Does Spinal Sensitization Contribute to Pain Risk in Native Americans?: Preliminary Findings from Oklahoma Study of Native American Pain Risk (OK-SNAP)


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Introduction
Native Americans have higher rates of chronic pain than any other racial or ethnic group, but little has been done to uncover risk factors for its development. A pilot study from our group suggested that while thresholds for the nociceptive flexion reflex (NFR) did not differ for Native Americans when compared to non-Hispanic Whites, temporal summation of the NFR (TS-NFR; an electrophysiological marker of spinal cord sensitization) was reduced. This suggested sensitization was dampened at the spinal level. Moreover, Native Americans exhibited reduced sensitivity to electric stimuli. Together, this suggested sensitization was dampened at the spinal level. Moreover, Native Americans have higher rates of chronic pain than any other racial or ethnic group, but little has been done to uncover risk factors for its development. A pilot study from our group suggested that while thresholds for the nociceptive flexion reflex (NFR) did not differ for Native Americans when compared to non-Hispanic Whites, temporal summation of the NFR (TS-NFR; an electrophysiological marker of spinal cord sensitization) was reduced. This suggested sensitization was dampened at the spinal level. Moreover, Native Americans exhibited reduced sensitivity to electric stimuli. Together, this suggested sensitization was dampened at the spinal level. Moreover, Native Americans did not have reduced TS-NFR or hypoalgesia in the current study.

Contrary to our pilot study, Native Americans did not have reduced TS-NFR or hypoalgesia in the current study.

These findings indicate that pain signaling remains uninterrupted at the spinal and supraspinal levels in Native Americans and, therefore, do not contribute to chronic pain in this population.

Conclusions

Similar to our pilot study, there was no group difference in NFR threshold (p > .05).

But in contrast to the pilot study, both groups showed similar levels of TS-Pain and TS-NFR.

The main effects of race (p > .05) and the Race X Stimulus Train interactions (p > .05) were non-significant for pain and NFR.

Despite this, both groups demonstrated significant summation of NFR (F(2, 32.20; p < .001) and pain (F(2, 61.10; p = .001).