

African American Community Perspectives of Social Determinants of Cardiovascular Health Disparities in Mississippi

Clifton Addison^{*}, Brenda Campbell Jenkins, Adrienne Clark, Vanessa Bland, Monique White, Ricardo Brown, Donna Antoine-La Vigne, Marinelle Payton

School of Public Health, Center of Excellence in Minority Health and Health Disparities, Jackson Heart Study, Jackson State University, Jackson, USA

Abstract

Background: The study objective was to increase the understanding of the cultural and independent factors influencing health disparities by examining some of the psychosocial issues of African American communities from a community perspective. The authors examined the perceptions of the community members regarding the social factors that affect health and requested their recommendations for addressing them. **Methods:** Forty-two participants from Hinds, Madison, and Rankin counties agreed to share their thoughts, perspectives, and recommendations as part of focus groups. The study group was asked to discuss their perceptions of social elements in the study region that may impact health status. Data were coded and analyzed thematically. **Results:** Most of the participants cited nutrition, access to healthy foods and physical activity resources as a major area of concern. They understand the importance of making better food choices, developing better eating habits, and decreasing their intake of fast foods. They recommend a change in the mindset of society and a change in the community's psychological attitude. **Conclusions:** There is the potential for community health workers to assist communities in identifying and managing cardiovascular risk factors at the community level in Mississippi. A thorough understanding of the impact of social elements on cardiovascular health would provide the impetus for community members to build community-level resilience for the advancement of community care, prevention of premature development of cardiovascular disease, and reduction of health disparities.

Keywords

African Americans, Cardiovascular Health, Social Determinants, Mississippi

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1. Introduction

Mississippi has a CVD mortality rate that is the highest in the nation, with a mortality rate of 229.93 per 100,000 compared to 166.99 per 100,000 for the United States. Mississippi also has one of the highest rates of cardiovascular disease (CVD) morbidity and mortality among African Americans in the

United States [1]. Although CVD mortality rates for African Americans have decreased nationwide, rates in Mississippi have increased and the health disparity gap between African Americans and Caucasians has continued to widen [2].

Some important influences on cardiovascular health include

* Corresponding author

E-mail address: clifton.addison@jsums.edu (C. Addison), brenda.w.campbell@jsums.edu (B. W. C. Jenkins), misanneone@gmail.com (A. Clark), nessap1@yahoo.com (V. Bland), monique.s.white@jsums.edu (M. White), ricardo.a.brown@jsums.edu (R. Brown), donna.antoine-lavigne@jsums.edu (D. Antoine-La V.), marinelle.payton@jsums.edu (M. Payton)

social, economic, political, environmental, and cultural determinants of health, together referred to as social determinants of health. According to the World Health Organization (WHO), the social determinants of health are the conditions in which people are born, grow, live, work and age; these are shaped by the distribution of money, power and resources at global, national, and local levels [3]. Social conditions that individuals experience create significant risk for the development of major diseases just like genetic, physiological, and behavioral factors and contribute to health inequalities. In order to craft effective interventions, it is necessary to go beyond the individual risk factors and examine the psychosocial conditions that can influence the development of chronic diseases [4].

African Americans in Mississippi are faced with health disparities that require collaborative approaches, innovative methods, and culturally appropriate interventions in order to overcome the limited effectiveness of existing public health practice [5]. Examining the socio determinants of health and its impact on health status is an effective approach to begin to create interventions and prevention strategies to reduce health disparities [6-7] because some categories of CVD can originate from a complex interplay of behavioral, genetic, environmental, and social factors [8]. These factors contribute to the development of chronic diseases and much of the morbidity and mortality experienced by many in disadvantaged and underserved areas [9]. There are marked differences among individuals, families, and communities in their capacities, priorities, and resources to establish policies and strategies, and activities that would enable them to practice behaviors that could reduce their chances of developing chronic disease prematurely [10-13]. Socio determinants of health, including social support, can affect a person's willingness to participate in an intervention and prevention regimen, including medication adherence, when faced with the onset of disease. For some individuals, factors like personal belief misconceptions and lack of trust may result in their unwillingness to take steps that could lead to recovery or cure [14-17].

