clinical practice guideline	#1 – NP treatment: heat, massage, acupuncture, spinal manipulation (low-mod evid; strong rec) #2 – NP; exercise, multidisciplinary rehab, MBSR (mod), etc (low) but strong rec
Kolasinski, 2020 ACR – guideline for osteoarthritis hand, hip, knee	Exercise, self-efficacy and self
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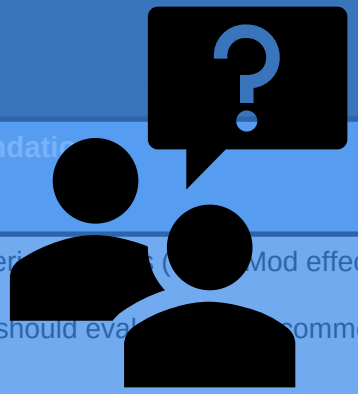


- **Small effect sizes, underpowered studies, lack of opioid Rx info**
- **Heterogeneity: frequency, intensity, duration of interventions confound meaningful analysis**
- **Missing controlled comparators**
- **Lack of long term follow up**
- **Crossover between CBT and mindfulness**
- **Etc…**

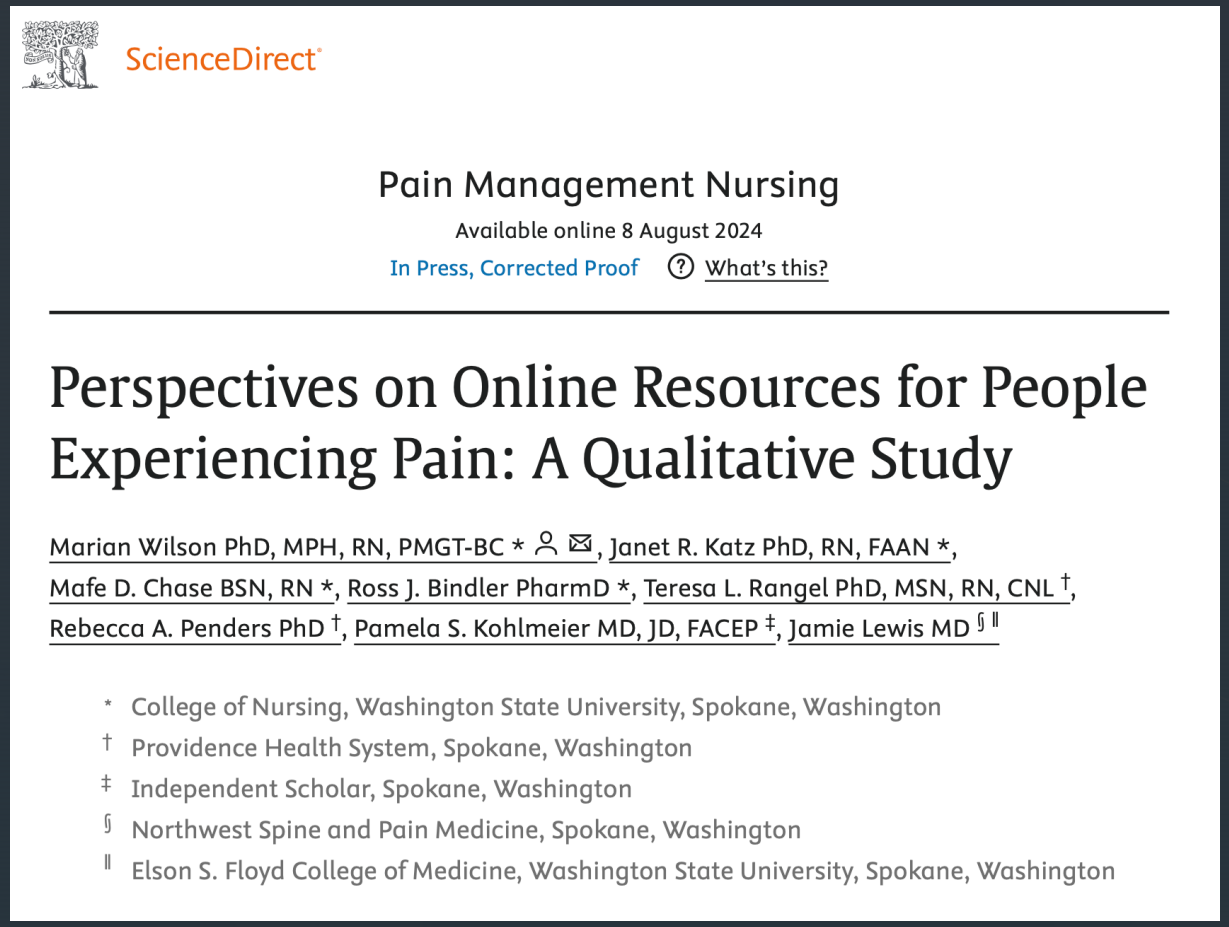
Disparities in access to care

Patient resources: Limitations and disparities, including:

