

Introduction and Background

The Hispanic population represents 17% of the U.S. total population, is the largest racial minority, and lives with disproportionately higher rates of disability due to complications associated with diabetes and obesity (1, 2). While high obesity levels in Mexico indicate that Mexican immigrants might already be engaged in poor dietary practices prior to immigration, research on the relationship between dietary intake and acculturation among Hispanics have yielded inconsistent results (3,4). Increasing our knowledge of Hispanics' dietary intake is critical to developing interventions that promote healthier diets and lifestyles.

This cross-sectional study analyzes the role of **English Language Proficiency (ELP)** and **nativity (place of birth)** in **dietary intake** of saturated fat, fruits, vegetables and fiber among sedentary Hispanic women residing near the United States-Mexico border in Texas.

Methods

Sample:

- Hispanic women ≥18 years (n=237)
- Do not meet national physical activity (PA) guidelines (150 min/week of moderate-intensity PA or 75 min/wk of vigorous-intensity PA or a combination)
- Living in the Lower Rio Grande Valley of South Texas

Data Source:

- Interviewer-administered surveys
- Interviewer-administered computer-based Block Food Frequency Questionnaire

Measures/ Variables:

- Nativity: defined by country of origin (US or Mexico)
- Demographics: age, education (highest level completed)
- English language proficiency: measured with bi-dimensional acculturation scale for Hispanics (12 questions on language use)
- Nutrition variables: intake of saturated fat, vegetables, fruits, and fiber
- Body Mass Index (BMI)

Results

Table 1. Demographic characteristics of sample by country of origin

Variable	N	Total (Mean±SD)	US(n=50) (Mean±SD)	Mexico(n=187) (Mean±SD)	p-value
Age, years	237	39.4±9.5	36.8±11.7	40.1±8.7	0.03
Education, years completed	237	9.85±3.2	12.2±2.5	9.2±3.0	0.00
English language proficiency	237	19.3±7.6	29.6±7.5	16.5±4.8	0.00

Compared to US born participants, participants from Mexico:

- Were older
- Completed fewer years of education
- Scored lower on ELP

Table 2. BMI and dietary variables by country of origin

Variable	N	Recommended	Total (Mean±SD)	US (n=46*) (Mean±SD)	Mexico (n=182*) (Mean±SD)	p-value
BMI, kg/m ²	237	18-25	31.6±6.4	31.4±6.6	31.6±6.4	0.90
Sat. Fat, grams/day	228	<20	22.3±11.1	22.9±12.9	22.1±10.7	0.70
Vegetables, servings/day	228	5	1.8±1.4	1.6±1.4	1.9±1.4	0.20
Fruits, servings/day	228	3	1.0±0.8	0.9±0.6	1.0±.9	0.20
Fiber, grams/day	228	>25	20.3±9.7	17.7±10.2	20.9±9.5	0.04

*For BMI, US n=50 for Mexico n=187

- No significant differences observed by nativity for BMI, fat, vegetables or fruit intake
- Significantly higher fiber intake in women born in Mexico with a mean of 20.9 (sd.9.5) versus 17.7 (sd.10.2) p=0.04 for women born in US
- Overall, participants did not meet dietary recommendations.

Table 3. Correlation Matrix

Variables	Age	Education	ELP	BMI	Saturated Fat	Vegetables	Fruits	Fiber
Age	—							
Education	-.303**	—						
ELP	-.133*	.407**	—					
BMI	.006	.070	-.019	—				
Sat. Fat	-.090	.086	.161*	.070	—			
Vegetables	.017	.013	-.005	.104	.437**	—		
Fruits	.139*	-.079	-.007	.052	.097	.512**	—	
Fiber	.029	-.038	-.052	.066	.665**	.640**	.392**	—

Dietary variables significantly correlated with acculturation variables:

- Saturated Fat positively correlated with ELP
- Intake of Fruits positively correlated with age

Conclusion

In our sample of Hispanic women, immigrants had a higher consumption of fiber but not fruit, vegetables or saturated fat. Also, Hispanic women who spoke more English consumed more saturated fat regardless of nativity. The influence of nativity and language use on dietary intake are different and may be indicative of different processes involved in the adaptation of behaviors to a US context (social or geographic). Neither Mexican-born nor US-born women consume the daily recommended 3 servings of fruits and 5 servings of vegetables, nor the 25 grams per day of fiber. Both groups consume more than the recommended 20 grams of saturated fat per day. Culturally relevant strategies are needed to help Hispanic women increase consumption of fruits and vegetables and limit intake of saturated fat.

References

- CDC Minority Health : <http://www.cdc.gov/minorityhealth/populations/REMP/hispanic.html>
- CDC, *Health Disparities and Inequalities Report 2013*.: <http://www.cdc.gov/mmwr/pdf/other/su6203.pdf>.
- Food and Agriculture Organization of the UN : <http://www.fao.org/docrep/018/i3300e/i3300e.pdf>
- Ayala, G. X., et al. (2008). "A systematic review of the relationship between acculturation and diet among Latinos in the United States: implications for future research