Alexithymia does not moderate emotional modulation of pain and nociception
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Alexithymia is a personality construct associated with decreased ability to recognize emotions, increased emphasis on somatic sensations and external events, and various pain syndromes. Pain is a complex sensory and emotional experience indicative of actual or potential tissue damage. Alexithymia is more closely related to the affective component of pain, rather than its sensory component. The link between alexithymia and pain is thought to be related to an inability to regulate the negative emotions intrinsic to pain. Given that emotion modulates pain, such that negative emotions enhance pain and positive emotions inhibit pain, it was hypothesized that healthy individuals who are high in alexithymia would exhibit decreased emotional modulation of pain and nociception.

Methods: Picture-evoked Skin Conductance

- **Subjective Emotional Ratings**
  - Self-Assessment Manikin (Bratley & Lang, 1994)
  - Valence (Positive) Ratings: 1 (unhappy) to 9 (happy)
  - Arousal Ratings: 1 (calm) to 9 (excited)

- **Picture-evoked Skin Conductance**
  - Skin Conductance Response (SCR): average SC in the 1-8s post-shock interval minus average SC in 1 s pre-shock interval

- **Stimulations**
  - 104 healthy participants from the community
  - Participants watched a series of emotionally-charged pictures while randomly receiving electric stimuli to the ankle
  - Electrode applied to the ankle over the sural nerve
  - Level of stimulation intensity set at 2x the nociceptive flexion reflex threshold
  - Participants rated subjective emotional responses to pictures

- **Results:**
  - Main effect for picture content (p<.01). Greater SCR during mutilation pictures and smaller SCR during erotica and families.
  - No significant differences in SCR between groups.

- **Conclusions**
  - No differences were detected between individuals high and low in alexithymia in subjective or physiological reactions to the pictures and stimulations. These findings suggest that emotional modulation of pain does not differ between groups. However, only 11% of participants (7%) were above the cut score for clinical alexithymia on the TAS. Thus, it may be that even the high alexithymia group on the TAS is not significantly alexithymic. It also is possible that, in healthy samples, the association between alexithymia and pain may not be due to the inability to emotionally modulate pain but some other underlying mechanism. Future research should assess modulation of pain in clinically alexithymic populations, as well as in individuals with chronic pain syndromes.