



WASHINGTON STATE UNIVERSITY
College of Nursing

NON-OPIOID SYMPTOM MANAGEMENT STRATEGIES FOR POPULATIONS PRESCRIBED OPIOIDS

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Conflict of Interest, Disclosure Information

Marian Wilson, no conflict of interest or disclosures



Acknowledgement

In gratitude for all the
frontline workers



Educational Objectives

At the conclusion of this activity participants should be able to:

- Understand patient perspectives regarding symptom burdens when prescribed opioids
- Recognize influences on patients' choice of non-pharmacological symptom management treatment options
- Identify assessment and communication strategies to assist shared decision-making in symptom management





Overall Goal

Share research that emphasizes undertreated symptoms.

Encourage new approaches to symptom assessment and integration of non-opioid treatment options.

EMPOWER people with pain and improve quality of life for patients and healthcare workers.

How does treating pain help healthcare workers?

About half of COVID-19 frontline hospital workers are suffering with stress, ~ 25% with depression and anxiety (Salari et al., 2020)

- These are **normal emotional responses** to crisis

(Blake et al., 2020)

Burnout, Compassion Fatigue, Post-traumatic Stress Disorder linked to work stress:

- Witnessing patient suffering and unrelieved pain is stressful!



Moral injury



- Psychological distress resulting from actions, or lack of them - violating someone's moral or ethical code
- Term originated in military
- Guilt/shame from facing overwhelming demands
- Historically present in healthcare
 - HIV/AIDS
 - Cancer pain management – WHO Ladder 1986

Unrelieved pain of patients can transfer to caregivers as a moral injury – which can lead to depression, PTSD, suicidality
(Tracy et al., 2020).

Suicide and Safety Warning



Shooting suspect at Minnesota clinic threatened violence at the facility in 2018, police report says

By Adrienne Broaddus, Bill Kirkos, Madeline Holcombe and Steve Almasy, CNN

FDA identifies harm reported from sudden discontinuation of opioid pain medicines and requires label changes to guide prescribers on gradual, individualized tapering

FDA Drug Safety Communication

Abrupt cessation of opioids can lead to:

- symptom exacerbations
- illegal drug use
- opioid withdrawal
- depression/suicidality (U.S. FDA, 2019).

American Medical Association (AMA) recommended revisions to CDC guidelines ensuring patients are not denied appropriately prescribed opioids for the management of pain.

(Madara, 2020).

"It is clear that the CDC Guideline has harmed many patients." Madara, 2020

Who is prescribed opioids?



People with pain (short term, acute or long term chronic/persistent pain)

People with opioid use disorder

How do their needs differ and how are they the same?

Methods of pain management



Pharmacological

- Opioids (long or short-acting, oral, patch, IV, SC, epidural)
- Non-opioids e.g., corticosteroid injections, non-steroidal anti-inflammatory drugs, acetaminophens, topical preparations

Non-Pharmacological

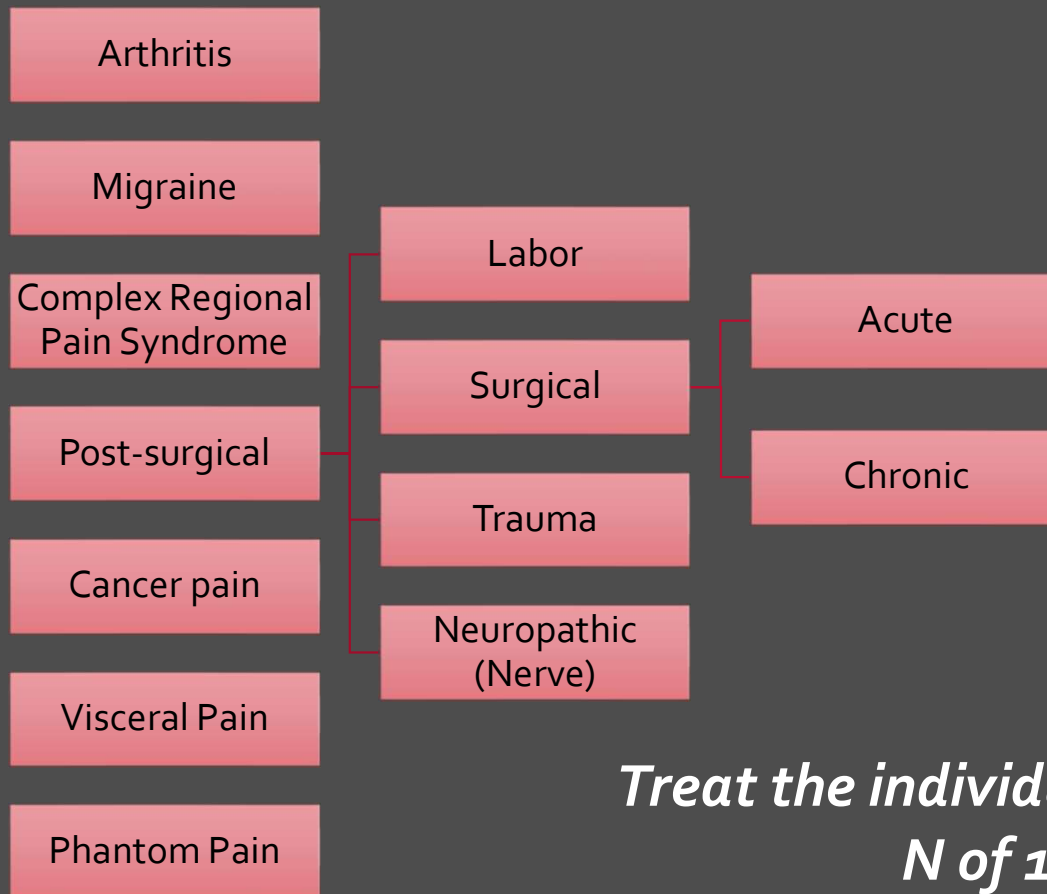
- **Complementary and Integrative Health (CIH)**
 - Preferred term to emphasize multimodal treatments are no longer “alternative,” but an essential component to providing a biopsychosocial-spiritual approach to pain care (NCCIH, 2021)



A combination of techniques is often ideal to address multiple mechanisms of pain relief.

