

ACEs Research in Tulsa

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ACEs are prevalent NOW in Oklahoma

ADVERSE CHILDHOOD EXPERIENCES: NATIONAL AND STATELEVEL PREVALENCE. Vanessa Sacks, M.P.P., David Murphey, Ph.D., and Kristin Moore, Ph.D., **Child Trends**

“States vary in the pattern of specific ACEs. Connecticut and New Jersey have some of the lowest prevalence rates nationally for all ACEs, while Oklahoma has consistently high prevalence.”

http://www.childtrends.org/wp-content/uploads/2014/07/Brief-adverse-childhood-experiences_FINAL.pdf

Oklahoma ACEs – Survey 2011-12

National survey by state about child's ACEs

- 30% - Economic Hardship (ranked 45th)
- 30% - Divorce (ranked 50th)
- 17% - Parent abused alcohol or drugs (49th)
- 11% - Witnessed domestic violence (50th)
- 12% - Had a parent with a mental illness (43rd)
- 10% - Had a parent incarcerated (48th)
- 13% - Was a victim of or witnessed neighborhood violence (49th)
- 17% - Already experienced 3 or more ACEs (49th)
- Highest rates (with Montana and W. Virginia) of children with ≥ 4

Oklahoma history of trauma & stress



Extended ACEs Pyramid



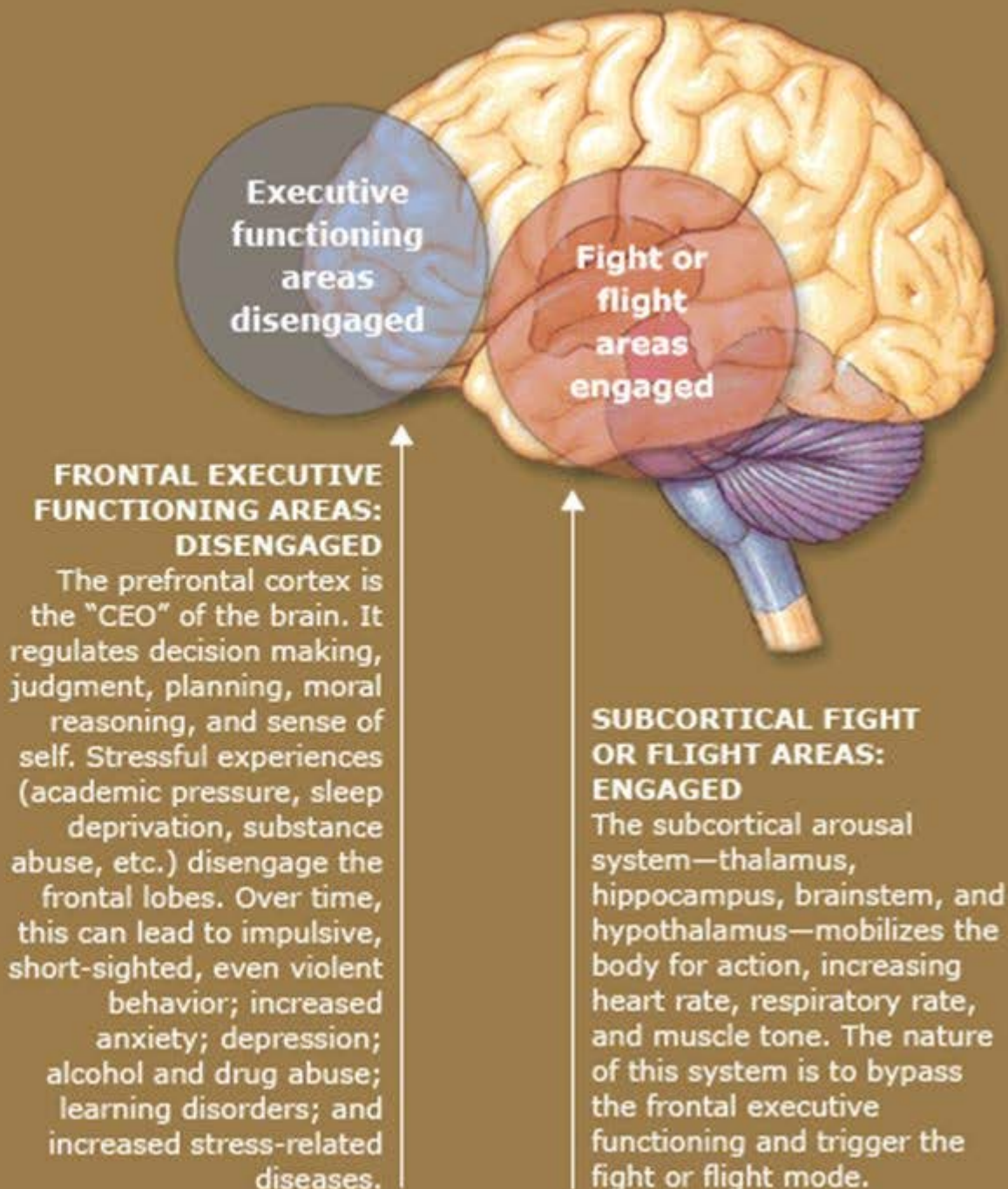
Stress & the Brain

- Frontal executive functioning areas are disengaged
- Subcortical *fight or flight* areas are engaged

