PIII-46: Risk Associations Between Perceived Stress, Insulin Resistance and Allostatic Load among non-diabetic African American women of the Jackson Heart Study

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Abstract:
Introduction: Insulin resistance is the antecedent to health disparities such as obesity, Type 2 diabetes (T2DM), and cardiovascular disease (CVD). Allostatic load is a physiological risk assessment of parameters depicting dysregulation across body systems associated with insulin resistance, such as the hypothalamic-pituitary-adrenal (HPA) axis, cardiovascular, and metabolic processes. Activation of the HPA axis potentiated by stressors enhance the allostatic load sequela. An individual’s perception of major and minor stressors, as well as discrimination, has been found to be detrimental health determinants of insulin resistance among African Americans (AA). Homeostatic Model Assessment of insulin resistance (HOMAIR) is highly correlated among euglycemic individuals when compared to euglycemic clamping or the gold standard. The researcher will explore the longitudinal associations among perceived stress, allostatic load, and insulin resistance (defined as HOMAIR) among nondiabetic AA women (AAW) of the JHS
from 2000-2008. The purpose of this study is to evaluate the interactions between the individual, stress, allostatic load, HOMAIR, and the influence this may have on how nondiabetic AAW transition toward insulin resistance.

**Method(s):** The JHS is an epidemiologic, population based cohort of 5,302 AAs investigating CVD and associated risk factors. This study will be a nonexperimental, correlational secondary data analysis of nondiabetic AAW of the JHS. Measurements include physiological markers, anthropometric measures, and (3) stress instruments: WSI, STS, and DIS. t-tests, $\chi^2$ test, bivariate correlations, and forward hierarchical multiple linear regression will be used to analyze the data.

**Results:** N/A

**Discussion & Conclusions:** The concern for nondiabetic AAW is the disparate representation of undiagnosed or underdiagnosed insulin resistance in the United States. The role of stress in disease development should not be undermined because excess taxation on physiological systems facilitate unhealthy states. A highly sampled race-gender specific study exploring the cumulative interplay of perceived stress, allostatic load, and insulin resistance among nondiabetic AAW would elucidate influential associations that facilitate disease progression in this population.

**Abstract History:**
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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No, I (or a member of my immediate family) have not received something of value* from or own stock (or stock options) in a commercial company or institution related directly or indirectly to the subject of my presentation.

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I will not be describing any pharmaceutical and/or medical device.

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