- **Insurance coverage**
- **Time commitments; frequency, duration**
- **Treatment availability; online vs. face to face**
- **Availability of instructors, scheduling**
- **Hardware, WiFi and digital literacy**
- **Ability of qualified instructors/therapist to provide interventions at scale to support the needs of chronic pain community**

Dowell et al., 2016/2022 ; Tick et al., 2018

More equitable resources are needed



ScienceDirect

Pain Management Nursing

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In Press, Corrected Proof What's this?

Perspectives on Online Resources for People Experiencing Pain: A Qualitative Study

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"I didn't even know pain psychologists existed"

"I didn't know there was anything beyond going to the clinic (and) taking a medication"

"I didn't even know things like online resources were available…nobody offered that to me"

"If the doctor believes in it, you would as the patient"

Psychoeducational programs

- **Psychoeducational (PE) programs: professionally developed and delivered programs that integrate psychological and educational interventions**
  - **Often inclusive of tools and practices that can subsequently be self-administered to better regulate intrusive and disruptive pain-related symptoms**
  - **Pain-related content is typically multidisciplinary and inclusive of CBT approaches,**
  - **Delivery might be face-to-face, and/or online, live or virtual**

Lukens and McFarlane, 2004; Watson, 2023

Select pain-related psychoeducational programs

- Background
- Content
- Dose, duration, frequency
- Efficacy: published findings
- Accessibility

Mindfulness-based stress reduction (MBSR)

Background:

- **Developed as the Stress Reduction and Relaxation program**
    - **Jon Kabat-Zinn, University of Massachusetts Stress Management Clinic, University of Massachusetts Medical School**
    - **First taught in 1979**
- **Intended to teach patient "the *how* of living with chronic pain" (Kabat-Zinn, 1982)**
- **Tested MBSR in chronic pain with 4-yr follow up (Kabat-Zinn, et al., 1986)**

Content

- Mindfulness meditation
  - Sitting and walking meditation
  - Body scan
- Mindful movement
  - Gentle yoga/stretching
  - Bringing awareness to routine activities
- Body awareness
  - Nonjudgemental observation of thoughts, feelings, sensations
  - Mindful breathing/breathwork
- Group discussions
- Home practice
  - 45 minutes/day, 6 days/week recommended

- Dose – duration/frequency
  - 2-hr sessions
  - Weekly x 8 weeks
  - Optional 6-hour retreat

Efficacy

Citation	Key outcomes	Findings	Conclusion
Cherkin et al., 2016 MBSR v. CBT v. TAU back pain. RCT	Back pain-related function Pain bothersomeness	N=342 Statistically and clinically significant improvement in disability and bothersomeness at 26 wk for MBSR and CBT	Crossover between interventions in CBT and MBSR may have limited the comparative analysis
Garland et al., 2022 Mindfulness-Oriented Recovery Enhancement (MORE) vs Supportive psychotherapy group for opioid misuse and CP. RCT	Opioid misuse, pain severity, pain interference	N=250 MORE was superior for pain severity and interference with mod-large effect, and decrease opioid use	Discontinuation rate impacted by COVID epidemic. Future: compare to MBSR, determine scalability
Pérez-Aranda et al., 2019 MBSR v active control v control in FM. RCT	FM impact, 'fibromyalginess', PCS, depression, anxiety	MBSR superior to active control and TAU post-Tx and 12 mo. (med-lg effect)	Overall small but significant effect for physical activity with psychological intervention

Accessibility

- Wide range of formats: in-person, live-online, virtual self pace
- Free, self-paced at https://palousemindfulness.com/MBSR/index.html
- UMass live online, including initial one-on-one meeting with instructor and check-ins during the course, and one all day class: $650
- Self-paced online with Jon Kabat-Zin: $198
- A few in-person classes at yoga studios: ~$500
- MBSR Resources and teacher training info at UMass Center for Mindfulness https://www.ummhealth.org/services-treatments/center-mindfulness/mindfulness-programs/mbsr-teacher-training