Trauma:

Allostatic load

The wear and tear that the body experiences due to repeated cycles of stressful events as well as the inefficient turning-on or shutting off of these responses



Allostasis and Allostatic Load

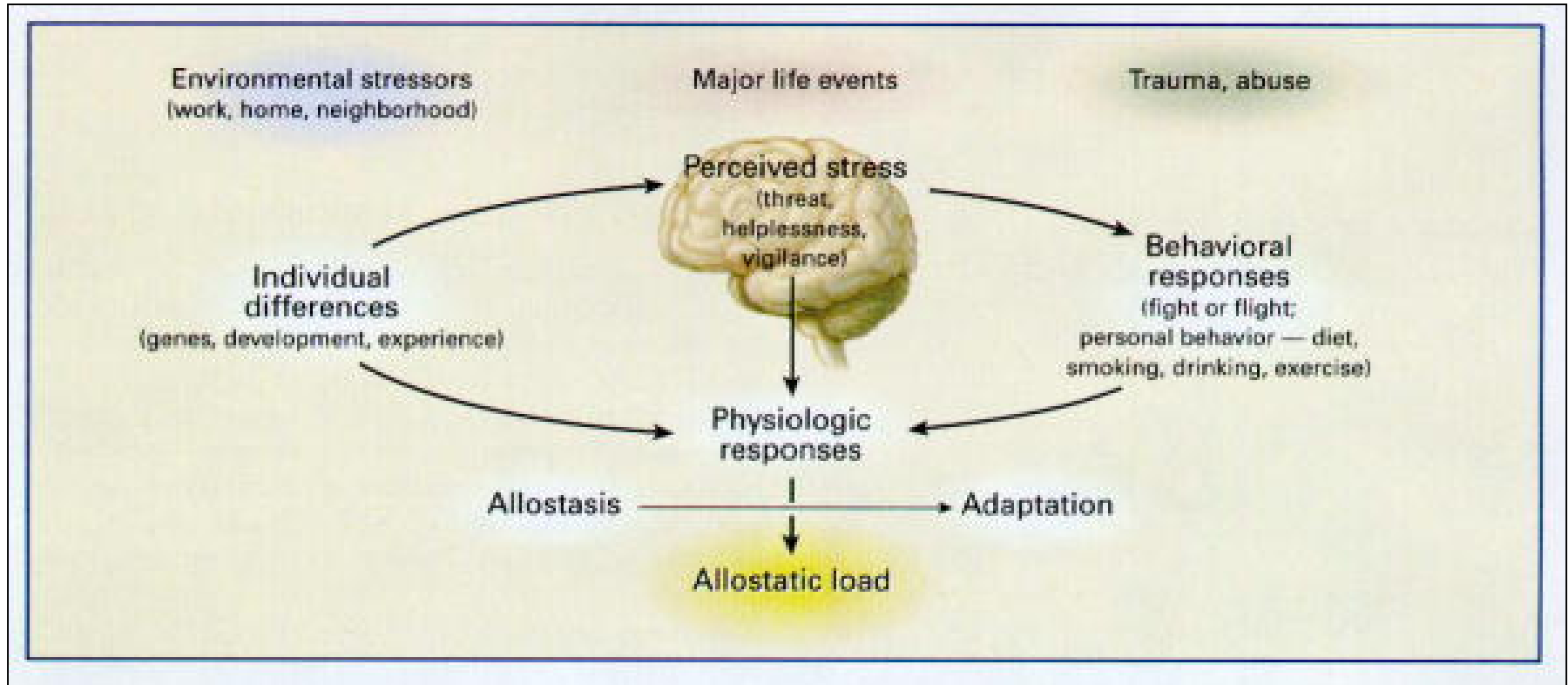
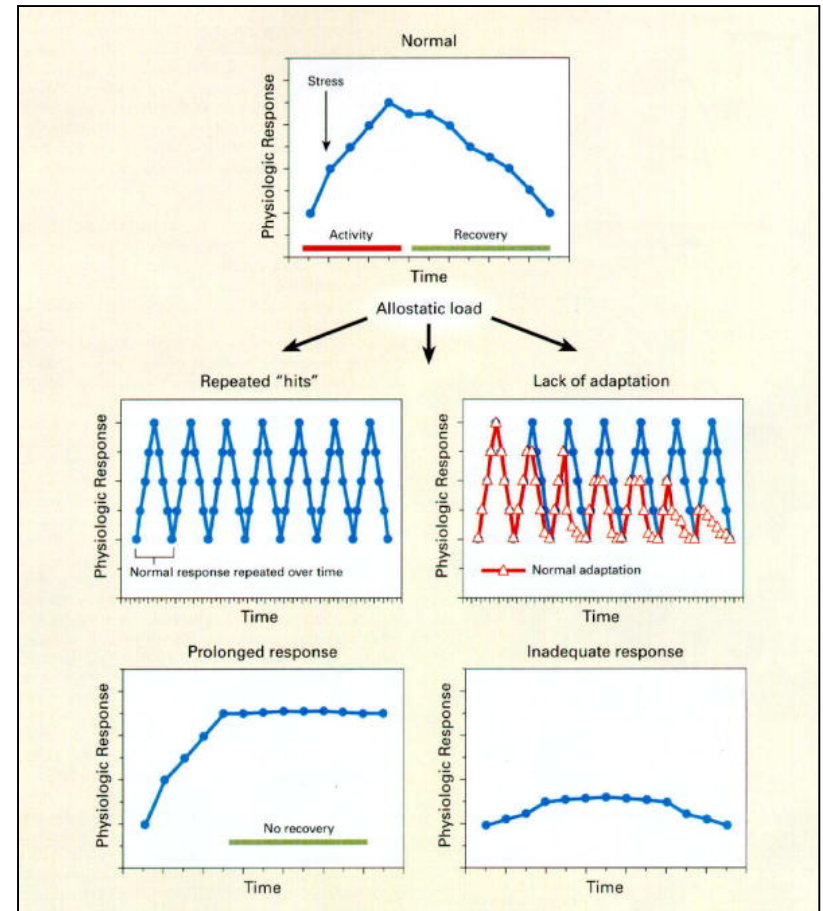


