J Behav Health 2013; 2(2): 159-166 *ISSN: 2146-8346*

GESDAV

Journal of Behavioral Health

available at www.scopemed.org

Original Research

The impact of organized community capacity building on health risk practices in an African American community

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Received: December 19, 2012

Accepted: February 17, 2013

Published Online: March 03, 2013

DOI: 10.5455/jbh.20130217103823

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Key words: African Americans, Community Partnership, Jackson Heart Study, Health Disparities

Abstract

The Jackson Heart Study (JHS) Community Partnership Office (CPO) initiated the Community Health Advisory Network (CHAN) that included members of the African American community from within the JHS study area (Hinds, Madison, and Rankin Counties located in the Jackson, Mississippi metropolitan area.This study measured the impact of the health promotion activities on the participants for the period 2004-2008. Analysis was computed in 2010 using 40 Community Health Advisors (CHAs) who provided both pre and post data to determine changes in health risk behaviors after their involvement in the health promotion activities.

INTRODUCTION

It has been widely reported that there are disparities in health care delivery and health outcomes and that African Americans receive low quality health care and health services [1-3]. The prevalence of cardiovascular disease (CVD) has been very prominent on communities and families in the United States and, increasingly, in Mississippi where the burden is disproportionately present among African Americans, due in part to interactions between certain physiological, behavioral, and social determinants. To reduce the prevalence of CVD, it is important to address these interactions by implementing and promoting community partnerships that focus on capacity building that empowers community members to take responsibility for adopting heart healthy practices that may lead to reductions in the occurrence of pre-mature cardiovascular disease [4].

Based on the reported inequities, much attention has recently been placed on examining strategies to reduce health disparities and on developing health improvement interventions; but racial and ethnic disparities continue to plague many communities [2, 3, 5-7]. The current state of health disparities demand interventions that have the potential to reduce disparities, and culturally tailored interventions could be effective once implemented [8]. It is therefore incumbent upon public health professionals to develop solutions for health disparities and to identify types of interventions that can be effective for the communities affected [6]. It has even been suggested that one way of reducing health disparities is to target some of the societal factors that are believed to militate against certain groups from accessing necessary information and services and achieving optimum health status [9-11].

Researchers believe that community partnerships can play a key role in disease prevention and awareness of preventable risk factors, such as physical activity,

dietary practices, access to health services, and medication adherence [4]. The Centers for Disease Control and Prevention (CDC) has proposed recommendations for these partnerships for successful implementation outlining how information from communities can be used to provide direction for future reduction in health disparities and elimination of premature occurrence of chronic diseases [12]. The struggle to eliminate health disparities is very challenging as public health professionals search for effective and sustainable strategies that can help to prevent and control cardiovascular diseases. Many researchers agree that conducting research by partnering university researchers with those directly affected by and knowledgeable of the local environmental and social characteristics can have the strongest impact on community health with sustainable health benefits for communities [13].

The Jackson Heart Study (JHS) Community Partnership Office (CPO) created a unique opportunity for institution/community collaboration to assess the extent to which institution/community planning can implement community driven capacity building activities that are designed to empower communities to participate in their own disease self management and health disparity reduction as recommended [14]. The current study examined strategies used by the JHS CPO to engage the community in health promotion activities. We examined the impact of these strategies for reducing health disparities in African Americans to which community members were exposed. It is believed that the information gathered might help to assess whether these community-based strategies can be further endorsed as a catalyst for eliminating health disparities and increasing access to health care.

It is widely believed that involving the community in a prevention/intervention self-management plan could empower individuals to take responsibility for their own health management like monitoring symptoms, adhering to medication regimen, and engaging in more positive behaviors like physical exercise and healthy eating [13]. The activities of the JHS CPO are designed to facilitate a community understanding of diverse intervention strategies that encompasses the entire spectrum of health and illness, ranging from preventive care to disease management to medication adherence.

This study sought to answer three important questions. They were: (1) To what extent has the capacity building activities and disparity reduction strategies provided new knowledge among Community Health Advisors (CHAs)? (2) To what extent has the capacity building activities and disparity reduction strategies influenced new risk factor reduction behaviors among CHAs? (3) How has the CPO capacity building activities influenced CHA leadership in health promotion/health education in the community?