Pain Reprocessing Therapy

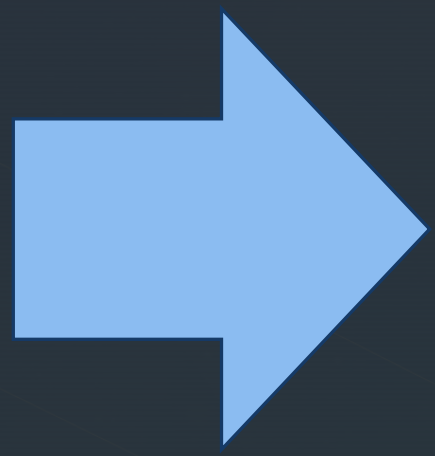
Background:

- Lumley & Schubiner (2019) developed an integrative model psychological assessment and treatment of centralized pain
  - Somatoform/nociplastic pain as distinguished from primarily nociceptive, inflammatory or neuropathic pain
  - Integrative model was tested as Emotional Awareness and Expression Therapy (EAET) in a RCT for people with FM with positive findings (Lumley et al., 2017)
  - The model then informed pain reprocessing therapy (PRT) as developed and tested by Ashar et al. (2021) in people with CLBP

https://www.painreprocessingtherapy.com/

Content

- Personalized evidence for nociplastic pain
- Guided reappraisal of pain sensations
- Processing of psychosocial threats
- Interventions to increase positive emotions and self-compassion



- Education about reversibility of pain and the pain-fear cycle
  - Pain recovery
- Attending to and appraising pain sensations through a lens of safety
  - Mindfulness
  - Adaptive self-statements
  - Movement/activity
- Address emotional threats
  - Expressive writing/unsent letters
- Gravitate toward more positive feelings and sensations
  - Adaptive interpersonal communication

Ashar et al., 2021a; Ashar et al., 2021b, Supplemental online content; Lumley et al., 2019

Dose, Frequency, Duration

- 1 hr telehealth assessment/education
- 8 1-hr therapy session (1-hr twice/week x 4 weeks) – study protocol
- PRT website: https://www.painreprocessingtherapy.com/wellbody-psychotherapy
  - PRT workshop: 8 90-minute group classes
  - PRT movement immersion for patients: weekly 1-hr class x 4 weeks
  - WellBody PRT & coaching, 1:1 and group (8 90-minute classes)

Ashar et al., 2021; https://www.painreprocessingtherapy.com/wellbody-psychotherapy

Efficacy

Citation	Key outcomes	Findings	Conclusion
Lumley et al., 2017 EAET v. CBT v. pain ed. in FM. RCT	Pain severity, 30% and 50% reduction in pain, FM symptoms, widespread pain	N=230 Significantly decreased FM symptoms, widespread pain, and greater 50% reduction of pain for EAET	Subset had substantial, sustained improvement. Possibly those w/ unresolved trauma benefitted the most.
Ashar et al., 2021 PRT v. placebo +TAU v. TAU in CLBP. RCT	Pain intensity, 30% and 50% pain reduction, low pain intensity (0 – 1), pain interference	N=151 Significantly decreased pain severity, with 66% of PRT group reporting pain-free or nearly pain free	Limitations included relatively well educated and active sample, expert clinicians. fMRI effect sizes modest.
Tankha et al., 2023 Investigation of PRT(Ashar, 2021) from pt. perspective. QUAL	Understand change process of PRT from pt. perspective, explore pretreatment beliefs and expectations	Semi-structured interviews (all PRT invited, 73% participated)	-change in mindset: pain as a signal/false alarm -ability to observe pain, shift focus/perspective

Accessibility

- PRT workshop: 8 90-minute group classes - $525
- PRT movement immersion for patients: weekly 1-hr class x 4 weeks $150
- Directory of practitioners
- WellBody – 1:1 therapy/group classes (8 sessions - $525)
- Teacher training: multiple levels
  - Certification (21 hrs - $990)
  - Licensed mental health
  - Coaching
  - Clinicians
  - PT (coming soon)
  - Medical providers (coming soon)

https://www.painreprocessingtherapy.com/pain-reprocessing-therapy

Empowered Relief®

Background:

- As an alternative to longer programs of psychoeducation, Darnall et al., (2014) developed a single, 2-hour pain program that included neuroscience-based pain education, mindfulness principles and CBT skills – From Catastrophizing to Recovery
    - Focused on treating pain catastrophizing (PC) and associated negative phenomena including pain intensity and affective distress
    - Pilot study in sample of participants with mixed etiology chronic pain (N=57) demonstrated significantly reduced Pain Catastrophizing Scale (PCS) measurements at 2-wk and 4-wk post intervention with large effect size
    - Protocol for RCT (Darnall et al., 2018) in people with CLBP randomized to 8-session CBT v. Single session pain psychology class (Empowered Relief (ER) v. single session back pain ed.