Figure 1 . The Stress Response and Development of Allostatic Load. The perception of stress is influenced by one's experiences, genetics, and behavior. When the brain perceives an experience as stressful, physiologic and behavioral responses are initiated, leading to allostasis and adaptation. Over time, allostatic load can accumulate, and the overexposure to mediators of neural, endocrine, and immune stress can have adverse effects on various organ systems, leading to disease.

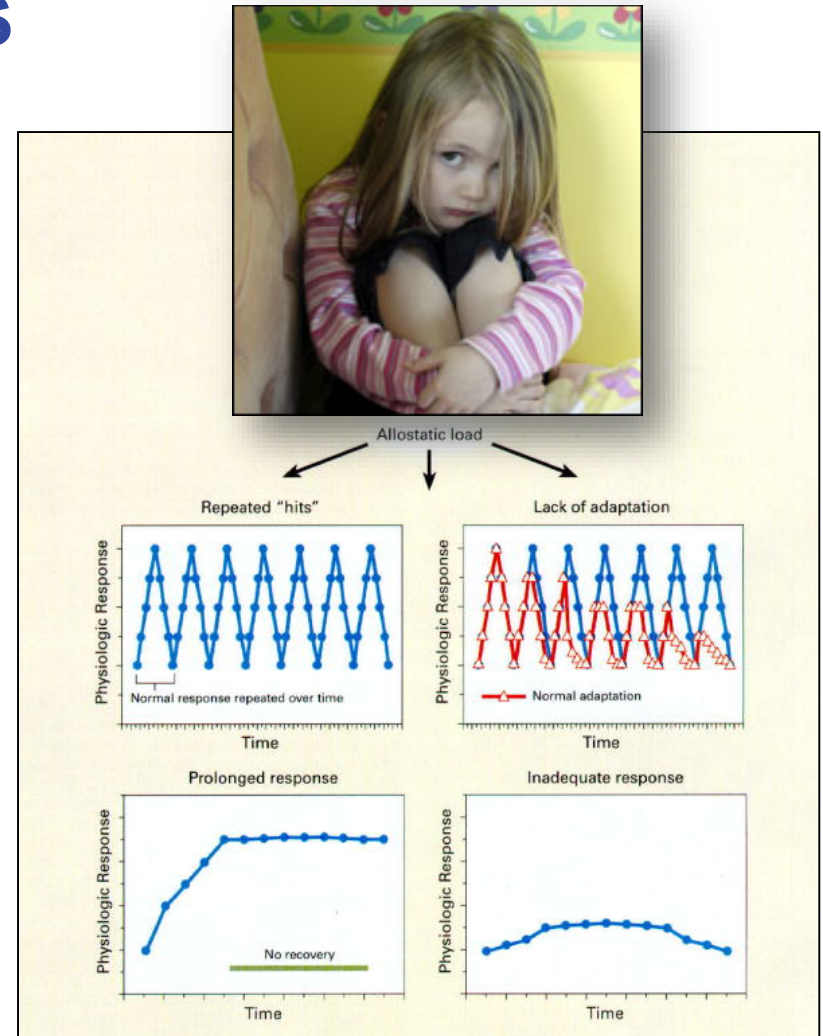
McEwen, Bruce. **Protective and Damaging Effects of Stress Mediators.**
New England Journal of Medicine. 338(3):171-179, January 15, 1998.