METHODS

The Jackson Heart Study (JHS) is a longitudinal, prospective study of 5301 African American adults recruited between 2000 and 2004 from Hinds, Madison, and Rankin Counties located in the Jackson, Mississippi metropolitan statistical area. The JHS has collected extensive data to examine the underlying causes of CVD in African Americans with the ultimate goal of reducing health disparities, promoting health education, and building capacity among its communities (Addison et al, 2010). Three clinic examinations (2000-2004, 2005-2008, and 2009-2013) have been completed, and annual calls are made to participants to obtain information on medical events and hospitalizations during the previous year to determine health status. To facilitate the JHS goals of reducing health disparities, promoting health education, and building capacity among its communities, the Jackson Heart Study Partnership Office (JHSPO) sought to enhance its community engagement activities by initiating the Community Health Advisory Network (CHAN), inviting participation from JHS participants, as well as members of the community from within the JHS study area. The continued success of the JHS depends to a large extent on spirited, sustainable participant/community engagement.

To achieve its objective of promoting sustained community engagement, the JHSCPO implemented five CHANs in the JHS study area (communities of Bolton/Edwards, Canton, Clinton, Pearl, and Jackson) and systematically organized health promotion/health activities that were designed to train the community partners to acquire the capacity to lead in the area of health promotion and health behavior modification within their respective communities. The participants were asked to attend a series of activities conducted by trained professionals and JHS Staff to nurture and promote the capability, capacity, and assets that exist within the community with the ultimate aim to eliminate or reduce health disparity and CVD. These activities included the following: (1) Community Health Awareness Training, General Health Education Training, CHAN Training, Know Your Numbers Training (KYN), CHAN Sustainability Training. Activities were held monthly and focused on community activities designed to build capacity and promote healthy lifestyles, behaviors, and personal responsibility. The trainers provided instruction that promoted health among individual community members and provided informal counseling and social support. The training was intended to facilitate and support the activities of community health advisors (CHAs) who accepted the challenge to implement

activities to eliminate the preventable risk factors and burdens that result in the premature occurrence of CVD in their community.

The data for the current study were collected beginning in August 2004 and represent the period 2004-2008. The participants' were asked to respond to items on the surveys conducted and to provide their perceptions of the activities attended and the impact of the activities on their lives and practices. A total of 40 CHAs provided both pre and post data that were used to assess changes in behaviors, attitudes, and practices after participation in the prescribed activities sponsored by the JHSCPO. Participants' accounts, beliefs, and practices, as well as their perceptions were recorded, analyzed, and reported. Analysis was conducted in September 2010. Descriptive statistics (frequencies, percentages) were used to describe the participants' characteristics, practices, and activities. Differences in pre and post assessments relating to changes in behaviors, practices, and knowledge were assessed.

RESULTS

Table 1 is a presentation of the demographic characteristics of the participants. The majority of the participants in the community activities ranged in age from 45 and above. Females made up the largest group of Community Health Advisors, and the participants all believed that they were in good health.

Table 2 is an examination of changes in knowledge of the CHAs after their exposure to the training and the heart healthy/health promotion activities and a response to research question one that asked "To what extent has the capacity building activities and disparity reduction strategies provided new knowledge among CHAs?" The data in Table 2 present the CHAs knowledge regarding selected risk factors for development of CVD. The risk factors selected included dietary practices, physical activity, and medical conditions/risk factors. There were increases in knowledge among the CHAs from the pre-evaluation to the post-evaluation. In the area of sedentary lifestyle, there was only a 1.8% increase in knowledge.

Table 1. Characteristics of Community Participants

Characteristics		Percentage
Age		
	35-44	9.5
	45-54	28.6
	55-64	28.6
	65 and older	33.3
Marital Status		
	Married	40.9
	Divorced/separated	22.7
	Single	13.6
	Widowed	22.7
Gender		
	Male	14.3
	Female	85.7
Education Level		
	11th grade or less	14.3
	High School Diploma/GED	4.8
	Some College	19.0
	Bachelors Degree	38.1
	Graduate Degree	19.0
	Doctorate/Professional	4.8
Perception of Health Status		
	Excellent	19.0
	Very Good	28.6
	Good	47.6
	Fair	4.8

