Stress and Academic Disparities: Biological Pathways

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Background

• Lower socioeconomic status (SES) and minority race/ethnicity are associated with:
  • Greater morbidity for a wide variety of illnesses
  • Lower academic performance and attainment

• Growing body of theory & research suggests role for:
  • Psychosocial stress
  • Activity of stress-sensitive biological systems
Two stress sensitive biological systems of key interest in my research

- Hypothalamic Pituitary Adrenal Axis
  - HPA axis, cortisol
  - Sensitive to stress
  - Shows disparities by SES and race/ethnicity
  - Lower morning levels, less decline across the day predict worse cognitive functioning

- Sleep
  - Sleep hours, sleep quality
  - Sensitive to stress
  - Shows disparities by SES and race/ethnicity
  - Shorter sleep hours, lower sleep quality predicts worse cognitive functioning
SES, Race, Stress, and Academic Disparities

Low SES
Racial Minority

Chronic Life Stress
Acute Daily Stress

Basal Cortisol
and Reactivity

Executive Function
Learning/Memory
Test Performance

Sleep Hours
and Quality

Academic Outcomes +
Disparities
Poverty and Cortisol: More Time Periods Low SES from Prenatal-Adulthood Predict Flatter Cortisol Rhythms

Adolescent Perceived Racial Discrimination and Early Adult Cortisol

Cortisol and Cognition

- Flatter diurnal cortisol slopes have been associated with worse executive functioning/cognitive performance in children and adults


Questions?

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