(Chen & Michalsen, 2017)

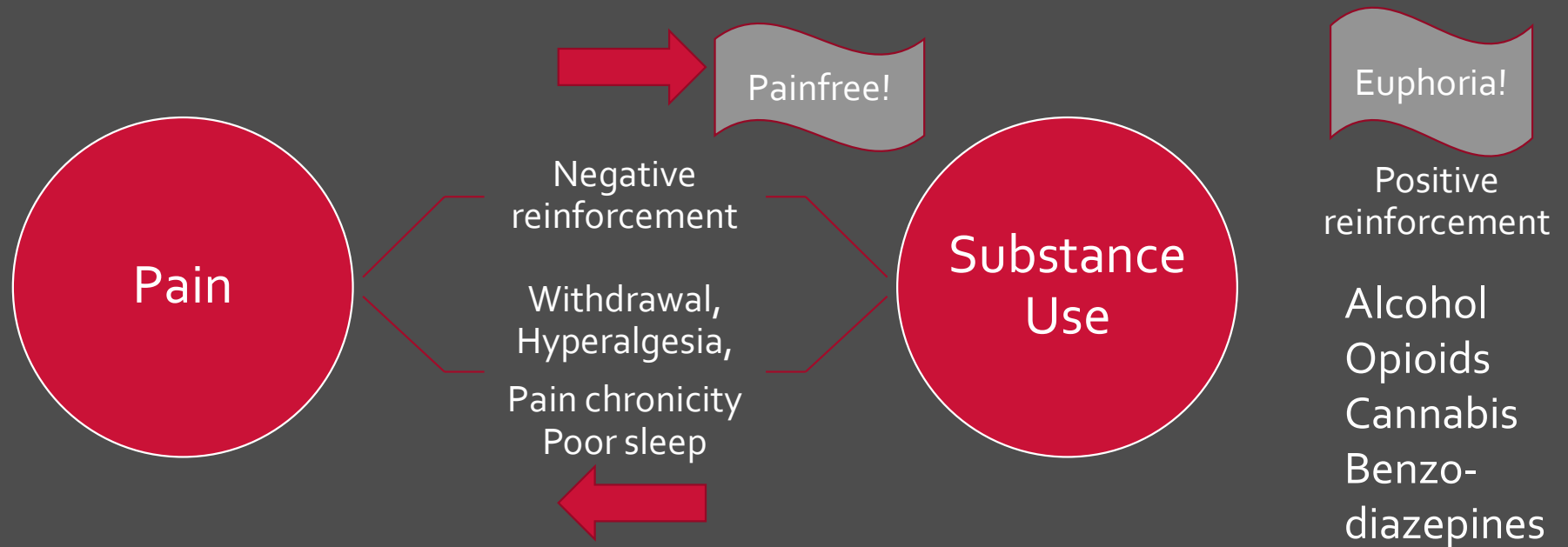
Challenges of pain research



- Multiple types of pain
- Complex comorbidities
- Self-report pain assessments
- High individual variation in responses to pain treatments
- Randomized trials can mask efficacy – placebo effects

Treat the individual – not the group mean
N of 1 trials needed

Pain promotes and reinforces substance use



Pain and substance use may interact in a feedback loop that worsens both conditions over time.

Pain and substance use disorders share neurophysiological patterns



Shared neural systems are associated with dopamine surges, reward, motivation, and learning centers (Elman & Borsook, 2016).

Both **pain relief** and addictive drugs are **reinforcing** in the brain's circuitry and can lead to preoccupation or craving for analgesic drugs.

Discerning pain behaviors from SUD behaviors can be difficult, yet is an important distinction.

Treating chronic pain and SUD as separate entities may miss the complexity of the whole individual. Coexisting problems necessitate an integrated, multidimensional therapeutic approach (Manhapa & Becker, 2018).

Treat the addiction AND the pain.

WSU

Transitions to OUD

Gaps in understanding how people move from appropriate opioid use for pain to OUD.

Unknown true incidence of OUD developing from chronic pain:

- estimated 15-26% “misuse” – a precursor to SUD
- < 8% “addicted”

Past myths: *If you take opioids for pain, you cannot become addicted*

We now know risk increases for OUD

- with increased opioid dose
- genetics, psychiatric disorders, younger age, social/family environments, childhood trauma



What about symptoms?

Study 1: Experiences of pain in adults receiving methadone for opioid use disorder



- Urgent public health need to improve retention and reduce recurrence of substance use in Medication for Opioid Use Disorder (MOUD) treatment programs.
- An IRB-approved qualitative study investigated the experiences of pain as described by adults receiving a daily methadone dose for OUD.
- Study objective: better understand pain management needs in MOUD populations and how they influence substance use.
- Follow up from previous two studies in same population showing :
 - 1) high burden of under-treated symptoms [pain, depression, anxiety, withdrawal, sleep]
 - 2) 73% first use of opioids was in response to a painful event

(Wilson, Gray & Bindler, 2021; Wilson et al., 2018a; 2018b)

Methods

Qualitative descriptive approach was used to answer the primary research question:
How do adults in MOUD describe their experience of pain?

