Multi-dimensional Pain Assessment

MiCCSI

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Disclosures

- Consultant to Community Health Focus Inc.
- President of the American Pain Society
- Chair of Steering Committee reviewing grants for APS sponsored by Pfizer
- Funded for research by NIH

There will be no use of off-label medications in this presentation.
Multi-Dimensional Pain Assessment

- Documents targetable elements of chronic pain perception
- Monitors chronic pain perception over time
- Helps phenotype pain for research
Persistent Pain Complaint

History/Physical

Red Flags
Specialist Referrals

Diagnosis

Investigations

Multi-Dimensional Needs Assessment, Improvement Goals, & Treatment Planning

Education

Self-Management

Multicomponent CBT
- Mood, Function
- Coping, sleep, pain

Pharmacotherapy
- Severe Pain
- Sleep

Fitness
- Function
- Pain

Other Therapies
- Massage
- Hydrotherapy

Monitor Symptomatic Change

Not improving

Repeat Needs Assessment

Specialist Referral

Improving

Regular Review / Pt. centric care

Adapted from Macfarlane et al. Ann Rheum Dis, 2017;76:318-328; Lee, et al., BJA 2014; 112:16-24; Peterson et al, VA ESP Project #09-199, 2017
Shared Neurotransmitters Explain

- The complexity of chronic pain presentation
- **Sleep, Pain, Affect, Cognition, Energy**
- New targets for treating pain perception

Traditional Pain Assessment

Pain
- Intensity
- Location, Quality
- Distribution
- Temporality

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
Intensity

Brief Pain Inventory

**EMA Pain**

**Ex: Pain Diary**

**MONITORING PAIN DIARY**

**Instructions:**
1. Keep a record of any pain you experience during any of the following periods with a 7 day diary.
2. Record how intense your pain was by rating it on a scale of 1 to 10 (1 = not very painful to 10 = highly painful).
3. Record what you were doing or the situation you were in when you experienced the pain.
4. Record your thoughts at the time of experiencing the pain.

This will help you to develop more awareness about your experiences of physical pain to help you identify strategies and techniques to help manage pain.

<table>
<thead>
<tr>
<th>DAY</th>
<th>Brief description of type of pain</th>
<th>RATE 1-10</th>
<th>Situation/What you were doing</th>
<th>What you were thinking at the time</th>
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Domains of Pain Assessment

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
Sleep

• Sleep Disturbances
  • PROMIS
  • MOS
  • PSQI

• Sleep-related Impairment
  • PROMIS

Focal vs Wide-Spread Pain

- **Body Maps**
- **Assess for local Vs. Wide-spread pain**
- **In IC, only 19% focal**

Fibromyalgia-ness

Fibromyalgia Symptoms (Modified ACR 2010 Fibromyalgia Diagnostic Criteria)

1. Please indicate below if you have had pain or tenderness over the past 7 days in each of the areas listed below. Check the boxes in the diagram below for each area in which you have had pain or tenderness. Be sure to mark right and left sides separately.

   - No Pain
   - Left
   - Right
   - Shoulder
   - Upper Arm
   - Lower Arm
   - Abdomen
   - Hip
   - Upper Leg
   - Lower Leg

2. Using the following scale, indicate for each item your severity over the past week by checking the appropriate box.

   - No problem
   - Slight or mild problems: generally mild or intermittent
   - Moderate: considerable problems; often present and/or at a moderate level
   - Severe: continuous, life-disturbing problems

   - Fatigue
   - Trouble thinking or remembering
   - Waking up tired (unrefreshed)

3. During the past 6 months have you had any of the following symptoms?

   - No
   - Yes
   - Pain or cramps in lower abdomen
   - Depression
   - Headache

4. Have the symptoms in questions 2-3 and pain been present at a similar level for at least 3 months?

   - No
   - Yes

5. Do you have a disorder that would otherwise explain the pain?

   - No
   - Yes

FDC, fibromyalgia diagnostic criteria

Fibromyalgia-ness:
• WPI+SS ≥ 13 cut point
Affect and Chronic Pain

IASP Definition of Pain:
An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.