The researchers decided to study Mississippi because of the social, political, and economic context of the state and because Mississippi is the site of the Jackson Heart Study (JHS), the largest epidemiological study of cardiovascular disease in African Americans ever conducted. This study was framed after the Addison Social Determinants of Health Model (ASDHM) that was developed to outline a list of aspects that should be examined when studying health disparities and their consequences (Figure 1). It was developed as a framework to illustrate how social determinants can influence health outcomes; health outcomes are influenced by the availability of opportunities, access to

resources needed, and choices and decisions that are made on a daily basis. If one has an abundance of opportunity and access to resources is unlimited, then the choices and decisions that can be made would tend to be positive and would lead to positive health outcomes. On the other hand, if opportunities and resources are limited, the decisions and choices available will be limited to the point where health may suffer negative consequences. Increased stress and depression due to limited resources and opportunity, lead to poor decisions and choices, and subsequently lead to negative health consequences and vice versa.

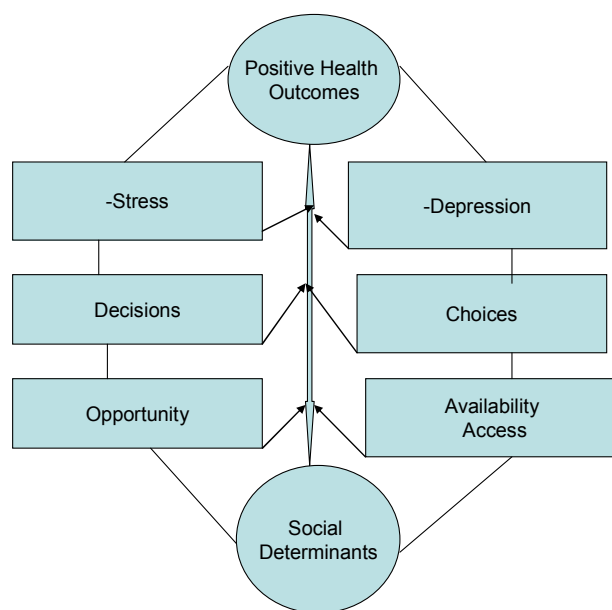


Figure 1. Addison Social Determinants of Health Model.

The ASDHM explains a pathway from social determinants of health to health outcomes, whether they be positive or negative. According to this model, it is the decisions and the choices that an individual makes that determine if he/she can travel a path that moves from social determinants and ends in positive health outcomes. The choices and decisions individuals make that can take them down the path to positive health outcomes are generally determined by the opportunities that they are afforded and the resources they have at their disposal. An abundance of opportunities and resources opens the door to a pathway that leads to positive outcomes. Limited opportunity and limited access to resources lead to a pathway that ends in negative outcomes. Research on psychosocial factors affecting health disparities in African Americans is limited. Most of the research on psychosocial issues in the United States has been carried out on Caucasians.

The purpose of this study was to increase the understanding of the cultural and independent factors influencing health disparities by examining some of the psychosocial issues of

African American communities from a community perspective. This research will help us understand the psychosocial impact of health disparities and identify useful interventions to manage the identified problem areas. The investigation sought to describe a Mississippi community members' understanding of the psychosocial issues related to health and explored their recommendations for addressing them.

2. Method

The researchers selected an exploratory qualitative research design to identify key community groups' perspectives on the psychosocial issues relating to cardiovascular health among African Americans in Mississippi. To understand the context within which African Americans in Mississippi live, a Town Hall meeting was held where in-depth discussions and interviews were conducted with an assorted group of 42 individuals who had expressed an interest in eliminating health disparities and accepted the invitation to participate in the study (Table 4). Participants were recruited from Hinds, Madison, and Rankin counties, and included members of the five Jackson Heart Study Community Health Advisory Networks (CHANs) and other community members. This study group had familiarity with the geography, politics, history, and infrastructure of their communities.

