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Liss Award/ARCS Atlanta Century Award

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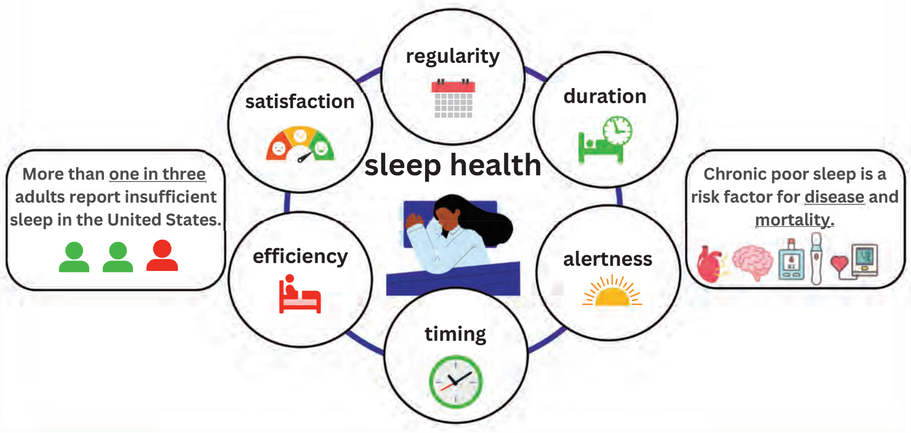
Examining Risk and Protective Factors of Sleep Health and the Role of Sleep in Biological Aging

The goal of this dissertation is to examine psychosocial risk and protective factors of sleep health.

Insufficient sleep is a major public health problem.



There are unexplained racial disparities in sleep health outcomes.

What we DO understand:

Black Americans have worse sleep health outcomes compared to non-Hispanic White Americans after controlling for confounding factors (e.g., age, socioeconomic status, etc.).

Inequities in sleep health are likely contributors to pervasive racial disparities in adverse health outcomes where sleep is implicated.

What we DO NOT understand:

What are the mechanisms of racial disparities in sleep health?

What is protective of sleep health among racially minoritized populations?

What is the relationship between sleep health and *"weathering"* (i.e. a proposed explanation for racial disparities in adverse health outcomes)?

Dissertation Aims and Potential Insights:

Aim 1: Estimate the proportion (%) of Black-White disparities in sleep health attributable to lifetime adversities, individually and cumulatively.

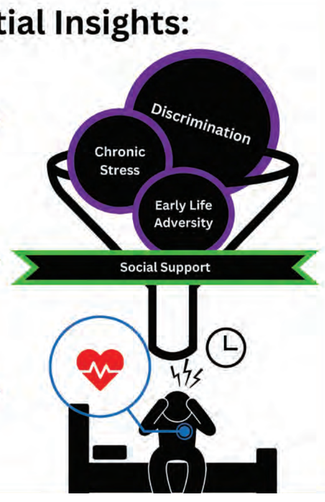
What psychosocial factors contribute to racial disparities in sleep health?

Aim 2: Test whether social support buffers the harmful impact of adversity on sleep health.

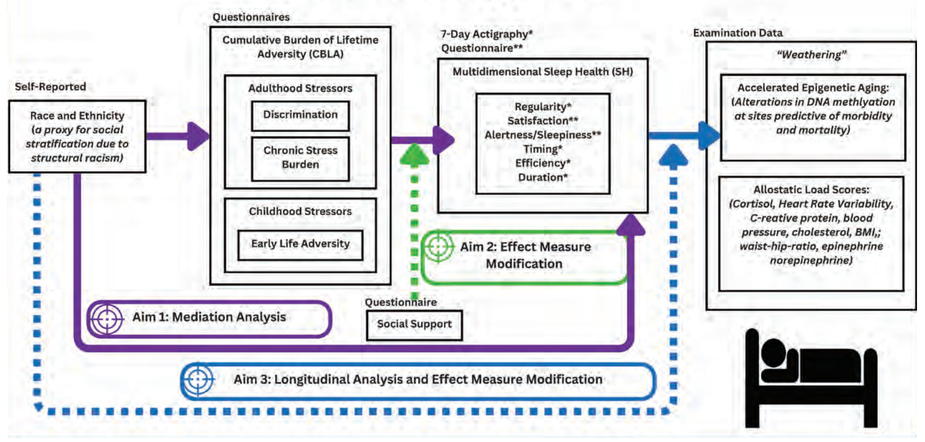
How do we intervene on racial disparities in sleep?

Aim 3: Examine whether sleep health predicts weathering indicators, allostatic load and accelerated epigenetic age, among Black and White adults.

Clarify the role of sleep health in the context of broader disparities in chronic disease and mortality.



Scientific Approach:



Why is this research important?

- The American Heart Association (AHA) has added sleep to its key recommendations for good health in 2022.
- Healthy People 2030 has added improving population sleep as an objective.
- The National Heart Lung and Blood Instutite (NHLBI) has called for more sleep determinants research and sleep disparities research.

This research in response to a collective public health call-to-action to improve population health and promote health equity.

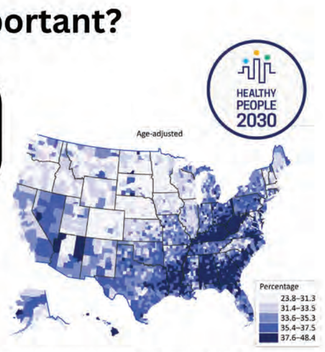


Figure. Model-based crude and age-adjusted county-level prevalence estimates of short sleep duration (<7 hours per 24-hour period) among adults aged 18 years or older, by quintile, United States, 2020. Urban–rural classification was defined by the National Center for Health Statistics 2013 urban–rural classification scheme (6). Age-adjusted estimates were standardized to the 2000 projected US population aged 18 years or older in 13 groups (18–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, ≥80) (4). Data source: Centers for Disease Control and Prevention (7).

Map Source: Pankowska MM, Lu H, Wheaton AG, Liu Y, Lee B, Greenlund KJ, et al. Prevalence and Geographic Patterns of Self-Reported Short Sleep Duration Among US Adults, 2020. Prev Chronic Dis 2023;20:220400. DOI: https://doi.org/10.5888/pcd20.220400.

Overall Goals and Public Health Impact:

IDENTIFY novel potential intervention targets and resilience promoting factors of sleep health.

ADVANCE the sleep health disparity mechanism epidemiologic literature.

PROMOTE healthy sleep overall and foster health equity.

"Where we sleep, when we sleep, and with whom we sleep are all important markers or indicators of social status, privilege, and prevailing power relations." – Simon Williams

Scholar Awards Celebration

November 12, 2025

SCHOLAR AWARDS CELEBRATION ARCS FOUNDATION ATLANTA

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