

# From Parents to Offspring: Investigating the Link Between Parental ACEs and Child Environmental Sensitivity

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## Background

### Adverse childhood experiences (ACEs)

- Abuse, neglect, and household dysfunction.
- Linked to poor well-being and health outcomes (Felitti et al., 1998).
- Parents' ACEs can manifest in ways that risk their offspring's functioning and pose behavioural challenges (Felitti et al., 1998).

### Environmental sensitivity

- An individual's capacity to respond and adapt to environmental conditions that pose various opportunities or challenges.
- Being sensitive is important for an individual to identify, evaluate and act on external situations that threaten or promote survival, development, and reproduction (Pleuss et al., 2018).

### Biological and epigenetic changes

- ACEs and other social factors together form toxic stress that can lead to disruptions in neurodevelopment, alterations in epigenetic patterns, and the reshaping of stress and immune regulatory systems (Rutter, 2012; Meaney, 2001).
- These changes can significantly influence a child's developmental path and shape their life course, likely by increasing their vulnerabilities to environmental factors (Danese & McEwen, 2012; Miller et al., 2011).

## Methodology

Secondary analysis of the data collected through the Child Resilience and Managing Pandemic Emotional Distress (CRAMPED) family study.

### Measures

#### Participants

- A single caregiver in each family unit reported on themselves and their children
  - 90% being biological parents
- 549 caregivers
- 1,098 children

#### Adverse Childhood Experiences Scale

- Caregiver retrospective accounts of 14 ACEs encountered between 0 and 18 years of age.

#### Child Environmental Sensitivity

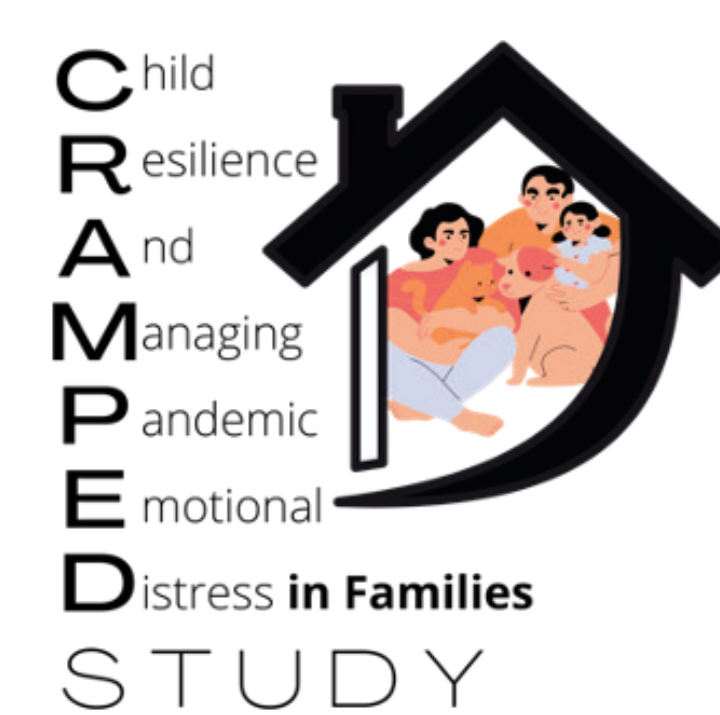
- Highly Sensitive Child Scale (HSCS-P)
- Parent-reported items related to negative and positive environmental influences on their child.

#### Family Functioning

- Family Assessment Device - family dynamics

#### Social Support Scale

- Parent-reported National Longitudinal Study of Children and Youth (NLSCY).



## Hypotheses

1. All children will develop greater environmental sensitivity within the family when parents have high ACEs.
2. Siblings will differ in terms of their environmental sensitivity, wherein one child will be highly sensitive and the other will be moderate to low.
3. We expect that family functioning and social support will moderate these effects.