Two sources of data were examined [secondary analysis from larger pilot study]:

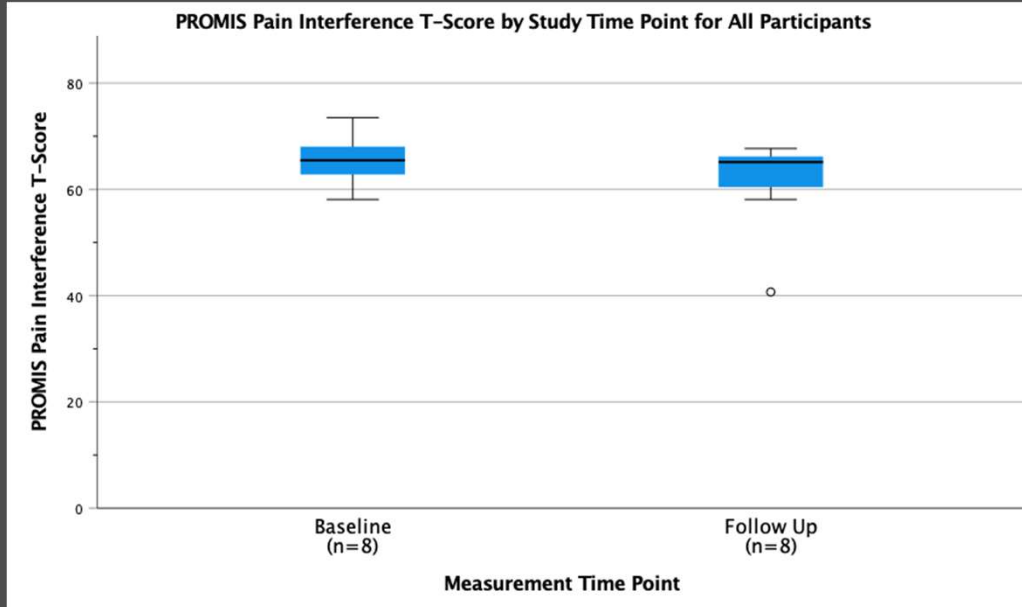
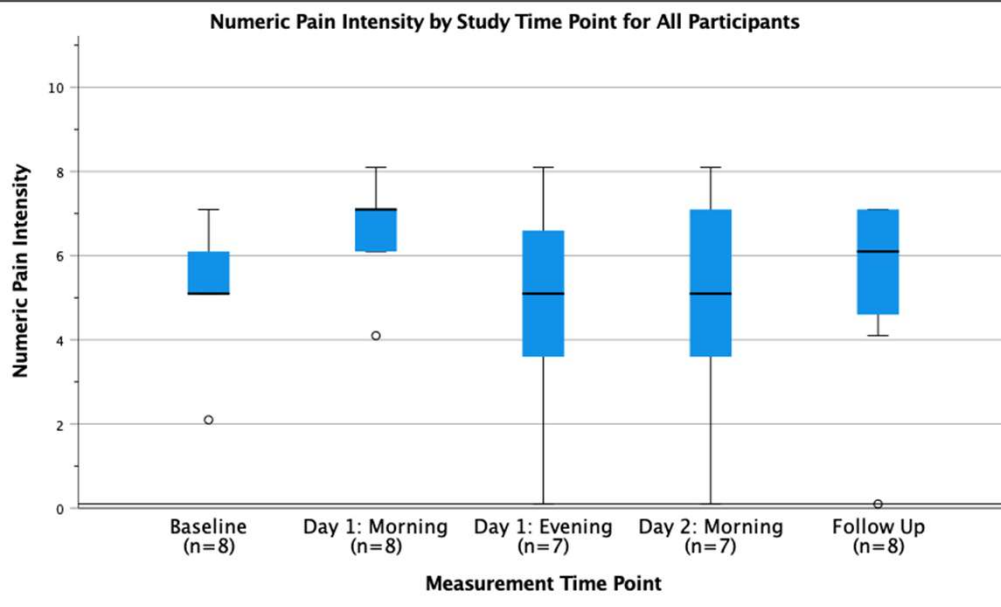
1) Survey data:

- Numeric Pain Intensity Scale (0-10)
- Patient-Reported Outcomes Measurement Information System (PROMIS) Pain Interference Scale across the 9-day study period (n=8)

2) Interview data collected to describe withdrawal experiences (n=6).

Descriptive analysis summarized survey data; content analysis identified themes from the interviews.

Results



Average pain intensity (N=8) ranged from 4.7 ± 2.7 to 6.5 ± 1.2 indicating moderate pain while average pain interference T-scores ranged between 61.5 ± 8.9 to 65.5 ± 4.7 , above the average for healthy normal adults (50).

Main themes and sub-categories

1) Types of pain

- withdrawal pain
- chronic pain

2) Responses to pain

- pain effects
- coping strategies



Types of pain

Withdrawal pain – participants described pain related to opioid withdrawal

*"A lot of the pain that I suffer from, from my illnesses, also seem to be **symptoms of withdrawal**...so when I'm feeling joint pain I'm always thinking that it...it's my arthritis."*



Common descriptors

*"It's in my hands, ..the fingers, my knees, my elbows...it seems like...pretty standard like everybody seems to have problems with their joints...It's in your joints and it's definitely related to withdrawal. The deeper your **withdrawal symptoms** are...the deeper the body ache goes."*

Types of pain

Chronic pain – participants described pain related to chronic conditions

*“I got a **really bad back injury**, L5 S1. I originally herniated it, then I tore it, and now it’s degenerated.”*



*“I **have chronic pain**...which is one of the reasons I was on, uh, the narcotics in the first place.”*

*“If I don’t get enough sleep, I get these raging **migraines**.”*

Responses to pain

Pain effects

- Sleep disruption
- Insomnia
- Interferes with mobility
- Financial stress

"I...seem to have a, a really hard time winding down...or feeling any type of...relaxing...so I don't go to sleep."

"You wouldn't believe the amount of money involved to stay out of pain. It's going to be a lifelong thing for me."



Responses to pain

Coping strategies

- Music
- Hot shower
- Companionship
- Medication timing
- Distraction

"When I'm working, I don't necessarily think about my, my aches and pains."



