

# The “AFRO-CardiAC” Study: Assessing the Cardiovascular Disease Risk among West African Immigrants in the United States.

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## 1 Background

The influx of West African immigrants (WAI) to the United States in the last decade has been phenomenal. According to the U.S. Office of Immigration Statistics (2012) 377,670 African immigrants were admitted as Legal Permanent Residents into the United States from 2002 to 2006. Similar to other immigrant groups, most WAIs lack insurance or are underinsured, marginalized and/or lack access to healthcare. Despite the growing presence of WAI, few studies have assessed their cardiovascular disease (CVD) risk. Previous research has categorized them as “Black/African-American”. However, such distinction is important for disease control and preventive healthcare.

## 2 Objectives

The “AFRO-CardiAC” study is a community-based cross-sectional study with the following specific aims:

- (1) Examine the global CVD risk using the “Pooled ASCVD Risk Score (PARS)”.
- (2) Examine the prevalence of CVDRFs (BMI, high BP, high blood glucose, high TC, low HDL-C) and health behaviors.
- (3) Identify independent predictors of increased global ASCVD risk.

## 3 Methods

The research was at the data collection stage at time of my initial assignment. Under the mentorship of the principal investigator (PI), I performed the following:

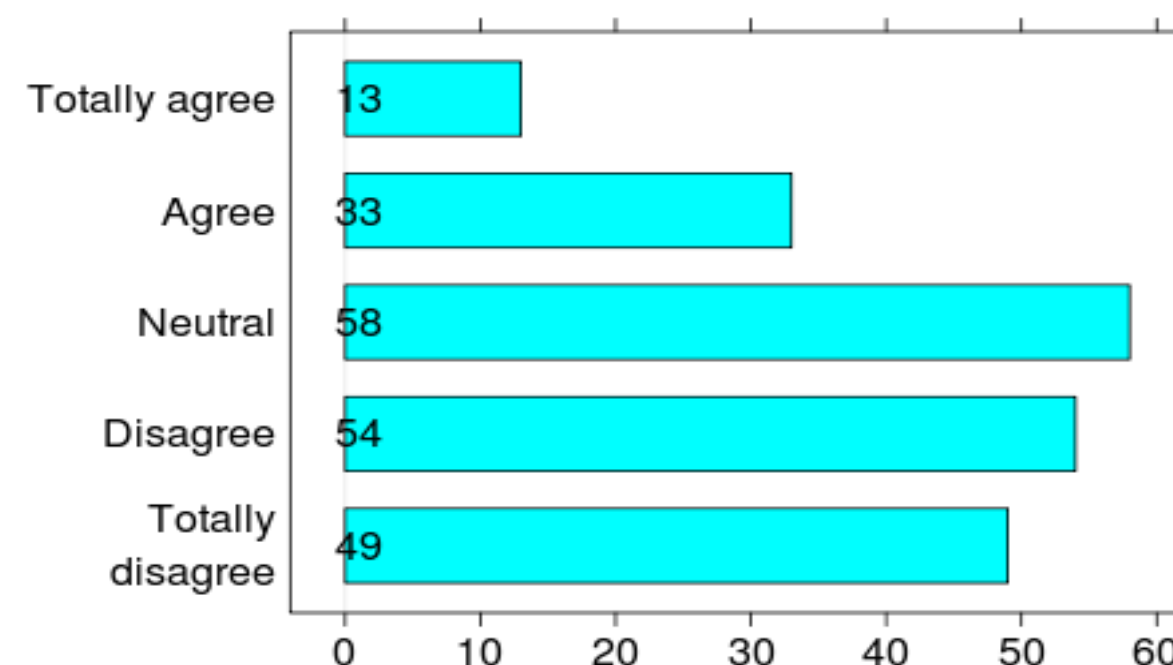
- 1) Identification and compilation of information on possible data collection sites.
- 2) Finding available community resources for study participants.
- 3) Participation in data collection activities and counseling of participants.
- 4) Data entry into REDCap (a secure, web-based application for building and managing online surveys and databases). Information entered included – participants demographic information and medical history, physical and biochemical measurements, behavioral measurements (diet, alcohol, smoking, and physical activity), heart disease facts questionnaire, data on culture, etc.

