

WEIGHT MANAGEMENT BEHAVIORS AMONG MEXICAN AMERICAN YOUTH: VARIATION BY TIMING OF GROWTH AND MATURATION

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Rationale

- Little is known about weight management behaviors (WMB) among youth
- Mexican American youth have higher rates of overweight and obesity
- Determinants of WMB are multifactorial

Aims

- 1) Assess the association between estimated age at peak height velocity with WMB among boys and girls
- 2) Examine the relationship between timing of menarche in Mexican American girls with WMB

Student and School Characteristics

- South Texas students enrolled in grades 4 through 12
- 34.5% poverty rate for the county
- Oversampled middle school students
- 99% Hispanic
- 640 students participated
 - 195 from elementary schools
 - 400 from middle schools
 - 45 from high schools.

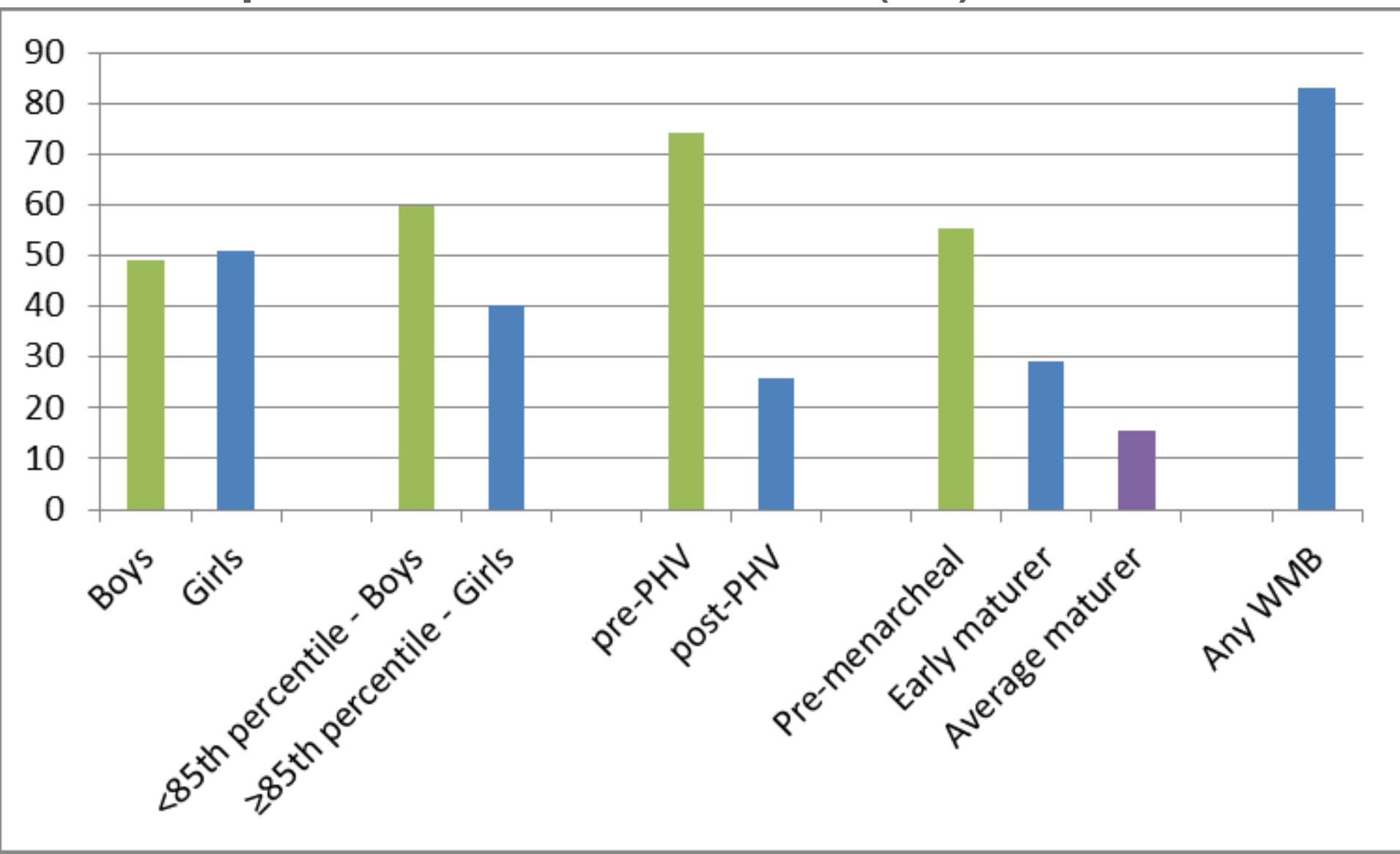
Measures

- 85th percentile of weight for age and sex
- Calculated maturity offset to estimate age at peak height velocity (Mirwald et al., 2002; Moore et al., 2015)
- Age at menarche
- WMB during past 30 days
 - perceived weight status
 - exercise to lose weight
 - eat less food/fewer calories
 - foods low in fat
 - go without eating for 24 hours or more
 - take any diet pills/powders/liquids
 - vomit or take laxatives