Important issues that influenced this study can be found in data collected from the 5,301 Jackson Heart Study (JHS) cohort to describe the self-reported prevalence of CVD (have you been told by a doctor that you have (disease)?) and their experiences with medication non-adherence and discrimination (a psychosocial element) (Table 1). This JHS

review provided some background data and a description of the experiences of communities located in the study area of Hinds, Madison, and Rankin Counties that comprise the Jackson Heart Study area. The researchers interacted with the study group to determine their perceptions of social elements in the study region that affected health status. Their perceptions, knowledge, and recommendations relating to the social elements experienced by the community in the tri-county area of Hinds, Madison, and Rankin Counties were recorded and examined. Data were coded and analyzed thematically using NVivo software.

All community members gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Institutional Review Board at Jackson State University, Jackson, Mississippi, and the protocol was approved by the IRB (2014-2015). All participants were asked to complete and sign a consent form, thus abiding by the informed consent process. Participants were reminded that their participation was voluntary and provided instructions for protecting confidentiality. The focus group interviews were digitally-recorded. The recorded interviews were transcribed by a professional transcriptionist.

3. Result

For comparison purposes, Table 1 presents a description of the prevalence of selected types of CVD in the Jackson Heart Study from data derived from the cohort residing in the tri-county area (Hinds, Madison, and Rankin counties in Mississippi). As seen in the table, the prevalence of high blood pressure, heart attack, kidney problems, and strokes was highest in Hinds County.

Table 1. Self-Report of Types of CVD in the Jackson Heart Study.

Characteristics	Told by Doctor Had High Blood Pressure		Told by Doctor Had High Cholesterol		Told by Doctor Had Heart Attack		Told by Doctor Had Diabetes		Told by Doctor Had Kidney Problems		Told by Doctor Had Stroke			
	N	%	N	%	N	%	N	%	N	%	N	%		
County of Residence	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Hinds	4367	82.44	2472	56.7	1200	27.5	216	5.0	768	17.6	232	5.3	170	3.9
Madison	498	9.40	244	49.0	158	31.7	23	4.6	80	16.1	27	5.2	13	2.6
Rankin	232	4.38	107	46.3	54	23.4	8	3.5	28	12.1	7	3.0	5	2.2
Unknown	200	3.78	97	48.5	48	24.0	15	7.5	35	17.5	4	2.0	7	3.5

Adapted from Addison et al (2010).

Psychosocial factors in the Jackson Heart Study was also examined. In Table 2, the JHS participants reported their experience with discrimination. As seen in the table, many of the African Americans residing in the tri-county indicated

that they had experiences with discrimination, ranging from more than one-third to about two-thirds. More than one-third of the participants indicated that they had no private insurance coverage.

Table 2. Selected Psycho-Social Factors among the JHS Cohort.

Selected Psycho-social Factors	Percent of JHS Cohort
Discrimination	
Unfair treatment at school/training	43.13
Unfair treatment getting job	44.30
Unfair treatment at work	63.95
Unfair treatment getting resources	37.39
Unfair treatment in public place	35.01
Unfair services	36.93
Reason for discrimination	
Race	52.64
Hard life because of discrimination	
A Lot	11.18
Some	27.09
A Little	29.26
Private health insurance coverage	
No	35.25

n = 5301

Another notable psychosocial factor to behavior practices is medication non-adherence. Table 3 presents the data from the Jackson Heart Study describing situations and experiences that prevented members of the JHS cohort from adhering to a medical regimen that included prescribed medications, a practice that could have health consequences. These top ten reasons why JHS participants did not take their medication as prescribed represent some of the contextual forces that drive and shape behaviors, choices, and decisions they make that are influenced by psychosocial factors.

Table 3. Reasons for Not Taking Medication.

Top Ten Ranked Reasons	%
1. In a hurry, too busy, forgot to take medications	47.3
2. Trying to do without taking medications	23.5
3. Did not have medication available	21.1
4. Medication made you feel bad-did not take	18.9
5. No money to purchase medication	18.2
6. Can't carry out normal activities-did not take medications	17.1
7. Medication was inconvenient to take	13.3
8. Medication wouldn't do any good-did not take	10.5
9. Thought you might become addicted-did not take medications	10.3
10. Don't like to take medicine	9.9

Adapted from Addison et al. (2010)

The researchers collected information that described the composition of the group of 42 participants who agreed to convene for the Town Hall meeting. Individuals with a variety of careers, vocations, and professions were represented in this group of respondents as seen in Table 4.

