Understanding African American Women's Health Outcomes through the Discrimination, Sociocognitive Processes, and Cardiovascular Risk Study

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Background

Cardiovascular Disease among African American Women

- Among African American women (aged 20 and older) 49% have been diagnosed with cardiovascular disease (CVD) while identification of the root causes remains incomplete. [1]
- Despite new interventions, CVD morbidity and mortality remain higher for African American women. [2]

Discrimination as a Risk Factor

- Prior research has shown discrimination as a significant risk factor for CVD among African American women. [3,4]
- Stress associated with discrimination increases CVD risk through cumulative physiological burden (allostatic load) and accelerating aging (shorter telomere length). [5,6]

Purpose

To better understand the link between discrimination and health outcomes among African American women by:

- Understanding how stressful experiences and psychophysiological mechanisms may contribute to cardiovascular risk for African American women.
- Using the information from this study to help develop interventions that target the unique stressors faced by African American women to improve cardiovascular health.

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Methods

Study Design
- Cross-sectional and longitudinal study.
- Examines the associations between discrimination, social cognitive processes, negative emotion, and sustained physiological dysregulation.

Participants
- Self-identified Black or African American female.
- At least 18 years old.
- Live in Los Angeles County or Orange County CA.

Exclusion Criteria
- Inflammatory disorders, use of asthma inhaler or antidepressants (last 3 months), previous diagnosis of mental illness, diabetes, hepatitis, cardiovascular disease, current pregnancy, chronic illness.

Procedures
- Virtual Intake Exam via Zoom (Cross-sectional)
- Anthropometric Measures
  - Blood pressure, heart rate, waist-to-hip ratio.
- Survey Questionnaires
  - Everyday Discrimination Survey, PANASX (measures emotions), Cognitive Appraisal Scale, and 11 am Sleep Quality Survey.
- Salivary Measures
  - One: SalivaBio oral swab, Passive Saliva collection, Oragene kit (analyzes telomere length to measure cellular aging to determine physiological age).

Procedures Continued
- 7-day ecological momentary assessment (EMA) protocol (Longitudinal)
- Completion of surveys (sleep quality, daily discrimination experiences, cognitive appraisal, and emotions) via mEMA app at 11am, 2pm, 5pm, and 8pm.
- Saliva sample collection at waking and prior to completing surveys.
- A collection of 35 samples will be used to measure biological markers of stress reactivity: stress hormone cortisol, enzyme salivary alpha-amylase, and cytokine interleukin 6 (index of inflammation).

Measures
- Data Analysis
  - Saliva samples will be sent to lab once recruitment reaches 90 participants.
  - Linear regression models will explore the association between baseline discrimination, schemas, and cognitive appraisal with the outcomes of current physiological state and cumulative physiological burden.
  - Linear mixed models will measure associations between daily discrimination reports, everyday discrimination score, cognitive appraisal, emotions, and physiological reactivity.

Results

We expect results will indicate that African American women's experiences of discrimination may contribute to schemas that heighten the appraisal of social evaluative threats resulting in recurrent emotional physiological stress responses that contribute to worsened health outcomes.

Conclusion

- Implications of this study will be used to examine the relationship between discrimination, social cognitive processes, negative emotion, and sustained physiological dysregulation.
- Results will highlight how unique psychophysiological factors correlate with CVD among African American women in order to develop informed CVD mitigation for future interventions.

Lessons Learned

Knowledge

- How stress-associated discrimination contributes to higher rates of CVD among African American women.
- Implementation of a cross-sectional and longitudinal study.
- Saliva sample collection protocol.

Skills

- Interpersonal communication with participants, communities, and institutions.
- Conducting participant recruitment.
- Supporting team members through intake exams.
- Navigating and setting up surveys on mEMA website.

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