The Relationship between acculturation and pain processing in Native Americans: Preliminary findings from Oklahoma Study of Native American Pain Risk (OK-SNAP)
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Introduction
Current research shows that Native Americans (NA) are at a higher risk for developing chronic pain than any other group. However, the mechanisms underlying this increased risk are still unknown. One psychological process that could contribute is acculturation (defined as the level of engagement with the dominant culture). For example, one prior study in an Asian American sample found a positive relationship between acculturation and pain processing, suggesting acculturation correlates with lower pain sensitivity. To date, no studies have examined this relationship in a NA sample. The current study investigated whether acculturation level was related to measures of pain tolerance, central sensitization, and endogenous pain inhibition in a NA sample.

Objectives
To examine the relationship between level of acculturation and pain processing in a NA sample.

Methods: Acculturation Scales
- Native American Acculturation Scale (NAAS): 20-item self-report questionnaire, specific to Native American culture, designed to assess level of acculturation ranging from traditional to mainstream.

Methods: Multilevel Linear Regression Models
- No models were significant (p > 0.05) indicating no significant relationship between the acculturation scales in NFR, cold pain tolerance, and endogenous pain inhibition in NA sample.

Results: Multiple Linear Regression Models
- No models were significant (p > 0.05) indicating no significant relationship between the acculturation scales in NFR, cold pain tolerance, and endogenous pain inhibition in NA sample.

Results: Zero-Order Correlations
- Intercorrelations among the acculturation measures and significant variables were varied between .384 and -.670, but regression model diagnostics indicated there was no concern with multicollinearity (tolerance values > .10).
- The Native American Acculturation Scale is significantly negatively associated with Temporal Summation of NFR.

Conclusion
Together, these findings suggest that measures of acculturation in the Native American population are not related to measures of pain tolerance, central sensitization, or endogenous pain inhibition. However, Native Americans who identify more with the dominant culture (higher scores on the MEIM and OCIS) tend to report lower levels of pain. Future research should consider additional factors such as acculturation and cultural practices, the relationship between acculturation and pain processing, and the interaction between acculturation and pain processing. However, more research is needed to better understand the relationship between acculturation and pain processing in the NA population.

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