Environmental Unpredictability in Childhood Predicts Eating in the Absence of Hunger

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INTRODUCTION

- Life History theory predicts early environmental circumstances serve as blueprint for the future, enabling behaviors that maximize survival in such conditions
- Low childhood SES predicts eating in the absence of hunger (EAH; Hill et al., 2016)
- Childhood unpredictability (dangerous neighborhood conditions & parental inconsistency) and having a more robust unpredictability schema predicts lower body awareness and more eating in the absence of hunger (Proffitt Leyva et al., in press)
- Current research examined impact of various facets of environmental unpredictability on emergence of EAH in children

METHOD

- **Participants:** N= 141 kids ages 3-14 (M_{age} = 7.12, SD = 2.75) and parents recruited from Research & Learning Center (RLC) at the Fort Worth Museum of Science and History

- **Procedure**:
  o Parent/legal-guardian completed questionnaires assessing variety of child/personal experiences and family environmental and socioeconomic measures
  o Child Snacking Task: Pre/Post weight of Sliced green grapes and M&M's® candies

- **Measures:**
  o Maternal pregnancy stress
  o Environmental unpredictability
  o Family financial insecurity
  o Hours since child last ate (parent reported)
  o Total calories consumed (calculated from grams of grapes and M&M's® candies)

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Previous research shows that adults who grow up in poorer, more unpredictable homes tend to eat opportunistically, rather than when hungry and be less in tune with their own bodies. The current research examines environmental unpredictability (maternal pregnancy stress, family financial security, & household/neighborhood stability) and eating in the absence of hunger in children ages 3-14 years.
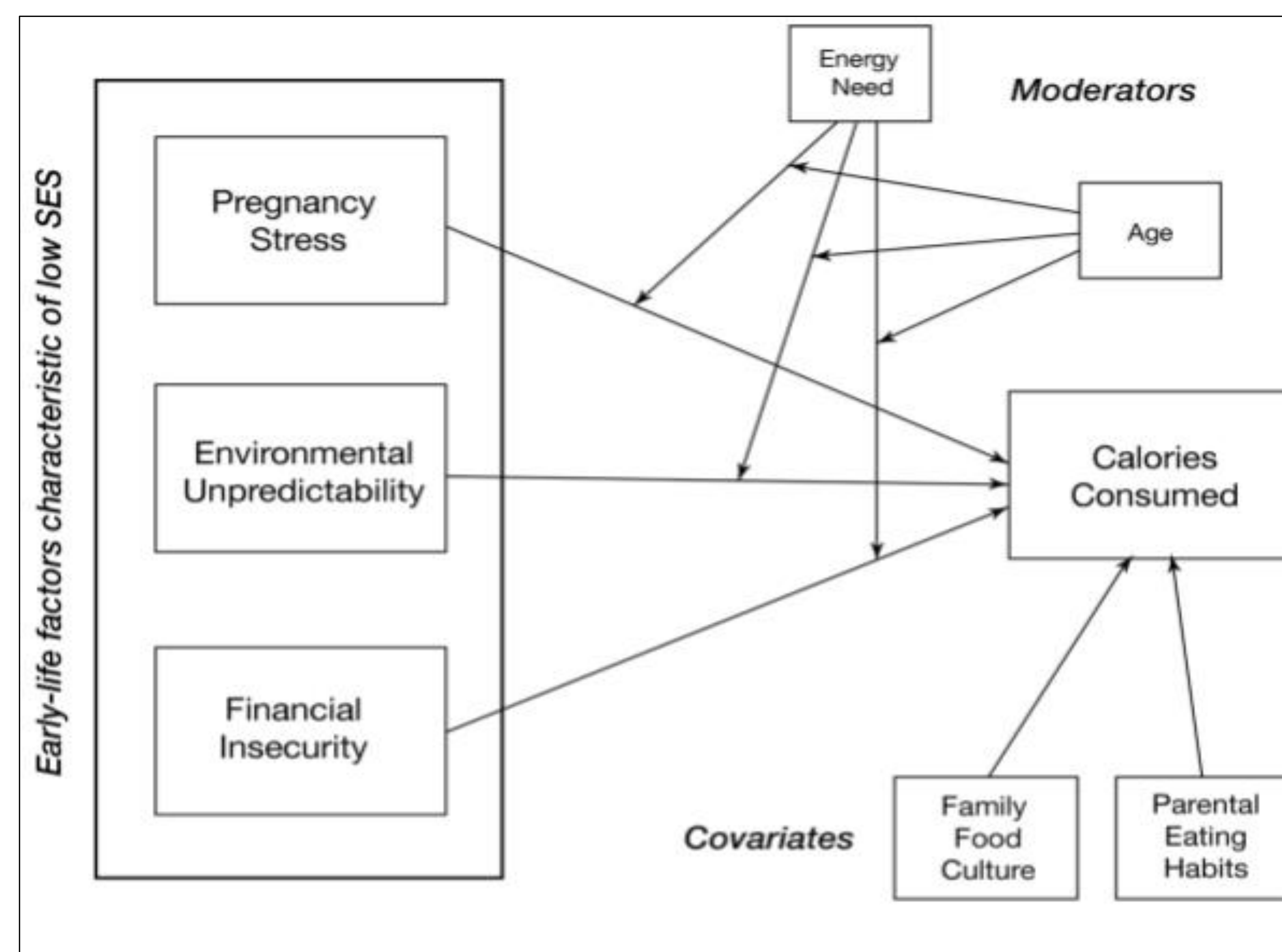
STATISTICAL MODEL

