

Child Feeding Practices and in Latino Households

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Transitions from Infancy to Childhood

- Infants: Breastfeeding on demand
- Older children: Less control over timing of meals, access to snacks important, eat according to appetite

Recent Research on Overweight in Mexican Children

- In two regions of Mexico, prevalence of BMI > 85th is 40% in boys and 35% in girls
- In middle-class Mexican families, childhood obesity more common:
 - In smaller households
 - Among boys
 - Where parents are “more permissive” or “less authoritarian”

Questions

- How do acculturation and food insecurity-- past and current—affect child feeding practices?
- How are child feeding strategies related to overweight?

UC Cooperative Extension Research Studies, 1997-98

- Phase I: Focus groups among 11 groups of parents in Riverside, Sonoma, Monterey counties
- Phase II:
 - Survey among 237 families: Monterey, Tulare, Kern, and Fresno counties
 - In-home observations of 11 children: Tulare County

Findings from the Focus Groups

- Use of bribes and threats very common—
not perceived as force????
- Child-led snacking common—growing
awareness of a link to overweight
- Parents often express need to give their
children what they lacked in growing up in
Mexico
- Seasonal food insecurity (winter) limits
supply of both nutritious and “junk foods”

Bribes and Threats Common

“If they don’t eat, I will punish them, They like to watch T.V. No T.V. if they don’t eat”

Spanish-speaking mother, Monterey County

Awareness that Snacking and Overweight may be related

“If I leave them to eat what they want, they are going to eat anything..sandwiches with honey...they will be eating every minute, grabbing cookies, quick foods, burritos, foods from a package, foods for the microwave, easy to prepare.. I was to blame because I brought home quick foods, only to heat up and eat. And they were getting fatter”

Spanish-speaking woman, Monterey County

Effects of Past Deprivation

“We want our children to have what we didn’t have. If I make beef soup and my child wants a hot dog, I am going to give him a hot dog.”

Spanish-speaking Mother, Sonoma County

Concern about Changes in Traditional Food Patterns

“Something that has begun to worry me is that...now that they are older, they refuse almost everything that has vegetables, that one cooks at home... The food pattern of my family—they are losing it, taking on hamburgers, what they call ‘junk food’, street food, potato chips, eat in the car, in the Drive-through. I myself am doing the same.”

Spanish-speaking father, Riverside County

Seasonal Fluctuation in Food Insecurity and Food Supplies

"There are times when we buy a lot of food... wholesale... to use in these times (e.g. winter). Now, when there isn't enough, there isn't enough for pizzas, "snack foods" (golosinas), hamburgers. There is only beans, tostadas, rice."

Spanish-speaking mother, Monterey

Nutritious Foods Disappear in Food Insecure Households

“When they see the empty refrigerator, they say ‘Mommy, there isn’t any juice, milk, chicken, and fruit. Go and buy some’. I tell them I will not bring all the fruit, because I don’t have a lot of money. I will only bring what is cheapest”

Spanish-speaking mother, Monterey 1997

Survey Methods

- Cross-sectional survey of 237 low-income Latino households w/ at least one preschooler (3-5 years old)
- Convenience sampling from Head Start, WIC, child care centers, Migrant education
- Bilingual interviewers, in-person at home or by phone (fathers)

Food Security Instruments

- Current food insecurity in past 30 days--
Radimer-Cornell scale
- Past food insufficiency--
 - (0) enough food of the types desired
 - (1) enough food, not always types desired
 - (2) sometimes not enough food
 - (3) often not enough food

Definition of Terms

- Current hunger: Child and/or adult level hunger Radimer/Cornell scale
- Past hunger: Sometimes or often not enough food during parent's childhood

Child Feeding Strategies

- Mother “controlling” style score (0-4)
 - No TV/Play
 - No Dessert/Store
 - Scold
 - Rules about finishing plate
 - Overall forceful response
- Mother “accommodating” style score(0-3)
 - Wait to serve until child is hungry
 - Offer other foods when child rejects food
 - Overall passive response
- Frequency of child-led snacking