Coping with substances

Participants reported using a variety of legal and illegal substances to relieve their pain and other symptoms.

"In the past, I have tried using other drugs, sometimes. If I knew someone who had Valium or something I would ask if they could spare any...that would help."



Common Substances

Aligning with global research

France (N=509)

Patients receiving MOUD with chronic pain:

- 15% were not prescribed and did not self-medicate with any analgesic drugs
- 52% were prescribed analgesics - most (49%) also self-medicated for pain
- 32% exclusively self-medicated for pain management.

84% "self-medicating"

Patients with chronic pain had more withdrawal-related pain, consumed significantly more street drugs including "street" buprenorphine, methadone, heroin, morphine.

Delorme et al., 2021



Aligning with global research

Scotland (N=521)

Significantly higher proportion of MOUD patients with chronic pain used non-medical benzodiazepine and illicit cannabinoids at study inception versus those without chronic pain.

A higher proportion of those with chronic pain continued non-medical benzodiazepine use and illicit cannabinoid use during the 5-year follow-up period.

Higgins et al., 2018

Universally, if symptoms are not addressed, patients will “self-manage.”



Clinical implications

- Assess symptoms thoroughly and holistically (chronic or acute pain, emotional/physical pain, spiritual distress).
- Offer solutions to relieve suffering.
 - Pain self-management, pain referrals, non-pharmacologic options, peer support groups
 - Ensure mental health needs are being met (anxiety, depression, PTSD often co-mingle with SUD/pain)
- Ask about substance use for symptom management with a focus on harm reduction (*cannabis, opioid misuse, methamphetamines, benzodiazepines*).
- Suggest medication dosing alternatives when appropriate (timing, split dosing, type of drug, opioid and non-opioids)
- Note increased risk for overdose. Educate on naloxone (Narcan[®]).

Study 2: Non-pharmacological pain management decision-making for adults with chronic pain

- Research question [Honors student]: What influences individual's choice of non-pharmacological pain management therapies?
- An IRB-approved pilot study investigated the use of CIH options for adults receiving opioids for chronic pain.
- Follow up from OUD study reporting lack of options to opioids offered for their pain conditions.
- Study objective: better understand how to engage people in CIH options that are known to be effective.

(Ware & Wilson, 2021; Wilson et al., 2018b)

Context



The COMFORT Study Community-engaged Options to Maximize and Facilitate Opioid Reduction through Treatment

This study is funded by the National Center For Advancing Translational Sciences of the National Institutes of Health under Award Number UL1 TR002319 and the Rayce Rudeen Foundation



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- **Spokane Regional Opioid Task Force:** Diverse group of healthcare and wellness practitioners meeting since 2018 as the *Non-opioid Pain Management Group*
- **Mission:** Remove barriers and increase usage of non-pharmacological pain management treatments within the Spokane area

Parent study purpose

- Examine feasibility, acceptability, and effectiveness of a process to remove barriers to receiving non-pharmacological pain management therapies
- Encourage compassionate conversations related to opioid use reduction
- Determine how free access to non-drug pain options is received
- NEW AIM POST COVID-19: Determine how telehealth options are received
- Participants had the opportunity to attend weekly 45-minute treatment sessions over a six-week period with their two chosen providers over Zoom technology.
- Treatment Modality Options:
 - Yoga Therapy
 - Massage Therapy
 - Chiropractic Therapy
 - Physical Therapy

PARTNERS:



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Study participants

Recruitment Script: *I'd like you to consider some options that might help with your pain and function. Would you like to hear more about a study we are participating in to try some different therapies?*

Inclusion Criteria

- Diagnosed with chronic non-cancer pain
- Prescribed opioids
- Have access to a smartphone or computer
- Age over 18 years
- The ability to speak and read English
- Pain severity rating of 5 or above on a scale 0 to 10

Exclusion Criteria

- Have a condition that requires frequent hospitalization or changes in their medications
- Currently pregnant

Data collection:

Preliminary Results

- *Honors project:* Survey questions asked about decision-making process verbally on intake interview
- Qualtrics survey software used to collect demographics

Post Selection Survey

Non-opioid Modality Selection and Scheduling Card To be selected after consent and pain assessment

Choose two					
Yoga Therapy	<input type="checkbox"/>		Massage Therapy	<input type="checkbox"/>	
Physical Therapy	<input type="checkbox"/>		Chiropractic Therapy	<input type="checkbox"/>	
	Date	Day/Time		Date	Day/Time
First session			First session		
Second			Second		
Third			Third		

Post-selection questions for participant (to be completed after selection made):

Modality 1	Write in modality chosen:
Do you have previous experience or knowledge of this treatment? Please tell us about any past experience.	
What influenced your choice of this treatment?	
Modality 2	Write in modality chosen:
Do you have previous experience or knowledge of this treatment? Please tell us about any past experience.	
What influenced your choice of this treatment?	

Data analysis



- Transcripts analyzed (N = 17) using deductive thematic analysis (Clarke et al., 2015).
- Concepts from the biopsychosocial-spiritual model were used to inform the coding process
- Data were categorized into one of four categories: Biological, Psychological, Sociological and Spiritual
- Categories were then reviewed to identify data elements that represented new themes.

