

**Title:**

Impact of Social Support and Stress on Blood Pressure Among West African Immigrants

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**Session Title:**

Health Practices for Immigrants

**Slot:**

S 02: Monday, 31 July 2017: 11:45 AM-12:30 PM

**Scheduled Time:**

11:45 AM

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**Keywords:**

African Immigrant, Blood Pressure and Stress

**References:**

1. Sawyer PJ, Major B, Casad BJ, Townsend SSM, Mendes WB. Discrimination and the Stress Response: Psychological and Physiological Consequences of Anticipating Prejudice in Interethnic Interactions. *American Journal of Public Health*. 2012. p. 1020–1026. PMID: 22420818
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3. Doamekpor LA, Dinwiddie GY. Allostatic load in foreign-born and US-born blacks: Evidence from the 2001-2010 national health and nutrition examination survey. *Am J Public Health*. 2015;105(3):591–597. PMID: 25602865
4. Commodore-Mensah Y, Sampah M, Berko C, Cudjoe J, Abu-Bonsrah N, Obisesan O, Agyemang C, Adeyemo A, Himmelfarb CD. The Afro-Cardiac Study: Cardiovascular Disease Risk and Acculturation in West African Immigrants in the United States: Rationale and Study Design. *J Immigr Minor Heal*. 2015;1–14.

**Abstract Summary:**

Cardiovascular health may be influenced by stress and social support. However, this relationship has not been examined in African immigrants to the United States. The relationship between perceived stress, social support, and mean systolic blood pressure was examined in a sample of West African immigrants living in Atlanta, Georgia.

**Learning Activity:**

<b>LEARNING OBJECTIVES</b>	<b>EXPANDED CONTENT OUTLINE</b>
Discuss the influence of stress on health	Present an overview of the effects of stress on cardiovascular health

Discuss the influence of social support on immigrant health	Present an overview of the social support in immigrants and the impact on health
Describe the effect of social support and stress on mean systolic blood pressure	Discuss the results of the relationship between social support, stress, and blood pressure on the sample of West African immigrants

**Abstract Text:**

**Purpose:** Stress negatively impacts health outcomes of individuals and social support is essential for the maintenance of both physical and mental health. Chronic stress has been linked to hypertension and atherosclerosis which result in the development of cardiovascular disease.<sup>1</sup> Adequate social support has been linked to resilience to stress, decreased morbidity and mortality. Social support is an important aspect of immigrants' adaptation to a new environment and has been shown to positively influence their health status and well-being.<sup>2</sup> Higher social support is associated with a lower likelihood of hypertension in racial/ethnic minorities and immigrants. Stress has been associated with cardiovascular disease disparities in persons of African ancestry.<sup>3</sup> West African immigrants (WAls) are one of the rapidly growing racial/ethnic minority groups in the United States (US) but are an understudied, vulnerable population.<sup>4</sup> Despite being at an increased risk for hypertension upon migration to the US, little is known about the impact of stress and social support have on blood pressure in WAls. The purpose of this study was to examine the relationship between social support, stress, and blood pressure in a sample of WAls.

**Methods:** In this pilot, community-based study, we examined the association between social support, stress, and mean systolic blood pressure in first-generation WAls (N=59) residing in the Atlanta metropolitan area. Social support was measured by the 7-item Enhancing Recovery in Coronary Heart Disease (ENRICH) Social Support Inventory (ESSI7). Scores for the ESSI7 range from 8 to 34 with higher scores indicating higher levels of social support. Stress was assessed using the Perceived Stress Scale (PSS), scores on this scale range from 0 to 40 with a score of 20 and above indicating higher stress. We fitted multivariable linear regression models to examine the associations between social support, stress, and systolic blood pressure after adjusting for known confounders.

**Results:** The participants' ages ranged from 36 to 76 years; the mean age(±SD) of the sample was 47.2(±9.9). Females made up 61% of the sample and 59% of the participants were born in Nigeria. Fifty-two percent of the participants had a household greater than \$50,000 despite at least 78% having at least a college education and only 68% had any health insurance coverage. A total of 36% of the sample were diagnosed with hypertension, 60% of these were being treated for hypertension. Eighty-three percent (83%) of those being treated had their hypertension under control. The mean(±SD) social support score in this study was 28.3(±7.0) and the mean (±SD) Perceived Stress Scale score of the participants was 18.6(±7.7). The mean(±SD) systolic blood pressure was 122.2(17.7). Social support was not significantly associated with systolic blood pressure. An inverse association was observed between perceived stress and mean systolic blood pressure ( $r^2 = -0.295$ ,  $p = 0.023$ ). This negative association persisted in a multiple linear regression model after adjusting for age, sex, BMI, and income ( $\beta = -1.07$ ; 95%CI: -1.68, -.45;  $p = 0.001$ )

**Conclusion:** An inverse relationship was observed between perceived stress and mean systolic blood pressure, but there was no association between social support and mean systolic blood pressure. This finding is consistent with the findings of earlier studies and suggests that chronic stress in WAls may lead to habituation and adaptation. Additional research is needed to examine the mechanisms by which stress impacts blood pressure among WAls and examine the role of protective factors such as resilience to stress among WAls.