Understanding the Psychological Components of Pain

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International Association for the Study of Pain
IASP
Working together for pain relief

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Psychosocial Aspects of Chronic Pelvic Pain

Pain is universally common, and can be essential for survival (i.e., warning signals) and facilitating medical diagnoses. This complex manifestation of sensory, emotional, and thought processes can lead to pain behaviors. Pain is a motivating factor for physician consultation and for emergency department visits and is regarded as a cause of almost one-third of primary care evaluations. Pain has been defined as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage." In part, pain is a sensory experience that varies in its severity and life impact according to the individual's subjective meaning, associated with a pain situation, his or her emotional response, the situation given to the pain, and other personal appraisals. Indeed, the biopsychosocial model for pain proposes that biological aspects of chronic illness (changes in organs, joints, or nerves) have multifunctional relationships with psychological factors (emotionalizing) and with the social context for individuals, in view of their specific interpersonal relationships.

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- The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
  - Umbrella term "Urologic Chronic Pelvic Pain Syndrome"
  - Pain syndromes associated with the male and female pelvises (2007).

Bladder Pain Syndrome/Interstitial Cystitis (BPS/IC)

Chronic Prostatitis/Chronic Pelvic Pain Syndrome (CP/CPPS)

Mapping of Pain Phenotypes in Female Patients with Bladder Pain Syndrome/Interstitial Cystitis and Controls

Dean A. Tripp, J. Curtis Nickel, Jennifer Wong, Michel Pontari, Robert Moldwin, Robert Mayer, Lesley K. Carr, Ragi Doggweiler, Claire C. Yang, Nagendra Mishra, Jorgen Nordling

Queen's University, Kingston, ON, Canada; Temple University, Philadelphia, PA, USA; Hofstra University School of Medicine, New Hyde Park, NY, USA; University of Rochester, Rochester, NY, USA; University of Toronto, Toronto, ON, Canada; University of Tennessee, Knoxville, TN, USA; University of Washington, Seattle, WA, USA; Jivraj Mehta Hospital, Ahmedabad, India; University of Copenhagen, Herlev, Denmark
<table>
<thead>
<tr>
<th>Controls</th>
<th>BPS/IC ONLY</th>
<th>BPS/IC+ (1-3)</th>
<th>BPS/IC+ (4-9)</th>
<th>BPS/IC (10+)</th>
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</table>

![Diagram](image)
Summary...

• BPS/IC patients are varied in presentation, with active pain-location phenotypes

• Patient pain phenotypes are associated with physical & mental disability, and depression.

What Helps and Why?
Predicting Patient Outcomes in Bladder Pain Syndrome/Interstitial Cystitis (BPS/IC) with Pain Appraisals & Behavioural Coping Strategies

Dean A. Tripp*, J. Curtis Nickel, Jillian Mulroy, Laura Katz Kingston, Canada
Bladder Pain Syndrome/Interstitial Cystitis

Self-Regulatory Processes?

Coping [Behavioral illness-focused]

Coping [Cognitive]

Appraisals [Pain Cat]

Pain

Refactory urologic pain & voiding issues

Decreased QoL

Study Objectives

1: Identify aggregate factor structures from measures
2: Examine factors predicting both PCS & MCS QoL
3: Examine factors roles as mediators [Pain $\rightarrow$ QoL]

Aging $\rightarrow$ Better Driving

Aging $\rightarrow$ Increased Experience Driving $\rightarrow$ Better Driving
Method

- 190 female IC/BPS Patients
  - 9 clinic sites: NA, India, Denmark
  - Age: 21-89 years old [Mean: 49.8 (SD=14.83)]
  - Education greater than high school [n=144 (76%)]
  - Racial background: Primarily White [n=178 (93.7%)]

- Procedure:
  - Patients contacted; Completed an REB approved battery of questionnaires; Returned by Mail

