Caring for people with chronic pain- Essentials

Ajay Manhapra

Section Chief, Pain Medicine, Hampton VA Medical Center, Hampton, VA

Lecturer in Psychiatry, Yale School of Medicine, New Haven, CT

Asst. Professor in PM&R and Psychiatry, EVMS, Norfolk, VA

Disclosures

- None
- These are my opinions and do not reflect VA policy in any way.

Objectives

At the end of this session, the participants will:

1. Be able to explain the basic definitions of chronic primary pain and chronic secondary pain and diagnose them in clinical practice.

2. Be able to easily verbalize the concepts of nociplastic pain, illness recovery, relief and reward and how they are integrated into the conceptualization of chronic pain and its management.

3. Have basic skills to organize comprehensive care for people with chronic pain

How to treat?

- A 62-year-old male had throat cancer in remission for 5 years after surgery, RT and Chemo
- Presents with debilitating chronic facial pain diagnosed as trigeminal neuralgia, throat pain, pain in the neck, shoulders, low back and knee. He is suicidal and completely homebound.
- Pain is uncontrolled despite oxycodone SA 40 MG 2 times daily with PRN short acting oxycodone 5 MG 4 times daily. Gabapentin 800 MG TID for trigeminal. Tylenol and aleve OTC. Injections for back
- Medical history- COVID 2 years back
- Psychiatric- Anxiety- clonazepam 1 MG QID and sertraline 200 MG daily
- No active SUD, quit smoking decades back

Essential questions in determining treatment

- What is the pain diagnosis for this person?
- What clinical type of pain is this person experiencing?
- Why is the body making this pain experience?
- What are the causal drivers of this pain experience?
- Why does pain get worse with pain management?

What is the pain diagnosis for the patient?

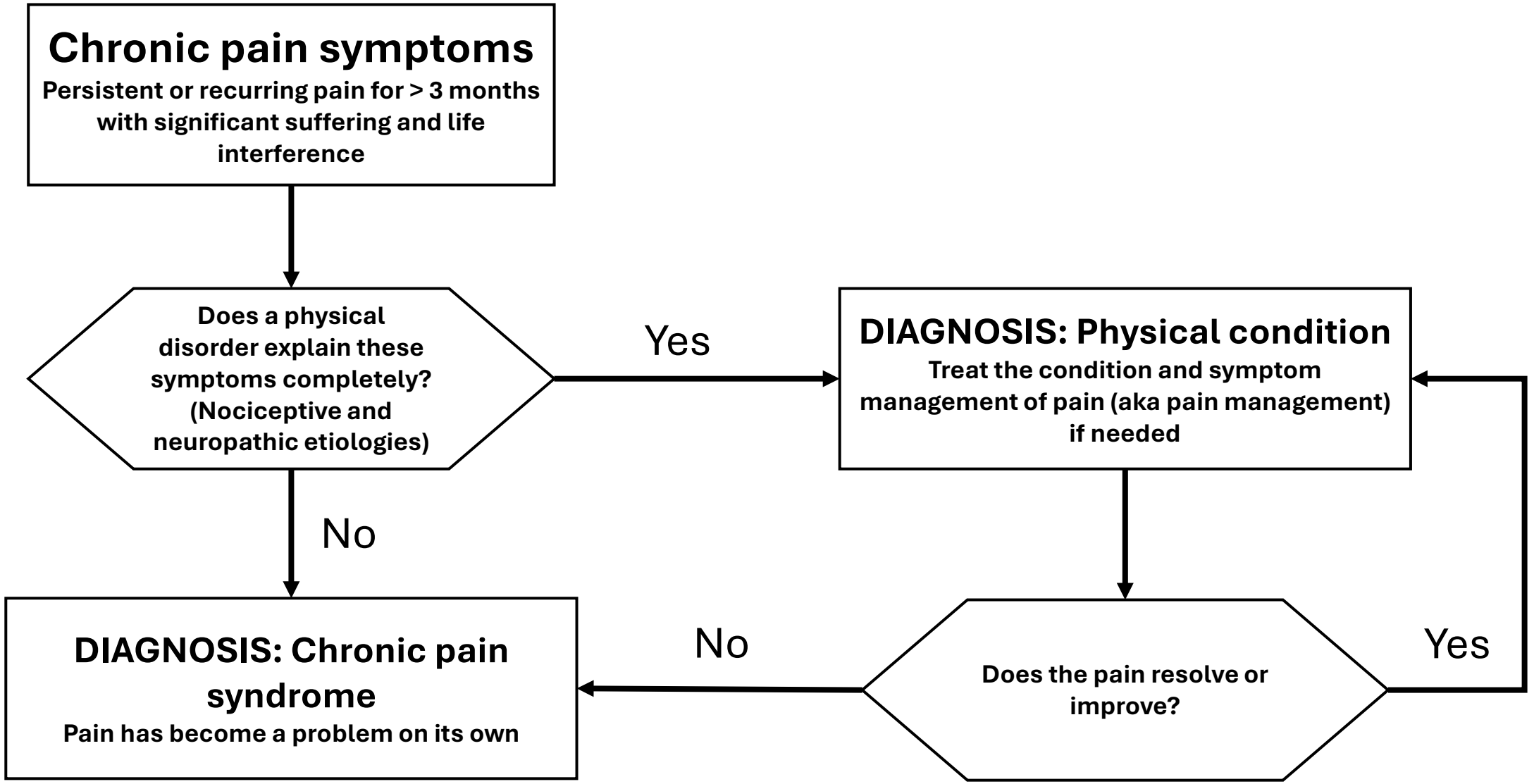
Chronic pain is a pain that persists or recurs for more than 3 months

Treede et. al. PAIN 2019

A chronic pain syndrome diagnosis

means that the “real” “physical” pain has become a separate problem on its own and is not a symptom of some other physical disease, even if the pain started as a symptom of another disease.