## 4 Participants

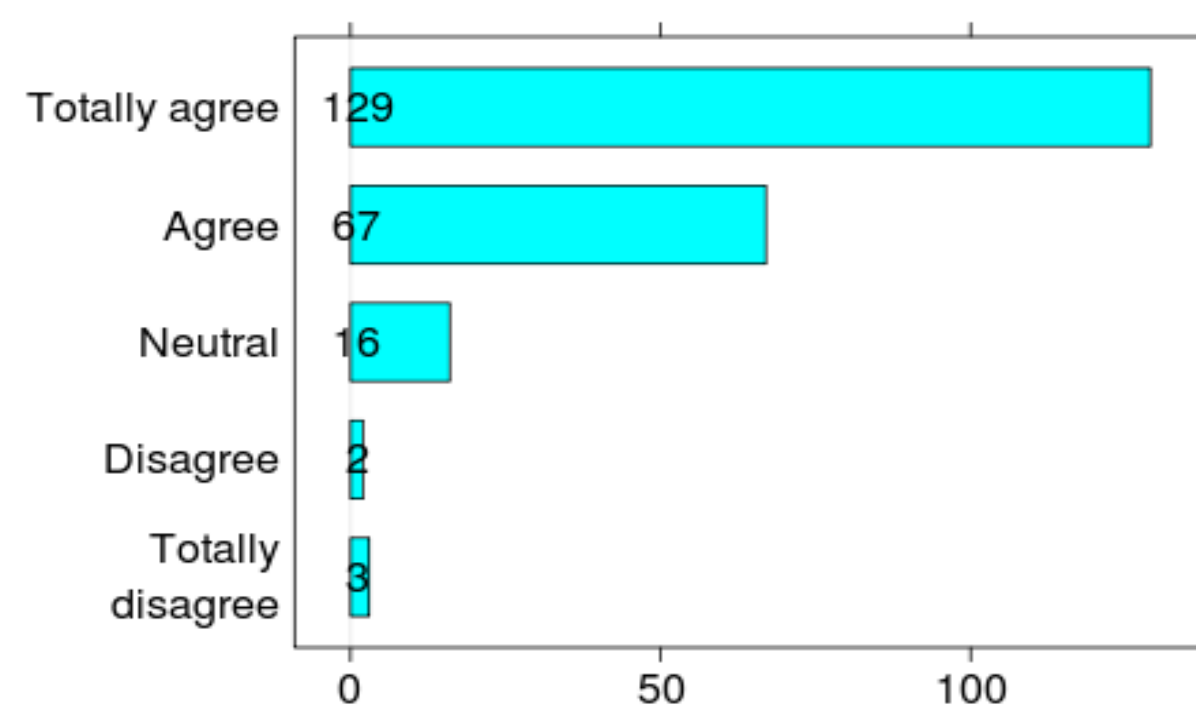
Characteristics	Mean ± SD/n(%)
Age	48.9 ± 9.2
Hypertensive	109(51)
Diabetes	32(15)
Overweight/Obese	191(88)
Pooled ASCVD Risk Score	5.9 ± 6.8

### Cultural Identity

I feel American



I feel Ghanaian/Nigerian



### Heart Disease Risk Report Card

Name: _____		
<b>Your results</b>		
	Current Level of Risk Factors	Ideal Level of Risk Factors
Blood pressure (mmHg)	_____	Goal: < 140/90
Fasting Blood Glucose (mg/dL)	_____	Goal: <100
Total Cholesterol (mg/dL)	_____	Goal: < 200
Triglycerides (mg/dL)	_____	Goal: <150
HDL-Cholesterol (mg/dL)	_____	Goal: ≥ 50
LDL-Cholesterol (mg/dL)	_____	Goal: <100
Do you smoke?	_____	Goal: No
Body Mass Index (kg/m <sup>2</sup> )	_____	Goal: 18.5 to 25
Waist Circumference (inches)	_____	Goal (Men): <40 Goal (Women): <35
Waist to Hip Ratio	_____	Goal (Men): 0.90 Goal (Women): 0.85

Your risk of developing heart disease or dying from it is \_\_\_\_\_% in the next 10 years

Your “heart age” is \_\_\_\_\_ years

You should try to improve your risk factors (even if you have only one or two). A single risk factor (such as obesity) can greatly increase your risk of having heart disease later in life. You may also develop other risk factors as you become older. Make sure that you eat healthy food, exercise regularly, avoid smoking and avoid gaining extra weight. This may prevent or delay other risk factors from developing in the first place. It is very important that you know and understand all your risk factors!

Talk to your doctor about all the results you were given today and how to keep your heart healthy!

## 5 Results

Data were collected on 222 WAIs. 66.2% of the total sample were Ghanaians, 33.3% were Nigerians. When asked whether they felt American or Ghanaian/Nigerian, 88.2% identified with their country of origin; only 20.7% said they felt American. Also, 30.6% of participants thought a person would always know when they have heart disease. While 48.7% of survey respondents said people with diabetes tend to have HDL cholesterol (Q22); 50% could not distinguish between diabetes and heart disease as it relates to gender (Q25).

## 6 Conclusions

The prevalence of CVD risk factors was high in this sample of WAI. WAIs also reported a stronger African cultural identity than an American identity. Knowledge of CVD risk factors in this sample was suboptimal. Moreover, there is a need to increase awareness on diabetes, hypertension and cholesterol among WAIs. There is an urgent need for CVD prevention strategies that are tailored to WAIs to prevent adverse cardiovascular events. Finally, additional larger-scale epidemiological research on CVD risk in WAI is recommended. Data gathered from such research will enhance provider management of CVD risk and quality of care among WAIs.

## 7 References

- Goff, D. C. et. Al. (2013). American College of Cardiology/American Heart Association Task Force on Practice 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk: A Report of the. *Journal of the American Heart Association*, 1-50 <http://dx.doi.org/10.1161/01.cir.000043774.1.48606.98>
- Office of Immigration Statistics, U.S. Dept. of Homeland Security, (2012). 2011 Yearbook of Immigrant Statistics.

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