



Prevention Research Center for Healthy Neighborhoods
at Case Western Reserve University

PRCHN Research Seminar Series

Hair Cortisol in Black Expectant Mothers: Only their Hairdressers Know for Sure

Presented by: Angela Neal-Barnett, PhD, Professor, Director of the Program for Research on Anxiety Disorders among African Americans, Kent State University

Wednesday, October 30th, 2019, 12:00 - 1:15 pm **NOTE DATE CHANGE**



Stress is an important factor in infant mortality disparities. Previous research reports that chronic stress is more common in the daily lives of Black women than White women, regardless of income and education. Common chronic stressors for Black women include racism, finances, and food insecurity. Unfortunately, racial inequality stressors take a cumulative toll on Black women, increasing the chance they will have health problems at younger ages. This process is known as weathering. For pregnant Black women, the weathering created by chronic stressors creates uterine constriction and increased blood pressure, conditions associated with increased risk for various poor birth outcomes, such as low birth weight, preterm delivery, stillbirth, neonatal and post neonatal death.

Hair cortisol is an efficient way to measure chronic stress. Many black women, however, refuse to give a hair sample. In the first part of this presentation, Dr. Angela discusses a culturally-relevant protocol for collecting hair cortisol in Black communities.

In the second part of the presentation, she presents data on her team's ongoing research on race, stress, and infant mortality. The research examined chronic stress using the biomarker hair cortisol in two samples of Black expectant and postpartum women. Sample 1 consisted of 18 women and Sample 2 consisted of 33 women. Cortisol concentration in Sample 1 ranged from 5.7- 416.2 pg/ml and in Sample 2 from 2.3-118.9 pg/ml. A trend was identified in Sample 1. These women evidenced significantly higher means of cortisol. These findings are alarming as high cortisol levels are indicative of chronic stress and associated with depression, prematurity, obesity, and chronic pain. The findings from Sample 2 were concerning for a different reason. These women evidenced a trend of unusually low cortisol levels. Low cortisol levels are commonly seen in people who have experienced trauma and Post-Traumatic Stress Disorder.

Hair cortisol studies with Black pregnant women are rare, thus we were unable to compare our samples with other studies of pregnant Black women. Compared to existing data on White expectant and postpartum mothers however, our Sample 1 findings were significantly higher and our Sample 2 findings significantly lower. Our Sample 2 findings were supported by the mothers' data from the Adolescent Child Experiences (ACES) measure that indicated that on average, they had experienced 3.38 traumas. (e.g., various forms of abuse, neglect and household dysfunction) during their childhood or adolescence.

Dr. Angela Neal-Barnett is a national award-winning psychologist, professor, and leading expert on anxiety disorders among Black Americans. The first African American woman to be tenured and promoted to the rank of professor in the Department of Psychological Sciences and in the College of Arts and Sciences, she directs the Program for Research on Anxiety Disorders among African Americans. Her current work focuses on a wearable integrated intervention for middle school girls and the role of race and stress in infant mortality. Dr. Neal-Barnett is the recipient of numerous federal, state and foundation funding including grants from the National Institute of Mental Health, National Science Foundation, Women's Endowment Fund of the Akron Community Foundation, Ohio Commission on Minority Health, Sisters of Charity Foundation and the Mount Sinai HealthCare Foundation. She is the architect and developer of the Build Your Own Theme Song© App and the author of Soothe Your Nerves: The Black Woman's Guide to Understanding and Overcoming Anxiety, Panic and Fear (Fireside/Simon and Schuster). An international workshop presenter and speaker, Dr. Neal-Barnett's work bridges the gap between academia and the general public. She has published in numerous psychological journals including Clinical Psychology Science and Practice, Journal of Anxiety Disorders and Journal of Affective Disorders. Her work has been featured on CNN, NBC, NPR, PBS, Fox News, SIRUSXM Doctor's Radio, BET, and the Tom Joyner Morning Show as well as in O, the Oprah Magazine, Health magazine, Working Mother, Essence, Ebony, and the New York Times.

The PRCHN Seminar Series is open to the public and takes place from 12:00 - 1:15 on the 2nd Wednesday of every month at the BioEnterprise Building, Room 03B 11000 Cedar Avenue.

Parking is available and a light lunch is served. Contact Madeline Castele at: mcc92@case.edu for more information.



The Prevention Research Center for Healthy Neighborhood's mission is to foster partnerships within Cleveland's urban neighborhoods for developing, testing, and implementing strategies to prevent and reduce the burden of chronic disease.