Stress response



Allostatic load: Wears out body's ability to regulate stress



Tulsa Children Project

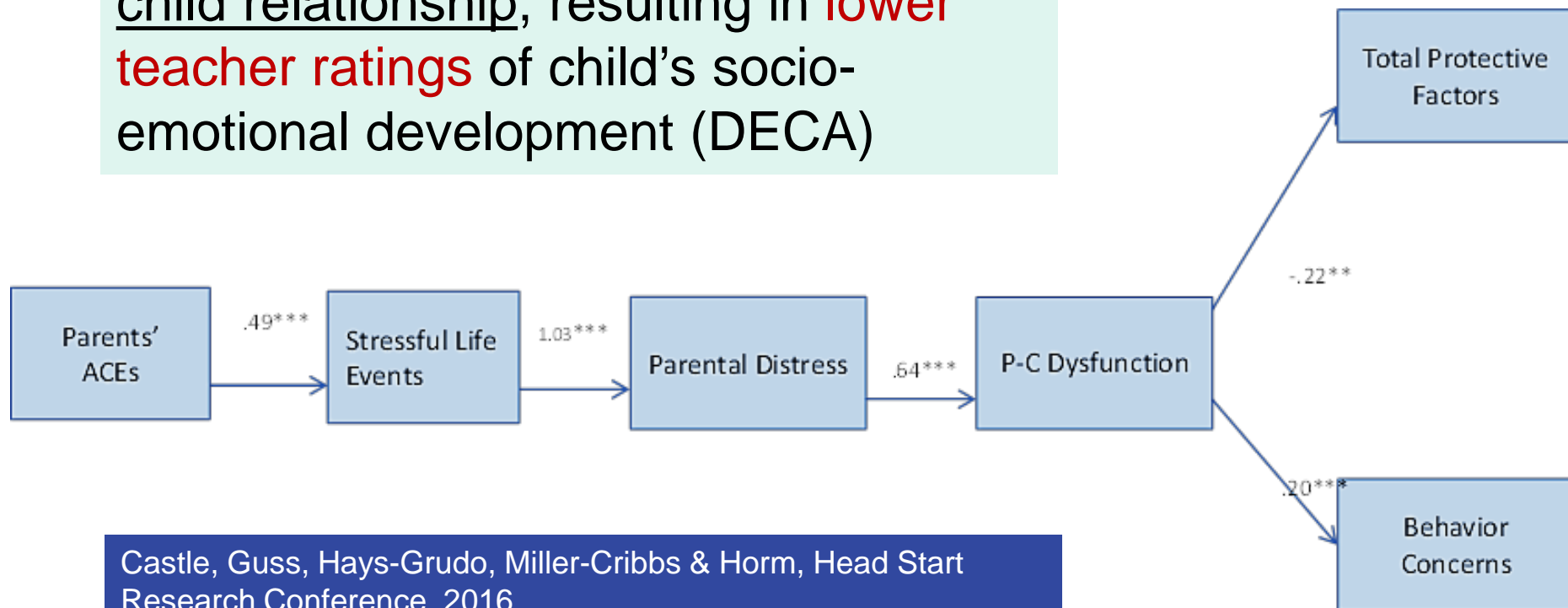
Do parents' ACEs affect children?

- Parent measures
 - ACE scores, stress
 - Health status
 - Access to care
- Child measures
 - Behavioral dysregulation (DECA scores)
 - Biological dysregulation (salivary cortisol)
- Partners: OU ECEI, SSW, Educare
- Funded by GKFF