Table 2. Pre-Post Comparisons of Community Participants' Knowledge

Knowledge Area	Risk	Evaluation	Percentage	Difference
Knowledge of ideal adult blood pressure measurement (120/80)	120/80	Pre Post	71.4 100.0	+28.6*
Knowledge of major diet modification for blood pressure reduction (sodium intake)	Sodium Intake	Pre Post	85.7 100.0	+14.3*
Knowledge of non-modifiable risk factor for hypertension (age)	Age	Pre Post	75.0 85.7	+10.7*
Knowledge of modifiable risk factor for hypertension (sedentary lifestyle)	Sedentary Lifestyle	Pre Post	12.5 14.3	+1.8
Knowledge of foods rich in potassium (broccoli)	Broccoli	Pre Post	75.0 100.0	+25.0*
Knowledge of dangerous effects of hypertension (stroke)	Stroke	Pre Post	33.3 75.0	+41.7**
(kidney failure)	Kidney Failure	Pre Post	0.0 66.7	+66*
(heart)	Heart	Pre Post	0.0 25.0	+25.0*

*p < .05

Figure 1 examines selected comparisons of nutritional and physical activity practices of the CHAs and a response to research question two that asked "To what extent has the capacity building activities and disparity reduction strategies influenced new behaviors among CHAs?" The participants were asked to respond regarding whether they always, usually, sometimes, or never completed an activity. As is illustrated in the figure, the Jackson Metropolitan CHAs demonstrated behavior changes in the five categories selected regarding dietary practices and physical activity.

Figure 2 examines the impact of the training activities on the CHAs and a response to research question three that asked "How has the Community Partnership Office capacity building activities influenced CHA leadership in health promotion/health education in the community? Two thirds of the participants took the initiative to encourage someone in their community to seek medical attention. Almost one quarter of them were able to share information they had acquired from the training activities regarding stroke. Some of them indicated that they seized the opportunity to share heart attack symptoms information with family and friends. In addition, a small number of them did presentations at regional and national conferences and were actively involved in conducting Community Health Advisory Network (CHAN) sustainability activities in their communities.

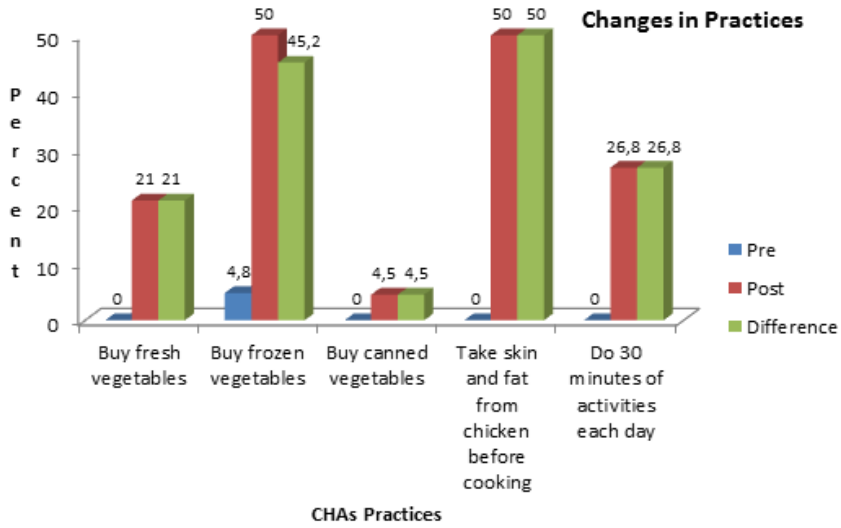

Figure 1. Pre-Post- Selected Comparisons—Nutrition Practices and Physical Activity

