



# Jackson Heart Study Manuscript Proposal

**Instructions:** Use a font size of 11 points or larger with at least one-half inch margins (top, bottom, left, and right) for all pages. **Note: Supplemental materials such as table shells must be uploaded separately.**

1. **Proposal Title:** Social Determinants of Health: Measuring the Impact of Cultural Norms on Cardiovascular Disease Prevalence Among African American Adults in The Jackson Heart Study.
2. **Lead Author:** Shelia Malone
3. **Overview** Understanding social determinants of health from a cultural perspective will be a paradigm shift in public health. The current efforts focus on traditional risk factors. In terms of primary prevention, public health professionals are focusing heavily on the risk factors rather than the cultural norms that influence the positive or negative effects of community behaviors.
4. **Background/Rationale**

Sociologists study societies, the patterns of social relationships, social interaction, and the culture of populations (Conrad and Barker, 2010). Medical sociology provides an analytical context for examining illness and health care from a social perspective (Barby, 2009). Major topics for medical sociologists include the doctor/patient relationship and emphasizes shared decision making, the structure and socioeconomics of healthcare, and how culture impacts attitudes toward disease and wellness (Namazi1, Aramesh, and Larijani, 2016). One's culture usually precipitates the selection of fit. Culture is the collective values, beliefs, and socially accepted norms of a group or sub-group of people. Culture, therefore, influences the manner we learn, live, and behave. Because of this, many theorists believe that culture significantly shapes our health outcomes (Pawa, 2003). Age-restricted, geocoded data have been used to demonstrate a novel use of the Lorenz curve and Gini coefficient to determine the representativeness of the Jackson Heart Study cohort to the African American population in a geographic settings (Hickson et AL, 2010). There is a gap in the literature that is evident of a lack of analysis of the impact of cultural norms among the participant population in the Jackson heart study. Therefore, this study purports to encourage policy development that focuses on primary prevention that promotes changes in cultural norms.
5. **Research Hypothesis:** There is a significant relationship between cultural norms and cardiovascular disease prevalence among African American adults in the Jackson Heart Study?

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## 6. Inclusions/Exclusions

See Table 1 for determinants from exam 1 that will be included:

## 7. Statistical Analysis Plan and Methods

*Methods:* The study will include 5306 African American (females, n = 3,371 and men, n = 1,935) aged 35 to 84 years from the Jackson Heart Study (Jackson, Mississippi), during the period 2000–2012. We will use a linear multiple regression model and adjust for age and gender to identify contributing effects.

$$y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_p x_{ip} + \epsilon$$

**where, for  $i=n$  observations:**

$y_i$ =dependent variable

$x_i$ =explanatory variables

$\beta_0$ =y-intercept (constant term)

$\beta_p$ =slope coefficients for each explanatory variable

$\epsilon$ =the model's error term (also known as the residuals)

We will use data extracted from the following surveys in exam one to measure cultural norms:

### *Health Practices: Alcohol and Drug Use Form*

- ADRA1 Ever consumed alcoholic beverages
- ADRA3 Average number of drinks
- ADRA5 5+ alcoholic beverages/day ever consumed?
- ADRA6 Used crack or cocaine in any form
- ADRA7 How many times have you used crack/cocaine in your life
- ADRA8 Use of any other drug

### *Food Frequency Questionnaire Form*

- FFQ4 Dark-green Vegetables (servings) BY AGE AND GENDER

### *Anthropometry Form*

- ANT3A Waist Circumference (cm) BY AGE AND GENDER

### *Approach to Life C Form*

- RCPA1 How often do you attend church?
- RCPA3B I feel strength in my religion
- RCPA3C I feel deep inner peace and harmony

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RCPA4 Religion involved in dealing w/ stress  
RCPA5A Impossible to reach goals

## *Health Care Access & Utilization Form*

HCAA3 Trust your medical provider

## *Health Practices: Physical Activity Form*

PACA1 # minutes walk or run  
PACA7 Past year: often watch tv  
PACA12 Time caring for others (child/elderly)  
PACA13 Past year: time spent cooking/cleaning  
PACA19 Past year: participate in activities  
PACA20 Past year: often play sports/exercise

## *Health Practices: Tobacco Use*

TOBA1 Smoked at least 400 cigarettes  
TOBA2 Age when first smoke cigarettes  
TOBA5 Cigarettes you smoke per day  
TOBA14 Used any other Tobacco products?

## *Personal Data - Socioeconomic Status*

PDSA5 Are you currently working more than 1 job?  
PDSA10A Ever been unemployed 6+ months  
PDSA18A Highest degree/years of school you completed?  
PDSA20 Ever had/has spouse/partner  
PDSA21 Spouse/partner work for pay  
PDSA23A Highest degree/years of school spouse/partner completed?

We will develop an extraction tool to quantify the findings. Then we will examine the extent to which cultural norms affect nutrition, physical activity, impulsive behavior, all of which contributes to CVD prevalence. We will identify significant differences in prevalence of CVD among African American women versus men that is attributable to cultural norms. Lastly, we will be able to discern which of these determinants has the most significant impact on CVD among African American Adults in the Jackson Heart Study.

## **8. References (maximum 15)**

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Table 1. Inclusions

Social Determinant	Description	Outcome(s)
Nutrition	-Dark Veg, favorable food stores, sodium (NBK3FAVORFOODSTORE)	Obesity, Diabetes, Hypertension
Physical activity	=Obesity/BMI categorization, AHA Physical activity categorization (OBESITY3CAT, PA3CAT)	Obesity, Diabetes, Hypertension
Impulsive behavior	=Smoking, alcohol use (ADRA, ALC, ALCW, EVERSMOKER), illicit drug use	Obesity, Diabetes, Hypertension
Educational attainment	Education attainment categorization	Obesity, Diabetes, Hypertension
Religion	RCPA 1-4	Obesity, Diabetes, Hypertension