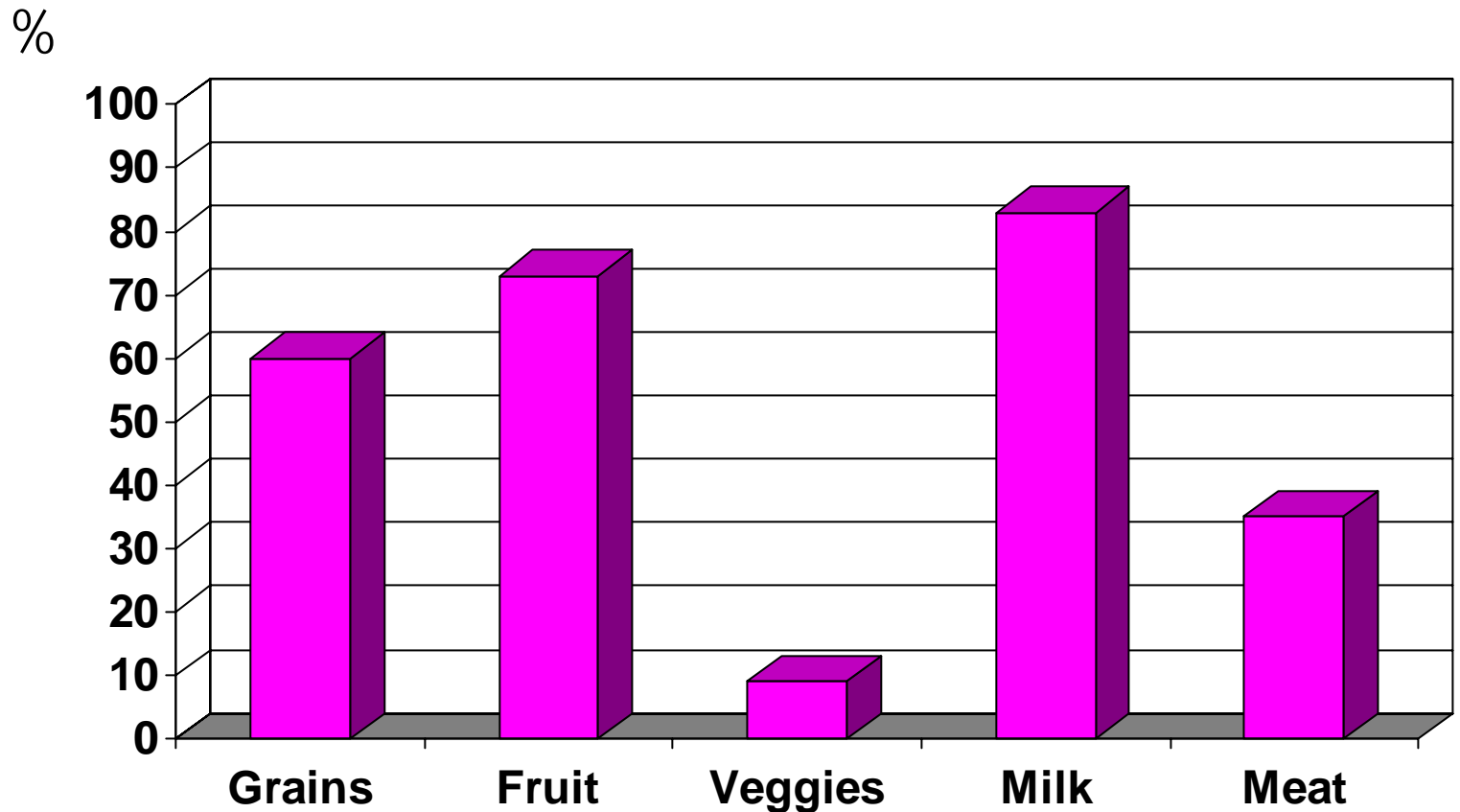
Other Data

- Acculturation level of mothers (Marin acculturation scale, birth country, yrs in US)
- Socioeconomic data—education, age, income

Description of the Sample

- 69% born in Mexico, 30% born in U.S.
- 58% spent all of early years in Mexico
- 65% speak mostly Spanish
- Mean mother's age: 29.9 yrs.
- Mean mother's education: 9.0 yrs
- Mean child's age: 4.4 yrs
- 24% overweight (\geq 95th percentile)

Percent of low-income Latino preschoolers meeting Food Guide Pyramid recommendations



Kaiser et. al. JADA.2002 102: 924-929. N=211, California, 1998

Claudia's day


At School


- **9:00: ½ tortilla; 1 tsp beans**
- **11:30: ½ cup salad; ½ orange; 1 oz chicken; ¼ cup rice; 4 oz milk**

