Mexican Immigrants' Evaluations of Their Weight Status

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Abstract

Using data from the National Health and Nutrition Examination Survey (NHANES), this paper compares weight status evaluations among overweight and obese Mexicans adults in the U.S. and U.S.-born non-Hispanic Whites. Using a logistic regression, which controlled for demographic and social-economic variables and body mass index, we find that foreign-born and U.S.-born Mexicans are less likely to classify themselves as overweight than non-Hispanic Whites. Mexican-born adults who had lived in the U.S. less than 10 years were particularly unlikely to do so. We speculate that overweight and obese Mexican immigrants may be less likely to recognize their condition as a health problem.

Introduction

National rates of obesity increased from 1999-2007 from about 27% to 31% among non-Hispanic White adults, and from 29% to 36% among Mexican-American adults (Flegal, Carroll, and Ogden 2010). Mexican-Americans were considered people of Mexican origin living in the U.S regardless of nativity. Even though the national rates have been increasing for both groups, obesity is more common among Mexican-Americans than non-Hispanic Whites.

Some studies suggest that weight status may be evaluated differently by non-Hispanic Whites and Mexican-Americans. It has been found that Hispanic women have more body satisfaction despite having heavier weights (Crago, Shisslak, and Estes 1996). Among those of normal weight, Hispanic women have also reported less body dissatisfaction than White women (Fitzgibbon, Blackman, and Avellone 2000). In a sample where Mexican-Americans were

heavier than Whites, Whites engaged in more dieting behavior (Stern, Pugh, Gaskill, and Hazuda 1982). Mexican-origin men and women also report higher desired weights than Whites (Winkleby, Gardner, and Taylor 1996).

These results suggest that Mexican-Americans may be less likely to classify themselves as overweight than non-Hispanic whites, even among those who would actually be classified as overweight on the basis of their body mass index (where BMI >=25). It is important to know if misclassification of overweight/obesity status is occurring at higher levels among Mexican-Americans than U.S.-born non-Hispanic Whites because obesity has negative health consequences. Obesity may trigger diabetes, cardiovascular disorders, and hypertension among other health problems (FX. 1991; Must, Spandan, Coakley, Field, Colditz, and Dietz 1999). People are less likely to act upon their overweight/obesity and modify their diet or physical activity unless they recognize they are overweight/obese. The present study explores whether Mexican-origin adults are less likely to correctly classify their weight status than non-Hispanic Whites. Because beliefs about healthy weight may vary by level of acculturation, we further investigate whether weight evaluations vary among Mexicans by place of birth and years of U.S. residence.

Sample and Methods

Data from five waves (1999-2007) of the National Health and Nutrition Examination Survey (NHANES) was pooled for analysis. NHANES is a nationally representative, cross-sectional study of individuals aged 1 to 84. The survey consists of two components: a questionnaire that collects socio-demographic data and an examination by a trained technician to collect anthropometric and bio-markers of health. Data from multiple waves was pooled to ensure adequate sample sizes for Mexicans by duration in the United States.

The analytic sample is limited to Mexican origin and U.S.-born non-Hispanic Whites adults ages 25 to 64. Respondents of Mexican origin include both foreign and U.S. born. All pregnant females were excluded because of the confounding between BMI and pregnancy. Only overweight and obese respondents (BMI>=25) were retained in the sample because the focus of this study is to capture people who are overweight according to Center of Disease Control (CDC) standards (BMI>=25) but may not classify themselves as being overweight.

The dependent variable, weight status evaluation, was measured with the survey question: *How do you consider your weight?* Response options were: a) overweight, b) underweight, or c) about the right weight. The dependent variable was dichotomized to represent overweight evaluation (=1) versus normal/under weight evaluation (=0). The primary independent variable is race/ethnic group by duration status. The groups of interest were constructed using the variables race, nativity, and residence length. Anyone who reported being of Mexican origin in the NHANES demographic questionnaire is considered a Mexican-American. For the remainder of this study Mexican Americans will be called "Mexicans". Mexicans were divided into two groups based on place of birth: U.S. born and foreign born. Foreign-born Mexicans were further divided by residence length in the U.S.: 0-9 years and 10 or more years. This separation by race, nativity and, and residence length yielded four interest groups: Mexican 0-9 years, Mexican 10+ years, US-born Mexican, and non-Hispanic White U.S. born.

Several demographic, social-economic, and health related variables were used as control variables. The demographic controls were age and gender. Age was divided into four categories: 25-34, 35-44, 45-54, and 55-64. Gender was included to control for the possibility that females are more aware of weight. Social-economic controls were marriage (1=married) and education.

