Examining Child Obesity among Mexican American Children through an Ecological Lens

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Introduction and Methods

• The obesity prevalence among Hispanic children is higher than other ethnic groups.
• The goal of the study is to explore factors in Mexican American (MA) children that contribute to obesity.
• Design: cross-sectional descriptive study, 55 MA children and their moms (N=110), ages 1-3. All participants recruited from WIC clinic in US-Mexico border town.
• Child, family, neighborhood, and community variables examined by χ2, independent t-test, and hierarchical logistic regression.
Figure 1. Ecological Framework

Macrosystem
South Texas

Exosystem
Hidalgo County

Mesosystem
- Maternal employment
- Day care
- Maternal acculturation (ARSMA II)

Agent
- Beverage
- Vitamin intake
- Introduction of foods
- Breast feeding duration
- Bottle feeding duration
- Prolonged bottle feeding

Microsystem
- Home Screening Questionnaire (HSQ)
- Perceived Stress Scale (PSS)
- Mother single parent
- Number of persons in home
- Number of children in home
- Birth order of children
- Having meals at a table with parents
- Meal organization

Children
- Birth weight
- Birth height
- Frequency of outdoor play

Mother
- BMI
- Age
- Education
- Preferred language
- Sport

Host

Child Obesity
Instruments and variables used

- **Host child**: demographics, weight/height, outdoor play X/week; **Maternal** characteristics: age, BMI, education, preferred language
- **Agent**: 24-hour diet recall, breast/bottle feeding, length of time on bottle, vitamin intake
- **Microsystem**: Home screening questionnaire, Perceived stress scale, number of persons in home, meal organization and eating patterns
- **Mesosystem**: maternal employment, day care, acculturation
Results

• Significantly more outdoor play in normal weight vs obese children (p=.02)
• 43.3% of obese children drank fruit drink compared to 10.3% of normal weight children (p=.001).
• 61% of obese children had prolonged bottle-feeding compared to 33% of normal weight children (p=.04).
• Maternal employment was twice as common among obese children.
• The model of host, microsystem and mesosystem variables accounted for 62% of the variance in child obesity.
Main Findings and Future Directions

• Physical activity and healthy diet are very important even for toddlers.
• Bottle-feeding is best stopped by 1 year of age. Prolonged bottle use leads to caries and obesity, especially when fruit drink is in the bottles.
• Outdoor free play is essential for toddlers.
• More moms of obese toddlers were obese than moms of normal weight children. Healthy family diet is recommended for all, not just the children.
• Promote WIC, SNAP, and other means for nutrition education.