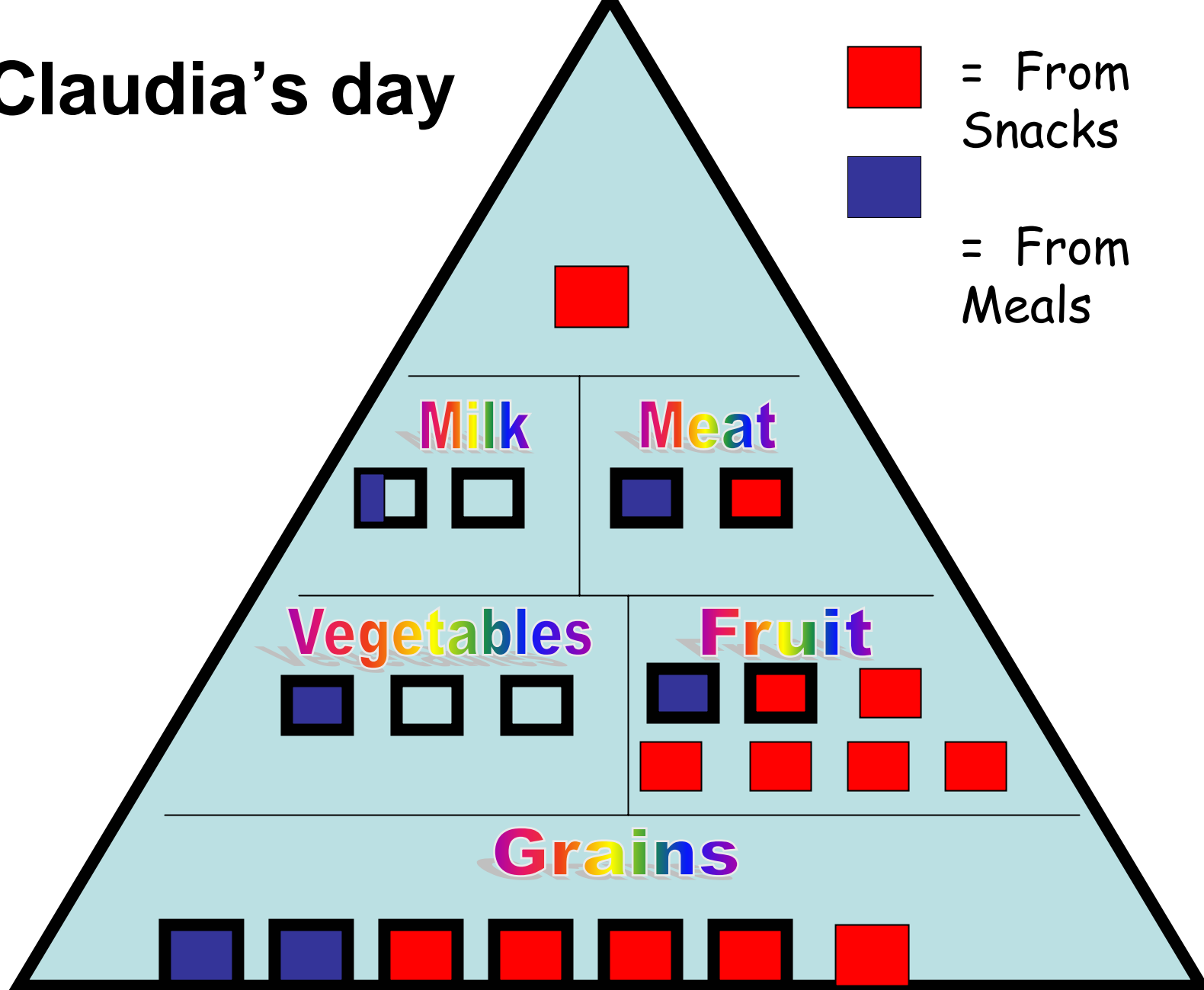
At Home

- **12:15: 3 oz juice**
- **12:40: 3 oz juice**
- **1:00: 1 hot dog**
- **1:35: ½ cu noodles**
- **2:00: 2 oz juice**
- **3:10 ¼ cu noodles**
- **3:35 1 orange**
- **5:00 1 oz chicken**
- **6:00 1 oz sausage**
- **6:30 candy, ½ pan dulce**
- **7:30 3 oz juice**
- **8:20 ¼ cu noodles; 3 oz juice**