Education was categorized as no high school diploma, high school diploma, and some college. The health related controls included BMI, health insurance, doctor visits, and smoking status. Body Mass Index (BMI) was measured in the examination portion of NHANES and is used as a continuous measure. Smoking status was divided into three categories, never smoked, current smoker, and former smoker. Dichotomous variables were created to signal whether respondents had any form of health insurance and whether they had *v*isited the doctor in the past 12 months.

There was a small portion of cases with missing data. For example, only 1.7% of the cases in the examination had missing data on BMI. For the cases with missing data on BMI, we are uncertain if they belong in the overweight/obese universe. The overweight and obese sample consisted of 7,086 cases. A small percentage of cases in the overweight/obese sample (3.5%) had missing data on at least one modeled variable; only .24% of the cases had missing data on the dependent variable, weight evaluation. After applying the sample restrictions and dropping cases with missing data, 6,836 cases remained for the analysis.

Results

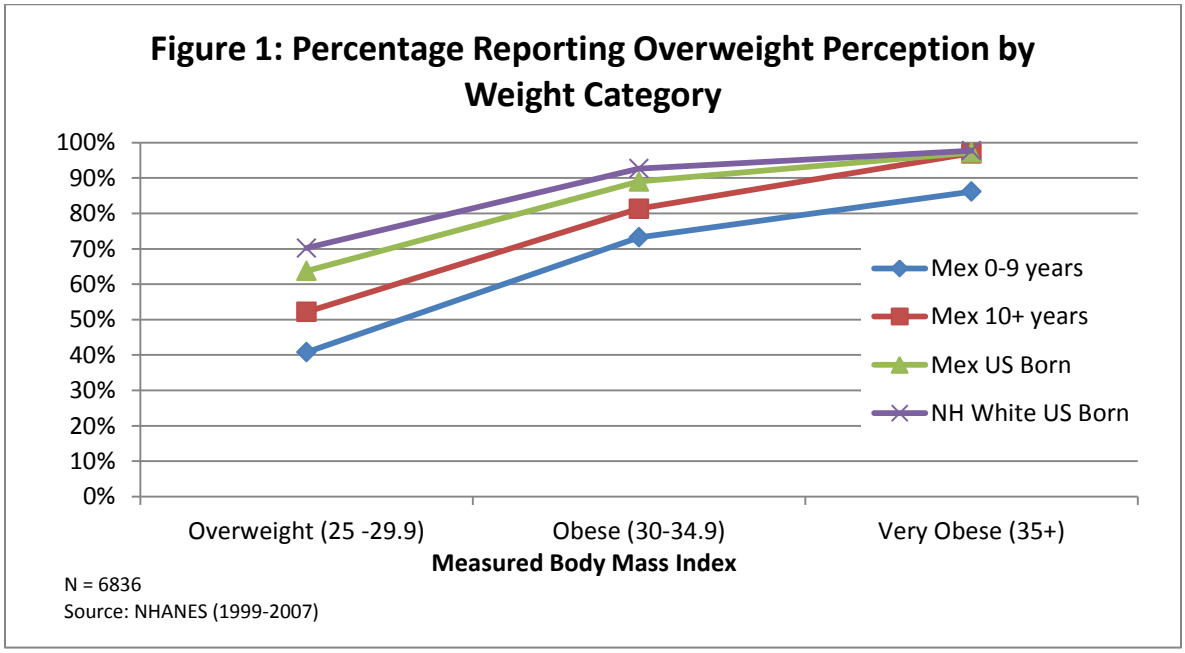
Table 1 presents the descriptive characteristics of the final sample.

Table 1: Descriptive Characteristics (Weighted Percentages)

	Mexican Ethnicity (N = 2487)	non-Hispanic White (N = 4349)
Weight Perception		
Normal weight	30.8%	17.5%
Overweight/Obese	69.2%	82.5%
Actual Weight (BMI)		
Normal (18.5-24.9)	0.0%	0.0%
Overweight (25-29.9)	52.6%	50.0%
Obese (30-34.9)	30.1%	28.7%
Very Obese (35+)	17.3%	21.3%
Residence Length/Nativity		
0 to 9 years	21.8%	0.0%
10 years or greater	40.1%	0.0%
US Born	38.1%	100.0%
Age		
25 to 34	36.2%	19.9%
35 to 44	32.9%	26.7%
45 to 54	20.4%	31.8%
55 to 64	10.5%	21.6%
Female	45.3%	45.8%
Married	65.6%	69.0%
Education		
No High School	52.5%	11.2%
High school Diploma	19.4%	27.2%
Some College	28.1%	61.7%
Has Health Insurance	51.1%	87.2%
Doctor visit (past 12 months)	65.9%	85.1%
Smoking Status		
Current Smoker	20.1%	24.2%
Former Smoker	20.8%	28.3%
Never Smoked	59.1%	47.6%