Primary Aims Analysis Plan

- Descriptive statistics and bivariate associations
- Separate multiple logistic regression analyses to model likelihood of engaging in weight management behaviors by
 - estimated age at PHV
 - timing of menarche (female students only)

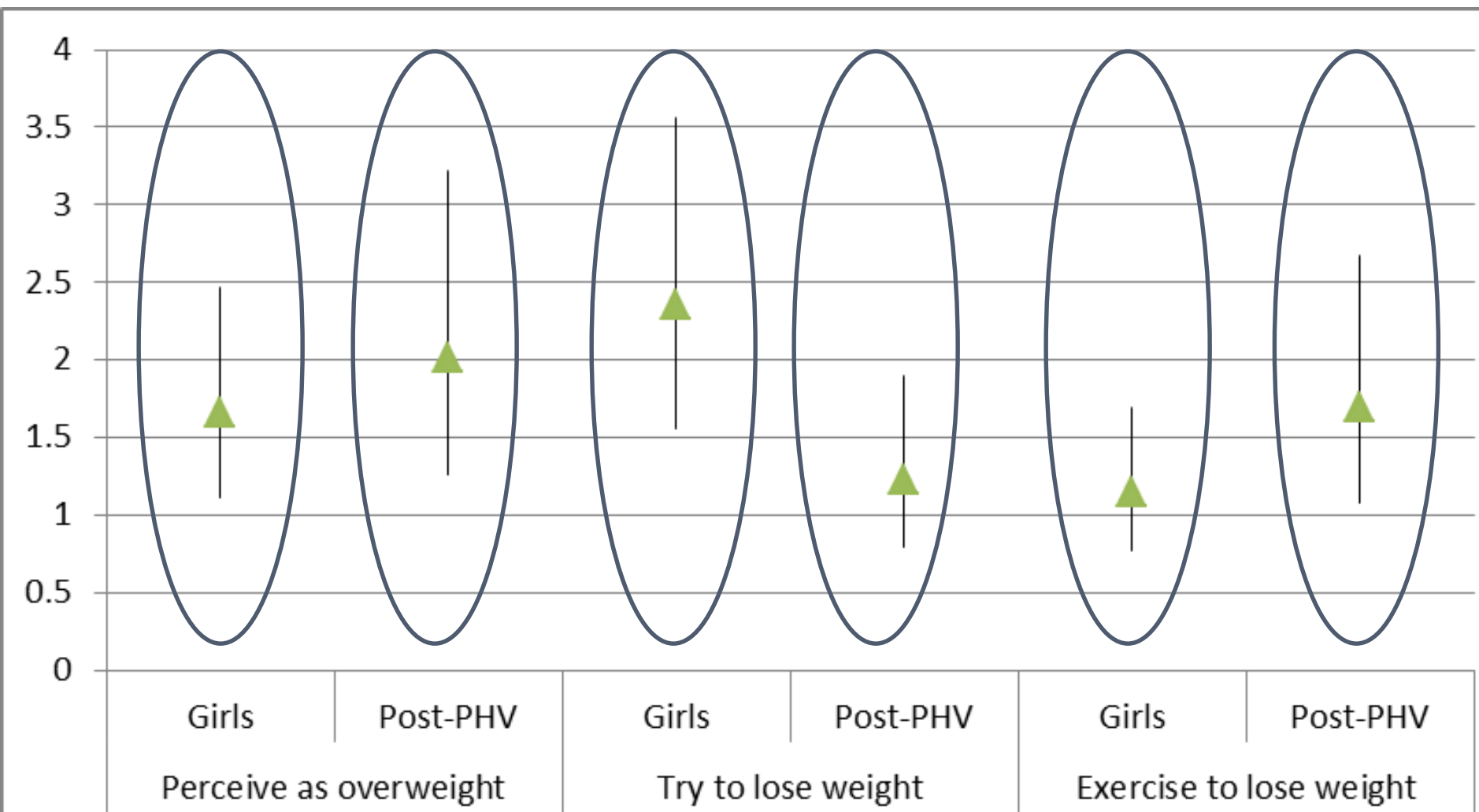
Sample Characteristics (%)