Claudia's day

 = From Snacks

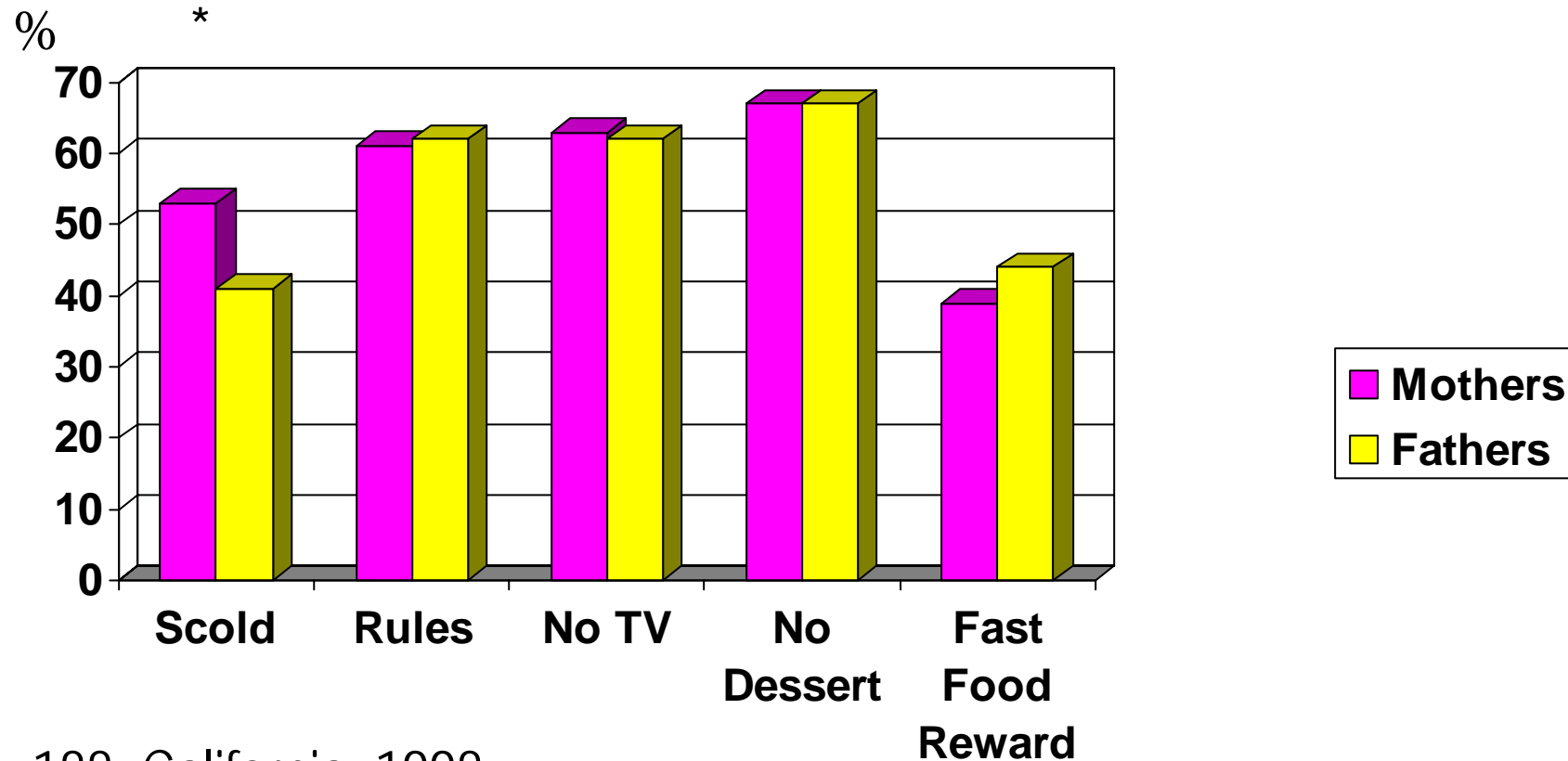
 = From Meals



Do Latino fathers and mothers use different strategies to encourage their children to eat?