Demographics		Value(s)
Age in years; mean (SD) [range 38-75]		60.4 (10.4)
Race/Ethnicity; n (%)	White	15 (93.7%)
	American Indian/Alaskan Native	1 (6.3%)
	Hispanic/Latino (a)	1 (6.3%)
Gender; n (%)	Female	12 (75%)
	Male	4 (25%)
Marital Status; n (%)	Married/Living with	6 (37.5%)
	Divorced	2 (12.5%)
	Widowed	4 (25%)
	Never married	4 (25%)
Highest Education; n (%)	Assoc. degree/tech	4 (25%)
	Bachelor's degree	2 (12.5%)
	Graduate degree	8 (50%)
	Some college	1 (6.3%)
Employment Status; n (%)	Disabled	8 (50%)
	Retired	6 (37.5%)
	Part-time	2 (12.5%)
Current Insurance Provider; n (%)	Medicare	9 (56.3%)
	Private insurance	4 (25%)
	Medicaid/State sponsored	2 (12.5%)
	VA sponsored	1 (6.3%)

Sample characteristics

Health factors	n (%)
Co-Occurring Mental Health Disorder	7 (43.8%)
Generalized Anxiety Disorder	3 (19%)
Major Depressive Disorder	5 (31%)
Bipolar	1 (6%)
Painful Medical Condition(s) Back pain	16 (100%)
Nerve pain or neuropathy	12 (75%)
Arthritis	12 (75%)
Neck pain	10 (62%)
Headaches or migraines	8 (50%)
Post-surgical	5 (31%)
Fibromyalgia	3 (19%)
Number of Painful Conditions (M/SD)	4.5 (1.8%)
5 or more	9 (56.3%)
Baseline Pain Intensity; mean (SD)	6.1 (1.7)

Modality selection

COMFORT Study Treatment Modality Selection			
	First choice (n=16)	Second choice (n=16)	Total (n)
Modality	Chiropractic Therapy = 1 (6.3%)	Chiropractic Therapy = 3 (18.8%)	4
	Massage Therapy = 3 (18.8%)	Massage Therapy = 5 (31.3%)	8
	Physical Therapy = 3 (18.8%)	Physical Therapy = 6 (37.5%)	9
	Yoga Therapy = 9 (56.3%)	Yoga Therapy = 2 (12.5%)	11

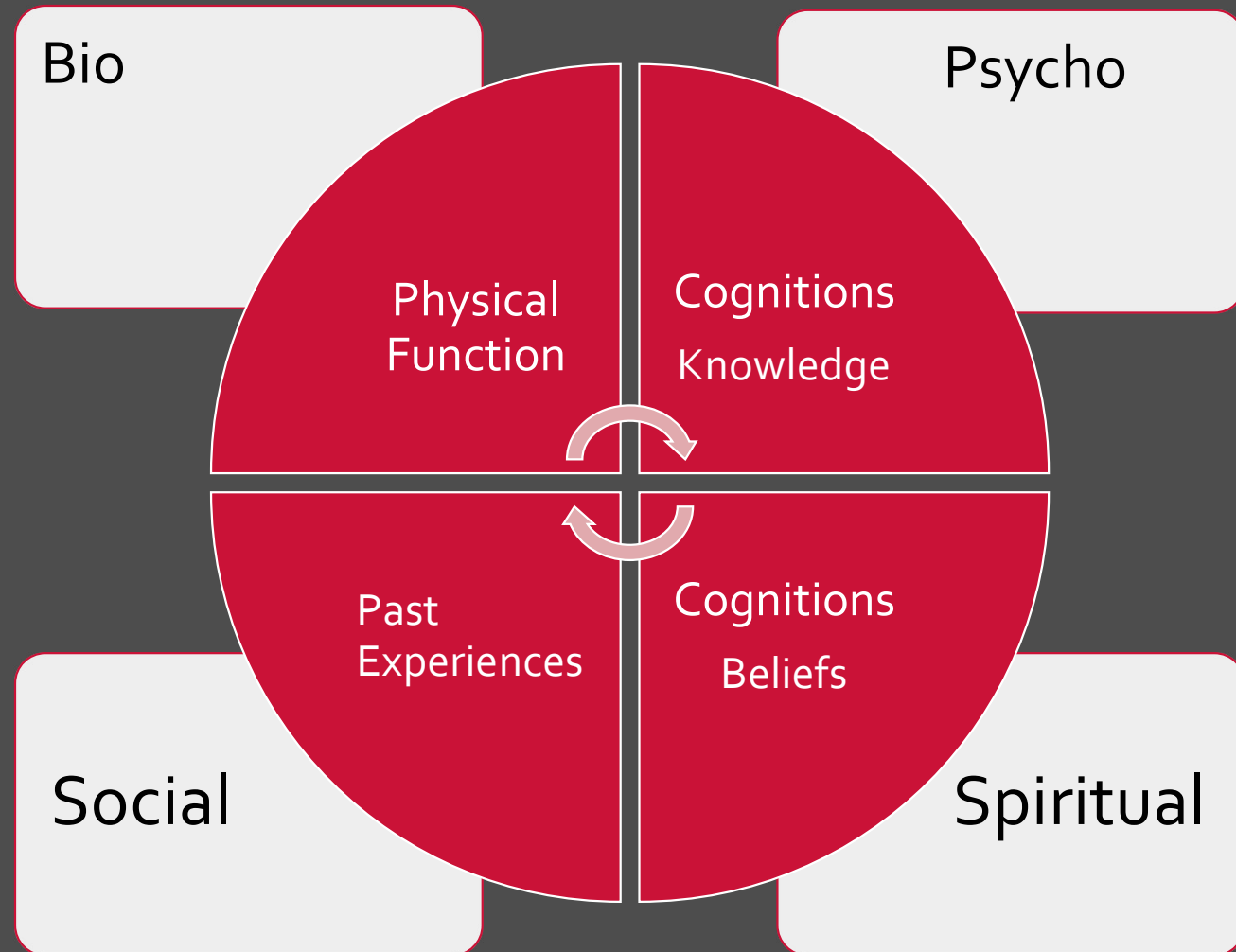


Total Sessions Conducted by the COMFORT Study Providers		
Modality	Patients	Sessions Completed
Chiropractic Therapy	4	12
Massage Therapy	8	24
Physical Therapy	9	24**
Yoga Therapy	12	32*
Totals	32 2 selections each	92 *1 missed; **3 missed

Results

Key Themes:

- 1) Physical Function
- 2) Cognitions
 - Knowledge
 - Beliefs
- 3) Past Experiences



Physical functioning

The ability to perform activities of daily living and movements. Encompasses desired physical improvements and restrictions due to physical limitations.

