



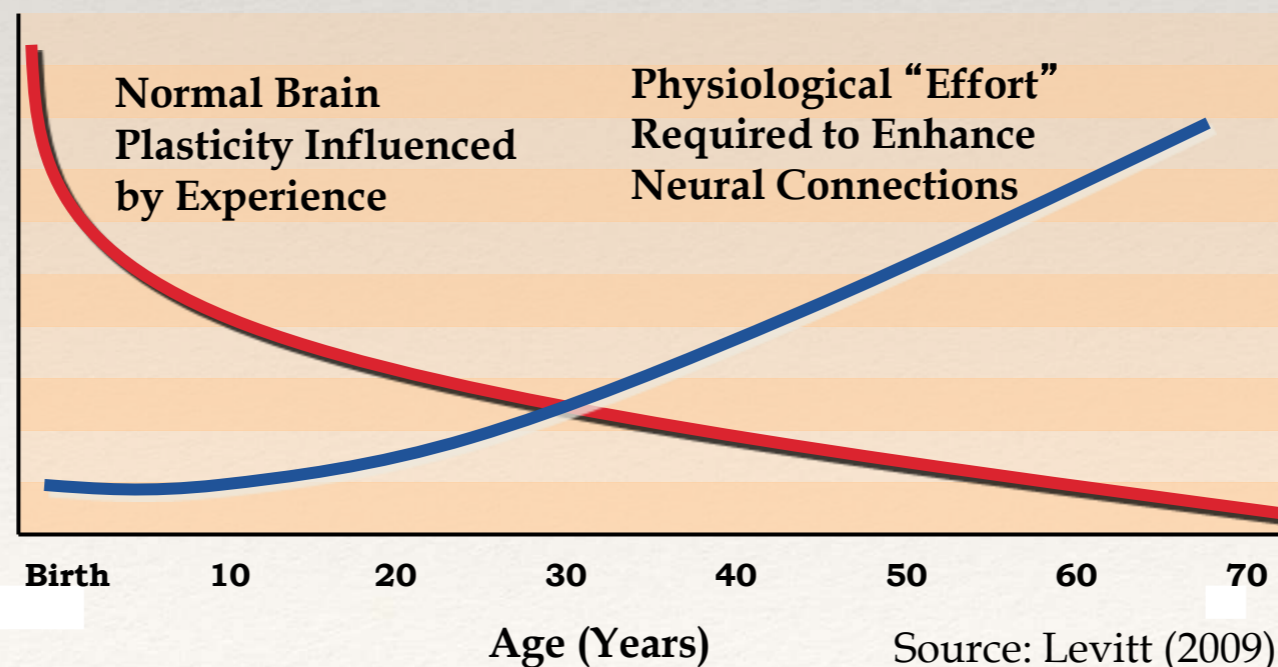
Effects of Early Psychosocial Neglect on Typical and Atypical Brain and Behavioral development

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Talk presented at National Academy of Medicine *Developmental Neurosciences: Do we know enough to prevent or reverse major behavioral disorders?* 16 October 2017

Role of Experience in Brain Development

- ❖ Many aspects of postnatal brain development depend on experience that occurs during critical periods
- ❖ Experience “cuts both ways:” if a child is exposed to adverse experiences during a critical period, or deprived of expectable experiences, brain development can be undermined
- ❖ Brain plasticity changes with age; in some domains change is possible throughout the life span, whereas in others, change is more difficult



Today's talk

- ❖ What happens to brain development when there is a profound violation of the “expectable environment” during a critical period?
- ❖ **Question:** Can the deleterious effects of early psychosocial neglect be reversed and if so, are there temporal constraints on doing so?