Figure 1 shows the bivariate relationship between BMI and weight perception for the race/ethnic duration groups. The vertical axis shows the percentage of respondents who classified themselves as overweight by measured weight categories (based on actual BMI) on the horizontal axis. In all of the measured weight categories, Mexicans with 0-9 years of U.S. residence were less likely to classify themselves as overweight than non-Hispanic Whites. For instance, in the measured overweight category, about 40.8% of Mexicans with 0-9 years of U.S.

residence classified themselves as overweight while 70.2% of non-Hispanic Whites did so. Also, among the very obese, Mexicans with 0-9 years of U.S. residence were less likely to say they were overweight (86.2%) than non-Hispanic Whites (97.7%). Overall, Mexicans who have lived in the U.S. longer or who were born in the U.S. were more likely to classify themselves as overweight than more recently arrived immigrants. U.S. born non-Hispanic white were the most likely to classify themselves as overweight for all the weight categories.



We next turn to the multivariate logistic regression model predicting overweight evaluation (=1) and normal/under weight evaluation (=0). The results are shown in Table 2.

Table 2: Logistic Regresiion where 1 = Overwieght Perception and 0 = Normal/Under Weight Percetpion

	OR		CI	
BMI	**1.41**	*	1.35	1.46
Residence Length/Nativity/Eth (ref. = NH White US born)				
Mexican 0-9 years	**0.44**	*	0.32	0.61
Mexican 10+ years	**0.63**	*	0.49	0.82
Mexican US Born	**0.78**	*	0.61	1.00
Age (ref.= 25 to 34)				
35 to 44	**1.40**	*	1.11	1.75
45 to 54	**1.54**	*	1.22	1.94
55 to 64	**1.59**	*	1.24	2.05
Gender (ref. = Male)				
Female	**4.60**	*	3.82	5.54
Marriage Status (ref. = not married)				
Married	**1.33**	*	1.11	1.60
Education (ref. = Some College)				
No High School	**0.51**	*	0.40	0.66
High school Diploma	**0.78**	*	0.64	0.95
Health Insurance (ref. = No)				
Yes	**1.12**		0.90	1.39
Doctor visit (past 12 months) (ref. = No)				
Yes	**0.95**		0.77	1.17
Smoking Status (ref. = Never Smoked)				
Current Smoker	**1.01**		0.82	1.25
Former Smoker	**1.09**		0.89	1.34

*p<0.05

Overweight and Obese Sample (N=6836)

Source : NHANES (1999-2007)

The multivariate results are similar to the descriptive findings. They show that when compared to non-Hispanic Whites, foreign-born Mexicans were significantly less likely to classify themselves as overweight. Foreign-born Mexicans with 0-9 years of U.S. residence were 56% less likely than non-Hispanic Whites to report themselves as overweight, and foreign-born Mexicans with 10 or more years of U.S. residence were 37% less likely. Finally, U.S. born Mexicans were 22% less likely to classify themselves as overweight than U.S.-born non-Hispanic Whites.

Conclusion

Even after controlling for demographic and health related variables, including actual body mass index, foreign-born and U.S-born Mexicans were less likely to classify themselves as overweight than US-born non-Hispanic Whites.

Since the entire sample was overweight, the results lead us to infer that Mexican adults may be less likely to recognize their weight as a health problem than their U.S. born non-Hispanic White counterparts. Policymakers should particularly target Mexican foreign and U.S. born adults in overweight/obesity awareness campaigns to attempt to reduce health disparities between the Mexicans and U.S. born non-Hispanic Whites.

The current study assumes that the effect of BMI on weight perception is the same for each interest group. This study does not reveal at what points in the BMI range are the weight evaluation differences more apparent. Post-study analyses not displayed in this paper have shown that the effect of BMI on weight perception is not the same for all groups. Future research will consider an interaction between BMI and the race/ethnic duration groups to find the slope of the effect of BMI on weight evaluation for each interest group. By considering an interaction between BMI and interest groups, we can learn more specifically the points in the BMI range where weight evaluations differ the most across groups.

Sources

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