



Dietary acculturation in Hispanic-American immigrant children

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Introduction

- Child obesity is a growing public health concern, with children of immigrant families at the highest risk for becoming overweight.
- Acculturation, or the process of adapting to a host culture's norms, can augment a child's susceptibility to external influences on diet.
- Diet quality is known to decline (less fruits/vegetables, more fats/sugars) in subsequent generations and English language preference.
- Research has largely overlooked age and gender as effect modifiers, and young boys may be more susceptible to unhealthy dietary choices due to cultural differences in socialization.
- The study addresses these by including younger ages, where body mass index differences are known to emerge, utilizing two proxies of acculturation: generational status and language preference, and analyzing differences by gender and ethnicity.

Hypotheses

- 1 The least healthy dietary intake (↑ sugar, ↑ fat, ↓ vegetables) will be among those most acculturated, as measured by 3rd generation status or English preference.
- 2 The group differences between high acculturation and low diet quality will be strongest among boys.
- 3 Mexican-Americans, compared to white non-Hispanics and other Hispanic Americans, will also have stronger group differences between acculturation and diet quality.

Methods

Dataset ▶ National Health & Nutrition Examination Survey (NHANES) 2009-2012: Cross-sectional data collected across the U.S. population through home interviews and physical examinations conducted in a mobile center

Sample ▶ Hispanics and White non-Hispanics, ages 5-17 with complete exposure and outcome information

Outcome ▶ Diet:

24-h dietary recall interviews over 2 different days

Added Sugars



Solid Fats



Vegetables



Exposure ▶ Generational status (GS) and Language preference (LP)

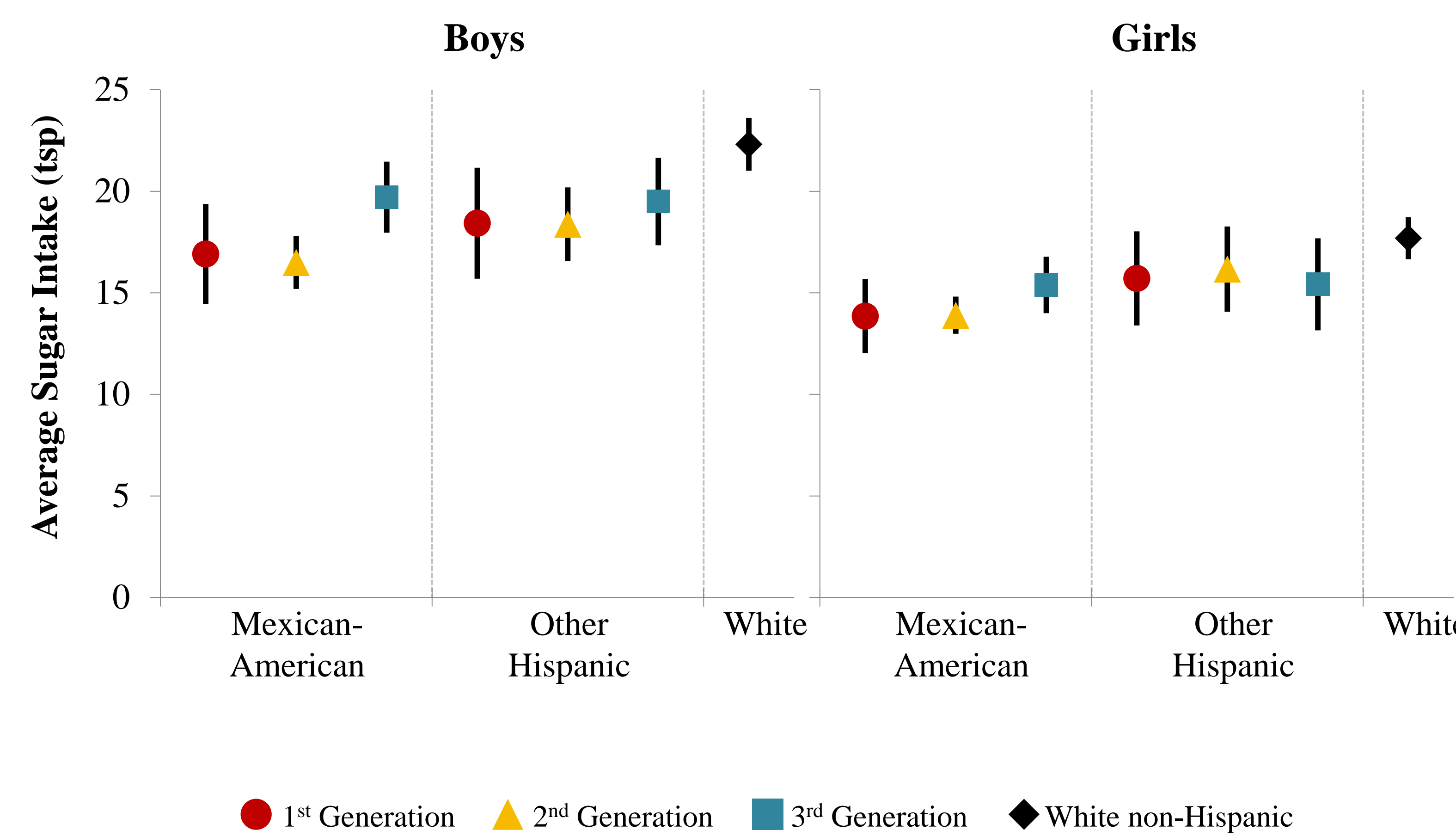
	GS n = 2,441			LP n = 2,510	
	1 st	2 nd	3 rd	English	Spanish
%	5.4	17.0	77.6	93.1	6.9
(n)	(224)	(749)	(1468)	(2048)	(993)
Boys	5.8	15.2	79.0	93.4	6.6
Girls	5.0	18.9	76.1	92.8	7.2
Mex-American	17.2	51.2	31.6	71.8	28.2
Other Hispanic	16.1	47.3	36.6	83.3	16.7
White N-Hisp.	1.1	4.6	94.3	99.7	0.3
Mean Age (y)	12.6	10.1	10.5	10.6	10.7
Ages 5-11 n=1,199	7.4 (163)	15.3 (322)	77.3 (714)		