Pain and movement limitations inhibited the utilization of some modalities:

- *"Massage I don't think I can do because I can't hold anything in my hands."*
- *"I cannot do traditional yoga, it needs to be modified with a chair or something that would allow me to not put too much pressure on my leg."*

Possible improvement to their physical condition was an influence in choosing a particular modality:

- *"I'd like to strengthen other areas, like the core, achieve better balance."*
- *"The idea of being able to increase my range of motion, especially in my legs, appeals to me."*





Cognitions

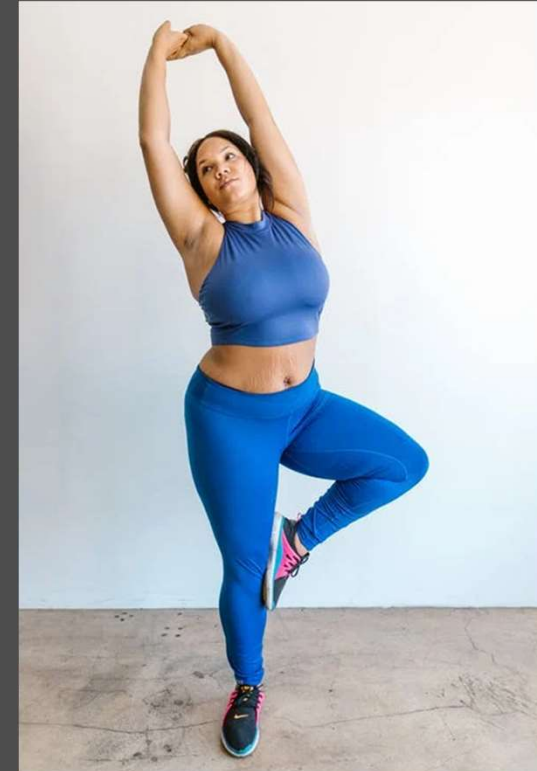
Acquiring knowledge, understanding and viewpoints through thought, experience and senses.

- Knowledge: understanding of the modality and information acquired.
- Beliefs: views of health and how the modality will impact well-being (including spiritual aspects, wants and desires).

Cognition: *Knowledge*

Participants were more inclined to choose a modality that they had an understanding of and one supported with evidence.

- *"I think it's been around for a long, long time. It has a lot of factual evidence that proves that it can work, lower your pulse, respirations..."*
- *"Easy to onboard with practitioner because of understanding, we speak the language."*



Cognition: *Beliefs*

Logical or spiritual beliefs had influence on modality choice both negative and positively:

- *"I believe all of these things can be achieved with yoga. Also, the spiritual sense, calm the senses, a form of meditation."*
- *"The body/mind connection, learning how to stretch, it helped keep my athlete's body in shape."*

Strength of beliefs/desires were expressed as the degree of certainty of the reasons behind their decisions:

- *"Exercise **always** is a good thing"*
- *"Some aspects are **probably** derived from yoga, stretching, awareness, kinesthetic sense." "I've **always** wanted to know more about it."*

Past experiences

Prior exposure to modality resulted in either a positive or negative view.

- Positive past exposure, including good connection with a practitioner, limited adverse effects and lasting relief led to the participant choosing that modality.
 - *"I used to get massage through VA, six per year, deep Swedish style"*
- Negative exposure, such as temporary relief, adverse effects or perceived incompetence of the practitioner found participants less inclined to choose the modality
 - *"I've had good results with the small amount (of massage) I've had. My limited experience of chiropractic was negative so I wouldn't choose that."*

COVID-19 complications

Modified recruitment and protocol at the start of the pandemic to comply with Washington State guidelines.

Clinical partners had many priorities to juggle.

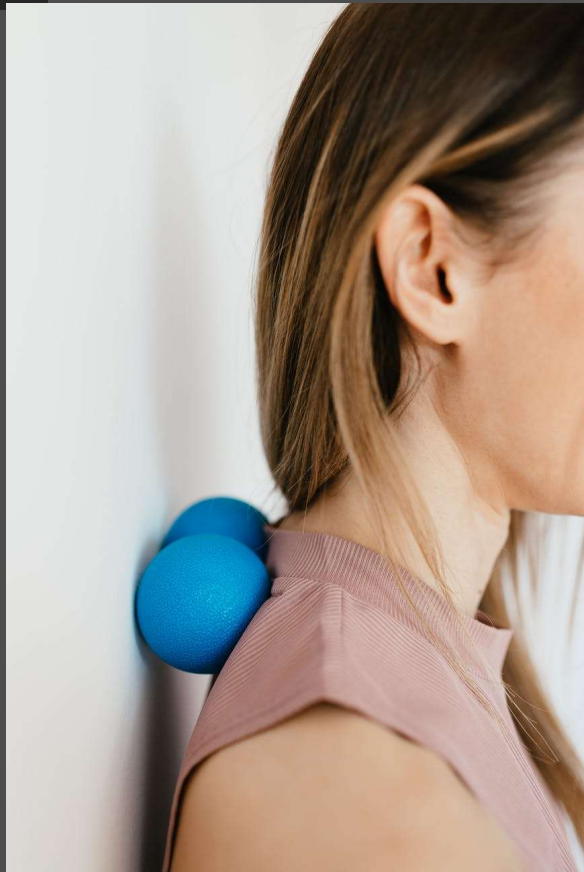
Barriers:

- Perception of effectiveness from participant, providers, and CIH practitioners
- Technological skills required to engage in telehealth for all involved
- Access and interest of population

Benefits:

- Convenience & efficiency for patient/ providers
- Reach populations in rural areas
- *"It's been difficult if not impossible to do yoga in a class,"* illustrating the barrier of the pandemic as well as location when searching for treatment options

Limitations and strengths



- Larger sample would provide more diverse perspectives
- Lack of diversity in race/ethnicity
- Not fully representative of the chronic pain population
 - Highly educated
- + Themes very consistent, theoretically-based
- + Excellent attendance! *Effects pending.*
- + Aligns with prior research - one's philosophy of illness and health care influences CIM decisions

(Corp et al., 2018)

Physical

Bio

Do you have any concerns about participating in this treatment?