Bivariate Associations

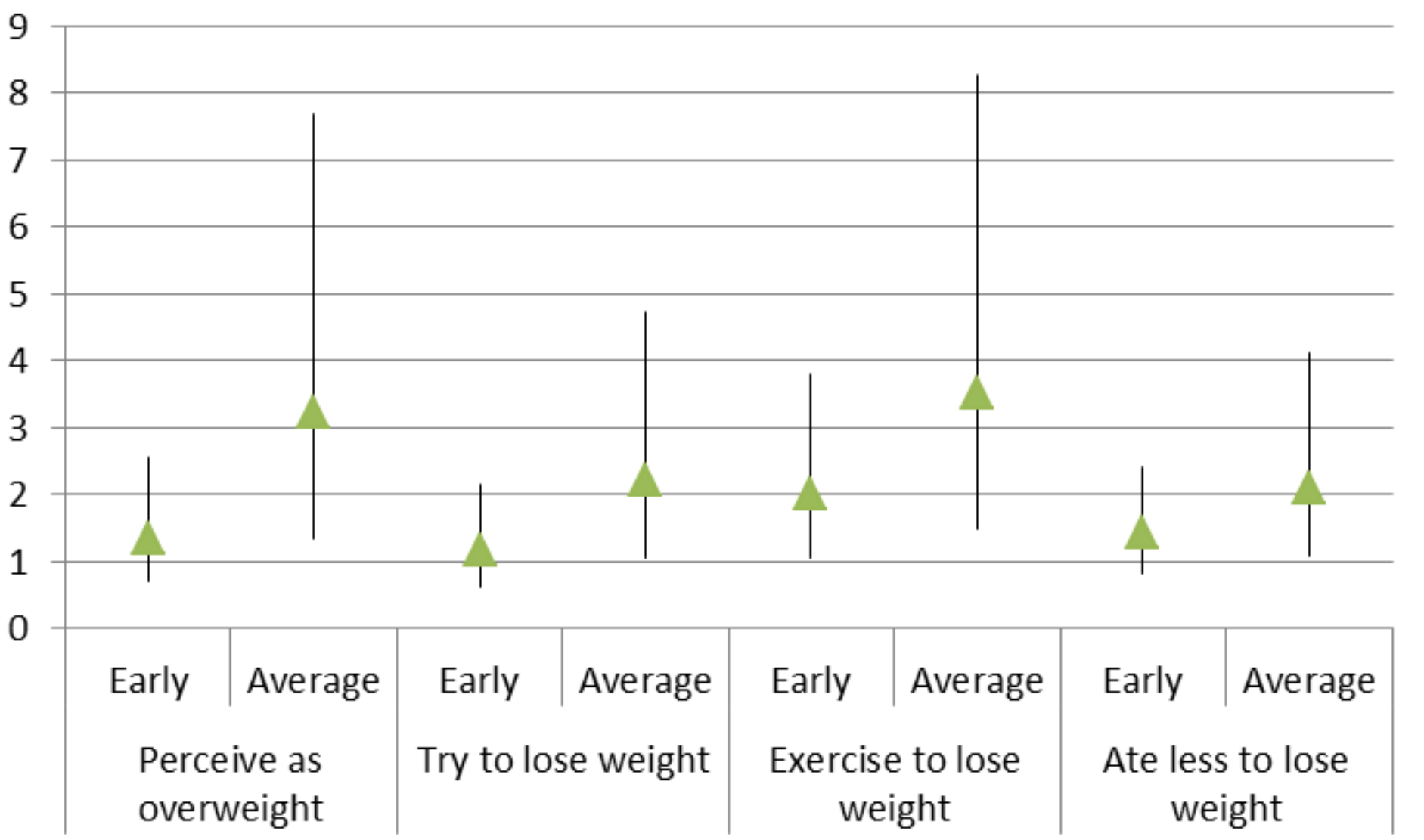
		BMI Percentile		
		<85.0 (n=258)	≥85.0 (n=382)	χ^2
Growth Status				12.884**
	Pre-PHV	66.7	79.3	
	Post-PHV	33.3	20.7	
Maturational Timing		<85.0 (n=158)	≥85.0 (n=149)	χ^2
	Pre-Menarche	53.8	57.1	4.741
	Early Maturation (<11.8 years at menarche)	25.9	31.5	
	Average Maturation (11.8 to 13.8 years)	20.3	11.4	
Weight Management Behaviors		<85.0 (n=258)	≥85.0 (n=382)	χ^2
	Describe self as slightly or very overweight	6.2	51.8	142.157***
	Trying to lose weight	26.0	76.4	159.273***
	Exercising to lose weight	58.1	85.6	61.184***
	Restricting calories	36.5	63.8	45.716***
		<85.0 (n=178)	≥85.0 (n=264)	χ^2
	Fasted for 24 hours or more to lose weight [†]	9.0	17.1	5.801*
	Taken diet pills, powders or liquids [†]	1.7	2.7	0.449
	Vomited or taken laxatives [†]	0.6	4.2	5.167*

Growth Status, Gender, and Weight Management Behaviors



Models were adjusted for weight status ($\geq 85^{\text{th}}$ percentile or $< 85^{\text{th}}$ percentile in weight for age)

Maturation Status and Weight Management Behaviors



Models were adjusted for weight status ($\geq 85^{\text{th}}$ percentile or $< 85^{\text{th}}$ percentile in weight for age)

Differences in PHV Equations

	Boys Pre-PHV	Boys Post-PHV		Girls Pre-PHV	Girls Post-PHV
Mirwald et al., 2002	129	83		95	146
Moore et al., 2015	170	50		111	114

More students classified as pre-PHV with new equations

Primary Limitations

- Cross-sectional data
- Maturity offset

Strengths

- Focus on Hispanic youth
- Oversampling of middle school students

Conclusions

- Growth-related changes in body shape and size may influence weight control behaviors
- Overweight and obesity may mask growth-related changes in body shape and size
- Explore timing of discussions related to weight among youth



Thank you!