Data Analysis ▶ Using STATA 13 software, analyses of variance and t-tests were conducted and adjusted for complex survey design.

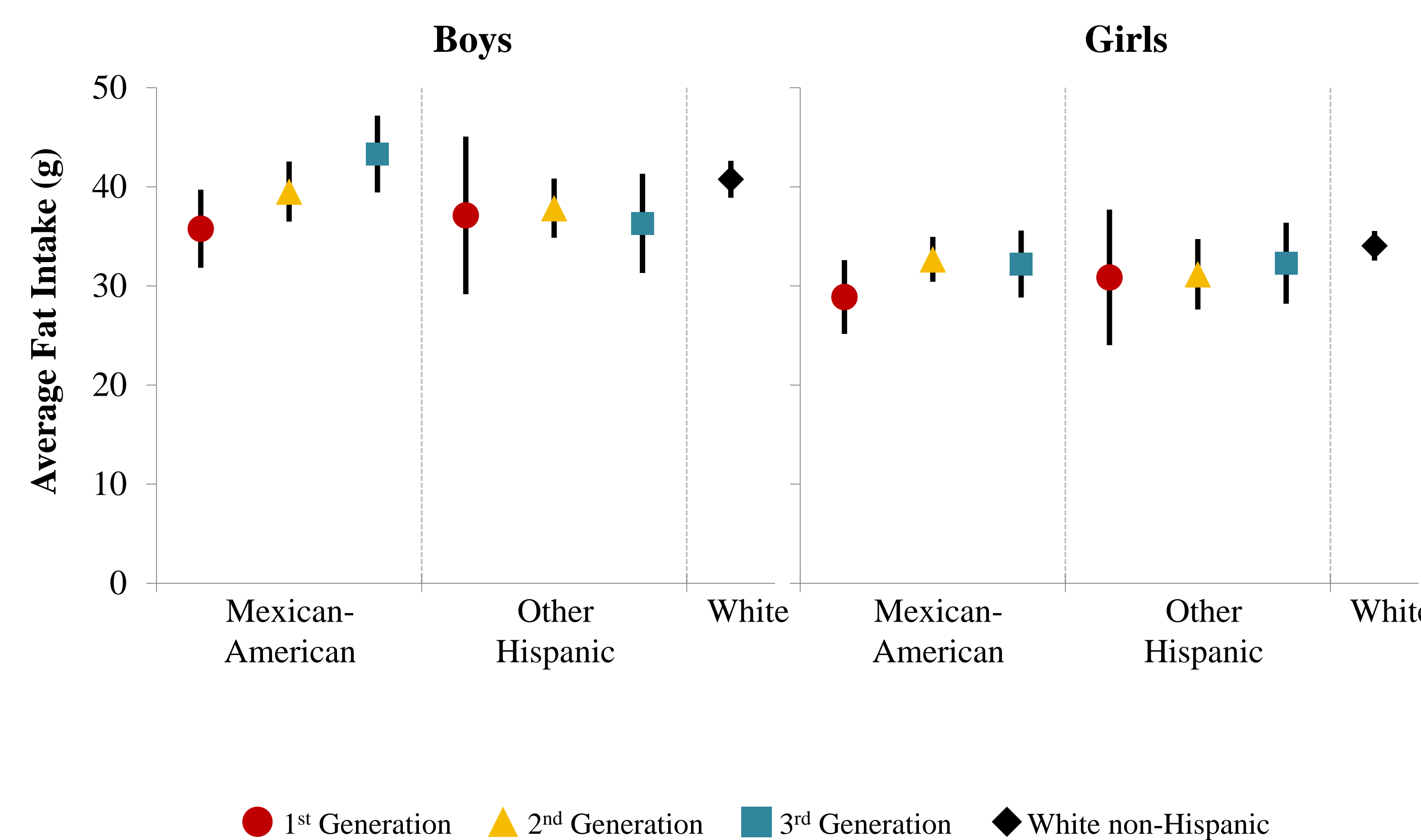
Results



