

## Background & Objectives

- Weight misperception is important and previous research has shown these misperceptions have influence on dietary intake and physical activity (PA) levels.
- Very few studies have examined how these misperceptions influence across different types of healthy/unhealthy foods, PA, and sedentary behaviors.
- No studies have examined these relations in low income groups.
- This study examines how weight perception (accurate perception or overestimating-underestimating actual weight) varies by gender and income and how these differences influence dietary behavior and PA in California adolescents.

## Methods

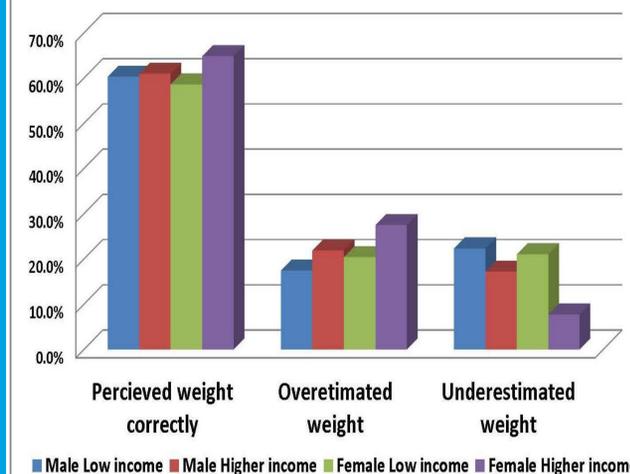
- Analyses were based on 986 California adolescents (age 12-17) from 2012 California Teen Eating, Exercise, and Nutrition Survey (CalTEENS) data with low-income and higher-income samples.
- We created three weight perception categories (accurate perception, overestimate, underestimate) using BMI scores (based on self-reported height and weight) and a weight perception item (very underweight, slightly underweight, about right, slightly overweight, very overweight).
- Three-way ANOVA analyses were used to test how weight perception interacts with gender and income on fruits-vegetables, sugar-sweetened beverages, fast food, PA and screen-time.

Percentage of Adolescents by Gender and Income Groups for Actual Weight, Perceived Weight, and Accuracy

Variable	Category	Total Sample	Gender		p	Income		p	Male		Female		p
			Males	Females		Low-Income	Higher-Income		Low-Income	Higher-Income			
Actual Weight	Underweight	19.4	20.4	18.4		15.4	22.4	a	13.4	25.2	17.2	19.5	a
	Normal	61.2	58.4	64.1		56.6	62.5		57.7	56.6	55.7	68.5	
	Overweight-Obese	19.3	21.2	17.5		28.0	15.1		29.0	18.2	27.1	11.9	
Perception of Weight	Slightly & Very Underweight	16.8	23.0	10.3	a	18.4	16.3	c	22.5	24.1	14.7	8.0	a
	About Right	54.8	47.2	62.8		48.3	57.3		38.2	49.4	57.5	65.7	
	Slightly & Very Overweight	28.4	29.7	27.0		33.2	26.5		39.3	26.6	27.8	26.3	
Weight Perception Accuracy	Accurate	59.7	56.8	62.6	c	56.8	60.5		52.0	57.4	60.9	63.7	
	Inaccurate	40.3	43.2	37.4		43.2	39.5		48.0	42.6	39.1	36.3	
Weight Perception Accuracy Category	Accurate	59.7	56.8	62.6	a	56.8	60.5	a	52.0	57.4	60.9	63.7	a
	Overestimate	23.9	22.5	25.3		19.1	26.8		19.3	24.9	18.9	28.8	
	Underestimate	16.4	20.7	12.1		24.1	12.7		28.7	17.7	20.2	7.5	

Box around numbers indicates significant differences (a=p<.001, b=p<.01, c=p<.05)