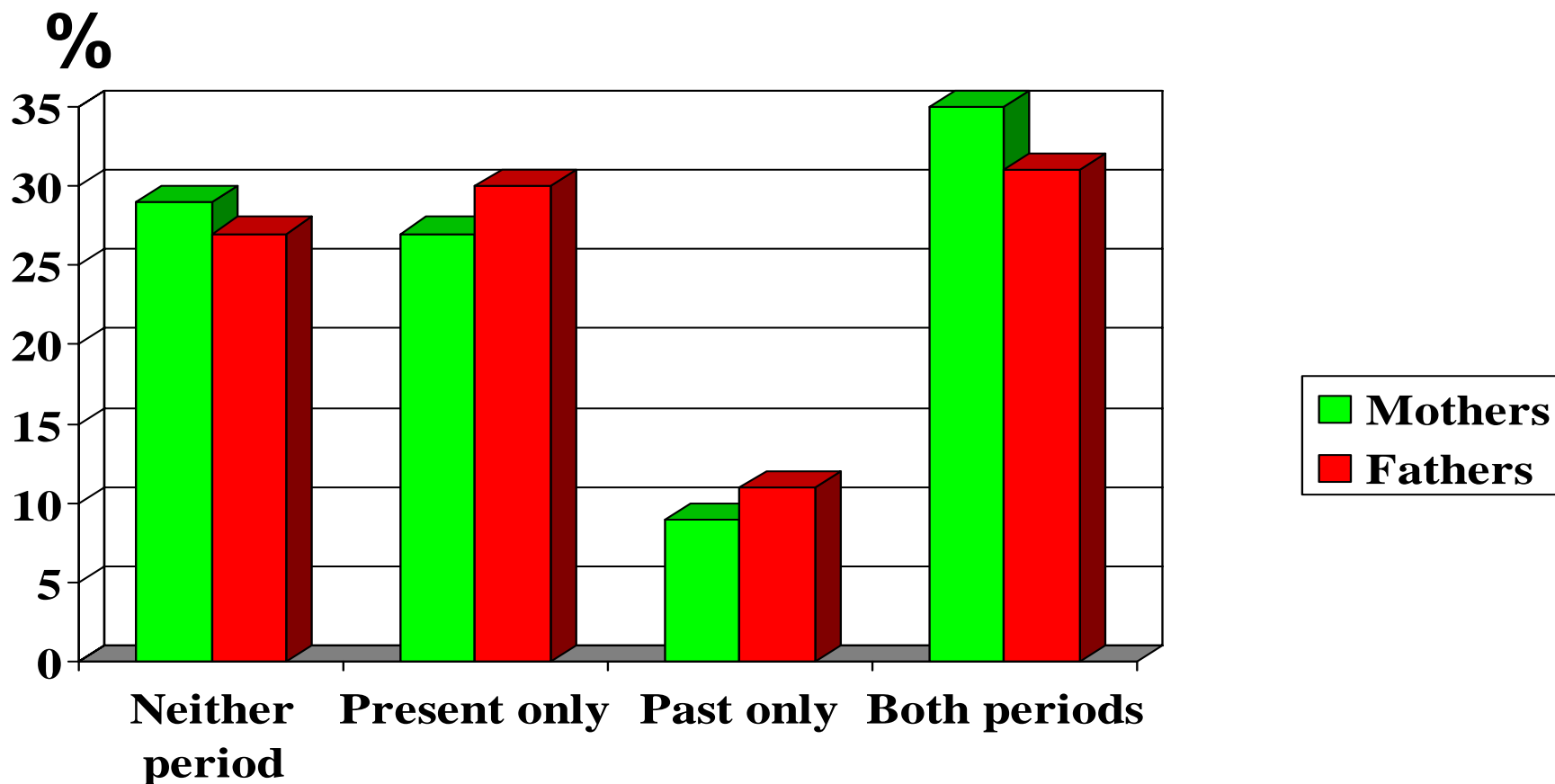
Very few differences in child feeding strategies among Latino fathers and mothers

* $P < 0.007$



N=188, California, 1998

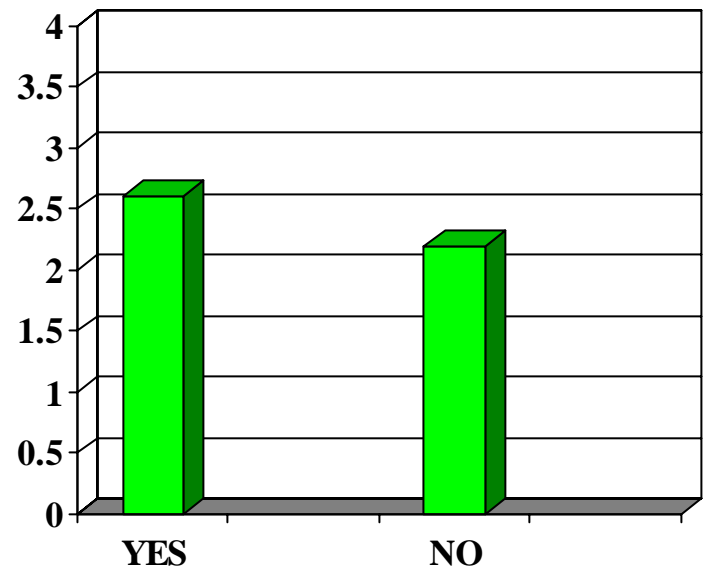
Percentage of Latino Parents Experiencing Hunger in Past and Present



