Identifying risk and protective factors for heart health among Hispanics in the Texas-Mexico border

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Introduction

- Cardiovascular disease (CVD) is the second leading cause of death among Hispanics in the United States.²
- Hispanics exhibit a greater prevalence of heart health risk factors than non-Hispanic whites and are subject to health disparities in heart health.²³
- The objective of this study is to identify heart health risk factors and protective factors associated with the unique Hispanic border population.
- Findings further knowledge of potential change mechanisms and provide insight on intervention target populations.

Hypotheses

- Acculturation: A higher level of acculturation (greater English proficiency and preference) correlated with a decrease in CVD risk factors.
- Socioeconomic Status: Consistent with our second hypothesis, a high socioeconomic status (high education level and income) correlated with decreased CVD risk factors.
- Physical Activity: High intensity and duration of physical activity correlated with a decrease in CVD risk factors, supporting our third hypothesis.

Methods

- Population: Hispanic adults residing in El Paso County (n=501)
- Assessment: Health questions and body measurements were recorded during an interview
  - Body measurements: height, weight, waist circumference and blood pressure
- Analysis: Bivariate correlations were computed to determine relationships between heart health risk factors (obesity and hypertension) and participant characteristic apportioned to the following categories: acculturation, socioeconomic status (SES), level of physical activity, and perceived stress.

Results

- Pearson Correlation Table: Acculturation
  - English Proficiency
    - BMI: -0.15**, P<0.05
    - Body Fat: -0.23**, P<0.01
    - Waist Circumference: -0.08
    - Blood Pressure: -0.12**
  - English Preference
    - BMI: -0.06*
    - Body Fat: -0.10*
    - Waist Circumference: -0.05
    - Blood Pressure: -0.10*
- Pearson Correlation Table: SES
  - Education Level
    - BMI: -0.14**
    - Body Fat: -0.13**
    - Waist Circumference: -0.08
    - Blood Pressure: -0.11*
  - Annual Household Income
    - BMI: -0.05
    - Body Fat: -0.15**
    - Waist Circumference: -0.14**
    - Blood Pressure: -0.04
- Pearson Correlation Table: Physical Activity
  - Metabolic Equivalent (MET) Total
    - Minutes Standing (Daily): -0.09
    - Minutes Sitting: -0.03
    - Minutes Vigorous Activity (Daily): -0.10*
  - Blood Pressure: -0.05
  - **p<0.01

Perceived Stress

- Correlations between perceived stress and CVD risk factors are weak and no significant p-value was attained.

Conclusion

- The correlations computed for acculturation demonstrate results that conflict with previous literature.
  - Findings from Slattery et al. (2006) propose acculturation places Hispanics at a greater risk for obesity, a CVD risk factor. ⁴
  - Discrepancy could be attributed to the unique Hispanic border population sample in our study.
  - Traditional thinking of the influence of acculturation on health may no longer hold. Further research is needed.
- The results imply that as SES increases, CVD risk among the Hispanic border population decreases.
- The correlation between physical activity and decreased CVD risk factors imply:
  - increased intensity and duration of physical activity is associated with decreased CVD risk.
  - increased duration of physical inactivity (sitting) is associated with increased CVD risk.
  - interventions that increase vigorous physical activity may reduce CVD risk in this population.
- Contrary to previous literature, perceived stress had no overall significant correlation to CVD risk factors in this population sample.¹
  - Based on these results, efforts to reduce stress in this population may not improve heart health.
- We are currently working on a multivariate regression analysis to further evaluate the data.

Acknowledgements

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