

# 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.<sup>2</sup>
- Hispanics exhibit a greater prevalence of heart health risk factors than non-Hispanic whites and are subject to health disparities in heart health.<sup>2,3</sup>
- The objective of this study is to identify heart health risk 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

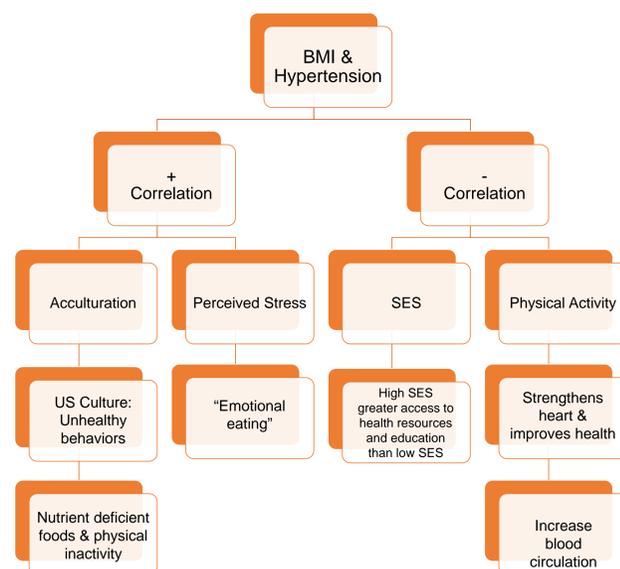


Figure 1. Hypotheses of BMI & hypertension correlate relationship to participant characteristics.

## 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

### Acculturation

- A higher level of acculturation (greater English proficiency and preference) correlated with a decrease in CVD risk factors.

Pearson Correlation Table: Acculturation				
	BMI	Body Fat	Waist Circumference	Blood Pressure
English Proficiency	-0.15**	-0.23**	-0.08	-0.12**
English Preference	-0.09*	-0.20**	-0.05	-0.10*

\*p<0.05, \*\*p<0.01

### Socioeconomic Status

- Consistent with our second hypothesis, a high socioeconomic status (high education level and income) correlated with decreased CVD risk factors.

Pearson Correlation Table: SES				
	BMI	Body Fat	Waist Circumference	Blood Pressure
Education Level	-0.14**	-0.13**	-0.08	-0.11*
Annual Household Income	-0.05	-0.15**	-0.14**	-0.04

\*p<0.05, \*\*p<0.01

### Physical Activity

- High intensity and duration of physical activity correlated with a decrease in CVD risk factors, supporting our third hypothesis.
- High physical inactivity (longer time spent sitting) correlated with an increase waist circumference.

Pearson Correlation Table: Physical Activity				
	BMI	Body Fat	Waist Circumference	Blood Pressure
Metabolic Equivalent (MET) Total	-0.05	-0.13**	-0.09	-0.03
Minutes Sitting (Daily)	-0.03	-0.08	0.12*	-0.08
Minutes Vigorous Activity (Daily)	-0.10*	-0.17**	-0.10*	-0.05

\*p<0.05, \*\*p<0.01

### Perceived Stress

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

Pearson Correlation Table: Perceived Stress				
	BMI	Body Fat	Waist Circumference	Blood Pressure
Perceived Stress	0.04	0.07	0.07	-0.03

\*p<0.05, \*\*p<0.01

## 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.<sup>4</sup>
  - 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.**
  - Interventions to reduce CVD risk may be most effective when targeting low SES populations.
- 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.<sup>1</sup>**
  - 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

Thank you to the Healthy Fit team and all of faculty and staff at the UT Health School of Public Health El Paso Regional Campus, especially Denise Vasquez, Sylvia Hernandez, and Aileen Soto. Thank you to Dr. Diaz-Martinez, the faculty and staff at COURI, and BUILDing SCHOLARS fellows, Daisy Alvarado and Bianca Montañó. Research reported in this poster was supported by the Border Public Health Interest Group of the City of El Paso, Centers for Medicare & Medicaid Services, and the National Institute Of General Medical Sciences of the National Institutes of Health under linked Award Numbers RL5GM118969, TL4GM118971, and UL1GM118970. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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