

Background

- Early attachment relationships are theorized to play a crucial role in regulating levels of the stress hormone, cortisol.
- International adoption offers a powerful test of the unique influence of early experiences for cortisol because children experience a profound shift in caregiving experiences after adoption.
- Prior studies are inconsistent regarding the consequences of early experiences of adversity for internationally adopted children's cortisol outcomes.
- It is also unclear whether the effects of early adversity on internationally adopted children's cortisol outcomes persist across time or whether the effects fade as children age and adapt to their new, adoptive caregiving environments.



Predictor Variables

Early Adversity

- Long duration of institutional care was used as an indicator of pre-adoptive adversity.
- Institutional care ranged from 0 to 35 months ($M = 9.94$)

Control Variables

- Children's age when cortisol was assessed
- Child gender
- Children's prenatal alcohol exposure
- Time of day and time since wake-up when cortisol was assessed



Outcome Variables

Diurnal Cortisol Regulation

- Cortisol levels were assessed at two time-points
 - Within 6 months of adoption
 - 4 years later
- At both ages, children's diurnal cortisol levels were measured by collecting saliva samples within 30 minutes of wake-up and at bedtime.
- Analyses focused on morning cortisol levels and changes in cortisol levels throughout the day.

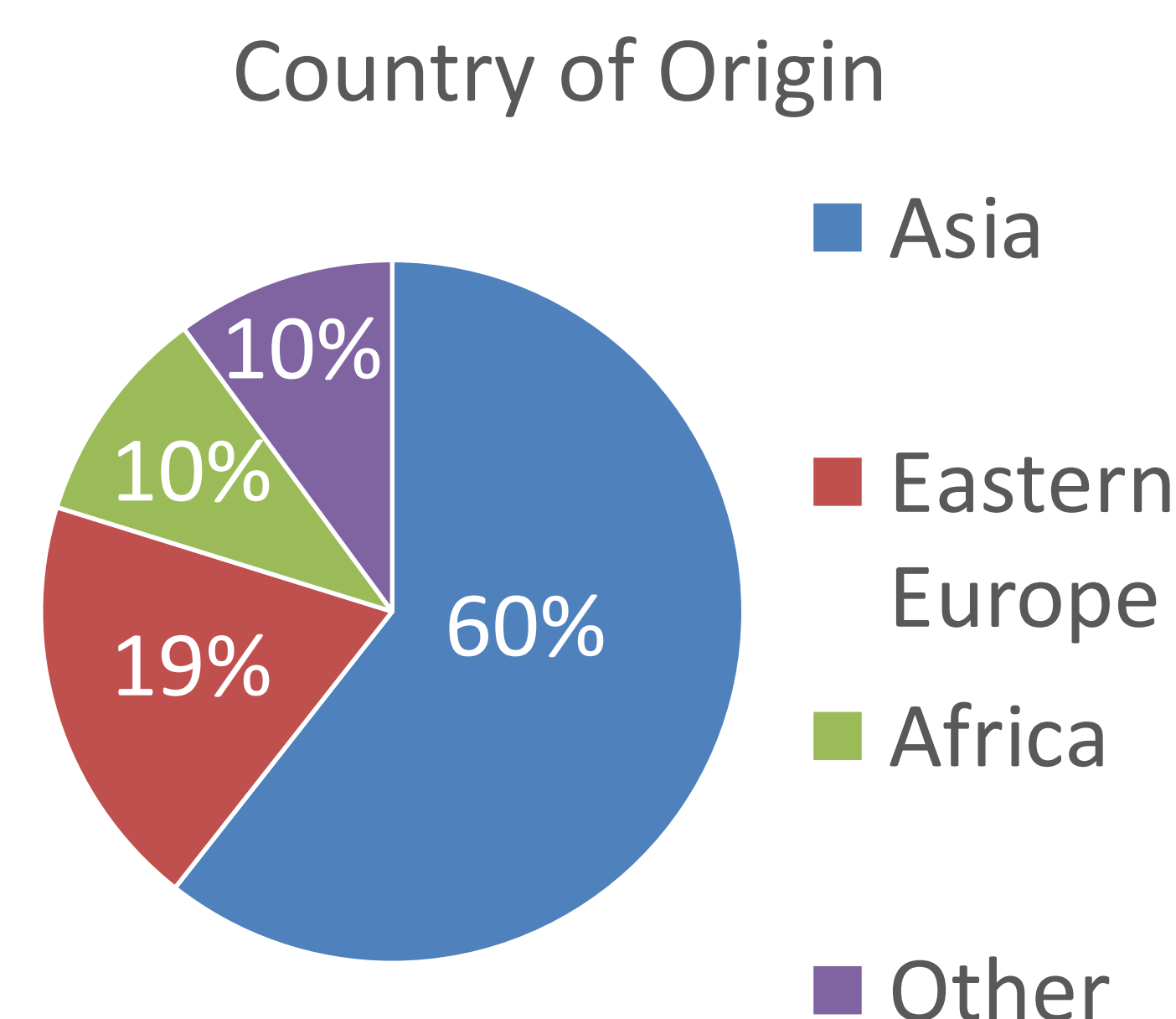


Current Study

- Aim: Test whether early adversity predicts altered patterns of diurnal cortisol functioning among children adopted internationally within the first 6 months post-adoption and approximately 4 years post-adoption.