Adapted from Treede et. al. PAIN 2019



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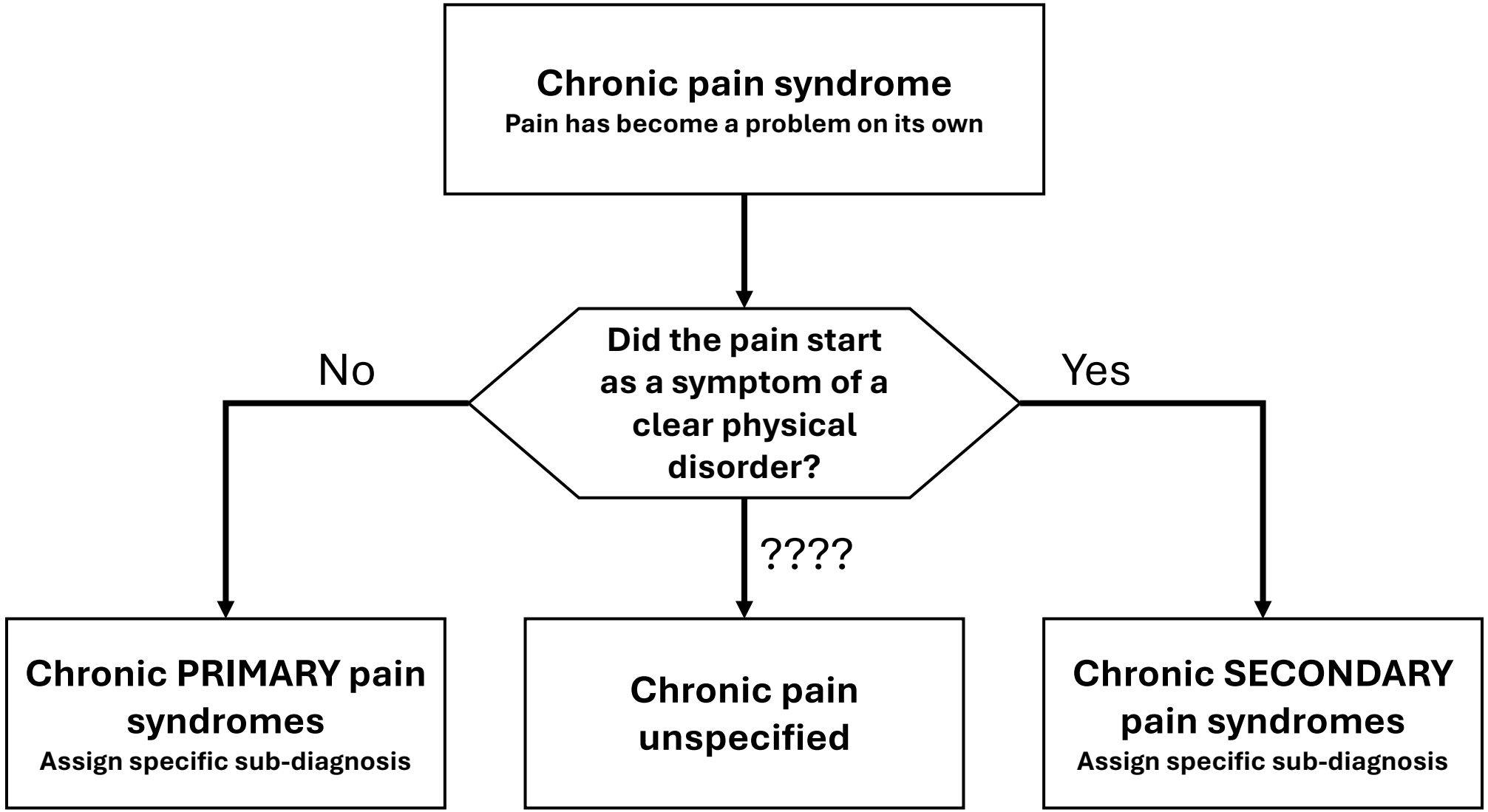


Based on Treede et. al. PAIN 2019

Chronic Primary Pain	Chronic Secondary Pain
Chronic widespread pain syndromes *(fibromyalgia)*	**Chronic cancer related pain** **Chronic postsurgical or posttraumatic pain**
Complex regional pain syndrome *(type I)*	**Chronic neuropathic pain**
Chronic primary headache or orofacial pain *Chronic migraine, chronic tension headache, Trigeminal autonomic cephalalgias, chronic temporomandibular disorder pain, chronic burning mouth, chronic orofacial pain*	**Chronic secondary headache or orofacial pain**
Chronic primary visceral pain *Chronic primary chest pain syndrome, chronic primary epigastric pain syndrome, irritable bowel syndrome, chronic primary abdominal pain syndrome, chronic primary bladder pain syndrome, and chronic primary pelvic pain syndrome*	**Chronic secondary visceral pain**
Chronic primary musculoskeletal pain (other than orofacial) *Chronic primary cervical pain, chronic primary thoracic pain, chronic primary low back pain, and chronic primary limb pain*	**Chronic secondary musculoskeletal pain**

Treede et. al. PAIN 2019

No specific mention of chronic pain among cancer survivors

Bennett et.al. PAIN 2019

What is the diagnosis?

- A 62-year-old male had throat cancer in remission for 5 years after surgery, RT and Chemo

Relevant history

- Patient had chronic pain involving neck, low back, shoulders, knee and diffuse pain for several decades before the cancer diagnosis. This worsened following the cancer diagnosis.
- During cancer treatment (chemo, surgery and RT) he developed new facial pain and throat pain with difficulty swallowing (radiation effect?). These pain persisted and worsened following the cancer remission.

Pain diagnosis

Non-ICD-11 diagnoses

- Trigeminal neuralgia
- Radiation therapy pain
- DJD of the neck
- DJD of low back
- DJD of shoulders
- Fibromyalgia?

ICD-11 based diagnoses

- Chronic primary widespread pain syndrome
  - Chronic primary musculoskeletal pain syndrome
- Chronic post-cancer treatment pain syndrome

What clinical type of pain?

What are the clinical types of pain?

