Pain locus of control (PLOC) refers to an individual's perceived control over pain; specifically, whether one feels pain is under their own control (i.e., internal, PLOC) or controlled by external events (i.e., external PLOC). Research has shown that a higher internal PLOC is related to decreased pain.

Pain catastrophizing refers to an individual's tendency to engage in thoughts and feelings of helplessness in response to pain. The Pain Catastrophizing Scale (PCS) is a common measure used to assess catastrophizing.

**Objective**
To assess whether 1) PLOC changes following a 30-min intervention intended to reduce catastrophic thinking, 2) changes in PLOC are related to changes in pain, and 3) any relationship between PLOC and pain remain after controlling for changes in catastrophizing.

**Participants**
- **Healthy Participants:** N = 103
  - **Characteristics:** 43 Women; average age = 28.57 yrs (SD = 11.70), White/Caucasian = 81, single = 71, average years of education = 14.87 (SD = 2.61), and employed = 57
- **Exclusion Criteria:**
  - < 18 years of age
  - BMI>35
  - Current acute illness
  - Cardiovascular, neurological, and/or circulatory problems
  - Recent use of anesthetic, antidepressant, anxiolytic, or antihypertensive medication
  - Record psychopathological trauma
  - Chronic pain condition
  - Raynaud's disease

**Procedure**
- **Consent & Instrumentation:**
  - Participants were randomized to either a treatment group or a control group
  - Participants randomized to the treatment group were administered a catastrophizing reduction intervention targeting catastrophic thoughts
  - Participants randomized to the control group received basic information on pain and pain processing
- **Determine Stimulus Intensity:** Pain Threshold
  - Pre-Test Testing, Control Group, Intervention Group

**Methods:**

**Pain Intensity and Unpleasantness**

**Visual Analog Scale (VAS):** Pain intensity and pain unpleasantness ratings made following each stimulation

**Results**
- **Hierarchical Regression Analysis Predicting Pain Unpleasantness**
  - Step 1: Catastrophizing
    - R²: 0.22
    - ΔR²: 0.22
    - sr²: 0.47*
  - Step 2: Internal PLOC
    - ΔR²: 0.01
    - sr²: -0.07

These correlational results indicate that increases in internal PLOC were associated with changes in pain unpleasantness, even after controlling for changes in catastrophizing.

**Change in Situation Specific Catastrophizing by Group**

These correlational results indicate that decreases in internal PLOC were associated with changes in pain unpleasantness, even after controlling for changes in catastrophizing.

**Conclusions**
These findings show that internal PLOC can be increased by a brief intervention to reduce catastrophizing, and that changes in PLOC are related to changes in pain above and beyond the effects of reduced catastrophizing.

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