Influence of Emigration of Rural Mexicans to the United States and Cardiovascular Risk Factors in Close Relatives who Remain in Mexico

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Background

Several studies have documented that acculturation to western society is related to worsened cardiovascular (CV) health. This is significant in the United States (US) where a rapidly growing Mexican population now accounts for over 9% of the US populace. Several studies confirm that Mexican Americans are at increased risk for developing CV risk factors when compared with non-Hispanic white Americans. Cultural changes that unfavorably affect the CV risk-factor profile may also occur within Mexico due to communication and transfer of currency between Mexicans who are working in the US and their relatives who remain in Mexico.

Methods

A total of 432 participants living in 9 communities in the state of Guanajuato, Mexico were included in this study. All participants completed an interview which assessed 1) the presence of a relationship between the participant and someone in the US and 2) the potential for a spread of US cultural values (defined by degree of communication with relative in the US and amount of currency received). Next, participants were assessed for CV risk through measuring waist-to-hip ratio, blood pressure (BP), fasting glycemia, total cholesterol and HDL-cholesterol. Elevated waist-to-hip ratio was defined as > 0.9 for men and > 0.85 for women. Elevated BP was defined as a systolic BP >140 mmHg or a diastolic blood BP >90 mmHg. Impaired glucose tolerance was defined as fasting glycemia >100 mg/dL. Elevated total cholesterol and low HDL-cholesterol were defined as > 200 mg/dL and < 40 in men/< 50 in women, respectively.

Results

A total of 316 participants (73%) reported a close relationship with an individual living in the US. The table displays the characteristics of the study population according to the presence of a relative in the US. We found no statistically significant relationship between having a relative in the US and increased CV risk.

Variable	Close Relative in US (n=316)	No Close Relative in US (n=116)
Mean age (years)	44.9 ± 15.6	48.2 ± 17.0
Female gender	83.6%	77.5%
Systolic BP (mmHg)	132 ± 19	135 ± 24
Diastolic BP (mmHg)	81 ± 11	81 ± 13
Total Cholesterol (mg/dL)	170 ± 35	172 ± 35

HDL Cholesterol (mg/dL)	36.0 ± 10.3	36.4 ± 10.9
Fasting Glycemia (mg/dL)	93.1 ± 39.4	92.4 ± 29.3
Waist-to-Hip Ratio	0.90 ± 0.12	0.91 ± 0.11

Conclusions

This study shows no association between having close relatives living in the US and increased CV risk factors among those staying in Mexico. The effect of US cultural values in rural Mexicans and their health behaviors may be mediated through complex mechanisms other than having close family members in the US. Further studies are warranted to examine whether or not proximity to the US unfavorably affects the risk-factor profile of rural Mexicans.