https://empoweredrelief.stanford.edu/

Content

- Pain education
- Self-regulatory skills
  - Relaxation/diaphragmatic breathing
  - Cognitive reframing
  - Self-soothing
- Mindfulness principles
- Interconnectedness of pain, stress and psychology
- Identify unhelpful pain responses
- Guided meditation
- 3-step personalized plan
  - Includes daily recorded guided meditation with binaural beats

Efficacy

Citation	Key outcomes	Findings	Conclusion
Darnall et al., 2021 ER v. 8-session CBT v. health ed. In CLBP. RCT	Pain Catastrophizing Scale (PCS), pain intensity, pain interference	N=263 ER noninferior to CBT for PCS, pain intensity, pain interference at 3 months. ER and CBT superior to HE for PCS.	Limitations: Sample diversity and clinical dx was limited to CLBP
Darnall et al., 2024 6-month follow up for 2021 RCT	As above	ER remained non-inferior to CBT for pain intensity, pain interference, and was superior to CBT for PCS at 6 mo. follow up	The low burden and cost of ER could help reduce barriers to nonpharmacologic chronic pain care
Ziadne et al., 2021 Live, online ER v WLC. RCT Self-reported CP	Pain catastrophizing score, Pain intensity, pain bothersomeness, sleep disruption	N=101 ER superior to WLC for primary and secondary outcomes, with mod – lg effect sizes	Live, online ER via Zoom was a/w high participant satisfaction and outcomes. Web-based delivery could improve accessibility
ERA: ASPMN nurse delivered ER. Live, online ER v WLC. RCT. Self-reported CP.	Pain catastrophizing score, pain intensity, pain interference	Data analysis in progress	Nurses could help support ER accessibility at scale

Accessibility

- 1300 certified ER instructors
- Instructor directory on website
- Integrated into patient care at healthcare organizations including: Cleveland Clinic, Stanford Healthcare, Allegheny Health Network, Lehigh Valley Health Network, Cedars Sinai Healthcare, and various VA clinics
- Cost to patient not listed on website, but individual provider costs vary, some are free
- Instructor training – 2-day workshop, $550, scholarships available

https://empoweredrelief.stanford.edu/

The RELIEF Project

Resources and Education Leading to Improved Pain Care Equity For Washingtonians

Project Director:

Marian Wilson, PhD, MPH, RN, PMGT-BC
Associate Professor, College of Nursing

Spokane, WA

WASHINGTON STATE UNIVERSITY HEALTH SCIENCES SPOKANE

Objectives

Supporting health care provider training and education necessary to reduce inappropriate prescriptions as well as **maintaining pain care** access for people who need opioids.

1) Develop and disseminate web-based opioid and pain prevention training for all WA state health science students
2) Develop a web-based central repository of resources for pain self-management for patients, providers and community members
3) Offer evidence-based programs to help primary care providers better manage people with pain, allowing them to continue to provide care to their patients on chronic opioid therapy.

Funder: Washington State Health Care Authority

Join our study

Improving Activity in Adults with Chronic Pain: Self-Directed versus Guided Support with Online Resources

Researchers at Washington State University Spokane are seeking adults with chronic pain who are interested in increasing their activity level to participate in a research project.

All participants will be provided access to a new online pain management resource and randomized to self-directed resource use or guided support. Everyone will be asked to wear a Fitbit activity tracker and complete three surveys over the course of eight weeks.

Those eligible to participate will be:

- Adults (18+) living in the US with a history of chronic pain lasting 3+ months
- Interested in increasing their activity level
- Able to speak and read English
- Willing to provide address for shipment of a Fitbit activity tracker
- Able use the Fitbit application and wear the activity tracker for the majority of study days and nights (8 weeks)
- Free of medical or psychological conditions that prevent participation
- Free of surgical or medical procedures scheduled during the study period

All participants that complete the initial survey will receive a Fitbit to keep and earn a $10 gift card for completing each additional survey (total $20).

For additional information, call or email the research team at 509-324-7443 or Spokane.PainStudy@wsu.edu or scan the QR code below.

Principal investigator Marian Wilson, PhD, MPH, RN, PMGT-BC Washington State University College of Nursing, 509-324-7443, marian.wilson@wsu.edu.

This study #20809 has been approved by the WSU Institutional Review Board (IRB). If you have questions or concerns about your rights as a research participant in this study, you may contact the WSU IRB at irb@wsu.edu.

Summary

Thank you!

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