Affective Vulnerability:
Highly predictive of first onset of chronic pain (e.g., TMD).

Neuroimaging Findings:
Compared to acute pain, chronic pain appears more like an emotional event than a sensory event.

Negative Affect

- Depression/Dysphoria
  - CES-D\(^1\)
  - PHQ-9\(^2\)
  - PROMIS\(^3\)

- Anxiety
  - STAI\(^4\)
  - GAD-7\(^5\)
  - PROMIS\(^3\)

- Anger
  - STAXI\(^6\)
  - PROMIS\(^3\)

Positive Affect / Resilience

- Positive/Negative Affect
  - PANAS
- Affect Balance
- Hardiness
- Grit
  - Short Grit Scale
- Optimism
- Determination/courage

- Satisfaction with life
  - SWL
- Benefit Finding
- Gratitude
- Forgiveness
- Subjective Well-being
  - SWBS
- PROMIS Affect/Well-being
- Sense of Coherence

**Dyscognition**
- Perceived Problems
  - MASQ⁴
  - MISCI⁵

**Fatigue**
- Multidimensional Fatigue
  - MFI⁶
  - PROMIS¹


Domains of Pain Assessment

Adapted from Williams, DA. Curr Opin. Urol. 2013;23(6) 554-9
Medical History
• Demographics
• Co-morbid medical conditions
• Current Treatments
• Medical History
• Family History

Trauma/Stress
• Trauma
  • CTES/RTES\(^7\)
• Stress
  • PSS\(^8\)

Personality
• 5 Factor Model
  • Neuroticism
  • Extroversion
  • Openness
  • Conscientiousness
  • Agreeableness
• IPIP\(^9\)
• TIPI\(^10\)


Domains of Pain Assessment

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Pain Beliefs

- Multi-component
  - SOPA¹
  - PBPI²
  - BBCA³
- Locus of Control
  - BPCQ⁴

Coping Resources

- Coping Strategies
  - CSQ⁵
  - CPCI⁶
- Catastrophizing
  - PCS⁷
- Self-Efficacy
  - PSE⁸

Expectancies

- Treatment Expectancy and credibility
  - TEC⁹


**Functioning**
- Multidimensional Functioning
  - SF-36¹
  - WHO-DAS 2.0²
- Pain Interference
  - BPI³ (interference)
- Disability
  - PDI⁴

**Pain Behaviors**
- PROMIS⁵

**Fear Avoidance**
- TSK⁶

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Substance Use

- Tobacco
  - FTFQ
- Alcohol
  - CAGE
  - AUDIT
- Opiates
  - ORT
  - COWS
- Illicit Drugs
  - DAST

Domains of Pain Assessment

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**Social**
- Multicomponent Social Functioning
  - WHYMPI\(^1\)
- Social Enfranchisement
  - PE\(^2\)

**Family**
- Dyadic Adjustment
  - DAS\(^3\)

**Work**
- Work Productivity/Impairment
  - WPAI\(^4\)

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**Family**: \(^3\)Spanier GB. The measurement of marital quality. J Sex Marital Ther

Domains of Pain Assessment

- Pain Intensity
- Location, Quality
- Distribution
- Temporality

Historical Experiences
- Medical history
- Coping Resources

Cognitive Response
- Pain
- Intensity
- Location, Quality
- Distribution
- Temporality

Behavioral Response
- Affect
- Coping Resources
- Environmental Influences
- Social
- Family
- Friends
- Pain interference
- Expectancies
- Self-Efficacy
- Risky Behaviors
- Sleep
- Energy
- Personality
- Family History
- Locus of Control
- Fear Avoidance
- Catastrophizing
- Trauma
- Demographics
- Beliefs
Do we need to assess everything?
How to ERASE  S.P.A.C.E.

Emotions
Reflections
Actions
Sleep
Environment

Sleep, Pain, Affect, Cognitive changes, Energy deficits
Targets

- Self-Management
  - Behavioral Sleep Strategies
  - Pacing
  - Social

- Physical Therapy
  - Functional status

- Cognitive Behavioral Therapy
  - Anxiety
  - Beliefs