- Nociceptive pain
  - From *actual or threatened damage to nonneural tissue* thru nociceptor activation
    - Pain occurring with a normally functioning somatosensory nervous system
- Neuropathic pain
  - Pain caused by a lesion or disease of the somatosensory nervous system
  - In dermatomal distribution of the nerve

- Nociplastic (centralized) pain
  - From changes in central nervous system pain generation mechanisms
    - Without activation of nociceptors or neural disease/lesion
  - Most common type in chronic pain

Non-nociplastic pain

Nociplastic pain

E. Kosek et al.PAIN 57 (2016) 1382–1386

Clinical criteria & grading for nociplastic pain affecting the musculoskeletal system

1. **Regional or widespread rather than discrete distribution**
2. **NOT *entirely* explained by nociceptive or neuropathic mechanisms**
3. **History of pain hypersensitivity-**

   Increased pain with: Touch or minimal pressure; Sit in a chair or stand for prolonged periods, Habitual moderate physical activities such as walking, Exercise, Exposure to cold/warm bath/shower, or cold/humid/warm weather, Life stress
4. **Objective evidence on clinical testing?!!**
5. **Defined comorbidities**
   - Hypersensitivity to sound, light, and odors
   - Disturbed sleep, fatigue, and cognitive problems.
   - Non-responsiveness to opioids, pain management, medical treatments, or surgeries

Kosek E et. al. *PAIN 2021 162 (11): 2629-34*

Sciatica Vs Chronic nociplastic back/leg pain

Waddell G et. al. BMJ 1984

What type of pain?

- A 62-year-old male had throat cancer in remission for 5 years after surgery, RT and Chemo

Relevant history

- MSK pains- widespread multi-site pain without much localization.
- Neck/facial pain- Diffusely distributed without any localization.
- Patient restless, constantly pacing, cannot sit or stand too long, weather change worsens pain, pain worsens with cold liquid and food, frequent numbness and tingling across the face and neck, fatigue, lethargy, lack of focus, distracted,
- Several other concurrent symptoms- anxiety, depression, insomnia, easily angered, irritated
- Confined to home because of pain, but can drive to see doctors or perform any other essential activities.

Why is the body making this pain experience?

What is this “Pain” that patients seek care for?!!-

A concurrent painful polysymptomatic experience - The “pain megillah”

Manhapra: PAIN March 2023; Eamon, Manhapra et. al. J Neurotrauma 2024

Why the pain megillah?

- *“Pain is a poor protector against injury…”*
- *“… pain signals .. a body state where recovery and recuperation should be initiated.”*

- Patrick Wall- John Bonica Annual Lecture; PAIN 1979

“Pain Megillah”: Healing response that self-terminates w/ recovery

Threats
Physical or non-physical with negative impacts on life

Recuperative Debility

Complex behavioral changes that initially restrict and then cautiously reinstate function

Assists healing, recovery & survival

Healing & Recovery

- **Recuperative debility resolves.**
- **New functional behaviors evolve**

Complex emotional, cognitive and motivational experiences are required to elicit, sustain and calibrate complex behavioral changes

Calibrates the pace of recovery

“Pain” resolves after sufficient healing & recovery

Manhapra: PAIN March 2023

Recovery based functional definitions

Pain

- A distressing polysymptomatic recovery response to threats that promotes healing through recuperative debility.

Acute pain condition

- Recovery response to threats that self-terminates with quick healing and functional recovery.

Chronic pain condition-

- A state of prolonged/stalled/interrupted recovery and healing response due to ongoing threats

Manhapra: Rethinking clinically significant pain: PAIN March 2023

What is healing and recovery?!

- An individual with an illness experiencing positive physical and/or psychosocial changes
  - Experienced differently by individuals
  - Involves physical, social, spiritual and social domains of life.
  - With healing- Distress and pain abates, and joy emerges.

- Decreased pain and increasing joy with just psychosocial healing even when physical condition deteriorates - Basic principle of hospice care
- Pain and suffering can can persist with physical healing when psychosocial recovery is incomplete

Adapted from Namisango et. al. Int. J. Environ. Res. Public Health 2023, 20, 1474.

Why is the body making this pain experience?

- A 62-year-old male had throat cancer in remission for 5 years after surgery, RT and Chemo

Relevant history

- He was a near-normally functional person before cancer
- His physical and psychosocial function declined during cancer diagnosis and treatment and has not recovered after successful treatment of cancer and its physical healing.
- In fact, the global function declined even further despite the healing of the physical disease of cancer.
- His psychosocial healing recovery from cancer is stalled- persistent painful polysymptomatic experience (apin megillah) to foster healing

What are the causal drivers of chronic pain experience?

The real question

- What are the causal impediments to the progression of psychosocial healing and recovery?

“Chronic pain is multifactorial: biological, psychological and social factors contribute to the pain syndrome.”

Treede et. al. PAIN 2019

Biopsychosocial model in chronic pain

- For **BIOMEDICAL** practice
- A **scientific BIOMEDICAL** model; NOT holistic or humanistic
- Replaces unscientific belief based (dogmatic) “biomedical model”
  - All illnesses can be explained by pathology of molecular systems in diseased organs agnostic of all other factors affecting the individual

Biopsychosocial model- simplified

- The illness is experienced by a person (not an organ)
- Illness experience is driven by several factors affecting the whole person and NOT just by disease/injury affecting the organs
- Factors affecting the whole person are heuristically classified into:
  - Biological
  - Psychological
  - Social