Summary of findings from the *Bucharest Early Intervention Project*

- ❖ Romanian gov't believed institutional care superior to family care for abandoned children; we were invited to conduct study by a member of the gov't who thought otherwise
- ❖ **Design:** RCT of foster care as an intervention for early institutional care; study launched in 1999-2000 and continues to this day.
- ❖ **Cohorts:** 136 infants abandoned to institutions soon after birth; following baseline assessment half randomly assigned to high quality foster care and the other to continued care as usual. Also recruited a sample of never institutionalized children living with their families in Bucharest

10 years after fall of Ceausescu



The Findings

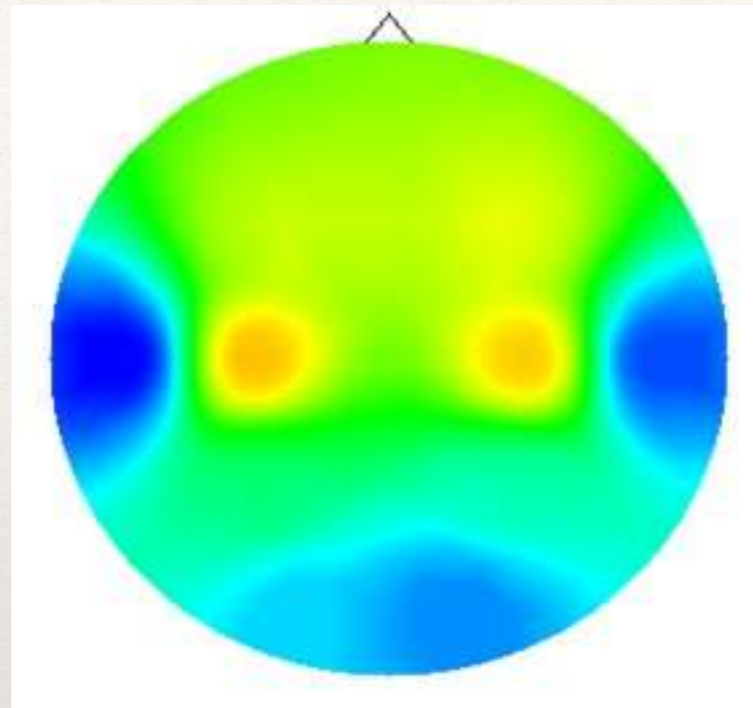
- ❖ Brain Development (EEG)
- ❖ Stress Response