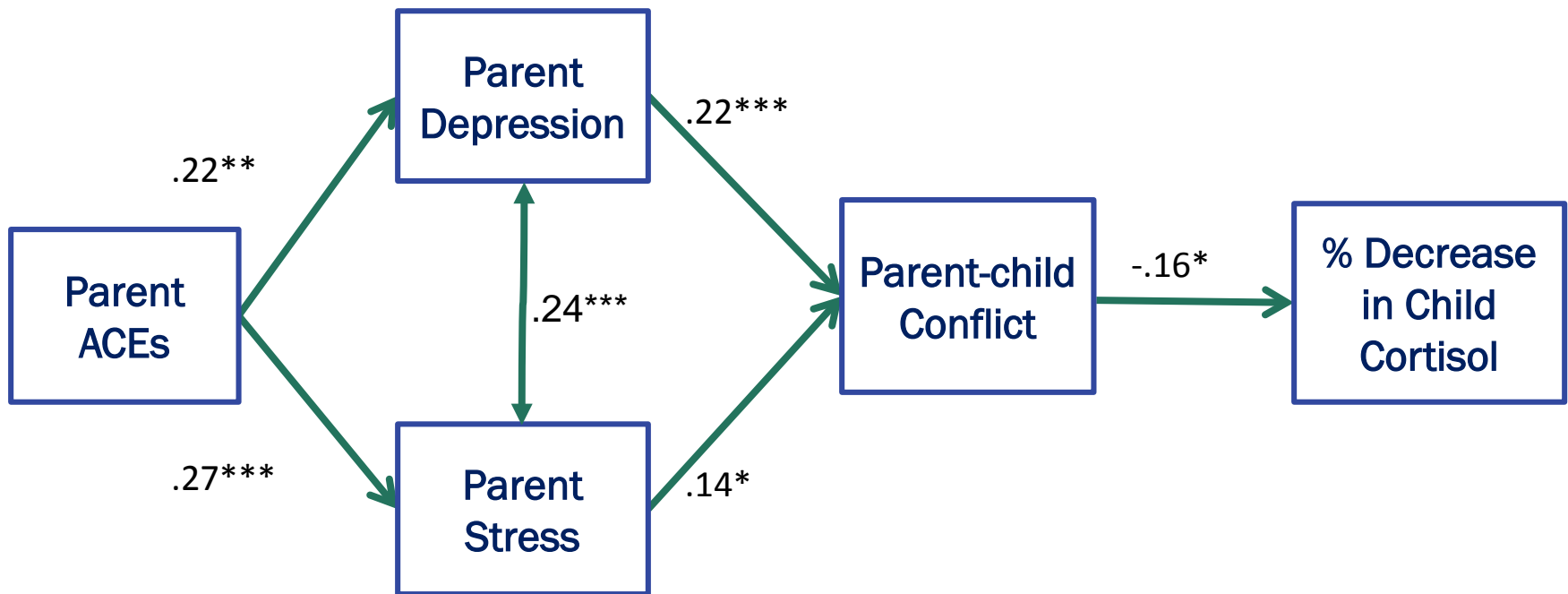
ACEs and behavioral dysregulation

Parent's ACEs predict current stress, which increases parenting distress, and decreases perceived the parent-child relationship, resulting in **lower teacher ratings** of child's socio-emotional development (DECA)



Castle, Guss, Hays-Grudo, Miller-Cribbs & Horm, Head Start Research Conference, 2016