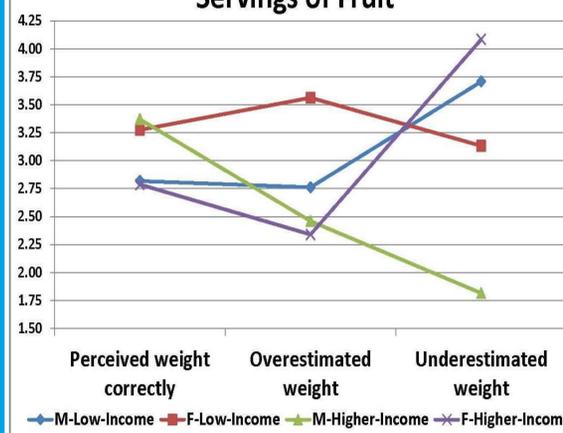
## Weight Perception by Gender & Income



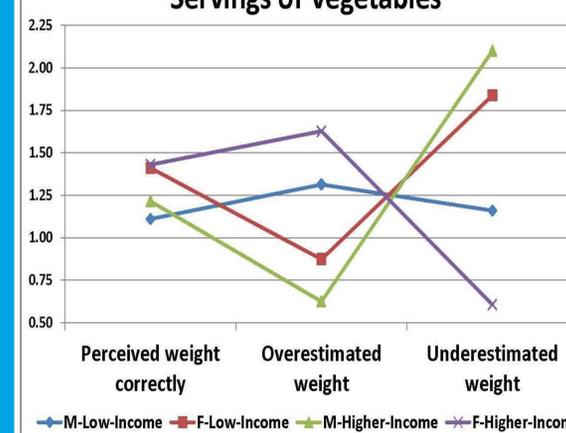
## Results

- Over 40% of adolescents misperceived their weight status.
- Low-income groups were nearly twice as likely to underestimate their weight (low-income males had highest levels)<sup>1</sup>.
- Significant interactions in 16 out of 20 diet and PA outcomes (p<.05), however, differences were found predominantly for adolescents who overestimated or underestimated weight.
- For those who overestimate their weight we found that low-income groups consumed more beans, dairy products (cheese, yogurt, milk), and soda; low-income females drank more 100% juice and had less PA<sup>1</sup>.
- For those who underestimate their weight we found that higher income males ate less fruit and drank less 100% juice<sup>1</sup>, whereas, higher income females ate less vegetables, hi-fiber cereal, and ate more fast-food per week<sup>1</sup>.
- <sup>1</sup>All significant results below p<.05.

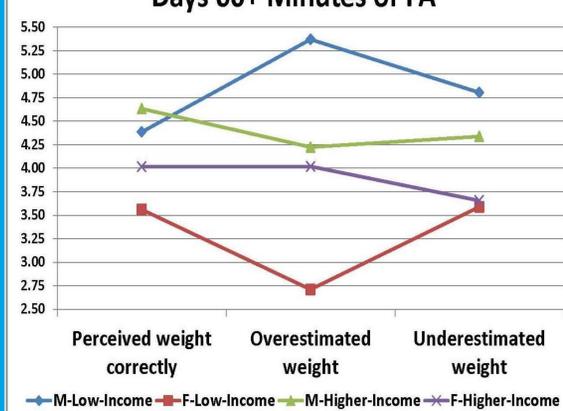
## Servings of Fruit



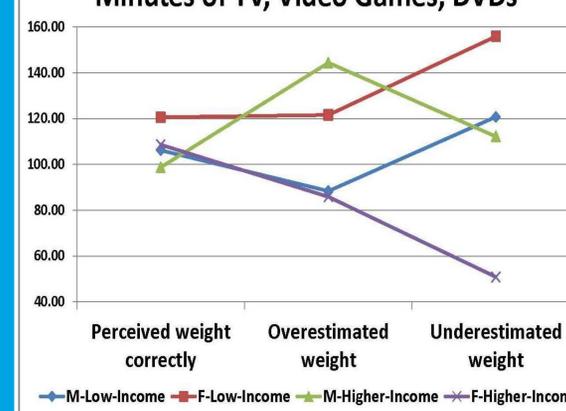
## Servings of Vegetables



## Days 60+ Minutes of PA



## Minutes of TV, Video Games, DVDs



## Summary & Conclusions

- Results highlight the importance of gender and income on weight perception and how these factors influence dietary and PA behaviors for adolescents who underestimate and overestimate their weight.
- Weight misperception, particularly underestimation of weight, is highest in low-income groups and low-income males.
- Most differences in diet and PA by gender and income were found for those who misperceived their weight, not those who accurately perceived their weight.
- Programs and interventions targeted at low-income groups need to consider the role of misperception in dietary intake and level PA activity.

## Acknowledgements:

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