Past Hunger and Greater Use of Controlling Strategies

- **Past hunger: 0.04**
- **Current hunger: NS**
- **Mother's educ. NS**
- **Acculturation: NS**
- **Child's age: NS**
- **Child's gender: NS**

Adjusted controlling strategies score



PAST HUNGER

Use of Accommodating Strategies

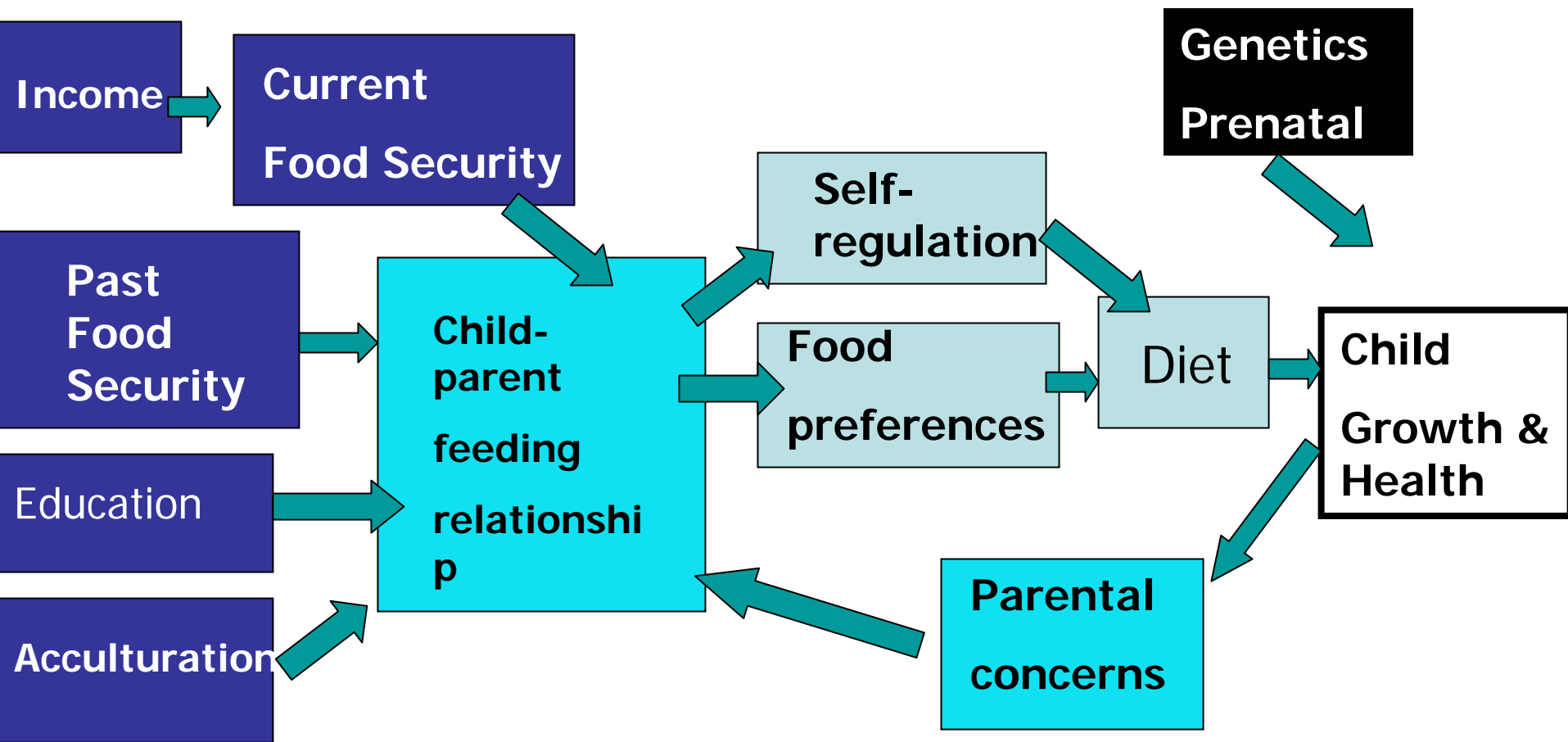
P-value

- Past hunger: NS
- Current hunger: NS
- Mother's educ. NS
- **Acculturation: 0.08**
- Child's age: NS
- Child's gender: NS