Table 4. Profession of Participants.

	Frequency	Percent
Secretary	1	2.4
Healthcare/public health	3	7.1
Therapist	1	2.4
Nutritionist	1	2.4

	Frequency	Percent
Education/Educator	7	16.7
Student	5	11.9
Researcher	3	7.1
University instructor	1	2.4
Social Worker/social welfare	2	4.8
Retired	5	11.9
IT technologist	2	4.8
Florist	2	4.8
Minister	1	2.4
Police Officer	1	2.4
CEO	1	2.4
Total	36	85.7
Missing	6	14.3
Total	42	100.0

Males and females were almost evenly distributed among the participants of this discussion. The distribution by residence indicates that Hinds County had the largest representation (71.4%), followed by Madison County (14.3%), then Rankin County (4.8%).

Table 5. Gender and Residence.

	Frequency	Percent
Gender		
Male	20	47.6
Female	19	45.2
Missing	3	7.1
County of Residence		
Hinds	30	71.4
Madison	6	14.3
Rankin	2	4.8
Other	3	7.1
Missing	1	2.4

The participants were asked to respond to a series of questions/scenarios that revealed their knowledge of public health issues and their ability to use acquired information gained from their attendance at workshops as well as their personal knowledge and experiences to make informed decisions. They were asked to provide their ideas about how to address seven areas of concern.

3.1. Behavior That Needs to Be Modified to Help to Achieve Positive Health

Most of the participants cited nutrition as a major area of concern. They believed that it is important for them and their families to make better food choices, develop better eating habits, and decrease their intake of fast foods. They stressed that they have to begin to stress healthy eating at home. Others felt that there is a need for more exercise and a lifestyle change. Another important strategy recommended was that there should be a change in the mindset of society and a change in the community's psychological attitude. Most participants cited the need for inclusion of more fun activities in recreational settings, while decreasing portion

size in restaurants, limiting consumption of fast foods, and reducing sugar, oil, and salt intake.

The need to include more physical activity was also recognized by many participants. There were some who felt that communities should develop motivation from the First Lady, Mrs. Michele Obama and invest in gardening projects, as well as develop reasonable exercise facilities in the lower SES areas.

Built environment developments like sidewalks and biking trails, as well as time-off were seen as important strategies to address the inadequate physical activity that is characteristic of African Americans residing in the tri-county area. Many participants indicated that more flex time in jobs would be helpful. Some of them suggested that sidewalks and more biking trails should be installed around all apartment complexes making exercising more accessible and safe.

3.2. One Policy That You Think Needs to Be Added or Modified to Create an Environment That Would Encourage Healthy Living

Access to activities as well as access to healthy foods were cited as an important psychosocial barrier to good health. Participants believed that healthy living can be possible if there were more free fun activities and fresh food and fresh produce access throughout the communities. Many of them believed that it would help if the gyms that were available locally would reduce their prices. There were concerns about the food deserts in some areas. They believed it is important to ensure that the area where they reside should not determine whether they have access to fresh produce. To further create an environment that would encourage healthy living, there should be regular inspection of fast foods, the maximum size of sodas sold at fast food restaurants should be limited, and a senior farmers' market nutrition program would be a great benefit.

Some expressed their support for legislation for free, city-paid health and exercise classes, and the imposition of a ban on cigarettes as important policy changes that can impact health.

3.3. Areas of Research Jackson State University Needs to Support to Help Eliminate Health Disparities

According to the respondents, to eliminate health disparities, Jackson State University should seek to address the effects of stress. The drive to eliminate health disparities should begin in early childhood, and more males should be encouraged to participate in health education/health promotion activities. Programs should be implemented to control the negative eating habits of elementary school children, and there should

be a stronger effort made to involve males in community health promotion/health education activities. That would help to ensure the presence of positive health modeling in the home and accelerate the impact of community engagement to address the negative impact of social determinants of health in African American communities. The big task now is to reduce the prevalence of CVD and high blood pressure. Some of it can be accomplished by conducting community workshops where community members can receive information about healthy living, exercise, fresh food access, and, for children, the need to develop a healthy lifestyle at an early age.

