The Effect of Catastrophizing on Pressure Pain

Fall 2010 Research Seminar
Bailey Bridges, Kate Campbell, Paige Forrester, and David Trant

Catastrophizing and Pain
- Coping method: Set of negative cognitions relating to pain
  - Higher levels have been found to be associated with higher levels of pain, disability, and depression
  - Most measures of Pain Catastrophizing ask people to rate their “General” level
  - Recent research has shown that “Specific” catastrophizing is more accurate
  - Never been manipulated

Catastrophic Worry
- researched mainly in anxiety disorders
- A series of “what if” statements
- Personal inadequacies
- People higher on catastrophic worry tend to ruminate more, generate more worries even with positive and neutral stimuli, magnify negative stimuli
- Manipulated by looking at content of stories

Current Line of Research
- Catastrophizing is supposed to be a coping strategy. This means that it should be malleable and respond to environment
- However, researchers have started to refer to it as a stable personality trait
- Previous research groups attempted with limited success to manipulate catastrophizing

Current Study
- Manipulation of Worry
- Pain

Current Study
- Manipulation of Worry
- Pain
- Change in Worry
- 64 Participants
  - 21 Male, 43 Female
  - Recruited from PSY 150 sections

- Worry
- Pain Catastrophizing - General

- Worry
- Pain
- Happy

- Related story based on condition
- Selected & highlighted 5 words
- Asked questions about words

- Focus on highlighted words
- Reassessment of pain
Participants
Surveys
Pre – Pain Assignment
Interview
Post – Pain

Assessment of specific worry about pain

Words Chosen

Number of Words Chosen

Pain
Positive Affect
Word Type
Negative Affect

VAS Scores for Light Weights

VAS Scores for Medium Weights

VAS Scores for Heavy Weights

VAS Scores for Extra-Heavy Weights

Mean VAS Scores for Heavy Weights

Mean VAS Scores for Extra-Heavy Weights
Specific Catastrophic Worry

Catastrophizing Score

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pain</th>
<th>Worry</th>
<th>Happy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean VAS Scores</td>
<td>0</td>
<td>*</td>
<td>*</td>
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</table>

Light Scores After Removing Specific Worry

<table>
<thead>
<tr>
<th>Time</th>
<th>Pain</th>
<th>Worry</th>
<th>Happy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
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<tr>
<td>Post</td>
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Medium Scores After Removing Specific Worry

<table>
<thead>
<tr>
<th>Time</th>
<th>Pain</th>
<th>Worry</th>
<th>Happy</th>
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<tbody>
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<td>Pre</td>
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<td>Post</td>
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Heavy Scores After Removing Specific Worry

<table>
<thead>
<tr>
<th>Time</th>
<th>Pain</th>
<th>Worry</th>
<th>Happy</th>
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<tbody>
<tr>
<td>Pre</td>
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<td>Post</td>
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Extra-Heavy Scores after Removing Specific Worry

<table>
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<tr>
<th>Time</th>
<th>Pain</th>
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In Summary

Manipulation of Worry → Pain → Change in Worry
**In Summary**

Manipulation of Worry  →  Pain  →  Change in Worry

**Relevance**

- Catastrophizing is not a stable personality trait.
- If catastrophizing can be manipulated, then methods of de-catastrophizing can be more effective for reducing pain and anxiety.

**Limitations**

- Need to better ensure participants were focusing on words
- Different populations (chronic pain, depressed individuals, etc.)
- Consistency in Pre/Post assessment of catastrophic worry about pain

**Summary**

- According to our results, catastrophizing can be manipulated in acute pain.
- This can be done by encouraging an individual to think about personal inadequacies related to pain.