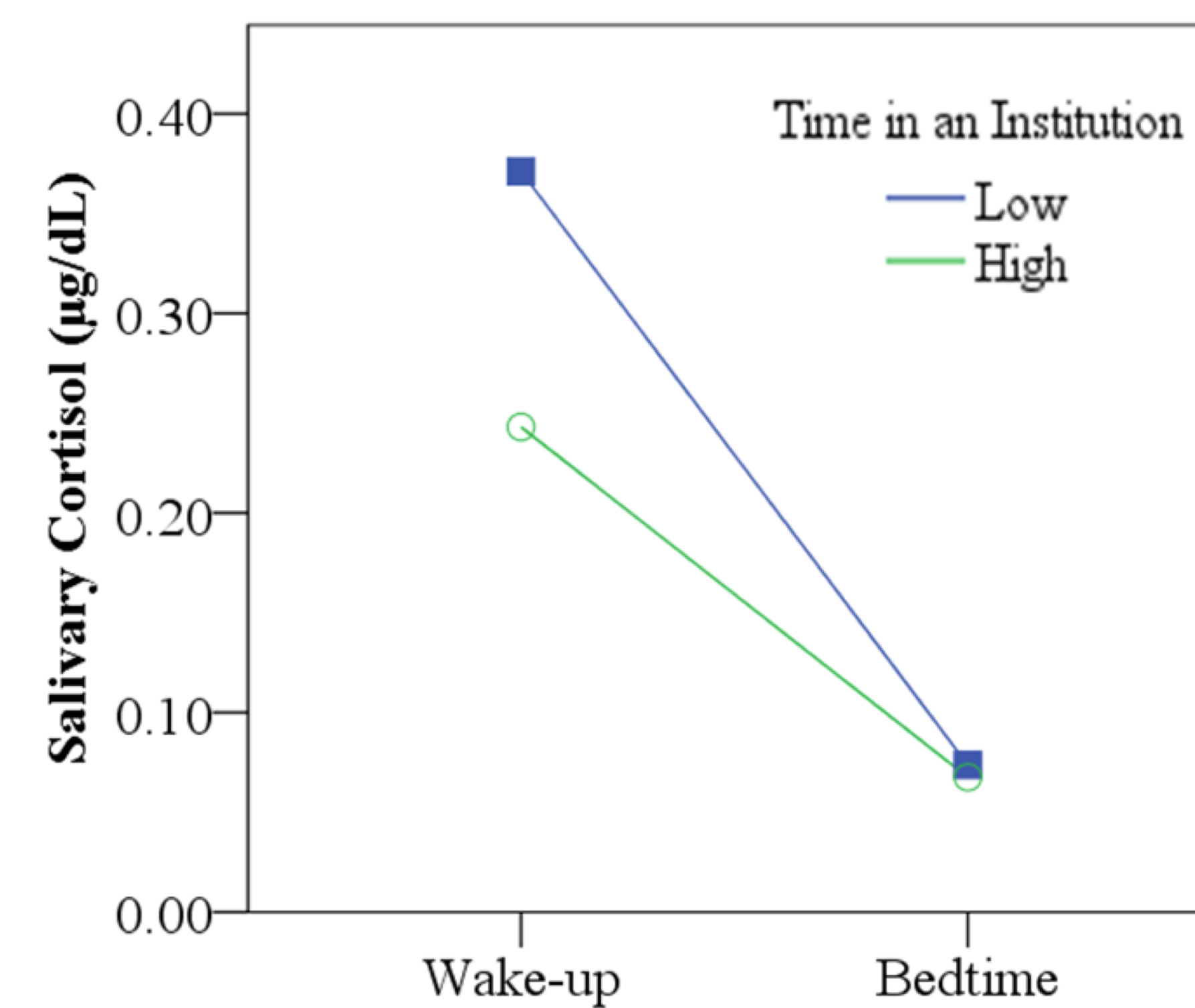
Participants

- 78 children (55% female) adopted internationally between 6 and 48 months of age.
- 75% of children experienced institutional care prior to adoption.
- Most adoptive parents were married (91%), had at least a 4-year college degree (84%), and had an annual income of \$100,000 or more (63%).