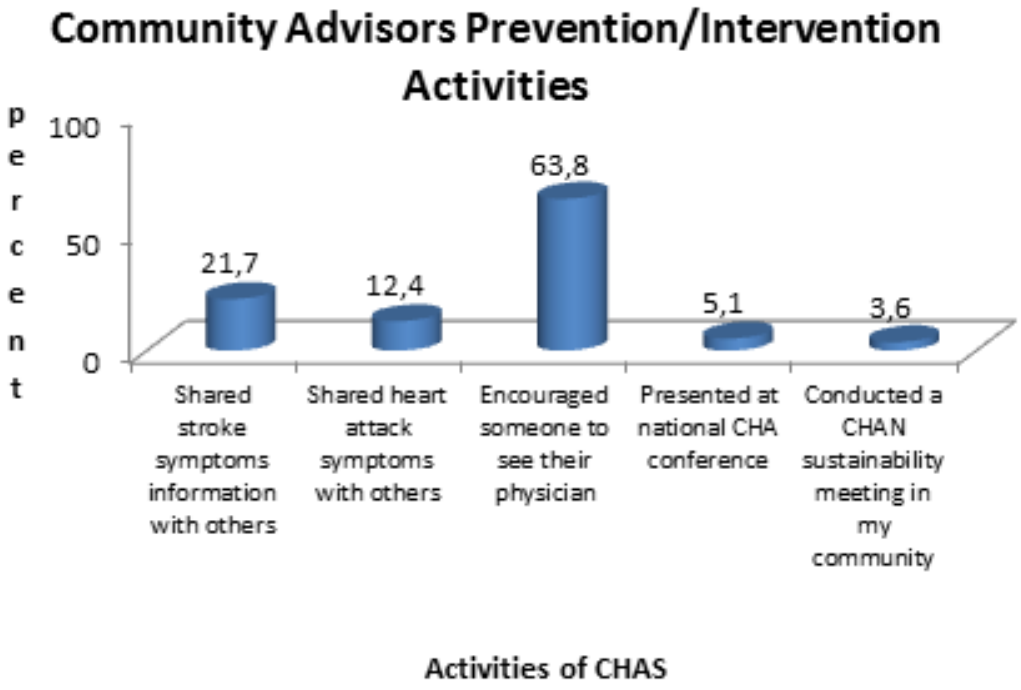

Figure 2. CHAs Demonstration of Acquired Leadership Capacity

DISCUSSION

When community partnership programs are implemented through actively engaging residents within the community, they serve to empower community leaders to interact with their constituents. This makes it easier for further collaborations and interactions with peers and families to be initiated and would be beneficial in changing attitudes and behavior, and influencing healthy choices. This is the type of approach that was promoted by Peek, Cargill, and Huang because these types of interventions if sustained can lead to long-term improvements in disparities and health-related complications [18].

The study sought to examine whether the capacity building activities and disparity reduction strategies provided new knowledge among CHAs. The expectation was that their involvement in these activities would help them to acquire additional skills that would enable them, not only to modify their own practices, but also to acquire the ability to transfer this new knowledge to others in their community so that they can influence positive behavior change that would lead to a reduction in risk behaviors and a reduction in the occurrence of premature chronic disease. The JHS CHAN activities proved successful in providing new knowledge among CHAs. The CHAs displayed a marked difference in knowledge about the effects of hypertension after their participation in the health promotion activities.

The study also sought to examine whether the capacity building activities and disparity reduction strategies influenced new risk factor reduction behaviors among CHAs. The participants were asked to respond regarding whether they always, usually, sometimes, or never completed an activity. These responses were compared based on a pre-evaluation and the post-evaluation. Their responses were examined to determine what type of changes occurred, and whether they gained new knowledge that would help them to adopt a healthy lifestyle, while, at the same time, developing the capacity to positively influence others in the community, as they assume their role as a team member in the fight to reduce CVD in Mississippi. The JHS CHAN capacity building activities and disparity reduction strategies proved successful in influencing new behaviors among CHAs.

In addition, the study sought to determine if the Community Partnership Office capacity building activities influenced CHA leadership in health promotion/health education in the community. The results of the study provided evidence that CHAs were actively applying acquired skills within the community

with the intention of influencing positive behavior change in the community. The JHS CHAN provided activities that offered an opportunity for community members to gain new information that would help them to maintain good health and to motivate family members and their community members to adopt a healthy lifestyle. The activities allowed community members to become more enlightened about ways of eliminating common risks factors for health issues, like physical activity, dietary practices.

CONCLUSION

This community partnership utilizes a practical approach for improving dietary practices, and participation in physical activity, as proposed by Zoellner, Bounds, and Connell [19]. By utilizing their familiarity and understanding of the communities, and tapping into the established cultural and social networks, the partnership is able to influence behaviors, practices, and attitudes of the Jackson, Mississippi, metropolitan area by using their access to nutrition and physical activity resources and information to empower the community.

