Effects of Worry on the Perception of Pain

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Introduction

• Pain
  – Common experience
  – Often related to punishment

• Descartes’ theory
  – Mechanical system
  – Pain signal is an alarm
  – Injury = Pain
Introduction

- The Gate-Control theory
  - Gating mechanism in the CNS
  - Pain is modified and not equivalent to injury
  - Pain can be affected by psychological factors
    - Negative affect increases pain
    - Positive affect decreases pain
Introduction

• Catastrophic Worry
  – Definition of worry in general
  – Excessive worry directed into the future
  – Focused on personal inadequacies
  – Couched in “what-if” statements
  – Ruminative
    • Stop Rules
Introduction

• Hypotheses:
  – Increasing catastrophic worry about pain, will lead to increased pain
  – Differential effect depending on the type of worry
    • General worry versus Pain specific worry
Methods

• Sample
  – 39 Participants (16 males, 23 females)
  – Minimum of 6 months of persistent pain
  – Mean age 25.7 years (SD = 12.4)
  – Majority were Caucasian
  – Recruited from Wofford faculty, staff, students
  – Compensated for participation
  – IRB approval
Methods

• Questionnaires
  – Completed on-line
  – Demographics
  – Pain
  – Worry
  – Coping
  – Affect
Methods

- Forgionne-Barber
  - Pressure algometer
  - 4 weights (Light, Medium, Heavy, Extra Heavy)
  - Pre and Post interview
Methods

• Catastrophising Interview
  – Random assignment
  – Statue of Liberty
  – Current Worry
  – Pain
  – Measured steps and rumination
Results

- Analysis was a series of Repeated Measures ANCOVA
- Observation was that some individuals produced more steps than others.
- Used Number of Steps as a covariate to control for individual differences in worry
Results

![Graph showing light intensity over pre and post time with pain, worry, and statue categories]
Results

![Graph showing changes in Pain, Worry, and Statue over Pre and Post Time. The x-axis represents Time (Pre and Post) and the y-axis represents Pain (ranging from 0 to 5). The graph shows an increase in Pain and Statue and a decrease in Worry post-intervention.](image-url)
Results

![Graph showing changes in Pain, Worry, and Statue over Pre and Post time for Heavy condition.](image)
Results

Extra Heavy

- Pain
- Worry
- Statue

Time

Pre
Post

Pain
Results

Combined Weights

Pain
Worry
Statue

Time
Pre Post
Discussion

• Hypotheses
  – Increasing catastrophic worry will lead to increased pain
    • Results show some significant results
  – Differential effect depending on the type of worry
    • No significant effect for interview topic
Discussion

• Interesting results
  – Statue of Liberty showed greatest increase in pain
  – Why?
    • Novel worry topic
    • Other two were not novel
    • Effect of the interview on worry
Discussion

• Future research
  – More subjects
  – Localized pain such as cancer patients
  – Make the topic more salient
  – Make the topic novel
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