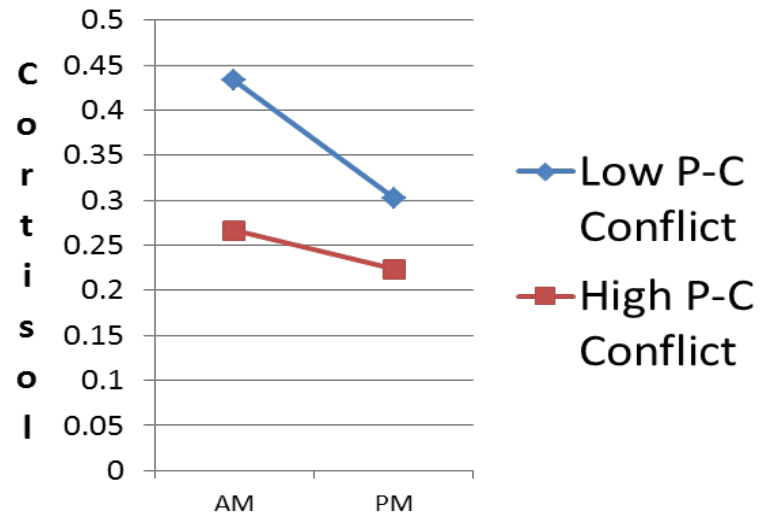
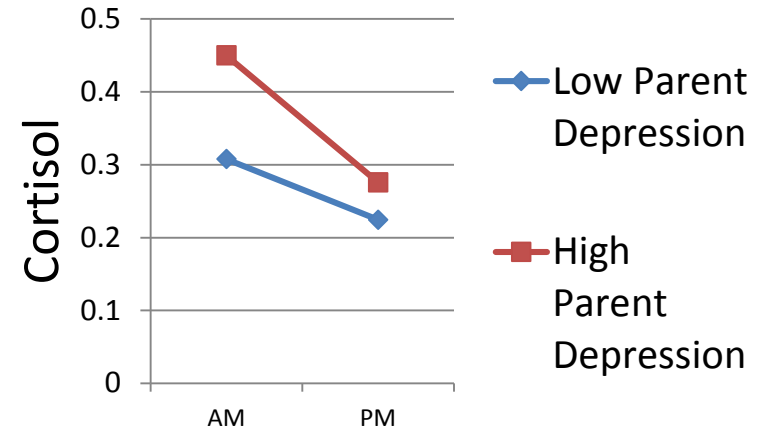
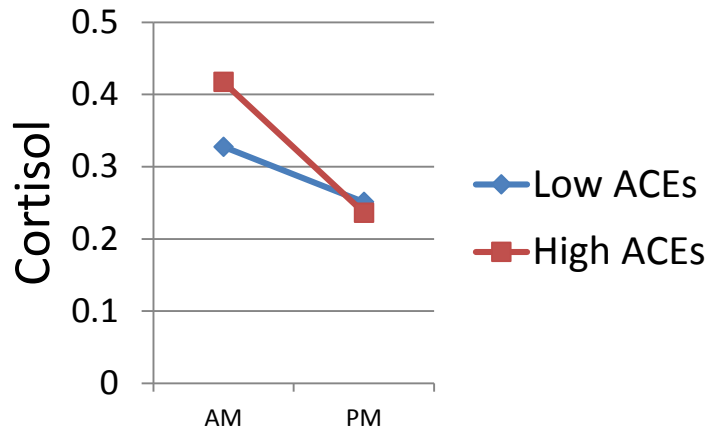
ACEs and stress hormone dysregulation



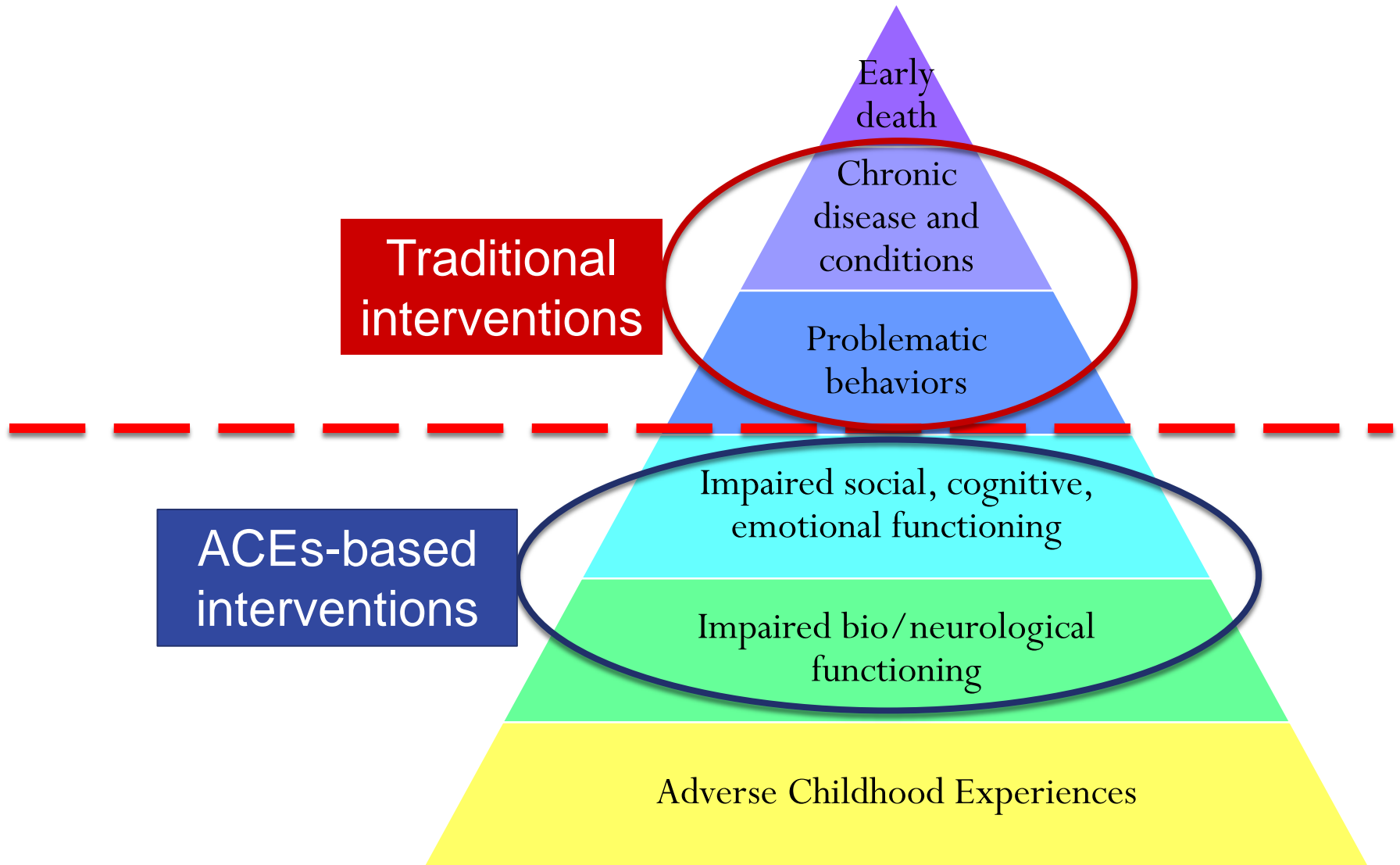
Note: *** $p < .001$, ** $p < .01$, * $p < .05$; model fit: $\chi^2(4) = 3.87$, $p = .42$, RMSEA = .00, CFI = 1.00, TLI = 1.01.