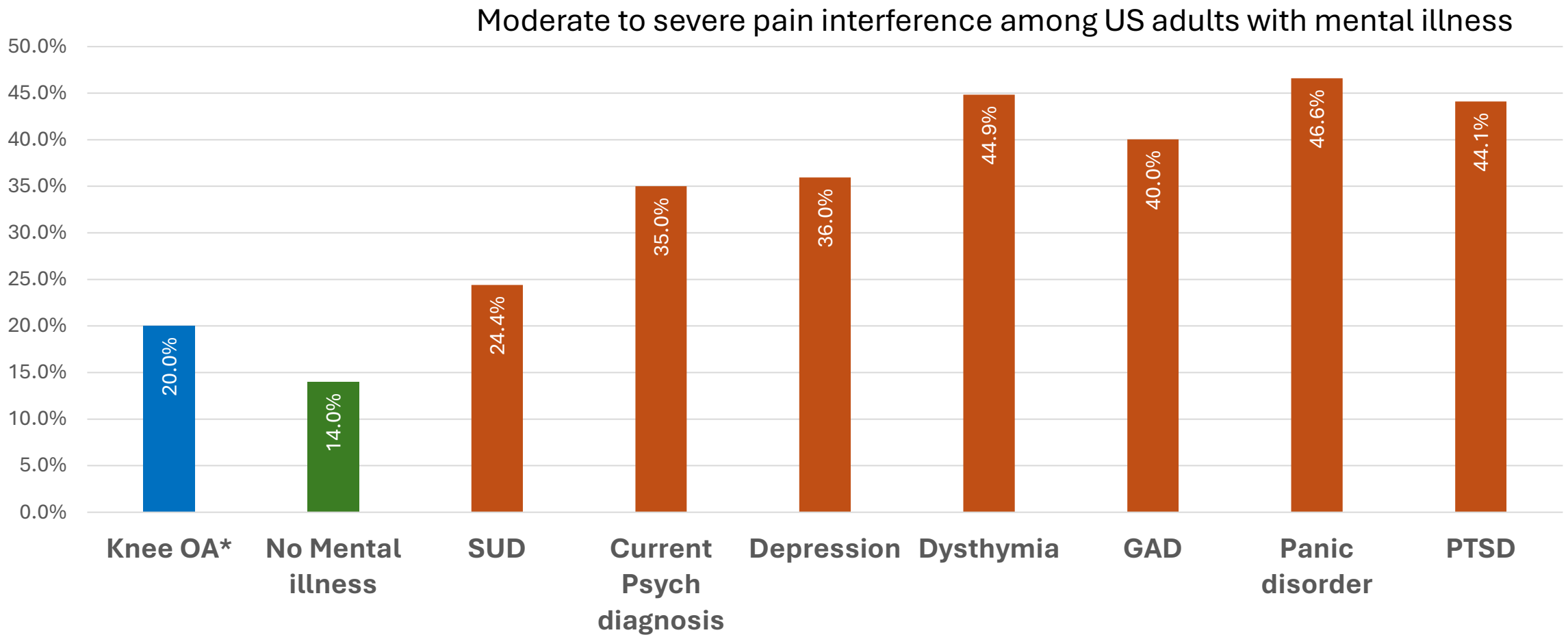
Nociplastic pain- What it means in practice?

“REAL” “PHYSICAL” pain can be caused by non-physical factors affecting the whole person.

Often more distressing and debilitating than non-nociplastic pain.

More common in clinical practice than non-nociplastic pains

Substance use and psychiatric disorders: Nociplastic etiology of chronic pain!



**Any knee pain among people with Radiographic knee OA- Osteoarthritis and Cartilage 21 (2013) 1145e1153*

Manhapra et. al. multiple manuscripts

Nociplastic pain- What it means in practice?

The causes of pain can be classified as potentially nociplastic and potentially non-nociplastic

Potentially Nociplastic

- Biological vulnerabilities (age, race, gender, SES, etc.)
- Psychiatric disorders (PTSD, depression, anxiety, etc.)
- Substance use and substance use disorders
- Complex medical illnesses like COPD, CHF, Diabetes, TBI, Renal failure, Cancer burden, neurodegenerative disorders, etc.
- Iatrogenic augmenters- failed treatments of physical disorders, failed pain management, medication and pain management overuse with dependence, polypharmacy, etc.
- Psychological factors
- Social stressors

Potentially Non-Nociplastic

- Physical trauma
- Post-surgical
- Cancer related
- Neuropathic conditions
- Musculoskeletal conditions
- Inflammatory conditions

Pragmatic BPS risk model for clinical practice

Social factors (nociplastic)

Loss of self-identity, employment, relationships, and social roles

Stigma, racism

Life stressors

Community and cultural stressors

Healthcare access, quality and other related issues

Psychological factors (nociplastic)

Fear avoidance behaviors

Low pain self-efficacy

Pain catastrophization

Unhelpful beliefs/Fear of progression

Psychological inflexibility

Exaggerated defensive pain behaviors

Negative cognition, emotion, and thoughts

Biological factors

(nociplastic and non-nociplastic)

Non-nociplastic factors - MSK disorders, cancer, physical trauma, neuropathies, etc.

Nociplastic factors

- Biological vulnerabilities
- Psychiatric disease (PTSD etc.)
- Substance use & SUD
- Distressing medical disorders
- Iatrogenic augmenters

Chronic pain arises from the cumulative effects of several BPS risk factors over a life course

BPS risk model: Nociplastic biological risk factors (affects the whole person)

Biological vulnerabilities :

- Genetic factors, gender, socioeconomic and educational status, neurobiological traits, hormones, immune status

Distressing diseases

- Psychiatric disorders (e.g. PTSD)
- Substance use and SUD
- Severe acute illnesses with long-term sequalae (e.g. post-sepsis, post COVID)
- Burden of chronic medical illness: CHF, COPD, and more.

Iatrogenic augmenters

- **Overuse and failure pain management:** Pharmaceuticals, non-pharmacological, procedural, psychological & complimentary.
- **Medication dependencies:** Opioids, sedatives, benzodiazepines, gabapentinoids, muscle relaxants, stimulants, and psychoactive meds.
- **Polypharmacy:** Especially psychotropic
- **Failed curative treatment of pain:** Failed back surgery, failed joint surgeries, etc.
- **Branding as an “incurable” person**

What are the BPS drivers?

- A 62-year-old male had throat cancer in remission for 5 years after surgery, RT and Chemo

Relevant history

- Grew up in an alcoholic and abusive family and developed anxiety which worsened with stress of employment and life. He started having diffuse pain without any significant injuries or diseases within this context and worsened along with anxiety.
- Anxiety treated with benzo and started abusing. Stopped w/ treatment and pain worsened. Several pain mgt. failed.
- Continued to function despite pain till cancer diagnosis when the multi-site pain worsened and new facial, throat and neck pain emerged with severe debility.
- Both worsened after long-covid 3 years back and required increasing opioid, gabapentin and benzo doses. Pain, function and anxiety worsened with opioid, gaba and benzo dependence, but unable to come off because of increasing pain, anxiety and function.
- Severe fear of activity, especially outside his house related to anxiety and pain. Increased avoidance of activity associated with worsening pain. He believes he will not recover. So, reluctant to do recovery activities with pain.
- Stress makes pain worse