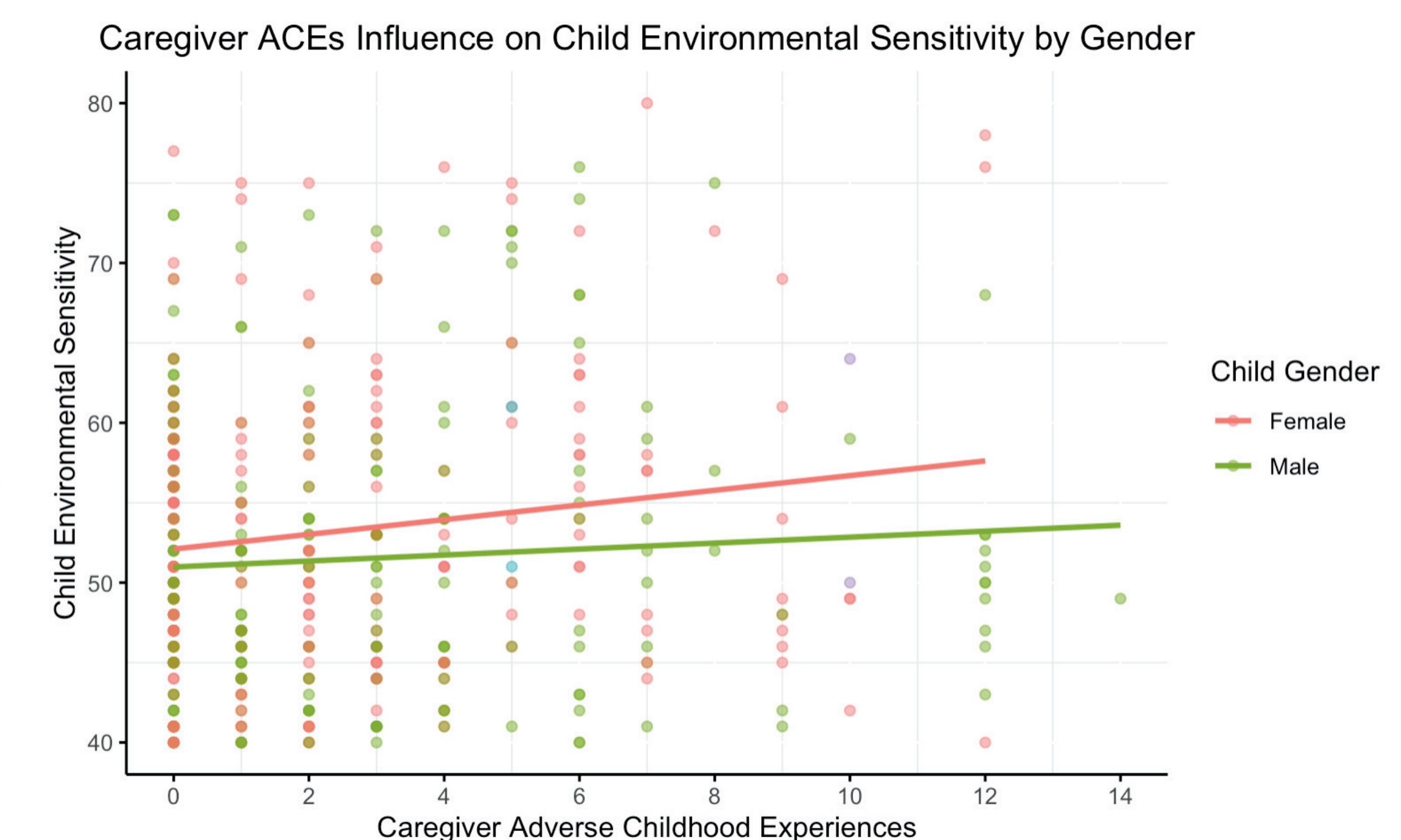
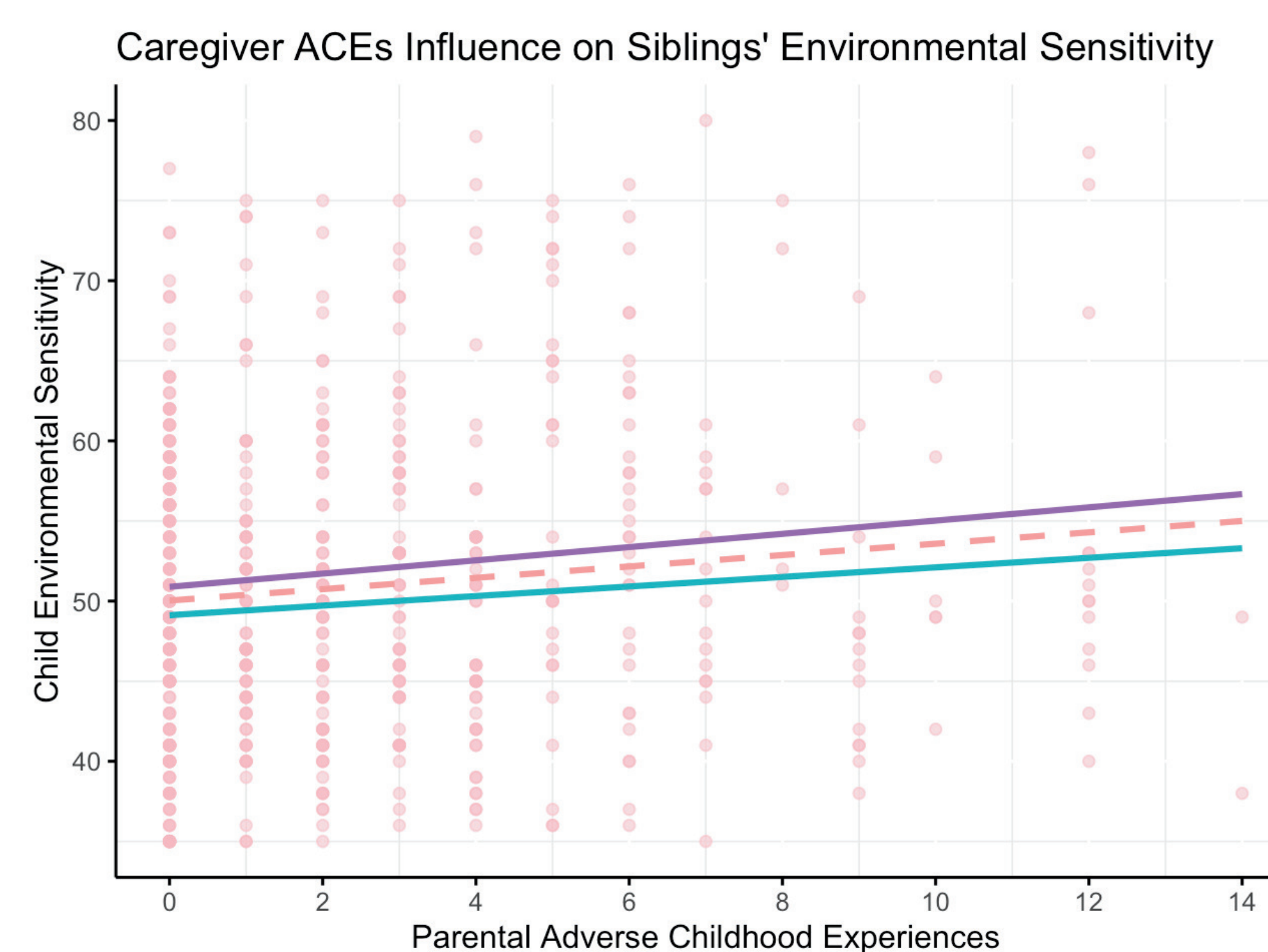
## Preliminary Analysis