Hays-Grudo, Bosler, Teague, Castle, Guss, Miller-Cribbs, Morris & Horm, World Congress on Infant Mental Health, Prague, June 2016.

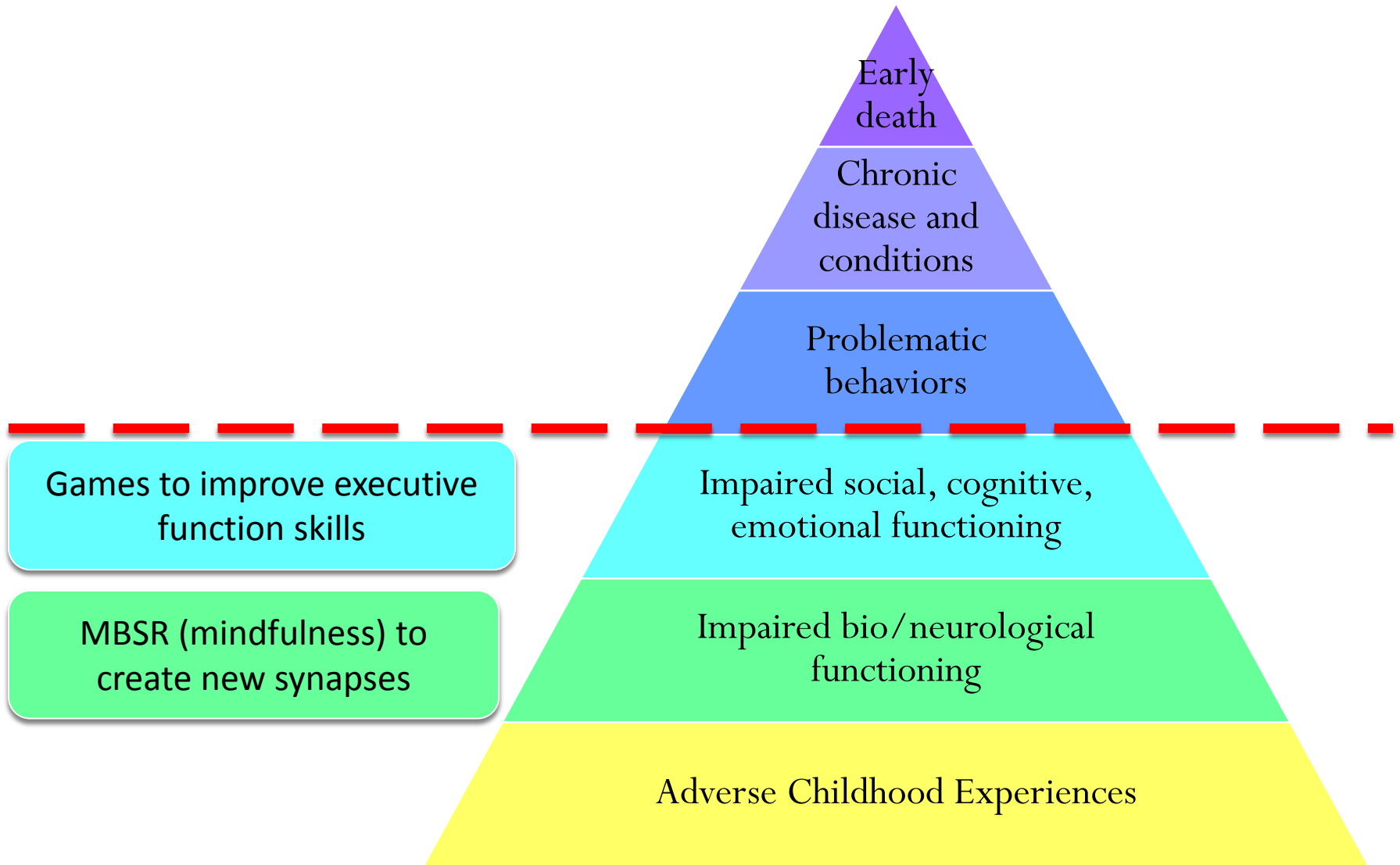
Parent ACEs, depression, relationship and child cortisol