3.4. Areas of Research Jackson State University Needs to Support to Help Eliminate Obesity

Participants feel that research needs to focus more on decreasing obesity in future populations. More effort needs to be expended to motivate communities to lead a healthy lifestyle by eliminating negative behaviors and addressing the psychosocial factors that negatively impact health status.

4. Discussion

The data collected demonstrate that there are significant numbers of African Americans in Hinds, Madison, and Rankin Counties where this study was conducted who have cardiovascular disease as supported by data from the Jackson Heart Study (JHS) information and data analysis performed. The JHS data reported provide characteristics of the study area regarding the prevalence of CVD and the experiences with psychosocial factors. Many of the residents are affected by some of the psychosocial elements, namely discrimination, and psychosocial factors play a major role in the non-adherence to medication as prescribed by a doctor for the CVD conditions with which they have been diagnosed. Since it is generally accepted that exposure to these conditions can lead to impaired health status, understanding the impact of these experiences and collaborating on finding solutions are two important strategies that will empower community members to begin to design lifestyle and environmental changes that can have a positive impact on their health status over time. The psychosocial elements that affect community members are represented by situations in which people are born, develop, mature, live, and work, and the social and legal systems that are in place to address their individual experiences and circumstances. The choices and decisions that people make are determined by the psychosocial elements that characterize their existence accented further by other elements, such as socio-economic status, that result in limited resources, and policies, all of which affect the decisions and

choices that community members are forced to make on a daily basis.

Many of the participants cite access to healthy foods and green spaces as a limitation to positive health status. However, they believe that these situations are shaped by unequal opportunities and inadequate services influenced by psychosocial factors. The feedback provided by the community members who participated in this discussion showed that they understand that some conditions must be changed in order to impact health status. Communities coming together and formulating strategies for health improvement in this type of forum is a positive way to begin the discussion that could eventually lead to policy change and behavioral change that can result in lasting changes in the prevalence of cardiovascular disease in Mississippi communities.

Opportunities are missed for successful intervention when the psychosocial elements are not considered in developing strategies for eliminating health disparities and reducing the prevalence of CVD in African Americans in Mississippi. For many families and individuals, making the right decisions regarding health status can be difficult because of the circumstances in which they find themselves and because there is widespread social inequities that reduce opportunities and access to resources needed to maintain good health.

5. Conclusion

The aim of this study was to elucidate the community's perspectives about the relationship between psychosocial elements and negative health outcomes in African American individuals and communities to emphasize the need for community-based interventions to address health disparities. Most interventions generally focus on lifestyle changes in order to improve health status. Further efforts are needed to address the barriers like psychosocial elements that limit successful intervention. Not enough attention has been paid to the importance of psychosocial factors, or the social and economic conditions that influence health.

Psychosocial influences have been associated with increased incidence, prevalence and burden of disease, and play a role in the health and well-being of individuals and populations. Without a sound understanding of the role of social determinants of health, it would be difficult to gain a true understanding of the root cause of some health issues that could lead to the development of effective health interventions. The World Health Organization (WHO) suggested that experiences of individuals relating to psychosocial factors may influence health. Individual, household and neighborhood socioeconomic status is a predictor of health outcomes. While socioeconomic status is

an important predictor, psychosocial influences are important contributors.

To effectively address cardiovascular mortality among African Americans, interventions need to be implemented targeting the psychosocial factors, in addition to the biological and behavioral factors. The African American community in Mississippi must become committed to building community-level resilience for the advancement of community care, prevention of premature development of cardiovascular disease, and reduction of health disparities. This study emphasizes the need for community health workers to identify and manage cardiovascular risk factors at the community level in Mississippi.

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Author' Contributions

All authors conceived the manuscript, provided ongoing feedback and reviews concerning data analysis, interpretation of results, and write-up until final manuscript completion. All authors read and approved the final manuscript.

Conflicts of Interest

The authors declare that they have no competing interests.

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