



# Wisconsin Center for Education Research

SCHOOL OF EDUCATION

UNIVERSITY OF WISCONSIN-MADISON

## The Impact of Toxic Stress on ACEs

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# Toxic Stress

- Definition: Toxic Stress can occur when a child experiences strong, frequent, and/or prolonged adversity—without adequate adult support that activates of the stress response systems.

# Toxic Stress

- ACE score: the probability of toxic stress occurring
- Not clinically quantifiable
- Causes vary and some can be mitigated

# ACEs Across Income

46.3% of  
children had  
at least one  
ACE

- 61.9% below 200% of Federal Poverty Line have at least one ACE

9.2 above  
400% of FPL  
had 2 or  
more

- 31.9% below 200% of FPL had 2 or more

# ACE Across Race

## Black Children

- 12.7% of population
- 17.4% of population with ACEs

## White Children

- 51% of population
- 46% of population with ACEs

Bethell, CD, Davis, MB, Gombojav, N, Stumbo, S, Powers, K. Issue Brief: A national and across state profile on adverse childhood experiences among children and possibilities to heal and thrive.

# Framework

*T.R. Williams Shanks, C. Robinson/Economics of Education Review 33 (2013) 154–170*

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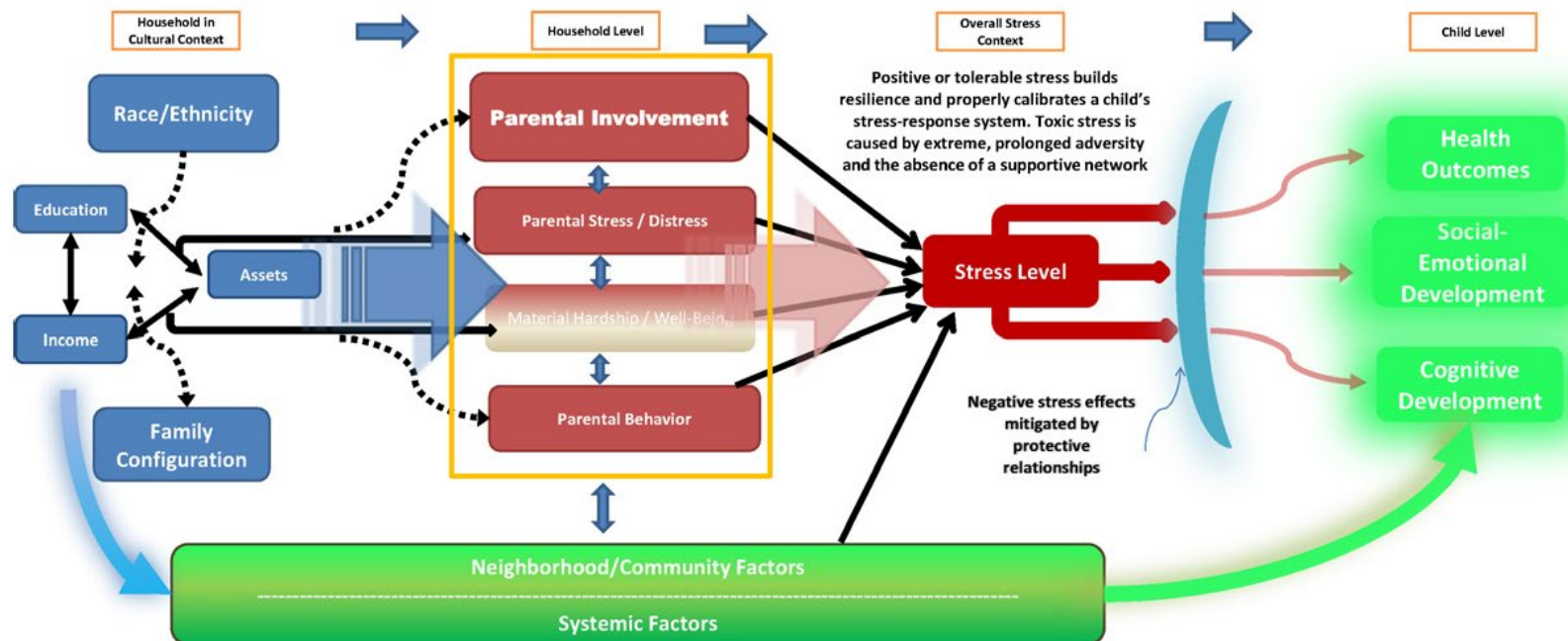
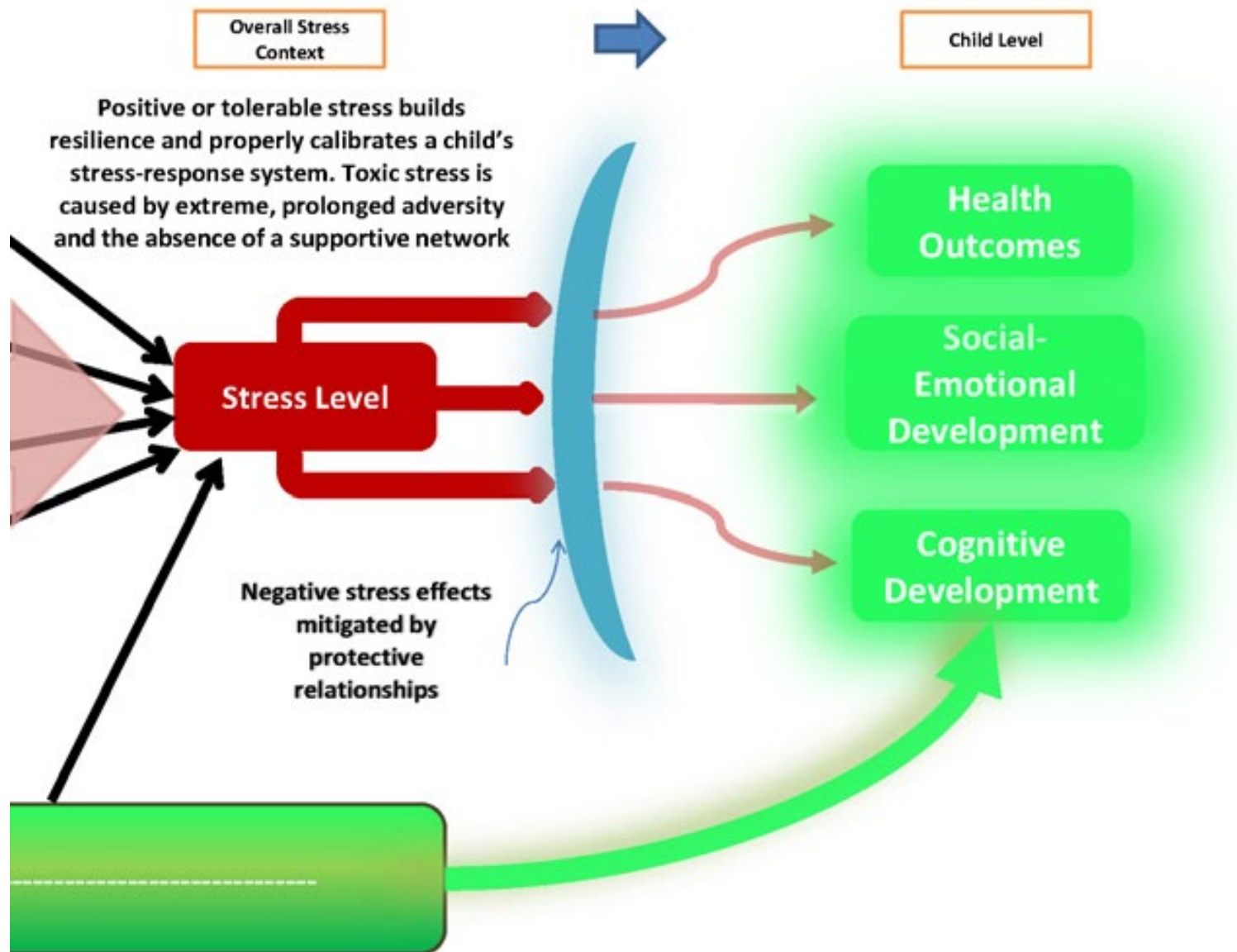
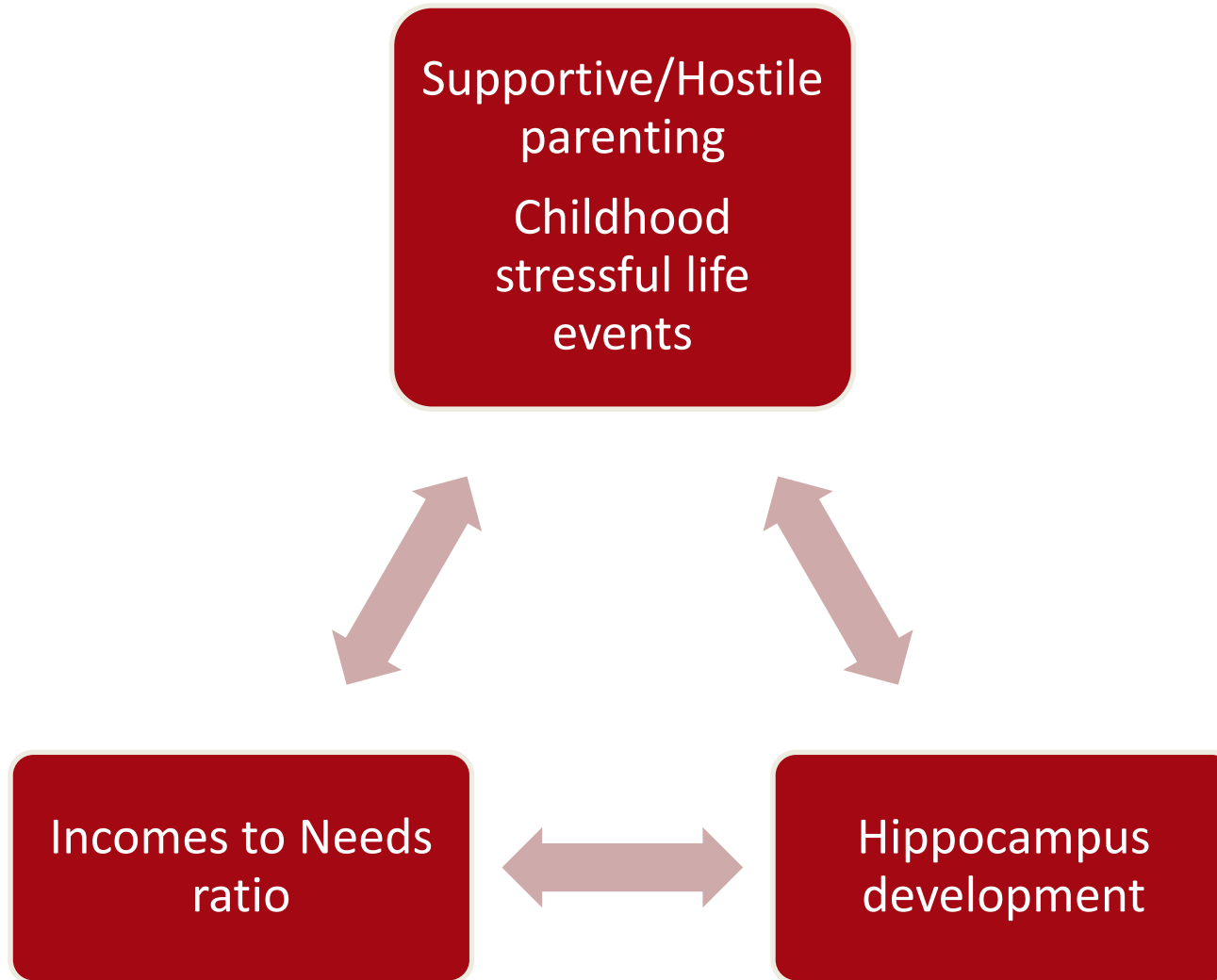