Figure 1. HLM statistical model representing relationships between early-life factors (maternal pregnancy stress, environmental unpredictability, and financial security), child's energy need (hours since eaten), child's age, family food culture, parental eating habits, on child's total calories consumed.
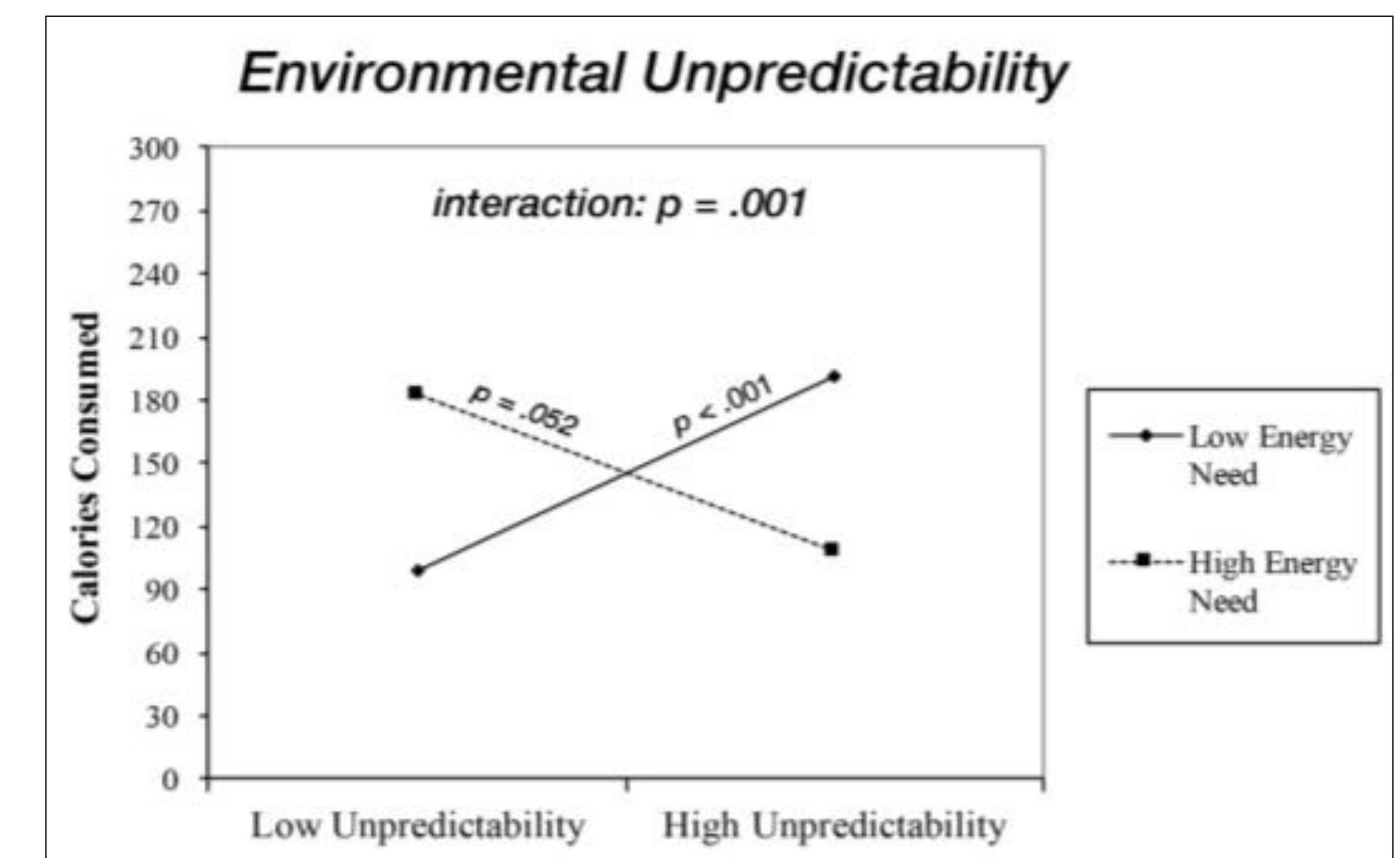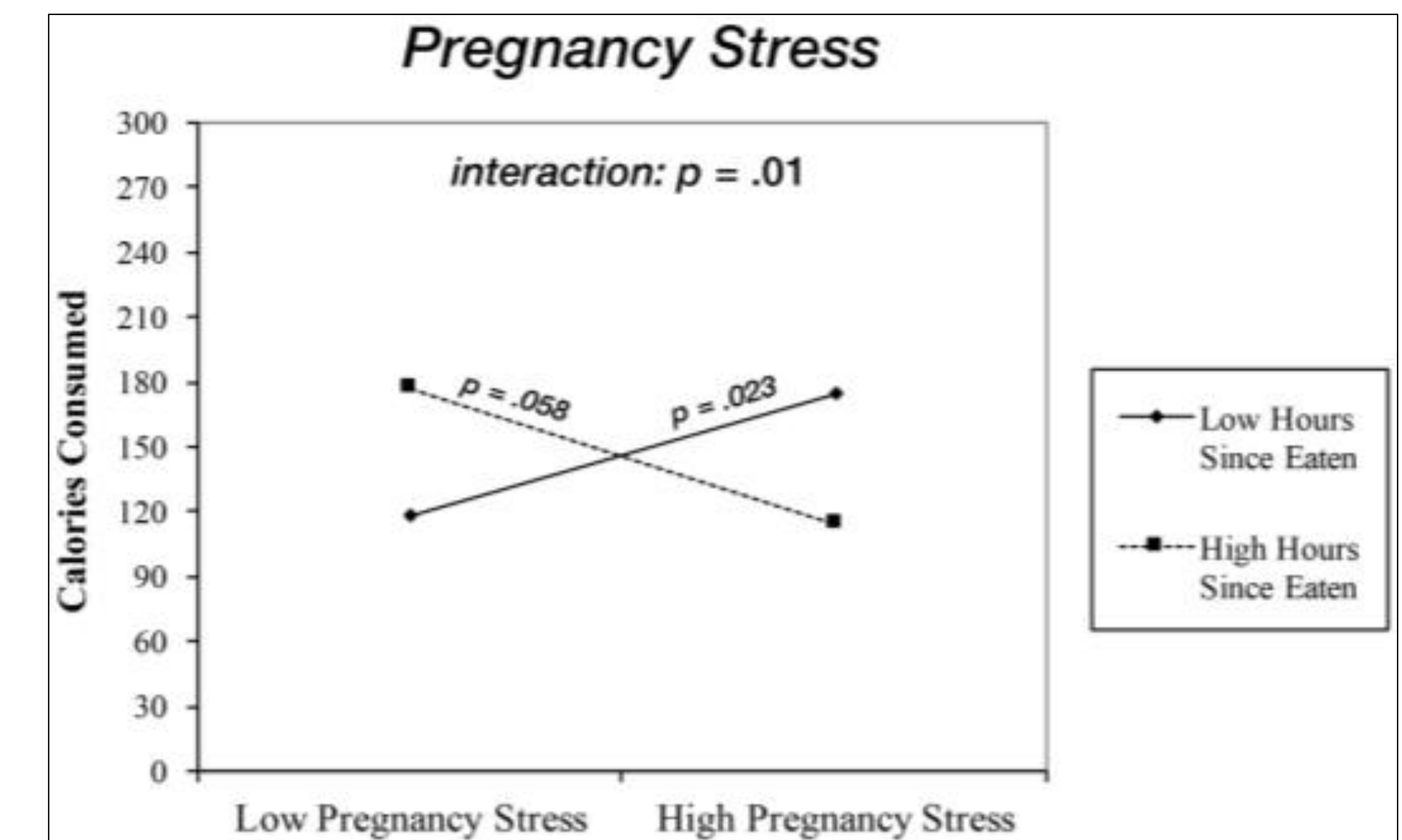