EEG activity at baseline

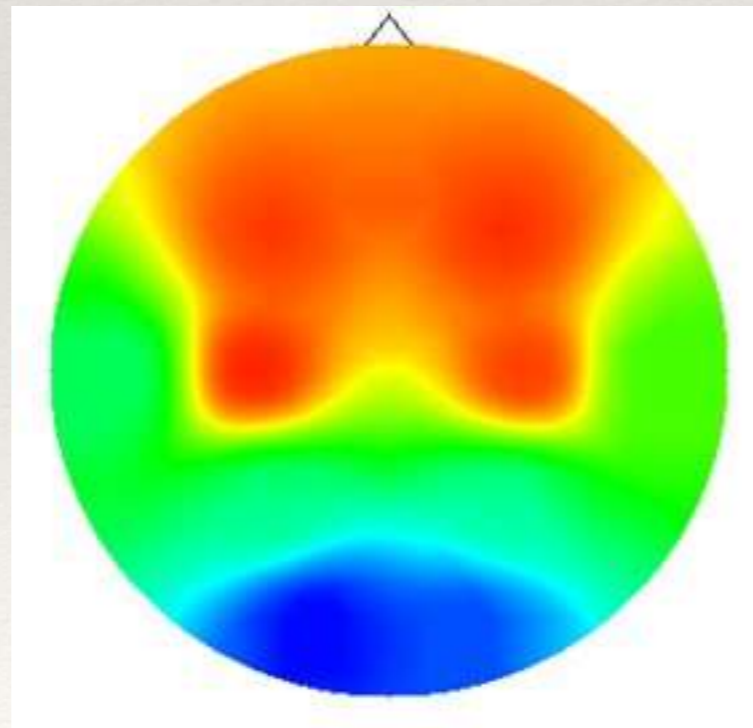
3.80 μV^2



2.44 μV^2

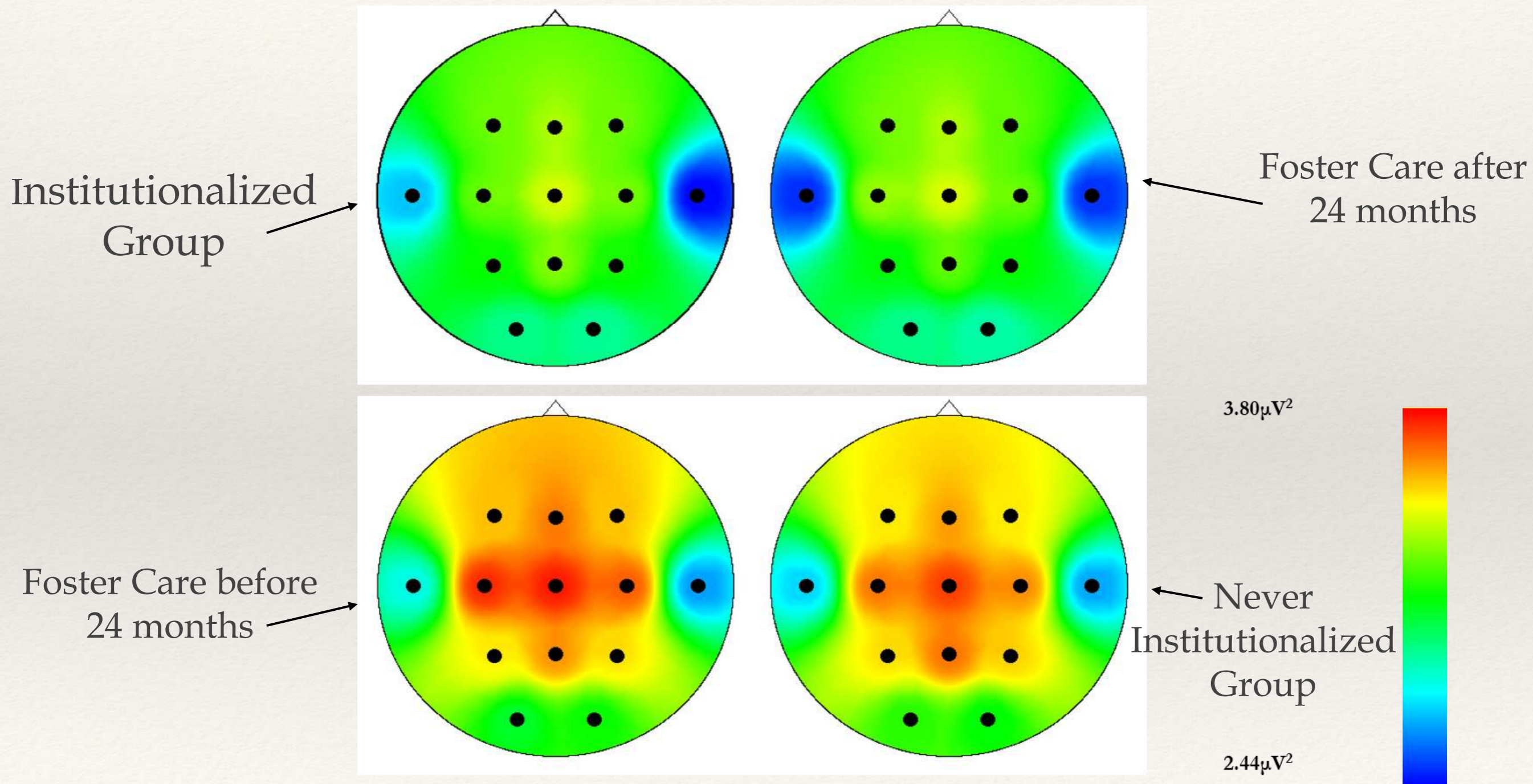


Institutionalized Group



Never Institutionalized Group

Does brain activity (EEG) change as a function of intervention and timing? - Age 8