The collaborative strategies developed by the CPO and the CHAs from the Jackson, Mississippi, Metropolitan area (Hinds, Madison, and Rankin Counties) have resulted in successful programs that have the potential to close the gap in CVD disparities in Mississippi and among the African American population. These collaborative activities implemented by the CPO have promoted social support, accelerated outreach, and the health fairs convened have exposed community members to preventive care and community and family health education. In a study conducted by Zoellner, Bounds, and Connell [19] on CHAs representing underserved, hard-to-reach communities in Alabama and Mississippi, only 15% were able to correctly identify the MyPyramid graphic regarding recommended dietary practices, and knowledge about recommended daily dietary practices/healthy alternatives was low. Community health programs strengthen existing community network ties [20] and they are able to help community members cope with stress and promote health outcomes [21]. This study demonstrated that positive changes in health behavior can occur after exposure to planned health promotion activities.

There are known barriers to effective treatment of chronic disease associated with self-management (such as blood glucose monitoring), according to Zgibor & Simmons [22], and the support, knowledge, and education provided by the activities developed for the CHAs by the CPO have the potential to provide the recommendations, the information, and the motivation that can lead to improved home care. Chronic disease management requires effective strategies that are made available to the community. These community interventions serve as an important public health strategy that can decrease the development of disease and manage co-occurring chronic diseases. These intervention/prevention activities provide opportunities for many in the community to gain access to training for preventing chronic diseases that would otherwise not be available [23].

Sustainability of the programs and an assessment of additional needs can be ascertained by continuing follow-up observations/evaluations to examine longitudinal behavior patterns. It is the intention of the JHS CPO to intensify its efforts to support and encourage increased CHAN training interactions within the community as the drive to reduce health disparities in Mississippi continues. Such activities have been shown to build capacity in community groups who ordinarily would not be exposed to the benefits of organized health education and add another dimension to the war on obesity and chronic disease.

The major challenge with implementing this program has been finding adequate financial, environmental, and technological resources to provide services and conduct outreach. Safety remains an ongoing concern. Finding adequate financial resources has continuously been recognized as the overriding issue that hinders the accelerated accessibility of services and resources and a continuing sustainability agenda. As we continue to refine the program, we must expand our outreach agenda to provide strong referral services through the coordination of the efforts to match identified needs with healthcare providers and agencies that can interact with the community at large.

IMPLICATIONS

The results of this study also have implications for another important behavior associated with health disparities. This type of involvement could also assist the health disparity effort by educating this population about medication non-adherence. Even though some medications have the potential to slow the progress of atherosclerosis and development of CVD, there are many at-risk individuals who continue to resist the benefits that are available by not following the advice of medical personnel. Non-adherence to prescribed drug regimens is a pervasive medical problem that negatively affects treatment outcomes and contributes to the disparity in healthcare that currently exists [4].

Judging from the results of this study, the CPO can effectively address medication non-adherence through its community activities. Data from the Jackson Heart Study illustrate the fact that many African Americans

do not strictly adhere to the prescribed medical regimen for managing their chronic diseases. According to Addison et al. [4], of participants diagnosed with chronic disease, 52% of the participants reported taking blood pressure medication, 14% took cholesterol medication, 16% took medication for diabetes, and 19% took blood thinning medication. Of those who did not take the prescribed medications, the reasons given were the following: 47% were in a hurry, too busy, or forgot to take medications; 23% were trying to do without medications; 18% had no money to purchase medications; 19% indicated that the medications made them feel bad; 17% felt that they could not carry out daily functions when taking medications. With exposure to activities provided by the CHAN, the African American population can benefit from heightened awareness of the risk factors that are associated with CVD and the benefits of following a prescribed treatment regimen. It is important to encourage members of the community to communicate with their healthcare providers so that ineffective medication regimens can be altered to include medication strategies that are better tolerated thereby increasing compliance and improving health outcomes [4].

ACKNOWLEDGEMENT

This research was made possible by NIH contracts NO1-HC 95170, NO1-HC 95171, and NO1-HC 95172 that were provided by the National, Heart, Lung, and Blood Institute, and the National Institute for Minority Health and Health Disparities.

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