

Tori R. Wiley
Undergraduate
Xavier University of Louisiana, College of Pharmacy, New Orleans, LA

Dr. Lisa Moreno-Walton:
Louisiana State University Health Sciences Center and University Medical Center New Orleans

“Racial Disparities in Associations of Stress with Increased Risk of Coronary Heart Disease: A Survey Study within an Urban Emergency Department”

Coronary heart disease (CHD) is a malfunction of the heart arteries to deliver oxygenated blood to the heart. This disease is a result of artery plaque buildup, and is worsened by co-existing health conditions and other risk factors. Stress is one of the risk factors to developing CHD. Psychosocial stress, perceived stress, work-stress and other social factors play a role in predisposing individuals to the development of CHD, especially in minorities. In the United States, African Americans are more frequently exposed to those stressors because of their social and economic background. Though multiple studies have assessed work-related or occupational stress during emergency care, empirical data linking stress and increased CHD risks amongst patients and medical staff within the Emergency Department is limited. This study aimed to identify the association between stress and CHD and to determine if race and other risk factors are modifiers of stress related to increased risk of developing CHD reported in the Emergency Department.

This study is a cross-sectional survey study administered to patients and their families, ancillary staff, nurses, medical students, residents, and physicians in the Emergency Department of University Medical Center New Orleans to assess their levels of stress and the impact it has on cardiovascular health. Surveys consisted of 70-85 questions constructed from validated surveys and required 10 to 15 minutes to complete online via RedCap or pen and paper. Data points included demographic information, personal and family medical history, and experiences of stress and discrimination. SAS 9.4 was used to carry out all statistical data analysis. Fisher's exact tests were used to assess the associations between CHD and discrimination, as well as to assess the associations between perceived stress and discrimination. We also used linear regression modeling to assess potential risk factors affecting CHD scores. The risk factors we included in our model were age, gender, race and perceived stress.

Our study population consisted of 73 subjects, Females (56.2%), Whites (63.0%), Blacks (30.1%), more than one race (1.4%), Asian (2.7%), and unknown (2.7%). 35% of the population were patients, and the remainder consisted of ancillary staff, nurses, medical students, residents, and physicians. Of minority participants, 61.5% reported moderate perceived stress; however, PSS scores were not statistically significant. Though 52% reported high scores for risk of CHD in reference to discrimination as a risk factor, these findings were also not statistically significant. The insignificance may be due to the small sample size. Linear regression showed age to be statistically significant ($p=0.0031$) and being black as a risk factor ($p=0.0214$) to developing CHD. Since this is an interim analysis, further exploration is necessary to determine if the validated tools fully reflect overall stress. In addition, we will need to assess what role resilience plays in one's self reported level of perceived stress.