FIGURES

Figure 2 & 3. Both pregnancy stress, β = .29, [b = 23.84, SE = 10.51], t = 2.27, p = .023, and environmental unpredictability, β = .51, [b = 50.98, SE = 11.65], t = 4.38, p < .001, significantly predicted the number of calories consumed; The more maternal pregnancy stress and environmental unpredictability in their household, the more the children ate of the snacks when their energy need was low.
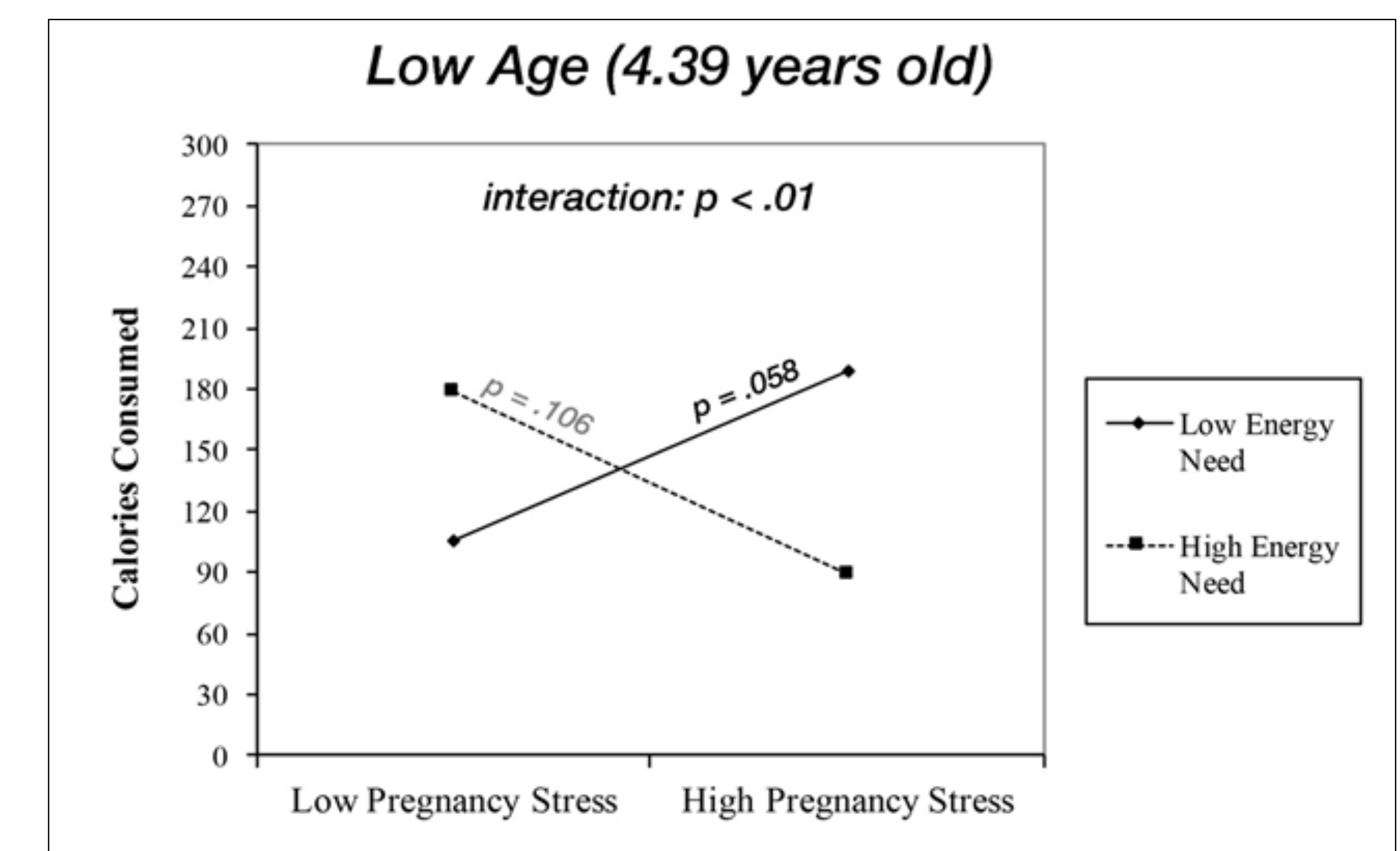

Figure 4. At low age (M = 4.39 yrs), maternal pregnancy stress predicted eating more calories when energy need was low, β = .35, [b = 28.25, SE = 14.94], t = 1.90, p = .058.