Objective 1: EFA

<table>
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<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<td>CSQ Catastrophizing</td>
<td>.897</td>
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<td>-</td>
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<tr>
<td>PCS</td>
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<td>PBAPI Mystery</td>
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<td>SOFA Solicitude</td>
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<td>PBAPI Duration</td>
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<td>CPC I Asking for Assistance</td>
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<tr>
<td>CPC I Rest/Aviability</td>
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<tr>
<td>CPC I Supportive Behaviour</td>
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<td>CPC I Active Persistence</td>
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<td>CESD Positive</td>
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<td>CESD Interpersonal</td>
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<td>PBAPI Blame</td>
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Catastrophizing
Illness-focused Behavioral Coping
Cognitive Coping
Depression
**Objective 2: Physical QoL**

<table>
<thead>
<tr>
<th>Variable</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>R² Change</th>
<th>F Change</th>
<th>β</th>
<th>t</th>
<th>p</th>
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<td>.025</td>
<td>.18</td>
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**Objective 3: Physical QoL**

**Illness-Focused coping – mechanisms DRIVE the Pain → Physical QoL.**

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<th>Variable</th>
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Objective 2: Mental QoL

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<td>.223</td>
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</table>

Objective 3: Mental QoL

Catastrophizing Pain Appraisals Drive the Pain → Mental QoL.
Summary...

• New insights into mechanisms of pain and QoL relations in BPS/IC...

• Symptoms (pain) may be physically/mentally disabling through behavioural and cognitive mechanisms.

Understanding the Mechanistic Role of Pain Appraisals and Behavioural Coping Strategies between Pain and Quality of Life in Chronic Prostatitis/Chronic Pelvic Pain Syndrome (CP/CPPS)

Dean A. Tripp\textsuperscript{a}, J. Curtis Nickel\textsuperscript{b}, Adrijana Koljuskov\textsuperscript{c}, Daniel Shoskes\textsuperscript{d}, Michel Pontari\textsuperscript{e}, Mark S. Litwin\textsuperscript{f}, Mary F. McNaughton-Collins\textsuperscript{g}

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Study

• To identify: Appraisals & Behavioural coping strategies [Pain → Physical/Mental QoL]

• NIH CP/CPPS Cohort study in NA tertiary care centers (6-U.S., 1-Canada). (N=168)
  – Age M = 46.98 (SD=10.69)
  – 86.3% Caucasian
  – 79.8 Employed
Summary

• Illness-Focused coping, Helplessness pain appraisals & Support from Friends – mechanisms [drive or buffer Pain → QoL].
• Symptoms (pain) may be physically/mentally disabling through behavioural, cognitive and environmental mechanisms.
• Similar to BPS/IC findings.

Supported by NIDDK: U01 DK53752, U01 DK53730, U01 DK53736, U01 DK53734, U01DK53732, U01 DK53746, & U01 DK53738.

Understanding Suicidal Ideation in BPS/IC

Dean A. Tripp, J. Curtis Nickel, Michel Pontari, Robert Moldwin, Robert Mayer, Lesley K. Carr, Ragi Doggweiler, Claire C. Yang, Nagendra Mishra, Jorgen Nordling

Queen's University, Kingston, ON, Canada; Temple University, Philadelphia, PA, USA; Hofstra University School of Medicine, New Hyde Park, NY, USA; University of Rochester, Rochester, NY, USA; University of Toronto, Toronto, ON, Canada; University of Tennessee, Knoxville, TN, USA; University of Washington, Seattle, WA, USA; Jivraj Mehta Hospital, Ahmedabad, India; University of Copenhagen, Herlev, Denmark
Suicidal Ideation?

- BPS/IC patients report wide range prevalence’s for depression (5% to >50%) (Clemens et al., 2008; Goldstein et al., 2008; Koziol et al., 1993; Rothrock et al., 2008).

23% of cases reported suicidal ideation (n=44/190)

6% of controls reported suicidal ideation (n=7/117)

'thoughts that you would be better off dead, or of hurting yourself in some way'

not at all  
several days  
more than half the days  
nearly every day
Summary:

- 23% of women with BPS/IC symptoms endorsed having suicidal ideation in prior 2 weeks.
- Adding to prev & risk factors of SI in women with BPS/IC symptoms.
- Helplessness again as a predicto
Final Thoughts...

- decreased QoL
- coping [cognitive]
- illness-focused coping
- depression
- disability
- social support
- appraisal [help, rum, mag]
- pain
Thank you

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