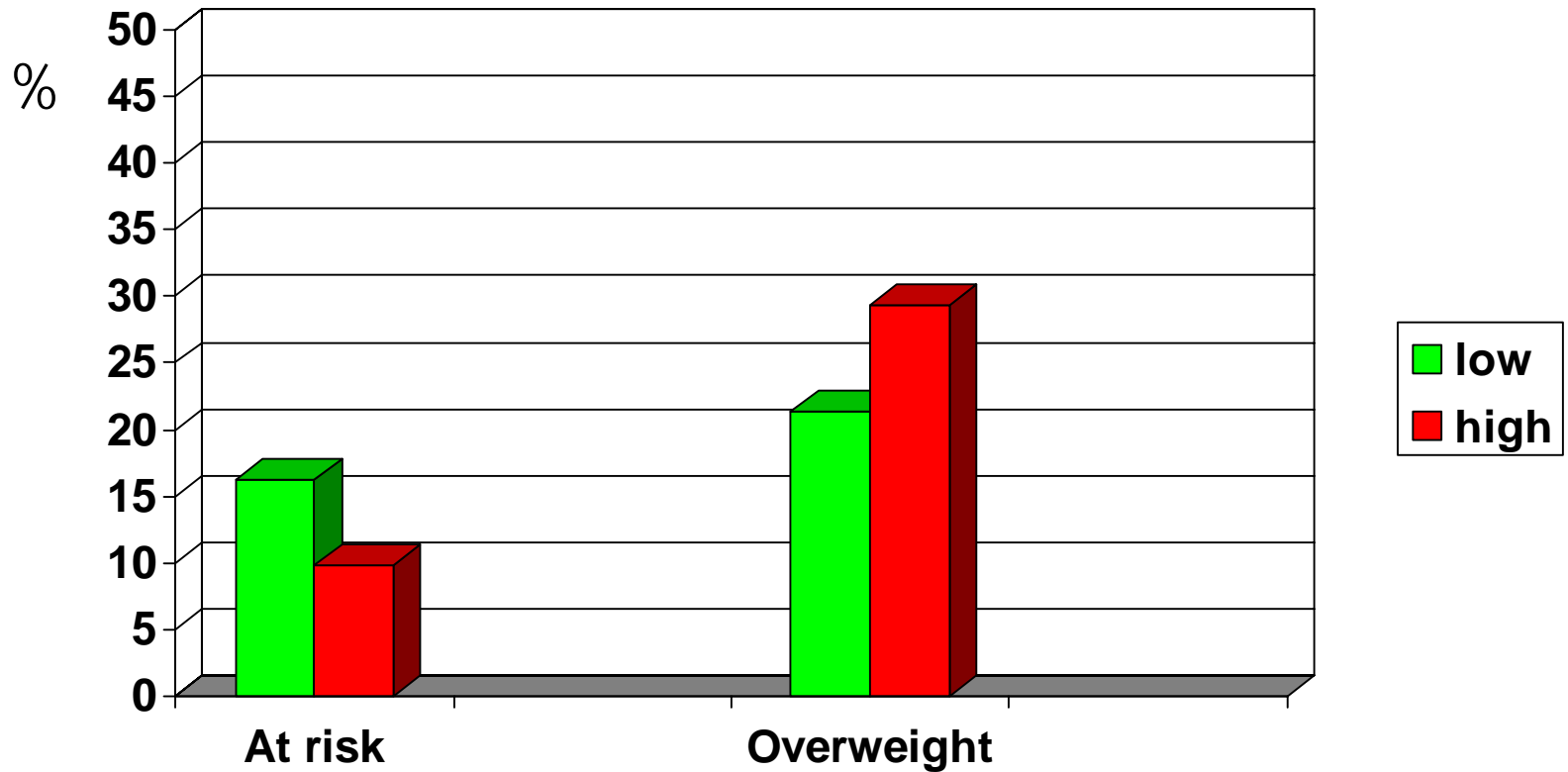
Child-led Snacking

- Past hunger: 0.10
- Current hunger: NS
- Mother's educ. NS
- Acculturation: NS
- Child's age: 0.09
- Child's gender: NS

How does past experience of hunger influence the parent's perception of an adequate portion size for a young child?