Fig. 2. Tolerable stress household.

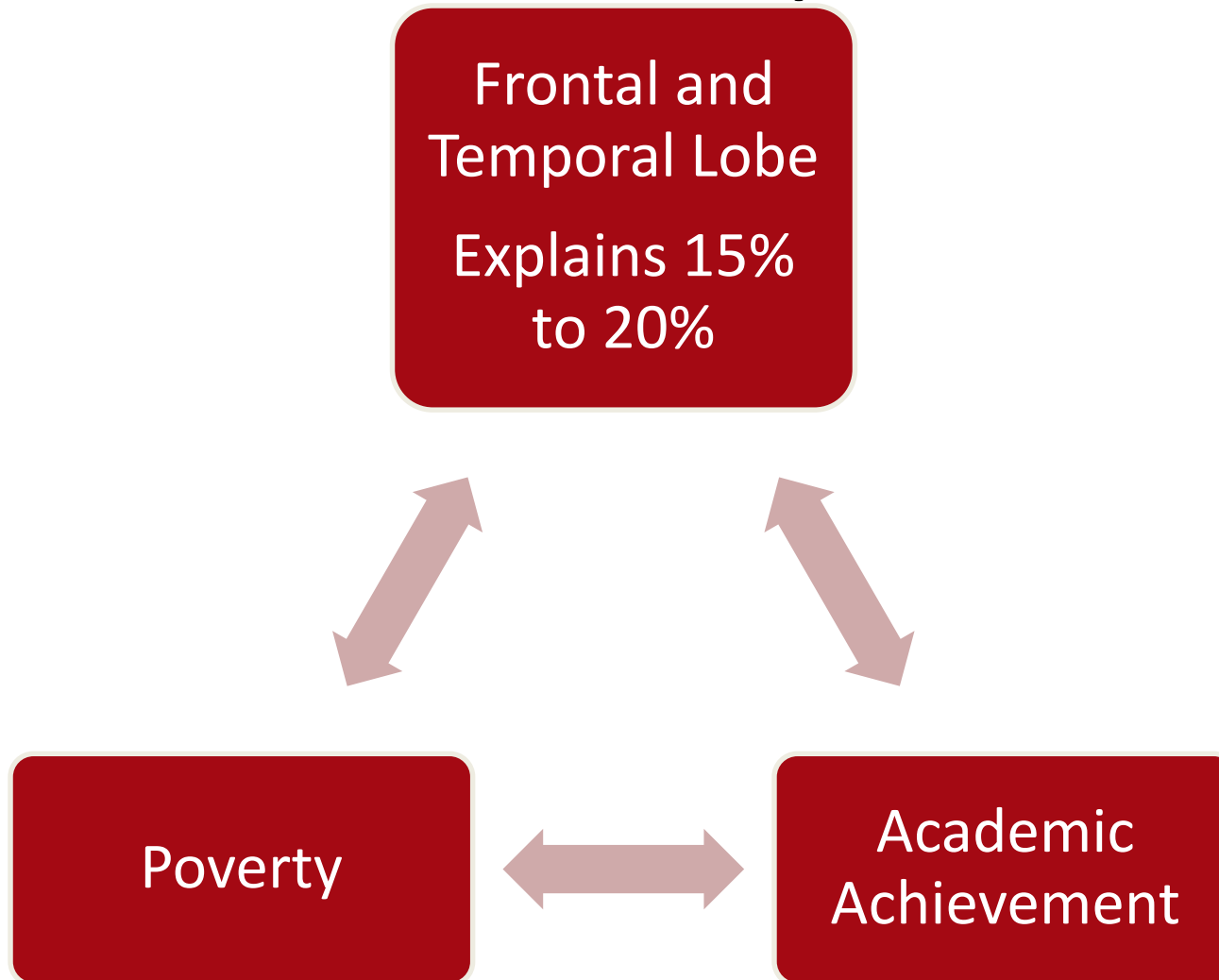


# Brain Development

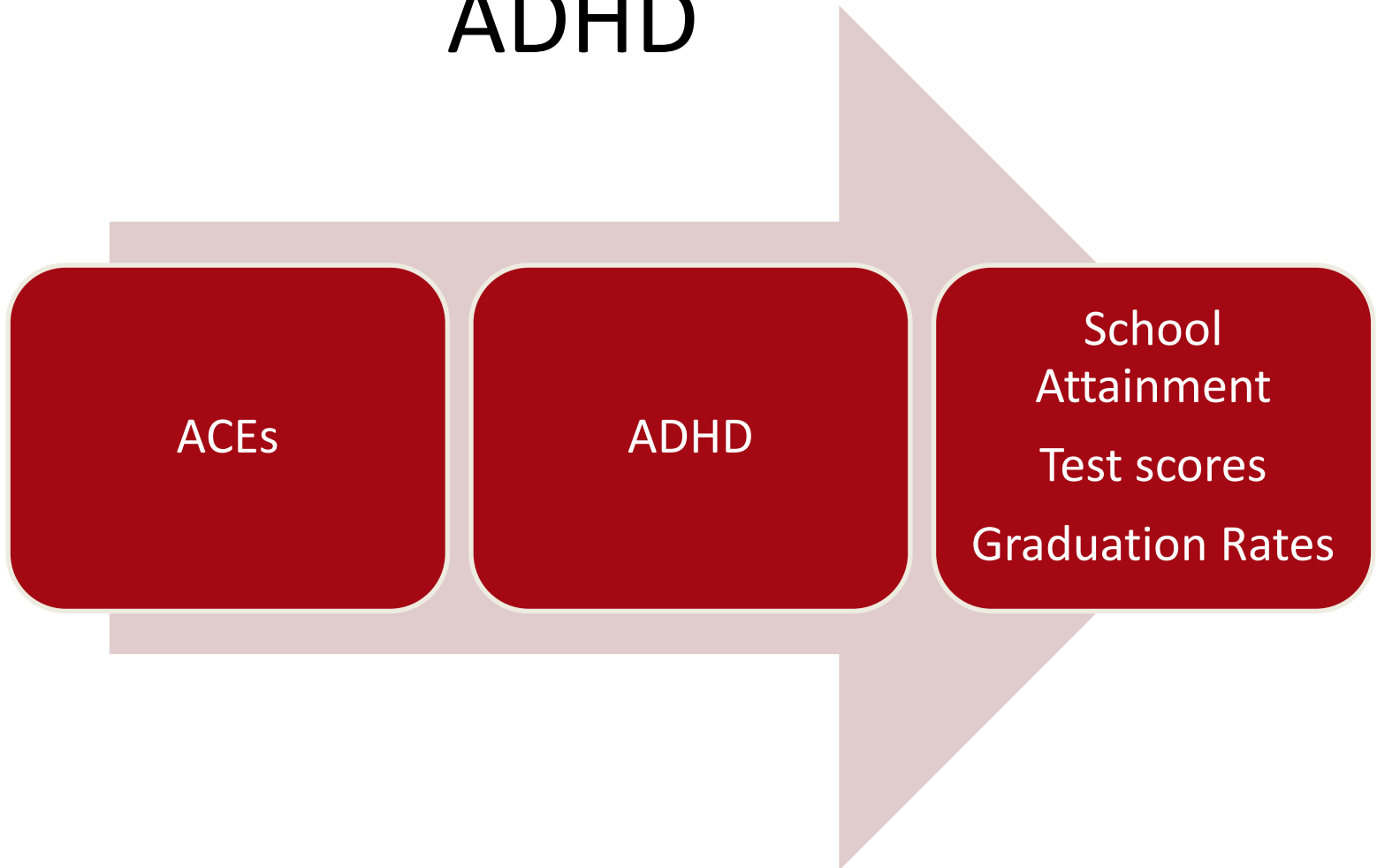




# Brain Development



# ADHD



# Elementary Intervention

10-minute Stress  
intervention

Reduced anxiety right  
away and a year later

- Small sample size, but implementation was feasible

# Trauma Sensitive Schools

- Very little empirical evidence
  - Iterations vary greatly.



# Trauma Sensitive Schools

- Very little empirical evidence
  - Iterations vary greatly.
- Implementation is key
  - Bottom up support
  - Leadership: teachers
  - Integration and acceptance into curriculum
  - Missouri's framework – continuum of change

# Reduction in Achievement Disparities



# Reduction in Achievement Disparities

?%



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## Questions?

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