**Title:** Food Insecurity Associated with Increased Stress and Frequency in Eating Out among Households with Children during the COVID-19 Pandemic

**People involved and organizational affiliation:** Colorado State University, Department of Food Science and Human Nutrition

Ana Altares, MS, RDN

Megan Mueller, PhD, MPH

**Background:** The COVID-19 pandemic disrupted access to adequate food and increased economic stressors for many. These impacts may have downstream effects on food choice and perceived stress, especially for parents; yet existing evidence is limited. Restaurant eating behavior, in particular, is associated with poor diet quality and chronic disease risk.

**Project Goals:** This study sought to determine associations between food insecurity, parental stress, and restaurant eating behaviors during the COVID-19 pandemic.

**Methods:** A cross-sectional survey among low-income parents of 2-11 year-olds who frequently ate food from restaurants prior to the pandemic was administered from November 2020 - February 2021 (n=1480). Participants reported frequency eating out in the last week and child orders at the “most recent” restaurant they visited. Child orders were classified as healthy vs unhealthy for entrees, sides, and beverages. The validated Hunger Vital Signs screener measured food insecurity and the validated perceived stress scale measured stress. Chi2 tests compared differences in perceived stress by food insecurity status. Negative binomial regressions tested associations between food insecurity and frequency eating from restaurants, adjusting for confounders. Child ordering behaviors were analyzed through logistic regression.

**Results:** About 82% of respondents reported food insecurity. Preliminary findings demonstrate that parental stress was significantly higher among food insecure individuals compared to food secure individuals (p=0.0000). Food insecure individuals reported increased frequency eating from restaurants when adjusted for covariates (IRR=1.129, p<0.05). Food insecurity was not significantly associated with child food orders.

**Discussion:** Services targeting food insecure families should consider the stress families experience and higher rates of eating from restaurants compared to food secure families. Given that food insecurity and stress are associated with reduced diet quality, higher rates of eating from restaurants may further increase risk of weight gain and related chronic diseases for both parents and children. Efforts to improve diet quality in this population should consider restaurant eating behaviors.