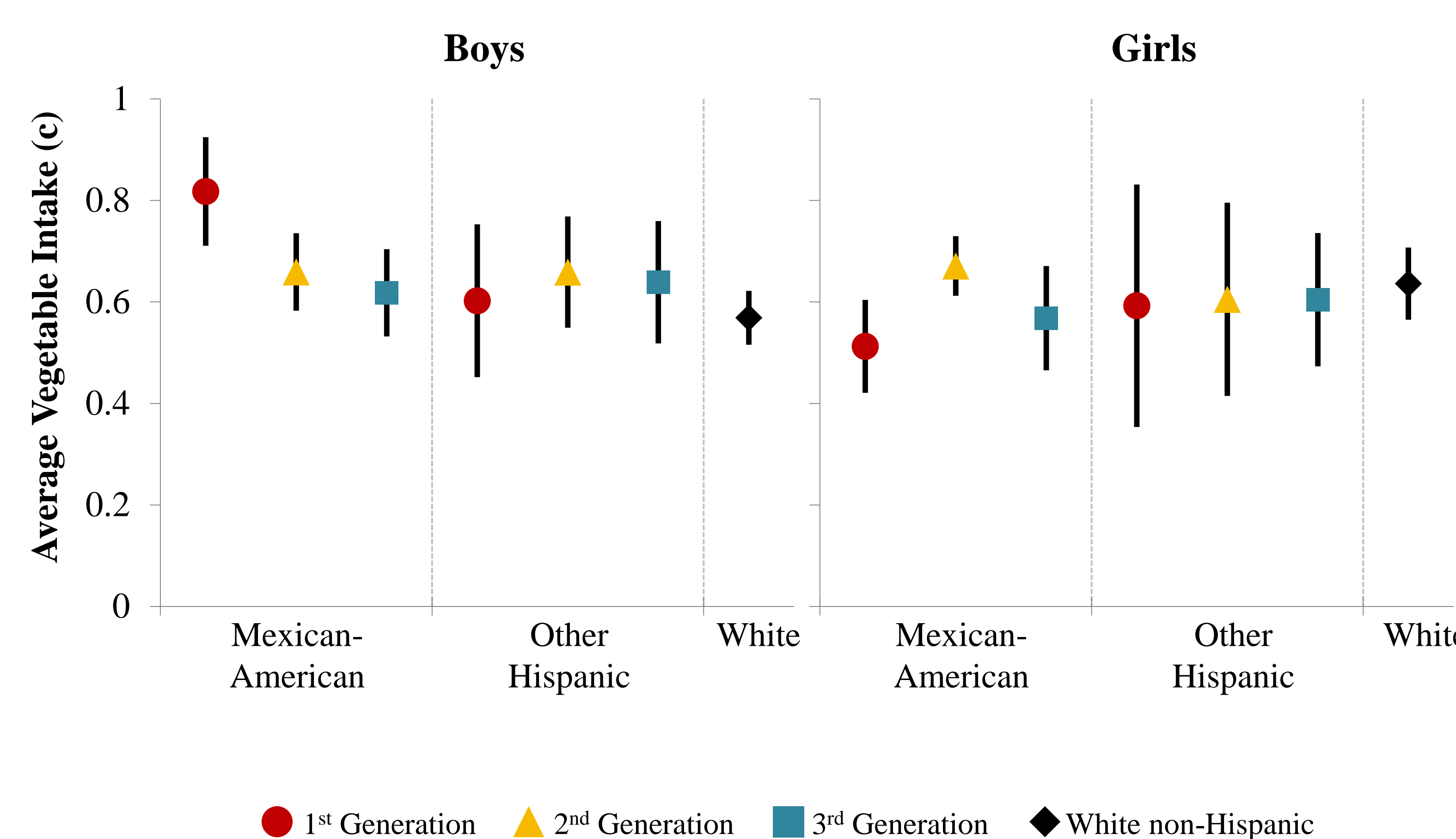
Boys' sugar intake was highest in 3rd generation; this pattern was most pronounced in Mexican American boys, and not observed in girls.