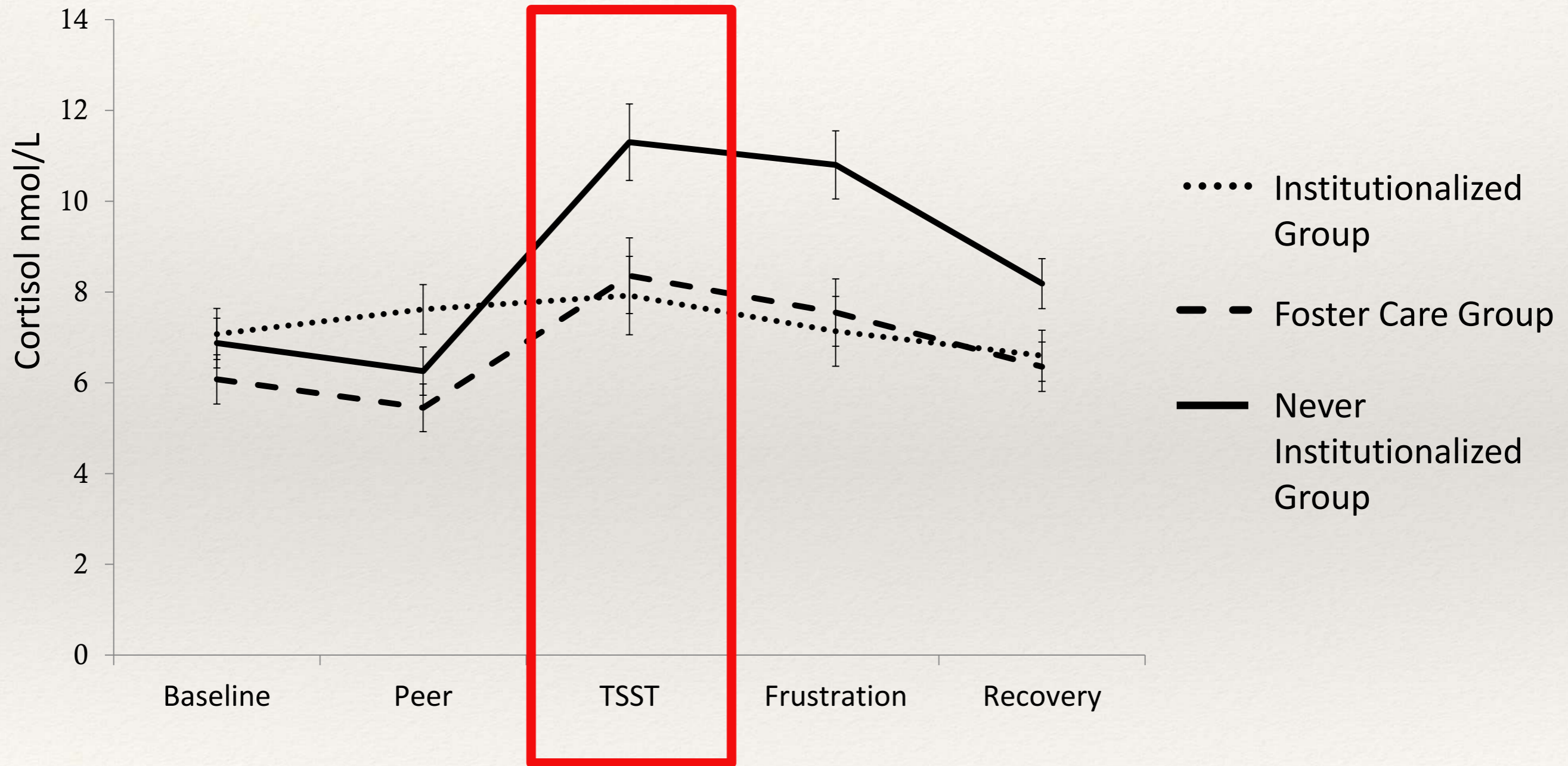


Stress Response

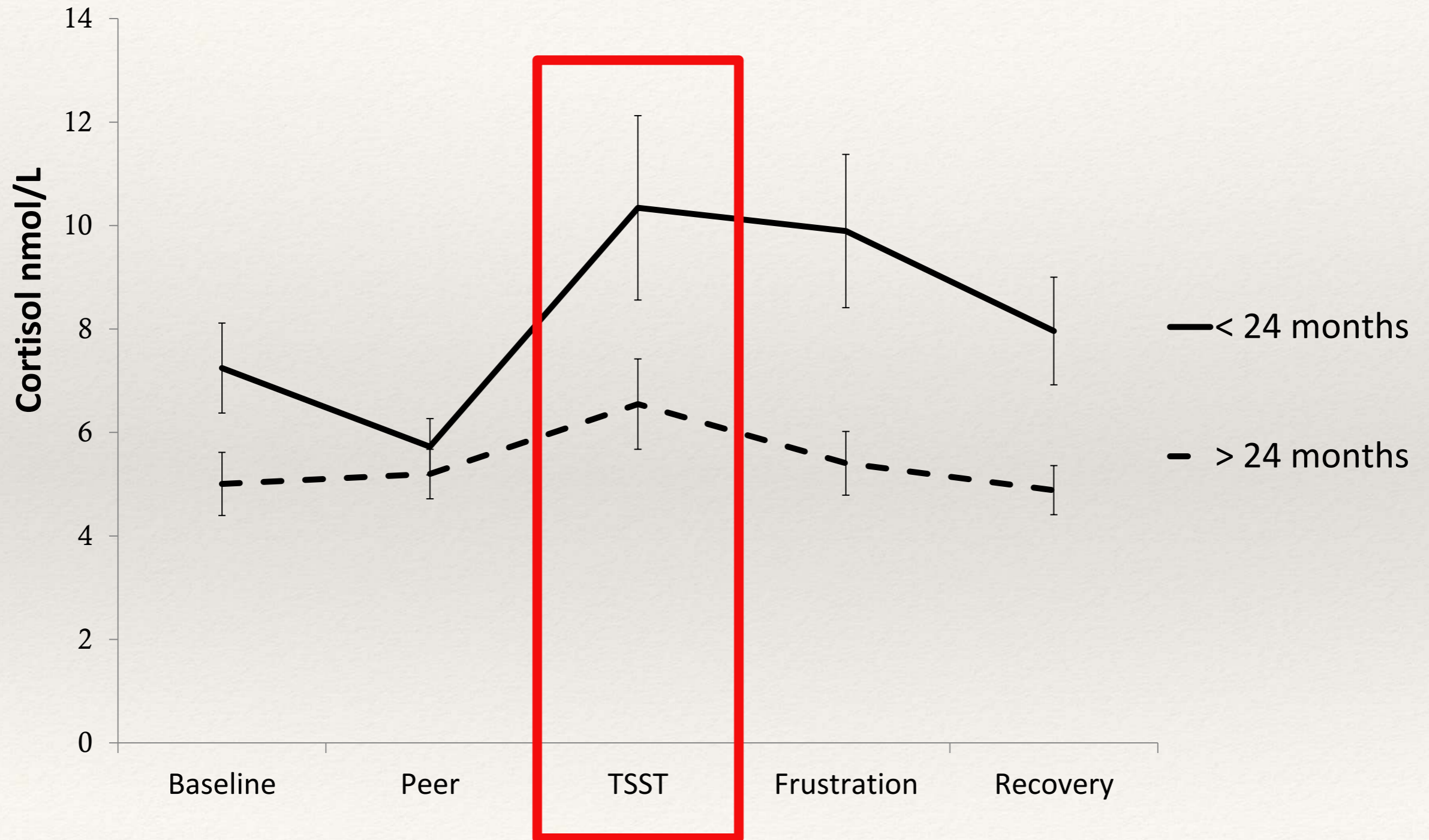
(children asked to give a speech in front of a group of strangers)



Cortisol Reactivity



Timing of Placement (Foster Care Group only)



Conclusions

- ❖ Children experiencing early psychosocial deprivation experience significant delays/impairments in physical, cognitive, linguistic, social-emotional, and brain development impairments compared to never institutionalized children
- ❖ Children removed from such settings and placed into families, *generally before age 2*, show far greater recovery in most domains we have examined
- ❖ However...
 - ❖ not all domains show recovery of function and
 - ❖ of those that do, not all regulated by critical periods;
- ❖ Thus, there is variability in outcomes depending on placement timing, and individual differences in response to context (i.e., institutional care vs. family care)

Thank you

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& CHARLES H. ZEANAH



ROMANIA'S ABANDONED CHILDREN

Deprivation,
Brain
Development,
and the
Struggle
for Recovery

