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Is There a Relationship Between Lived Discrimination and Chronic Pain? - A Pilot Study

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The primary aim of this study is to provide a pilot feasibility protocol to investigate HRV being highly correlated with chronic pain. Recent literature illustrates the impact of social determinants on health outcomes, including an association between chronic pain and lived discrimination. The complexity of the human experience of pain involves myriad biological, psychological, and social factors, each contributing uniquely to the overall experience. Due to the positive skew of EDS and HRV scores, the natural logs of EDS, high frequency power (HFP), and low frequency power (LFP) were utilized. Total natural log EDS (lnEDS) was not correlated with either lnHFP ($r = -.08, p = .637$) or lnLFP ($r = -.08, p = .658$). The homogeneity and limited size of this sample may be obscuring the influence of HRV variables and lived discrimination as risk factors for developing chronic pain. Future research should investigate the differences in these relationships in a larger sample between groups of those experiencing no pain, acute pain, and chronic pain.

## RESULTS

Due to the positive skew of EDS and HRV scores, the natural logs of EDS, high frequency power (HFP), and low frequency power (LFP) were utilized. Total natural log EDS (lnEDS) was not correlated with either lnHFP ($r = -.08, p = .637$) or lnLFP ($r = -.08, p = .658$).

## DISCUSSION

Lived discrimination is associated with pain intensity, which is related to the development of chronic pain. EDS scores were similar across the three groups, however an inverse relationship between discrimination and HFP compared to LFP was identified. This difference suggests there may be a connection between these variables that remains to be established. The homogeneity and limited size of this sample may be obscuring the influence of HRV variables and lived discrimination as risk factors for developing chronic pain. Future research should investigate the differences in these relationships in a larger sample between groups of those experiencing no pain, acute pain, and chronic pain.

## CONCLUSION

This protocol demonstrates a feasible structure for further exploration of the relationship between lived discrimination and HRV. While nonsignificant in this small sample, the association between discrimination and HRV is opposite of LFP, suggesting different relationships between these variables.

## REFERENCES