Background

- Food security entails dependable and consistent access to the quantity and quality of food required by active and healthy household members and that food is acquired in socially acceptable ways.
- 1/3 of U.S. Hispanic households with children are food insecure and five million Hispanic children live in food insecure households.
- Food insecurity results in poorer physiological, psychological, behavioral, social and academic wellbeing compared to adults and children living in food secure households.

Results

- Nearly 70% of households were food insecure (mother-reported) while 42% of children self-reported that they were food insecure during at least one point in time during the study.
- While rates of food insecurity were discordant between mothers and children, mother and child reports of food insecurity were consistently more frequent during Spring-Summer 2010 compared to Spring-Summer 2011.
- Time played a significant protective role in both the mother (Wald $\chi^2_1 = 14.47$, p-value 0.0001, odds ratio .996) and child (Wald $\chi^2_1 = 32.64$, p-value <.001, odds ratio .993) logistic regression models.

Setting & Participants

- Alton and San Carlos area colonias in Hidalgo County, Texas.
- Unincorporated settlements of varying size along the Texas-Mexico border that sometimes lack water and sewer systems, paved roads, and sanitary living conditions.
- Areas of persistent poverty — 20% of residents have lived below poverty line for past 30 years.
- 54 mother-child dyads including mother and child age 6-11 years.
- Majority of families are of Mexican-origin.
- Mean years of mother education: 8.37 (± 2.51).
- Mean household size: 5.74 (± 1.52).

Conclusion

- Mother buffering may partly explain discordance among mother-child food security reporting. Other research supports this finding, indicating that mothers voluntarily reduce their portion sizes to avoid a reduction in child dietary intake.
- Among mothers and children, food security was worse in 2010 than 2011, which may be a result of poor economic conditions both within the home and local community and/or increased utilization of food assistance programs as the study progressed as a result of information provided by promotora-researchers, leading to improved food security.

Methods & Analysis

- Collected in the home on four occasions from March 2010-July 2011.
- Multilevel mixed effects logistic regression for longitudinal data used to account for correlation in repeated measurements and shared household.
- Forward stepwise selection algorithm and Akaike Information Criterion using \texttt{xtmelogit} command in Stata 11.

Implications

- Longitudinal design and utilization of multiple reports within a single household further our understanding of the volatile nature and unequal distribution of food insecurity within households.
- Repeated measurements among mothers and children can provide researchers a tool to accurately assess the prevalence of food insecurity, aid in program development, and assist advocates and policy-makers with improving nutrition and food security in the U.S.
- Because children are able and willing to report on their own food security, and because cross-sectional designs may be unable to present a true picture of the issue, future research ought to incorporate a longitudinal study design as well as children’s reports of experiences and perceptions.