Biopsychosocial explanation

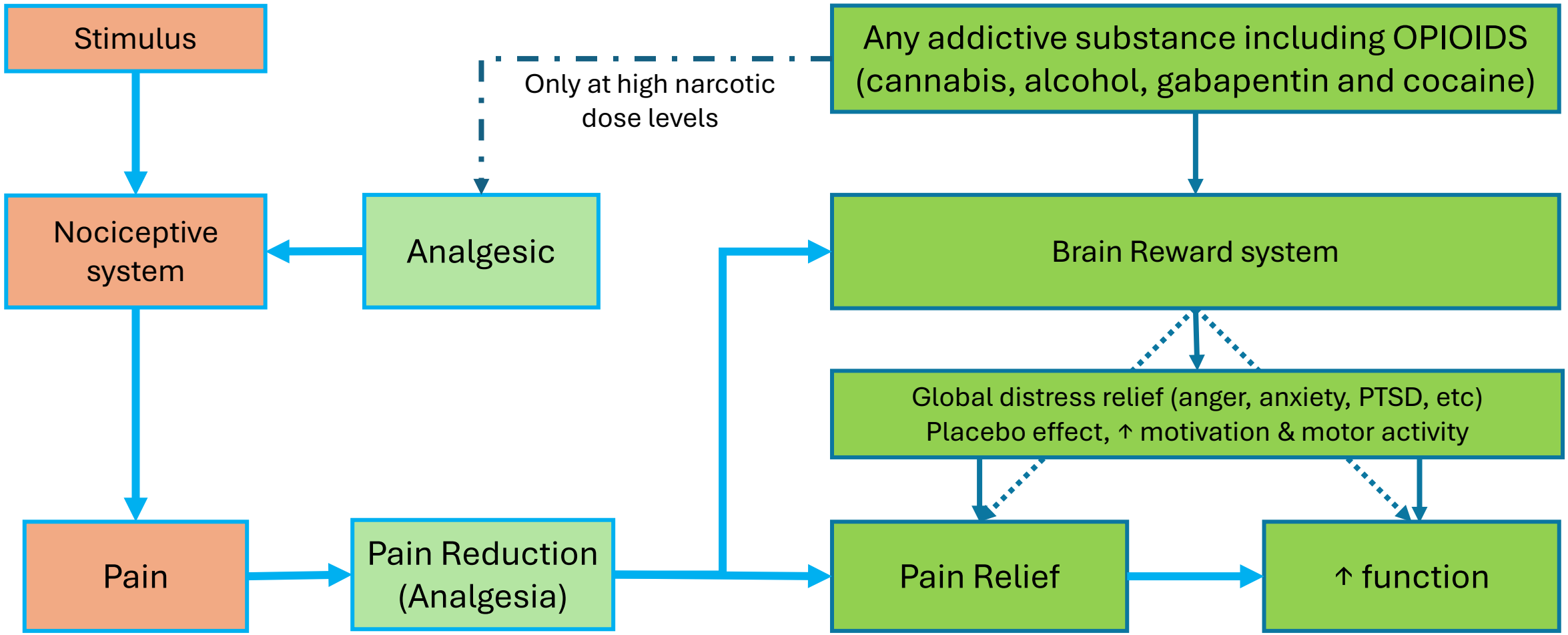
- Chronic primary widespread pain syndrome started with anxiety disorder related to adverse childhood events and military work stress
- Worsened with benzodiazepine dependence and protracted benzo withdrawal syndrome following benzo cessation (before cancer).
- Cancer related chronic orofacial pain syndrome and worsening of chronic primary widespread pain syndrome driven by psychological burden of cancer and its treatment, prognostic uncertainty and incessant worry of recurrence.
- Subsequent long-COVID, reemergence of severe benzo dependence with worsening anxiety, complex persistent opioid dependence, gabapentin dependence and several psychosocial stressors contributed.
- A firm belief endorsed by his healthcare providers that he has an irrecoverable physical condition is also significant.

Why is pain worsening with aggressive pain management?

Painful truth that is often ignored

- Improving function ***WITH THE PREVAILING PAIN*** is the only viable path to a life without persistent pain!!!
  - Pain management will not deliver "**lasting**" pain relief!!
  - Long-term pain mgt. often causes more pain!!!