I can't do the other things very well

Cognitions

Knowledge

Psycho

I don't know much about it

What do you know or believe about this treatment?

Do you have any past experience with this treatment?

My father had a table and gave me chiropractic all the time

Past

Social

Cognitions

Beliefs

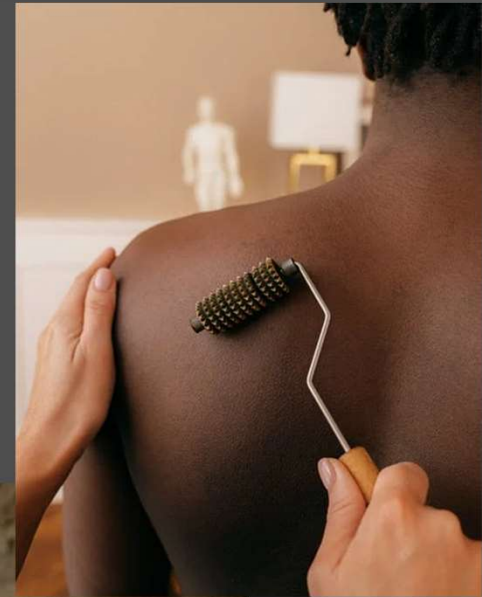
Spiritual

I've heard good things about yoga, it can't hurt



Barriers to CIH integration

- Lack of standardization in treatment dose and CIH application
- Variable training and credentialing of practitioners
- Duration of treatment and effects
- Costs – be creative, build community partners, local resources, offer in-house sessions
- Placebo/small effect – difficulty blinding sham conditions
- Risks may be underreported - appear minimal and less than traditional medical/surgical approaches



Clinical implications/conclusions

Non-pharmacological modality selection was influenced by perceived physical functioning/limitations, beliefs/knowledge on potential benefits, acquired knowledge and understanding from previous positive or negative experiences.

- Broaden perceptions and receptivity of treatment options based on current understandings and beliefs about treatments.
- Provide education and resources in an open shared decision-making discussion.
- Follow therapeutic communication guidelines to establish trust and exchange *ideas without judgement or perpetuating stigma* around the use of opioids and chronic pain.
- Maintain a holistic approach including biopsychosocial-spiritual aspects of pain care.
- Create a positive pain management environment
- Assess and reflect on preconceived notions and biases of the care team

CDC guide for effective communication for people with chronic pain

1. Development of treatment goals that **both** clinicians and patients can agree on
 - a. Options not in line with one's expectations or beliefs can create challenges and conflicts
 - b. CDC recommends ***empathizing*** while presenting benefits of suggestion along with evidence behind therapies.
2. Discuss risks and benefits of continued opioid therapy.
 - a. Learn the **patient's preferences and values**
3. Frequently evaluate – recommended every 1 to 4 weeks after any changes and every three months if stable



Non-pharmacological options

Traditional medicine

- Acupuncture
- Homeopathy
- Chinese herbs
- Indian (Ayurvedic)

Mind-body interventions

- Yoga
- Tai chi
- Meditation
- Cognitive behavioral therapies
- Relaxation
- Music
- Art
- Prayer
- Biofeedback

Manipulative/ Body Based

- Chiropractic
- Osteopathic
- Physical therapy
- Massage

Natural/Biologic Based

- Nutrition
- Diet/Weight loss
- Supplements
- Herbals

Multiple mechanisms

Acupuncture

- Affects neurotransmitters (adrenaline, dopamine)
- Endorphins (activate opioid receptors reduce pain/stress)
- Alters pain attention and memory in both central and peripheral nervous system
- Activates chemicals in inhibitory descending pathway including opioids, serotonin, noradrenaline
- May improve depression

Mind-body interventions

- Relaxation response reduces emotional/stress response to pain – calms sympathetic nervous system (flight/fight)
- Many can be applied as self-care, activate endogenous opioids
- Affect sensory cortex in pain evaluation, awareness, sensitivity
- Well-researched: yoga/tai chi/mindfulness/Cognitive Behavioral Therapy

Manipulative/ Body Based

- Chiropractic
- Osteopathic
- Physical therapy
- Massage – spinal cord
- Muscle stretching/strengthening body awareness/ positioning
- Spinal cord ascending – Transcutaneous Electrical Nerve Stimulation (TENS)

Natural/Biologic Based

- Vit D – anti-inflammatory - joint pain (periphery)
- Omega 3 fatty acids – anti-inflammatory joints and ascending spinal cord (central)
- Turmeric - spinal cord
- Alpha Lipoic acid – improves nerve blood flow for diabetic neuropathy
- Capsaicin topical – alters message from periphery to spinal column and brain stem
- Cryotherapy – decreases nerve ending sensitivity

Call to action: Pain Care Equity



American Society for Pain Management Nursing practice recommendations 2021:

- Safe and effective pain management regardless of SUD risk or history
- An integrated, holistic, and individualized approach to treating pain and SUDs.

American Medical Association (AMA) Substance Use and Pain Care Task Force 2021 Opioid Overdose Report:

- Rescind arbitrary laws/policies restricting access to multidisciplinary, multimodal pain care
- Require health insurance companies to make non-opioid pain care accessible/ affordable
- Emphasize social determinants of health.