Boys' fat intake was also highest in 3rd generation; this pattern was most pronounced in Mexican American boys, and not observed in girls.



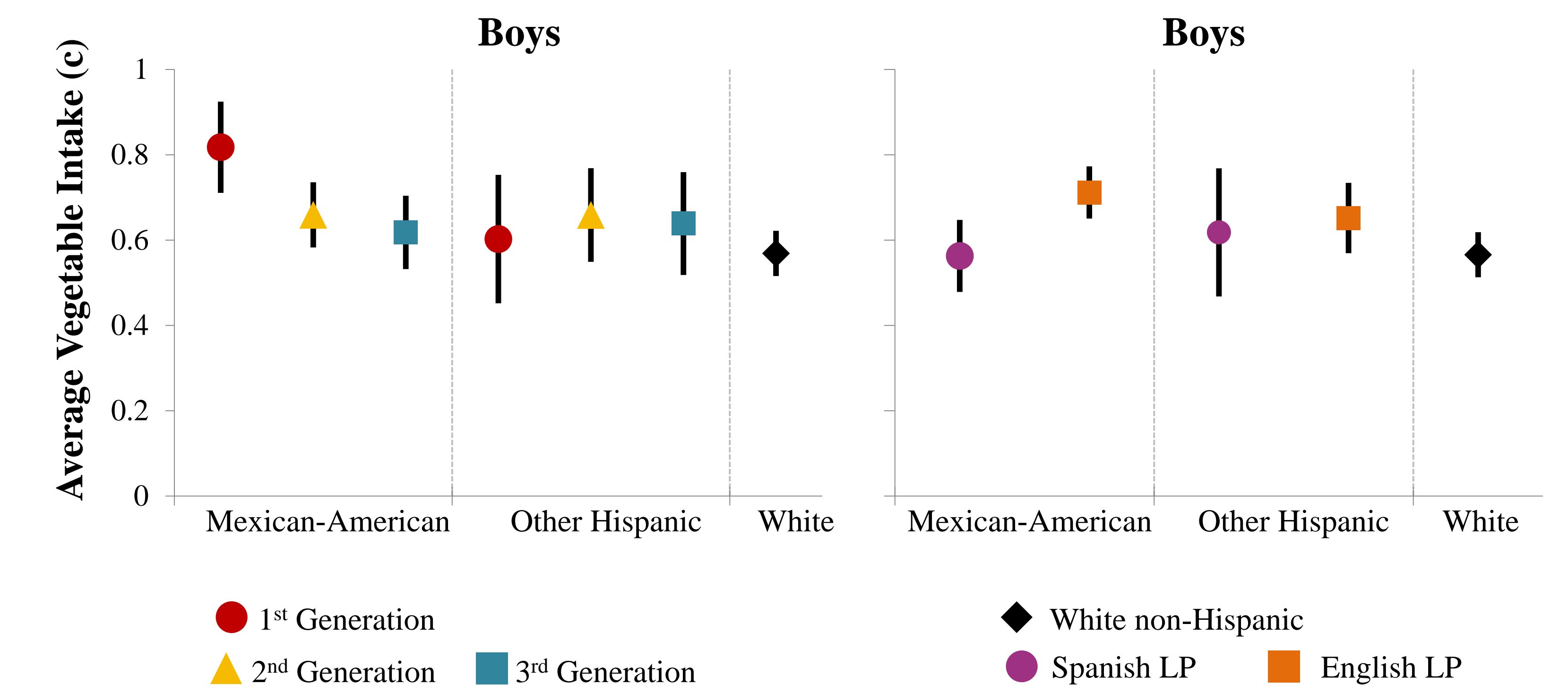
Boys' vegetable intake was lowest in 3rd generation; this pattern was also most pronounced in Mexican American boys, and not observed in girls.