Since ACEs affect neurodevelopment...



ACEs-informed interventions



Super Parents Evaluation

- 1,2,3,4 Parenting + Tulsa Children's Project
 - Mindfulness training and practice
 - Family games promoting executive function skills
- Comparisons of pre- and post-test measures showed
 - **significant increases** in
 - positive parenting attitudes
 - parenting efficacy
 - parent executive function
 - **significant decreases** in
 - child emotional problems and hyperactivity.

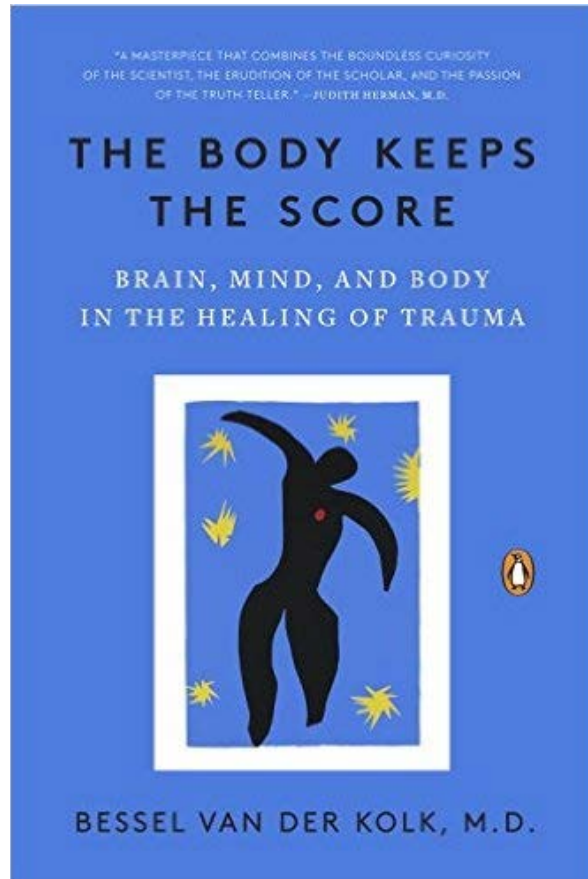
Three-month comparisons showed

- **significant increases** in
 - parenting efficacy
 - parent self-compassion
 - parent mindfulness
- **significant decreases** in
 - parent perceived stress
 - child emotional problems

Now in the revision of Active Parenting program (AP: First Five Years)

Slocum, Bosler, Hays-Grudo & Morris, 2016

Three avenues to treat trauma



- Top down— by talking, (re-connecting with others, allowing past and current experiences to be acknowledged and processed
- Medications that shut down inappropriate alarm reactions, or other technologies that change the way the brain organizes information
- Bottom up – by allowing the body to have experiences that viscerally contradict the helplessness, rage, or collapse that result from trauma.

Extended ACEs Pyramid



Protective and Compensatory Experiences (PACEs) – Morris, Hays-Grudo et al (2015)

Direct Experience	Environmental conditions
Have someone who loved you unconditionally (you did not doubt that they cared about you)?	Have an engaging hobby -- an artistic or intellectual pastime either alone or in a group?
Have at least one best friend (someone you could trust, had fun with)?	Have an adult (not your parent) you trusted and could count on when you needed help or advice?
Do anything regularly to help others or do special projects in the community to help others?	Live in a home that was typically clean AND safe with enough food to eat?
Were you regularly involved in organized sports groups or other physical activity?	Have a school that provided the resources and experiences you needed to learn?
Were you an active member of at least one civic group or a non-sport social group?	Were there rules in your home that were clear and fairly administered?



**CENTER FOR INTEGRATIVE RESEARCH
ON CHILDHOOD ADVERSITY**

- Identify and address sources of disparities in health and development
- Build research capacity Tulsa and Oklahoma
- Total funding is \$11.3M for five years
- Partnerships between OSU Center for Health Sciences, OSU-Stillwater, OSU-Tulsa, OU-Tulsa
- Projects, pilot projects (annual), Core support units