The hypotheses were tested using a multi-level regression analysis.

1. The caregiver's adverse childhood experiences have a significant positive effect on the child's environmental sensitivity (HSCS-P).
2. Being the older child (mean age = 12.83) compared to the younger child (mean age = 9.17) is associated with a significant increase in the child's environmental sensitivity.
3. There is a significant decrease in the environmental sensitivity score in male children compared to female children.

Predictors of Child Environmental Sensitivity				
Variable	b	SE	t val.	p
Caregiver ACEs	0.38	0.19	2.01	0.05*
Sibling Differences	2.25	0.91	2.48	0.01***
Family Functioning	1.88	1.71	1.10	0.27
Social Support	-0.28	0.25	-1.12	0.26
Child Gender	-1.76	0.40	-4.39	0.00***
Child Age	0.07	0.14	0.49	0.62

Note: All continuous predictors are mean-centered and scaled by 1 standard deviation. The outcome variable is in its original units.\*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05.



## Findings

- Children of parents reporting higher ACEs tend to exhibit increased sensitivity to their environmental contexts.
- The older child displayed greater environmental sensitivity compared to the younger child.
- Family dysfunction and social support did not significantly influence the association between ACEs and child sensitivity.
- Gender as a covariate revealed that the impact of ACEs on environmental sensitivity was lower in male children compared to female children.

## References