Rethinking analgesia & relief

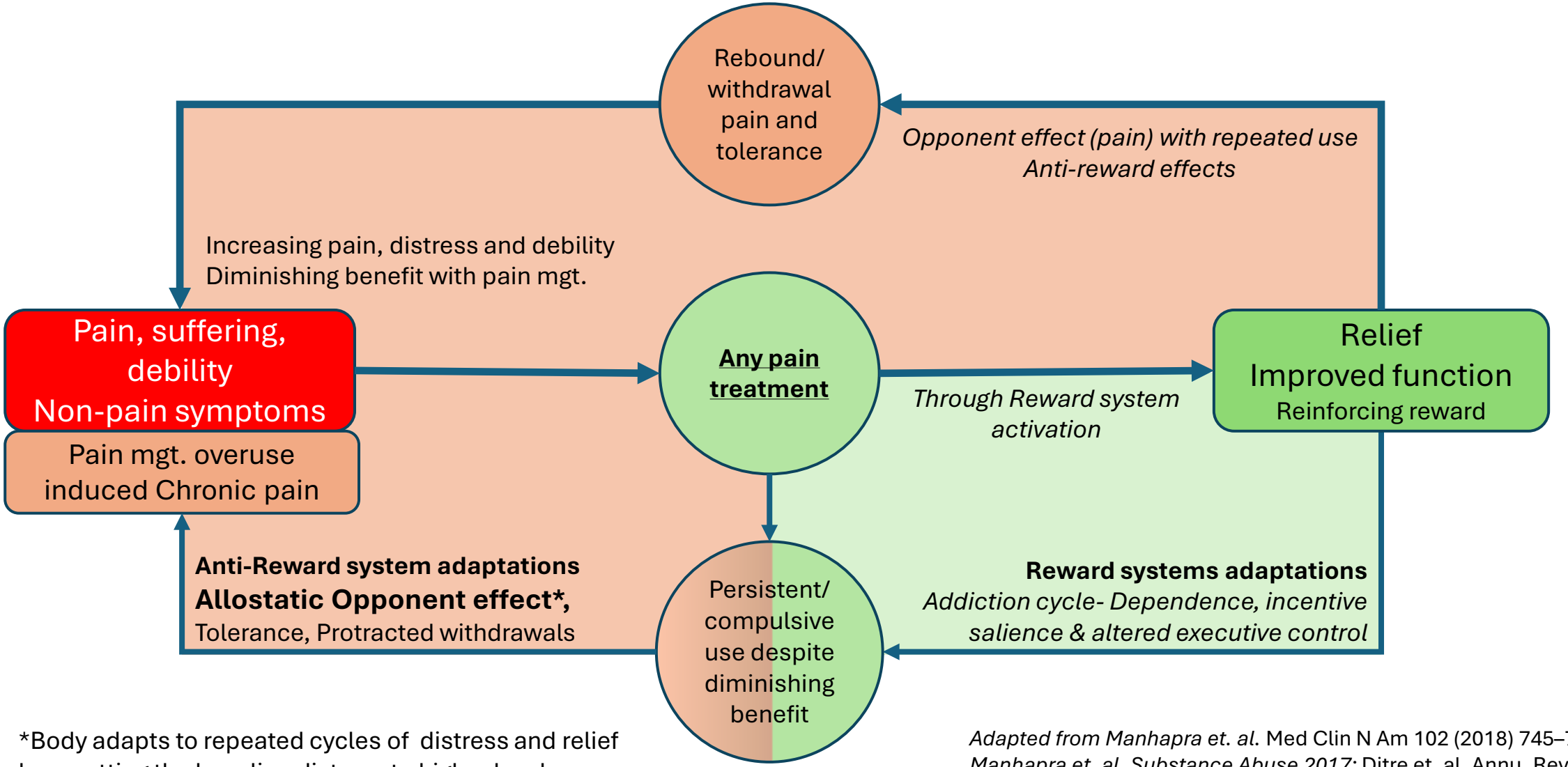


Analgesia- Absence of pain in response to stimulation which would normally be painful.

Relief- removal of distress

Manhapra, Arias, Ballantyne, Substance Abuse 2017

Repetitive pain management (relief) often worsens pain



*Body adapts to repeated cycles of distress and relief by resetting the baseline distress to higher levels

Adapted from Manhapra et. al. Med Clin N Am 102 (2018) 745–763; *Manhapra et. al. Substance Abuse 2017;* Ditre et. al. Annu. Rev. Clin. Psychol. 2019.15:6.1–6.26;

Treatment of chronic pain syndromes

Functional **R**ecovery **E**nabling **I**nter-**D**isciplinary **E**valuation and **M**anagement (FREIDEM) Model

Chronic pain syndrome- Essentials

- Pain is not a symptom of some other physical disease
- Other symptoms are part of the pain syndrome and not separate
- State of stalled healing and recovery
- Due to several nociplastic BPS factors over a lifetime
- Pain resolves with advancement of healing and recovery

Evaluation of people with chronic pain.

- Explanations not from physical exam, X-rays or MRIs
- BPS explanation from chronological/biographical history
  - What is the chronic pain diagnosis?
  - Who is this person with pain?
  - How did this person get to this state of debility?
  - What all BPS factors were involved at what time?
  - What all BPS factors are driving it now?

Treatment of people with chronic pain

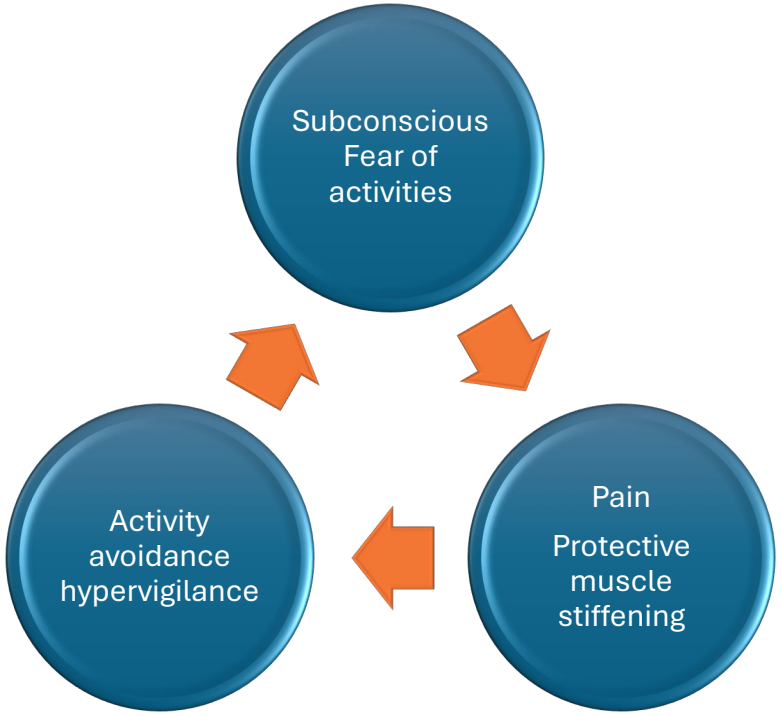
Essential components

1. Augmentation and acceleration of innate self-recovery
2. Mitigation of biopsychosocial impediments to recovery
3. Limited judicious use of pain management
    - Long-term pain management does not deliver healing and can cause paradoxical pain syndromes.

Treatment

1. **A goal-directed plan for self-recovery with prevailing pain and suffering**
   - **Options:** Graded exposure therapy, CBT, ACT, PRT, CFT, chiropractic care, complimentary integrative care with movement therapy
2. **Mitigation of biopsychosocial impediments to recovery**
   - Pain recovery education and coaching to help patients engage better
   - A plan to manage flare ups and psychosocial stressors
   - Lifestyle changes to support recovery
   - Enhance social support for recovery: family, peer, community etc.
   - **Integrative management of comorbidities**
3. **Judicious recovery-oriented pain management**
   - Only to assist initiation of self-recovery if needed.
   - Only for a short time (8-12 weeks) if needed. Bit longer w/ opioids, anti-depressants, etc.
   - Avoid long term-pain and symptom management.
   - Wean off pain management if dependent

