THE RELATION OF ACCULTURATION TO OVERWEIGHT, OBESITY, PRE-DIABETES AND DIABETES AMONG US MEXICAN-AMERICAN WOMEN AND MEN

Objective: To estimate and compare the prevalences of overweight, obesity, pre-diabetes and diabetes among a nationally representative sample of Mexican-American, non-Latino White and Black adults, and by acculturation for Mexican-Americans.

Design, Settings and Participants: The NHANES 1999–2008 data sets were used. Binomial regression models were used to compute prevalence ratios and their respective 95% confidence intervals to assess the relationships of race/ethnicity and acculturation with obesity, overweight, pre-diabetes and diabetes.

Main Outcome Measures: Overweight, obesity, pre-diabetes, and diabetes.

Results: Mexican Americans had a higher prevalence of overweight than White non-Latinos and Black non-Latinos. Obesity was significantly more prevalent among the most acculturated Mexican Americans but not the least acculturated. In contrast, the least acculturated Mexican Americans had the highest prevalence of overweight. The prevalence of pre-diabetes was higher among Mexican Americans than White non-Latinos and Black non-Latinos. The most acculturated Mexican Americans had a higher prevalence of diabetes and the prevalence of pre-diabetes was elevated in less acculturated Mexican Americans. In both unadjusted and adjusted models, the less acculturated were significantly more likely to be overweight and significantly less likely to be obese, compared to more acculturated Mexican Americans, and acculturation was not associated with diabetes or pre-diabetes in adjusted models.

Conclusion: Our results suggest that obesity was less prevalent among the least acculturated Mexican-Americans but overweight was more prevalent. (Ethn Dis. 2012;22(1):58–64)

Key Words: Acculturation, Mexican Americans, Diabetes Status, Body Mass Index Status

INTRODUCTION

Obesity and diabetes, major risk factors for cardiovascular disease, are more prevalent in Mexican Americans than non-Latino Whites.1–8 The prevalence of overweight is also higher for Mexican Americans than for non-Latino Whites.1,3,4 While in the study by Flegal et al1 the prevalence of overweight differed for Mexican American (74.4%) and non-Latino White (67.4%) men, the largest differences observed were between Mexican American women (71.9%) and non-Latino White women (57.3%). Similarly, several studies have shown that the prevalence of pre-diabetes is higher for Mexican Americans than for non-Latino Whites2,5,7,9 and significantly higher in Mexican American men (42.2%) than Mexican American women (21.2%).1 In contrast, using the more recent 2005–2006 NHANES data, no statistically significant differences were found in the prevalence of pre-diabetes by race/ethnicity or sex.7

In the United States, the estimated prevalence for obesity and overweight among Mexican American women (39.7% and 32.2% respectively) and men (28.9% and 45.5% respectively) is high.1 The prevalence of diabetes for Mexican American women aged >20 years was 11%; for Mexican American men it was 9.9%.5 Obesity and diabetes are precursors to serious health related-complications, such as heart disease, stroke, high blood pressure, osteoarthritis, cancer, kidney disease, blindness, nervous system disease, and dental disease.10,11 In 2007, heart disease, cancer, stroke and diabetes were among the top five leading causes of mortality for Latino men and women.12

The degree of acculturation differs markedly within the Mexican-American community, and these differences may influence the risk of obesity and diabetes. Among Latinos in the United States, Mainous et al13 found that increased acculturation was associated with a higher prevalence of obesity but with a lower prevalence of diabetes. However, Latinos in the United States are a heterogeneous population, and results have not been consistent regarding the relationship between acculturation and obesity or diabetes for Mexican-Americans.6,9,14–21 In the San Antonio Heart Study, Hazuda et al20 found an inverse relation between acculturation and diabetes, with increasing acculturation accompanied by statistically significant declines in the prevalence of diabetes and obesity among Mexican Americans. In contrast, Ahluwalia et al14 found a positive association between weight and acculturation such that Mexican Americans with low levels of acculturation were less likely to be obese (24%) than Mexican Americans with high levels of acculturation (32%). Further, using the 1982–1984 Hispanic Health and Nutrition Examination Survey (HHANES), Harris et al20 found no association between acculturation and diabetes among Mexican Americans. In addition, the relation between acculturation and impaired fasting glucose (pre-diabetes) is not known but has important preventive implications for diabetes and car-

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