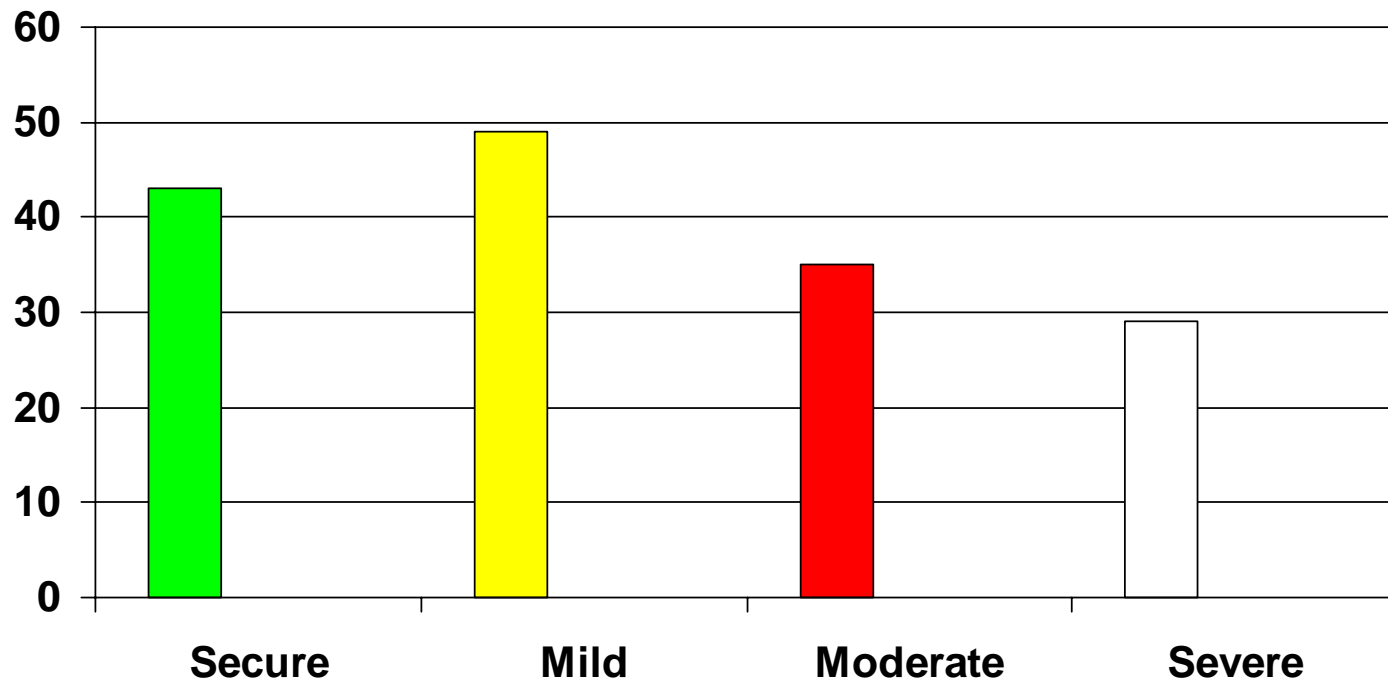


% Overweight among Latino Preschoolers by Parental Acculturation



Food Insecurity and % Overweight in Latino Preschoolers

Chi-square, $p < 0.06$)



Factors related to Overweight

- Positively related
 - Birth weight
 - Age of child
 - Mother's BMI
 - Income > \$1500/mo
 - % of energy intake from juice
- Negatively related
 - Currently on WIC
 - % energy intake from vegetables
 - Child takes food from refrigerator
 - Other nutr educ

Odds Ratios (95% C.I.) for BMI \geq 95 th Percentile (n=204)

(Melgar and Kaiser, JADA 2004)

- Birth Weight 2.06 (0.86, 2.37)
- Mother's BMI \geq 30 2.69 (1.27, 5.72)**
- Juice 2.68 (1.05, 6.92)*
- WIC 0.43 (0.19, 0.94)*
- Income \geq \$1500 2.33 (1.00, 5.42)*
- Takes food from refrig. 0.32 (0.13, 0.76)**

Adjusted for child's age. * $p \leq 0.05$, ** $p \leq 0.01$

Summary

- Parental experience of hunger during childhood is associated with greater use of bribes, threats, scolding, and rules about finishing one's plate.
- Lower acculturation marginally associated with greater tendency to delay meals and offer other foods when child refuses to eat.

- Most of the child feeding strategies were not associated with overweight, after controlling for birth wt, mother's BMI and other variables.
- More research—particularly longitudinal studies—needed to clarify the effects of past deprivation on frequent child-led, snacking and overweight in this population.

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