Fear avoidance model for functional recovery



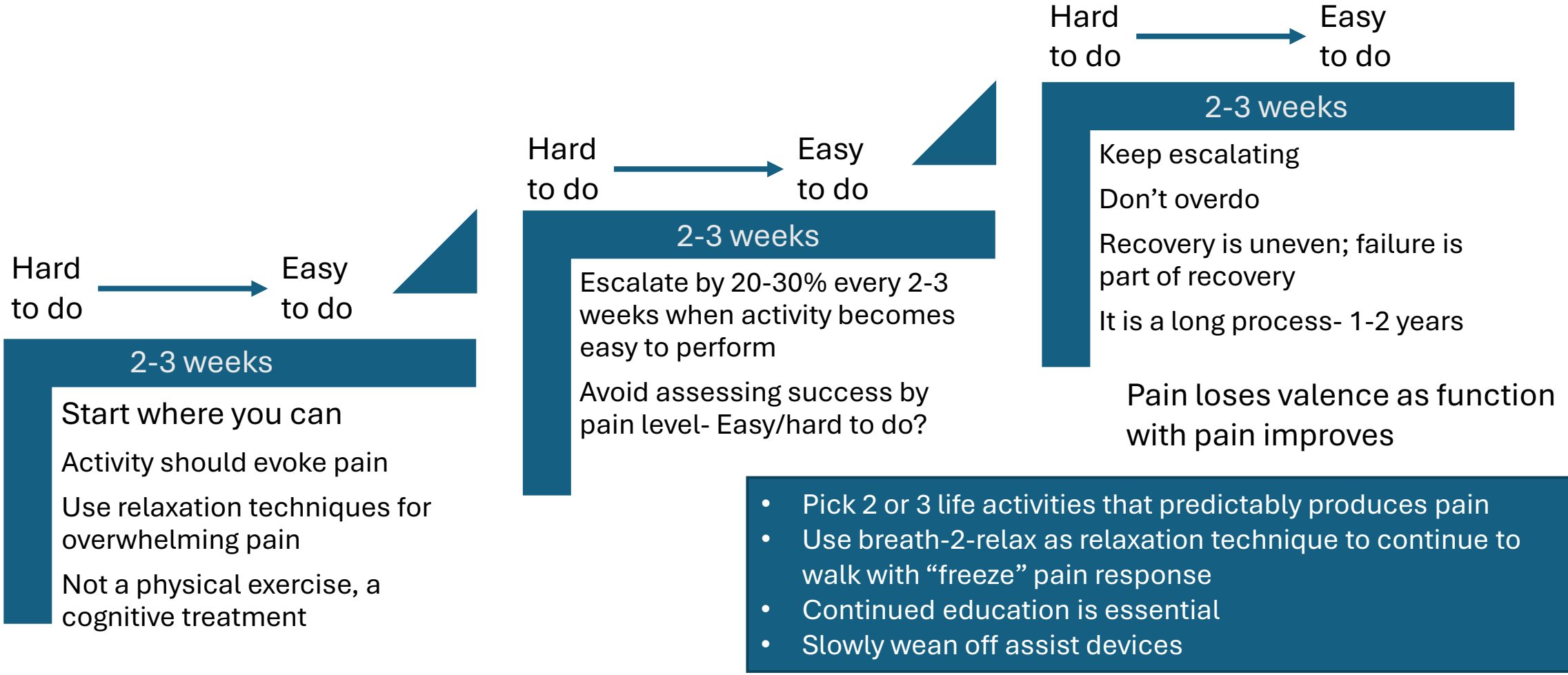
- Formal physical therapy often worsens pain and disability among patients with significant fear avoidance behaviors
- Graded exposure to painful activities in combination with relaxation techniques and recovery education

Boselie & Vlaeyen, Scand. J Pain 2017; Vlaeyen & Linton PAIN 2012

Functional **R**ecovery **E**nabling **I**nter-**D**isciplinary **E**valuation and **M**anagement (FREIDEM) Model

Plan to improve function with pain!

Graded exposure to painful non-essential activities + relaxation



- Pick 2 or 3 life activities that predictably produces pain
- Use breath-2-relax as relaxation technique to continue to walk with "freeze" pain response
- Continued education is essential
- Slowly wean off assist devices

Functioning well with pain flares

- Flares- Mostly non-pain symptoms & debility, not pain
- Flares are ‘normal’ expected events in c/c pain- Not new acute injuries
  - Self-remitting, no treatment needed
  - Physician and ER visits, X-rays and MRIs often worsens pain/disability and delays resolution
  - Short rest & early mobilization w/ pain
- Mostly due to non-injury factors
  - Unpleasant internal & external environments- weather, stress, emotions, etc.
  - Look at what has changed in life as explanation and not what is on X-rays
- Overactivity pain is normal (not new injury)
  - People with chronic pain have a lower threshold for overactivity pain
  - Don’t fear it or panic, expect it
  - Self-remitting, rest & recover

Integrative management of comorbidities

A 62-year-old male had throat cancer in remission for 5 years after surgery, RT and Chemo

- Complex persistent opioid dependence
- Benzo and gabapentin dependence
- Baseline anxiety disorder with panic
- Other issues
  - Change in belief about chronic pain – patient and providers
  - Deescalating specialist visits
  - Weaning off pain management
  - Deescalating and weaning off symptom management

Usual responses to FREIDEM model

“I already do most of this. You don’t think so?!”

Facts:

- Most providers do not have the transdisciplinary knowledge or the skills to translate such knowledge to clinical practice
  - Nociplastic chronic pain
  - Biopsychosocial model
  - Science of debility and functional recovery, and role of pain
  - Science of Relief and reward
- Unlearning the unscientific model is harder than learning the new scientific model
- Acceptance- A vulnerable state for the provider!

“You telling me I don’t know what I am doing?!”

- I am not ‘telling’ you anything

Fact:

- Clinical practice NOT consistent with current IASP chronic pain definitions and classification is likely of low value and harmful.

- Please don’t get mad at me!
- Get mad at people who taught us the inaccurate science!

