Gender Differences in Perceived Social Support and Heat Pain Tolerance

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Introduction
Perceived social support (PSS) has been implicated in positive responses to stressors, including bodily pain. Pain as a stressor has been determined to affect males and females differently, with females often experiencing increased pain sensitivity and lower magnitude of conditioned pain modulation (CPM), a form of pain inhibition.

Materials and Methods
Seventy-six healthy adults were recruited and completed the Multidimensional Scale of Perceived Social Support (MSPSS). On a second visit, they underwent laboratory tests of heat pain tolerance, heat pain threshold, and CPM using a Medoc thermal probe on their forearm:

- Heat pain threshold – Minimum temperature at which the participant experienced pain
- Heat pain tolerance – Maximum temperature the participant could tolerate
- CPM – Participants rated a series of painful heat stimuli alone, then the series of stimuli again while a painful pressure stimulus was applied to the leg. CPM magnitude was calculated as the change in heat pain ratings between these 2 conditions.

Results

Conclusions
- Pain tolerance is correlated with social support in women but not men.
- Due to the observation that women have more aversive responses to experimentally induced pain, there may be other confounding variables that explain the social support and pain tolerance correlation.
- Heat pain threshold and CPM were not correlated with social support and thus are pain measures that may not be as modifiable as tolerance.
- The generalizability of these findings is limited by the small sample size and greater number of females.

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References