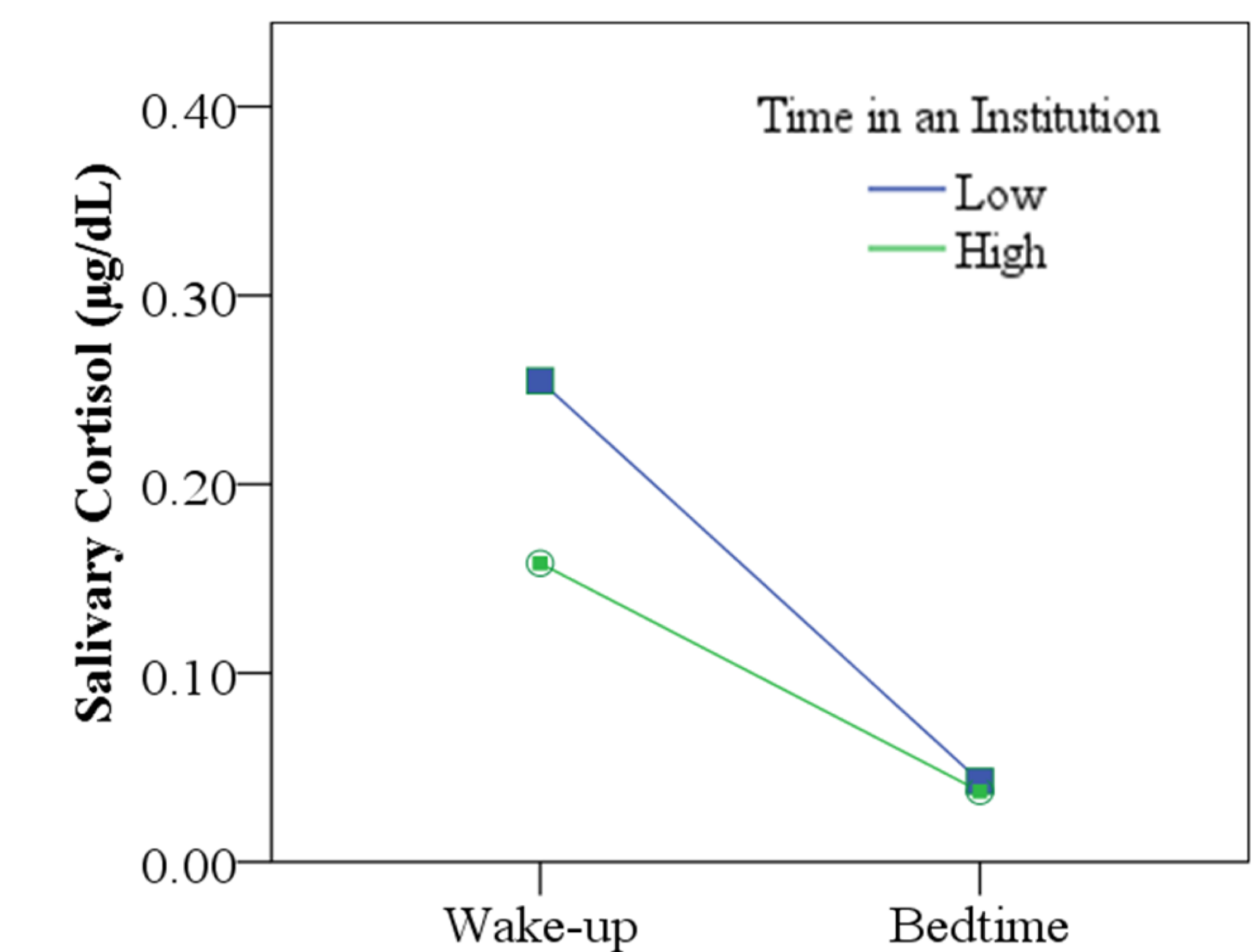
Results

Early institutionalization and diurnal cortisol levels 6 months after adoption



- Longer time in an institution predicted lower cortisol levels in the morning ($\beta = -.33, p = .017$) and a flatter decline in cortisol levels across the day ($\beta = .39, p = .006$).

Early institutionalization and diurnal cortisol levels approximately 4 years after adoption



- Longer time in an institution continued to predict lower morning cortisol levels ($\beta = -.27, p = .029$) and a flatter decline in cortisol levels across the day ($\beta = .24, p = .046$).

Discussion

- The results of this study are consistent with the idea that experiences in early attachment relationships help regulate the functioning of cortisol, a critical stress hormone.
- These enduring results from 6 month post adoption through 4 years post adoption suggest that early adversity may have lasting implications for children's neurobiological development.