Pain communication: does the dyadic relationship matter?

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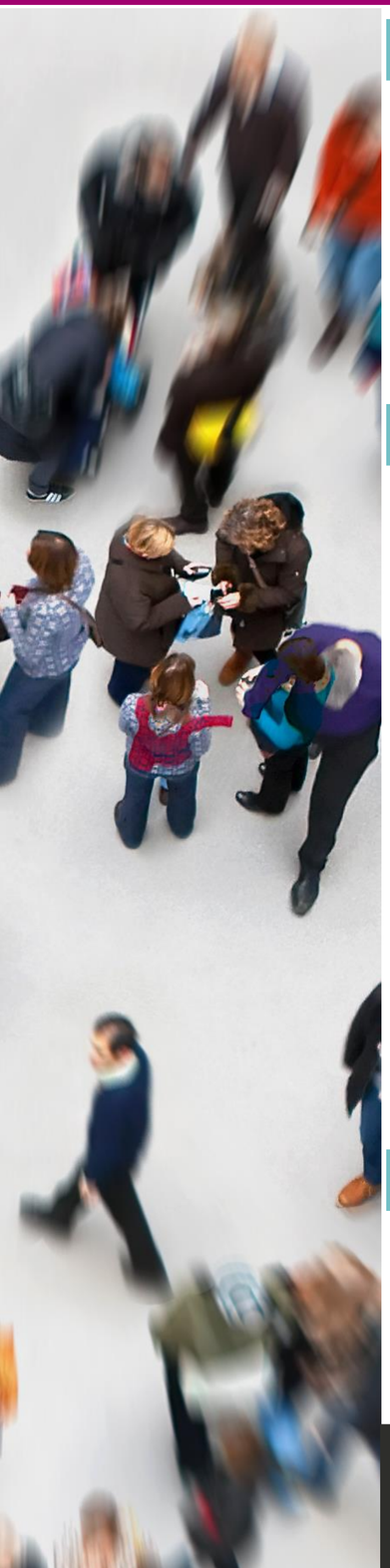


Background

There is limited research on the social influences on the reporting of pain. This is surprising given the differences in the way men and women communicate their pain, and the differences in the use of social support (Vervoort, et al., 2011; Brown, et al., 2003; Vigil & Coulombe, 2011).

The relationship between individuals experiencing pain and observers can impact on how pain is communicated; however, everyday dyadic relationships have not been studied in the context of pain. We aimed to address this over three studies; study 1 compared strangers vs. friends, study 2 compared same sex friends vs. opposite sex friends, and study 3 compared opposite sex friends vs. romantic partners.

Method(s)

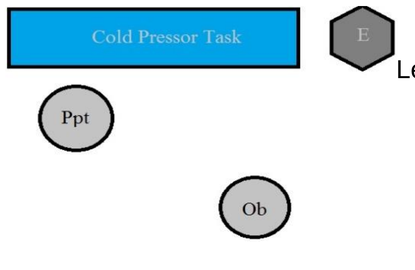
Experimental Pain Induction: Cold Pressor Task

2 Phases: Observer present vs. observer absent

Each study had 2 conditions, with 24 dyads in each condition (equally split by sex):
Study 1: Friends (coincidently all same sex friends)
Strangers
Study 2: Same sex friends
Opposite sex friends
Study 3: Opposite sex friends
Romantic partners

*Within each dyad, one person completed the pain induction tasks and the other participant observed.

Relationship closeness questionnaires investigated how close the dyads were.



Left: diagram of the set-up during the Cold Pressor task.
Right: Cold Pressor equipment

Results (Study 1)

Overall, males had a higher pain threshold and tolerance than females.

Pain threshold and tolerance increased in the presence of an observer. However, the nature of the dyadic relationship only had an impact on pain tolerance. Pain tolerance was higher in the friends condition when compared to the strangers condition. However, there were no significant interactions present.

Results (Study 2)

Males had a higher pain threshold and tolerance than females.

Pain tolerance increased in the presence of an observer. Specifically, pain tolerance was higher when the observer was male compared to when the observer was female. Further analysis revealed the biggest increase in pain tolerance was observed when the participant was male and observer was male.

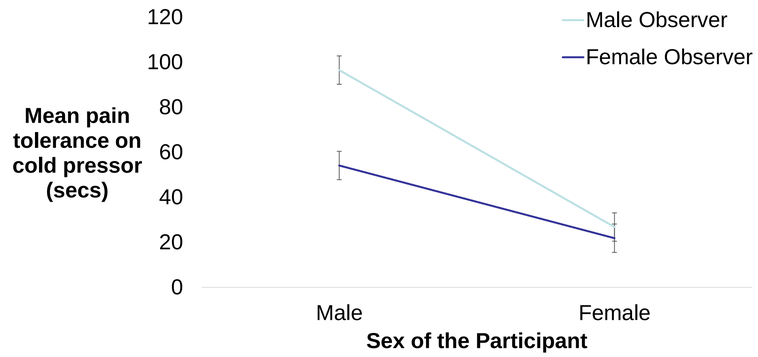


Figure 1. Mean tolerance time for the cold pressor (secs) for male and female participants with a male and female observer. Error bars represent ± 1 standard error of the mean.

Results (Study 3)

There were no sex differences present for pain threshold, but males had a higher pain tolerance than females.

Pain threshold and tolerance levels were higher in the presence of an observer. However, the dyadic relationship did not impact on pain reporting's.

Discussion

Overall, the key finding(s) was that an observer can impact on an individual's pain experience, and the relationship and sex of the person can affect how pain is communicated. Specifically, male-male dyads are the least sensitive to pain.

These findings add a new dimension to previous work (e.g. Vigil & Coulombe, 2011), and suggests the type of relationship between the person experiencing pain and their observer should be considered when investigating the social influences on pain.

The next step in this research is to investigate why males and females communicate their pain differently, and why the dyadic relationship matters.

Centre for Pain Research

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