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Spokane Regional Health District:

Project Managers: Heidi Wilson & Greg Dailey

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References

- American Medical Association (AMA). (2021). Opioid overdose report. <https://www.ama-assn.org/delivering-care/overdose-epidemic/physicians-progress-toward-ending-nation-s-drug-overdose-epidemic>
- Blake, H., Bermingham, F., Johnson, G., & Tabner, A. (2020). Mitigating the Psychological Impact of COVID-19 on Healthcare Workers: A Digital Learning Package. *International journal of environmental research and public health*, 17(9), 2997. <https://doi.org/10.3390/ijerph17092997>
- Chen, L., & Michalsen, A. (2017). Management of chronic pain using complementary and integrative medicine. *BMJ*, 357, j1284. doi: 10.1136/bmj.j1284
- Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic analysis. *Qualitative psychology: A practical guide to research methods*, 222-248. <https://doi.org/10.1037/13620-004>
- Corp, N., Jordan, J. L., & Croft, P. R. (2018). Justifications for using complementary and alternative medicine reported by persons with musculoskeletal conditions: A narrative literature synthesis. *PloS one*, 13(7), e0200879. <https://doi.org/10.1371/journal.pone.0200879>
- Darnall, B., Juurlink, D., Kerns, R. D., Mackey, S., Van Dorsten, B., Humphreys, K,...Lovejoy, T. (2019). International stakeholder community of pain experts and leaders call for an urgent action on forced opioid tapering. *Pain Medicine*, 20(3), 429-433. <https://doi.org/10.1093/pm/pny228>
- Delorme, J., et al., & TOXIDOL Study group (2021). Prevalence and characteristics of chronic pain in buprenorphine and methadone-maintained patients. *Frontiers in Psychiatry*, 12, 641430. <https://doi.org/10.3389/fpsy.2021.641430>
- Elman, I., & Borsook, D. (2016). Common brain mechanisms of chronic pain and addiction. *Neuron*, 89(1), 11-36. <https://doi.org/10.1016/j.neuron.2015.11.027>
- *All images free to use via www.pexels.com

References

- Higgins, C., Smith, B.H., Matthews, K. (2018). Substance misuse in patients who have comorbid chronic pain in a clinical population receiving methadone maintenance therapy for the treatment of opioid dependence, *Drug and Alcohol Dependence*, 193, 2018, 131-136. <https://doi.org/10.1016/j.drugalcdep.2018.08.038>
- John, W. S., & Wu, L. T. (2020). Chronic non-cancer pain among adults with substance use disorders: Prevalence, characteristics, and association with opioid overdose and healthcare utilization. *Drug and Alcohol Dependence*, 209, 1-9. <https://doi.org/10.1016/j.drugalcdep.2020.107902>
- Madera, J. (2020). Letter to CDC. <https://searchlf.ama-assn.org/undefined/documentDownload?uri=%2Funstructured%2Fbinary%2Fletter%2FLETTERS%2F2020-6-16-Letter-to-Dowell-re-Opioid-Rx-Guideline.pdf>
- Manhapra, A., & Becker, W. C. (2018). Pain and addiction: An integrative therapeutic approach. *Medical Clinics of North America*, 102(4), 745-763. <https://doi.org/10.1016/j.mcna.2018.02.013>
- National Center for Complementary and Integrative Health (NCCIH). (2021). <https://www.nccih.nih.gov/health/complementary-alternative-or-integrative-health-whats-in-a-name>
- Salari, N., Khazaie, H., Hosseini-Far, A., Khaledi-Paveh, B., Kazeminia, M., Mohammadi, M., Shohaimi, S., Daneshkhah, A., & Eskandari, S. (2020). The prevalence of stress, anxiety and depression within front-line healthcare workers caring for COVID-19 patients: a systematic review and meta-regression. *Human resources for health*, 18(1), 100. <https://doi.org/10.1186/s12960-020-00544-1>
- Tracy, D. K., Tarn, M., Eldridge, R., Cooke, J., Calder, J., & Greenberg, N. (2020). What should be done to support the mental health of healthcare staff treating COVID-19 patients?. *The British journal of psychiatry : the journal of mental science*, 217(4), 537-539. <https://doi.org/10.1192/bjp.2020.109>

References

- Turner, H., Oliver, J., Compton, P., Matteliano, D., Sowicz, T. J., Strobbe, S., St. Marie, B., **Wilson, M.** (2021). Pain management and risks associated with substance use: Practice recommendations. *Pain Management Nursing*. Epub ahead of print Dec. 26, 2021. <https://doi.org/10.1016/j.pmn.2021.11.002>
- U. S. Food and Drug Administration. (2019). 4.9.19 Drug Safety Communications. Retrieved September 17, 2021 from <https://www.fda.gov/media/122935/download>
- Volkow, N., Benveniste, H., & McLellan, A. T. (2018). Use and misuse of opioids in chronic pain. *Annual Review of Medicine*, 69, 451-465. <https://doi.org/10.1146/annurev-med-011817-044739>
- Ware, K. & Wilson, M. (2021). Influences on non-pharmacological pain management decision-making. Podium presentation, American Society for Pain Management Nursing's 31st Annual National Conference, Virtual Conference, September 2021.
- Wilson, M., Gray, E., & Bindler, R. (2021). Experiences of pain in adults receiving methadone for opioid use disorder. Podium presentation, American Society for Pain Management Nursing's 31st Annual National Conference, Virtual Conference, September 2021.
- Wilson, M., Finlay, M., Orr, M., Barbosa-Leiker, C., Sherazi, N., Roberts, M. L. A., Layton, M., Roll, J. M. (2018a). Engagement in online pain self-management improves pain in adults on medication-assisted treatment for opioid use disorders. *Addictive Behaviors*, 86, 130-137. <https://doi.org/10.1016/j.addbeh.2018.04.019>
- Wilson, M., Shaw, M. R., & Roberts, M. (2018b). Opioid initiation to substance use treatment: "They just want to feel normal." *Nursing Research*, 67(5), 369-378. <https://doi.org/10.1097/NNR.000000000000298>

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