DOES RELATIONSHIP STATUS AND QUALITY MODERATE DAILY RESPONSES TO PAIN IN WOMEN WITH CHRONIC PAIN?

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Burden of Chronic Pain

- Highly prevalent health condition
- Enormous societal costs: $560-635 billion/year
- Substantial individual costs: $4,475/year
- Psychological costs: Depression and anxiety

Institute of Medicine of the National Academies Report (2011)
What factors contribute to adjustment?

- Partnership status
  - Slower declines in functional disability over time
  - Fewer depressive symptoms

- Quality of the relationship
  - Non-distressed marriages
    - Lower distress and pain

- Partner’s responses to pain
  - More perceived spouse support
    - Increased disability
  - Solicitous spouse responses to pain behaviors
    - Increased disability

(Averill, Novy, Nelson, & Berry, 1996; Flor, Kerns, & Turk, 1987; Reese, Somers, Keefe, Mosely-Williams, Lumley, 2010; Romano et al., 1995; Ward & Leigh, 19930
Relationship Factors and Adaptation: Potential Mechanisms

- Social context influences responses to daily pain:
  - Affective
    - Negative Affect
    - Positive Affect
  - Cognitive
    - Pain catastrophizing
    - Pain coping difficulty

- Affective and cognitive responses linked to functional health

(Crombez, Eccleston, Van Hamme, & De Vlieger, 2008; Holtzman & Delongis, 2007; Jensen, Turner, Romano, & Karoly, 1991; Novy et al., 1995)
Study questions

1. Benefits for happily partnered vs. unhappily partnered and unpartnered?
   - Smaller pain-related increases in disability
Model

3 Partnership Groups
- Unpartnered
- Partnered – Low Satisfaction
- Partnered - High Satisfaction

Today’s Pain Flare

Today’s Disability
Study questions

1. Benefits for happily partnered vs. unhappily partnered and unpartnered?
   - Smaller pain-related increases in disability

2. Mediation of pain-disability benefit of happy partnerships?
   - Pain cognitions
   - Affective responses
Model

3 Partnership Groups
   Unpartnered
   Partnered - Low Satisfaction
   Partnered - High Satisfaction

Today’s Pain Flare

Today’s Disability
Model

3 Partnership Groups
Unpartnered
Partnered - Low Satisfaction
Partnered - High Satisfaction

Today’s Pain Flare

Today’s Pain Cognitions and Affect

Today’s Disability
Participants

- 251 women
  - Mean age = 57.33, range 37-72

- Pain diagnosis
  - Osteoarthritis (n = 103)
  - Fibromyalgia (n = 48)
  - Both (n = 100)

- Relationship Status
  - Living with a spouse/romantic partner: n = 145
  - Not living with a partner: n = 106
Method

I. Initial questionnaire

- Demographics, relationship status
- Modified version of Marital Adjustment Scale (Locke & Wallace, 1959)
  - Used to create 3 categorical groups:
    - 0 = unpartnered (UnP; n = 106),
    - 1 = partnered/low satisfaction (LowSat; n = 74)
    - 2 = partnered/ high satisfaction (HighSat; n = 71)
Method

II. Electronic daily diaries for 30 evenings

- **Pain:** 1-100 rating scale
- **Affect:** PANAS (Watson, Clark & Tellegen, 1988)
- **Catastrophizing:** CSQ (Keefe, Brown, Wallston, & Caldwell, 1989)
  - “Today, I worried about whether my pain would ever end.”
  - “Today I felt my pain was so bad I couldn’t stand it anymore.”

- **Pain coping difficulty:**
  - Rate difficulty to cope with pain at time of day when pain was worst.

- **Physical Disability:** SF-36 RP subscale (Ware & Sherbourne, 1992)
  - To what extent did you accomplish less than you would like due to your physical health?
Pain and Disability

- **LowSat**
- **HighSat**
- **UnP**

<table>
<thead>
<tr>
<th>Pain Level</th>
<th>Physical Disability (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Pain</td>
<td>47</td>
</tr>
<tr>
<td>High Pain</td>
<td>72</td>
</tr>
</tbody>
</table>

UnP = UnPartnered
LowSat = Partnered/Low Satisfaction
HighSat = Partnered/High Satisfaction

-1 SD
+1 SD
Pain and Catastrophizing

UnP = UnPartnered
LowSat = Partnered/Low Satisfaction
HighSat = Partnered/High Satisfaction
Pain and Pain Coping Difficulty

UnP = UnPartnered
LowSat = Partnered/Low Satisfaction
HighSat = Partnered/High Satisfaction

Pain Coping Difficulty (1-5)

UnP
LowSat
HighSat

Low Pain -1 SD
High Pain +1 SD
Pain and Negative Affect

UnP = UnPartnered
LowSat = Partnered/Low Satisfaction
HighSat = Partnered/High Satisfaction
Pain and Positive Affect

2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
Low Pain
-1 SD
High Pain
+1 SD
Positive Affect (1-5)
LowSat
UnP
HighSat
Mediation Results

- Positive affect, catastrophizing, and pain coping difficulty predicted change in disability

- Positive affect
  - Indirect effect = 0.02305 [95% CI 0.00263-0.04390]

- Catastrophizing
  - Indirect effect = 0.01546 [95% CI 0.00567-0.02653]

- Pain Coping Difficulty
  - Indirect effect = 0.04343 [95% CI 0.02656-0.06142]

- All mediators included
  - Cognitions remained significant mediators
  - Positive affect no longer remained significant
Conclusions

- On days of high pain, happily partnered women were less likely to:
  - Experience increased physical disability
  - Catastrophize about the pain
  - Feel the pain was difficult to manage

- Fewer maladaptive pain cognitions in response to increased pain helped happily partnered women better sustain physical functioning
Limitations

- Correlational
- Generalizability
- Measured overall relationship satisfaction rather than day-to-day changes
- Self-report
Implications

- When in pain, a supportive spouse may bolster one’s capacity to:
  - Use adaptive coping strategies
  - Preserve positive affect and physical functioning

- Possible implications for future interventions
  - Broadening treatment to include partner, other social supporters, teaching:
    - How to facilitate patient’s coping
    - How to respond empathically: relationship-focused coping
Acknowledgements

- This project was supported by NIAMS grant R01AR046034, PI: Alex Zautra
- Mary Davis, Ph.D.
- Alex Zautra, Ph.D.
- Arizona Health and Aging Lab
- ASU Department of Psychology
- ASU Graduate School
References