Questions

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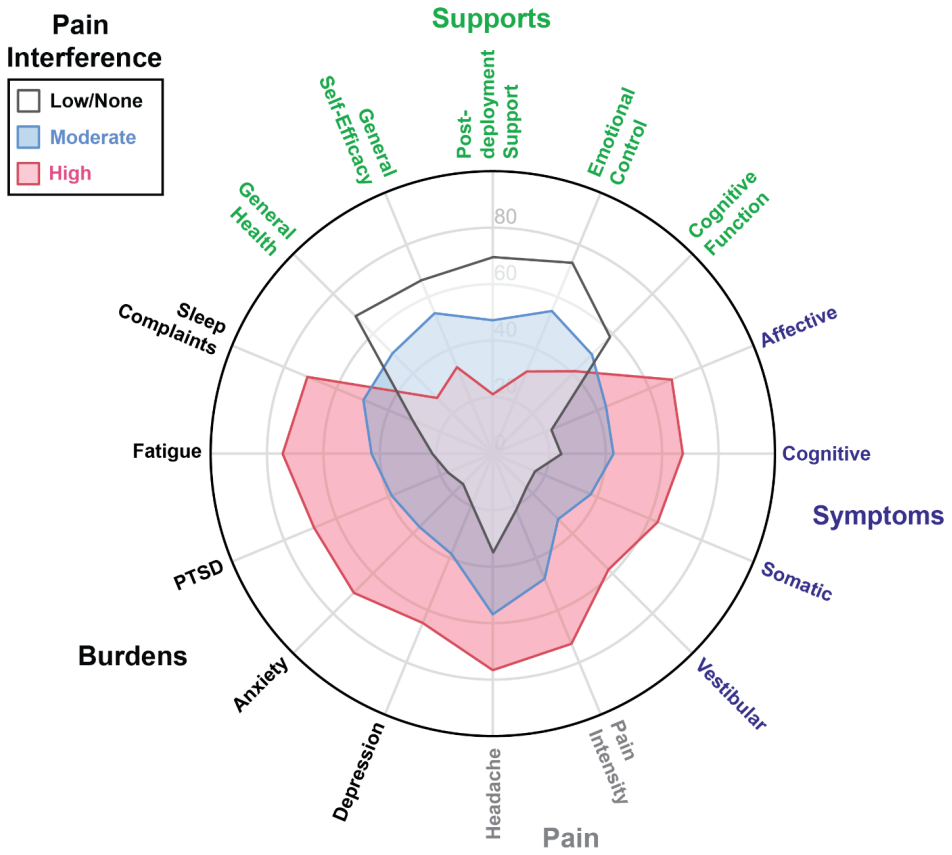
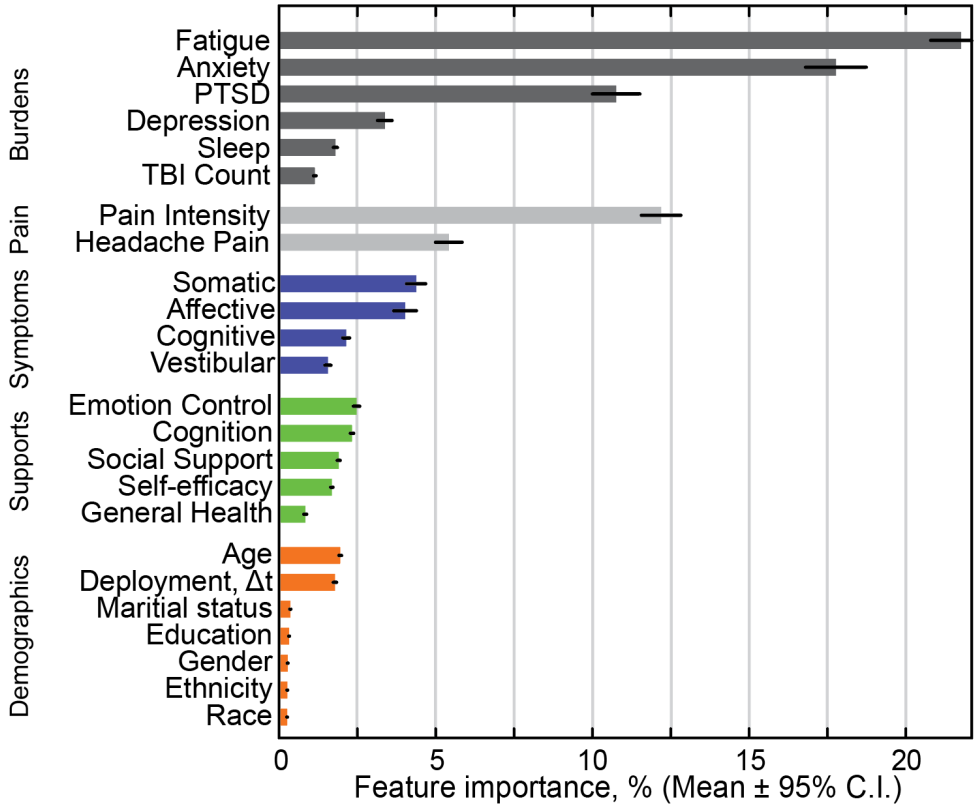
People w/ “pain”: Non-pain factors drive debility > pain!

Pain intensity is just one of the several impactful factors

Factors associated with Pain Interference among Combat Exposed US Service Members and Veterans



Predicting pain interference: Lot of factors are important, not just pain intensity



Eamon, Manhapra et. al. J Neurotrauma 2024

“Recuperative Debility” during recovery

Move and be functional to survive

Rest without movement to recuperate and survive

Essential functions allowed even though it can cause more pain

Balance based on the optimal level of debility and activity essential for survival and healing

Non-essential functions that potentially cause minimal pain are restricted

- Body allows 8 hours of physical work that is potentially severely painful to make a living
- Can walk across the parking lot and the building to see the provider

- Unable to do chores or get off the recliner and go for a walk at home, activities that are potentially much less painful.

Recuperative debility

- Not a strength or alignment problem
- A problem of unconscious motivations
- Standard physical therapy is often ineffective
- Functional interventions should target the ability to perform activities with pain and distress, overcoming motivational restrains

Essential knowledge to evaluate & treat people with chronic pain

- Function of pain for the body- functional definition
- Pain relief and consequences of repetitive pain relief seeking
- Clinical types of pain- nociplastic pain
- ICD-11/IAPSP diagnostic classification of chronic pain syndromes
- Biopsychosocial model of chronic pain
- Integrative evaluation and treatment model

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