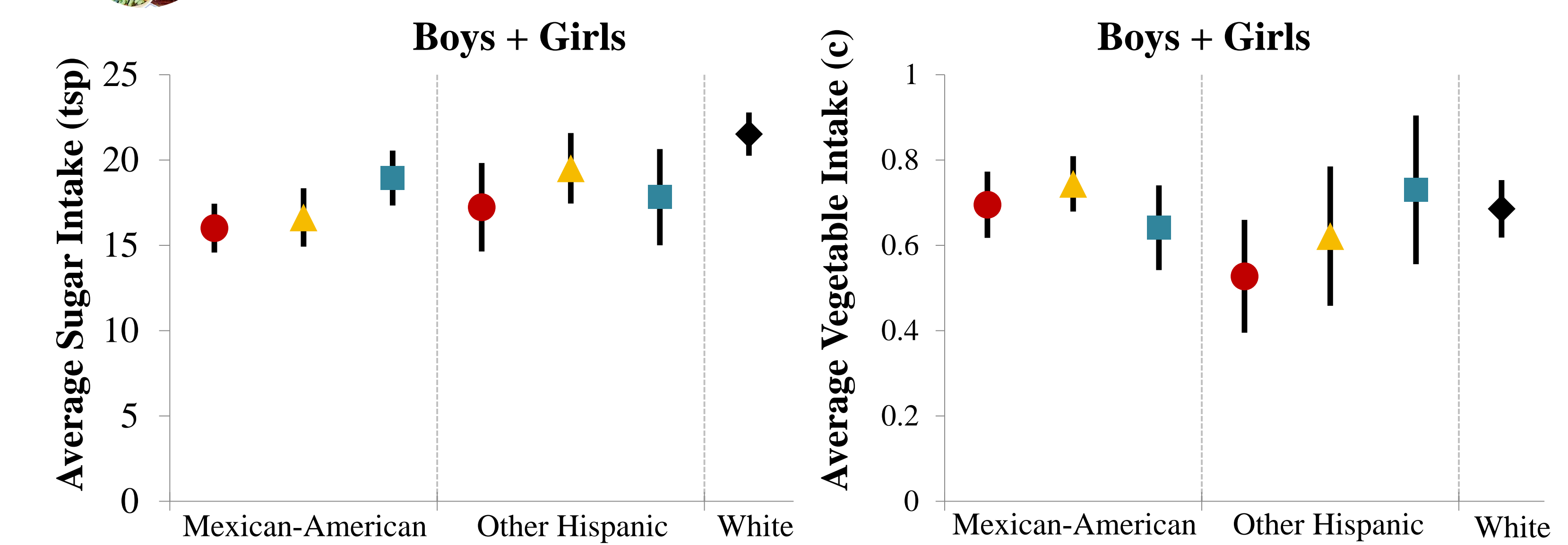
Results



Boys' vegetable intake differed between acculturation proxies. In GS, intake was highest for the least acculturated, and for LP, the opposite was true.



Similar dietary patterns were also found for 5-11 year olds



Conclusions

- Using a nationally representative, cross-sectional dataset the study investigated a mechanism by which acculturation may affect immigrant children's dietary intake.
- GS and LP, two proxies for acculturation, largely revealed similar patterns, with the least healthy diets among the most acculturated.
- Gender differences found in dietary intakes may be due to variations in exposure to U.S. lifestyle. Boys in Mexican cultures are often allowed more freedom for interaction outside familial institutions, increasing their vulnerability to outer diet influences.
- Across proxy types, a difference found in boys' vegetable intake may indicate a need to view outcomes separately by GS and LP for this population. For adolescents, while GS may be capturing exposure to the U.S., LP may be tapping into the extent to which a youth chooses to maintain ties with their own culture.
- Further, ethnic group differences became clearer when focusing on participants from a single country of origin. Due to differences in immigrant experiences, future studies should take into account the within-group heterogeneity of immigrant, ethnic populations.
- Lastly, similar patterns were also found for 5-11 year olds. Not often included in diet acculturation studies, these children hold a unique opportunity for influencing changes in eating behavior in the school and home.
- Understanding the circumstances in which increased exposure to U.S. culture affects diet can aid policymakers in tailoring efforts towards immigrant boys at the highest risk for becoming obese.

References ▶ Available upon request.