Patient Education and Counseling xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou

Knowledge, attitudes, and beliefs related to hypertension and hyperlipidemia self-management among African-American men living in the southeastern United States

Everett Long[a,*], Monica Ponder[b], Stephanie Bernard[c]

[a] CDC Foundation, Atlanta, GA, USA
[b] National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, GA, USA
[c] National Center for Chronic Disease and Health Promotion, Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention, Atlanta, GA, USA

ARTICLE INFO

Article history:
Received 10 May 2016
Received in revised form 13 December 2016
Accepted 15 December 2016

Keywords:
African-American
Men
High blood pressure
High cholesterol
Knowledge
Attitudes
Southern United States

ABSTRACT

Objective: Perceptions of illness affect cardiovascular disease (CVD) self-management. This study explores knowledge, attitudes, and beliefs regarding hypertension and hyperlipidemia management among 34 of African-American men with hypertension and/or hyperlipidemia, age 40–65, living in the Southeastern United States.
Methods: In-person focus groups were conducted using semi-structured interview questions informed by the Health Belief Model (HBM).
Results: Participants had a high level of knowledge about hypertension self-management, but less about cholesterol self-management. Perceived severity of both conditions was acknowledged, though participants perceived hypertension as more severe. Barriers to self-management included medication side effects and unhealthy dietary patterns. Facilitators included social support, positive healthcare experiences, and the value placed on family. Cultural implications highlighted the importance of food in daily life and social settings. Participants expressed how notions of masculinity affected self-management—noting the impact of feelings of vulnerability and perceived lack of control stemming from diagnosis and treatment expectations.
Conclusions: The findings highlight gaps in knowledge of hyperlipidemia versus hypertension, and the impact of cultural context and perceptions on engagement in self-management behaviors.
Practice implications: Public health practitioners and healthcare providers serving African-American men should address cultural factors and notions of masculinity which can hinder effective disease management among this population.

1. Introduction

African-Americans bear a disproportionate burden of heart disease, leading to worse health outcomes, including higher mortality. Non-Hispanic blacks have the highest age-adjusted death rates from heart disease—210.4 per 100,000 persons [1]. African-Americans have a higher prevalence of hypertension than other race/ethnicities, and among those with hypertension, are less likely to have their hypertension controlled [2–4]. African-Americans have a higher prevalence of hyperlipidemia compared to White Americans [4,5]. Such disparities translate into increased mortality rates for African-American men—they are almost twice as likely to have a stroke, and more likely to die from heart disease than Whites [4,6].

Regional disparities in heart disease outcomes are also evident, particularly in the Southeastern United States—or the "Stroke Belt." States like Georgia and South Carolina rank among the highest in disease rates and deaths from stroke and heart attack [7]. These states are among the six states where African-Americans comprise at least 25 percent of the population [8]. Studies show that factors associated with racial and regional heart disease disparities include low socioeconomic status and education, high smoking rates, lower physical activity and obesity, and lack of access to care [9–11]. Such factors play a role in the way African-American men in the Southeast, with hypertension and/or hyperlipidemia, perceive

* Corresponding author.
E-mail addresses: Elong1@cdc.gov, everett.long@gmail.com (E. Long), gvt0@cdc.gov (M. Ponder), sbernard@cdc.gov (S. Bernard).

http://dx.doi.org/10.1016/j.pec.2016.12.011
0738-3991/

their condition(s), and must be taken into account when exploring their engagement in disease management behaviors.

Self-management behaviors such as eating a heart-healthy diet, taking medications as prescribed, smoking cessation, and engaging in physical activity are crucial for those with hypertension and hyperlipidemia. Such behavioral and lifestyle changes have proven effective at reducing adverse cardiovascular disease (CVD) outcomes among minorities [12–14]. Smoking cessation counseling from a clinician, along with pharmaceutical treatment has proven effective at improving quit rates among African-Americans [15]. Individualized behavioral programs have successfully increased physical activity among African-Americans [16], and research suggests that group physical activity interventions may be more effective for underserved racial/ethnic minority populations [17]. Programs such as *Dietary Approaches to Stop Hypertension (DASH)*, which involve a diet high in fruits and vegetables, and low in saturated fats and sodium, have improved hypertension outcomes in African-Americans [18,19].

Racial disparities in hypertension control are impacted greatly by patients' attitudes and beliefs about health, consequently, affecting engagement in health behaviors [20]. Qualitative studies provide insight into the manner in which African-Americans' beliefs and attitudes shape health behaviors, and inform the efforts of health professionals working to improve CVD outcomes among this group [21–27].

Specifically, qualitative data reveals similarities and differences in sub-populations of African-Americans. Research consistently identifies social support as a facilitator of self-management behaviors among urban and rural African-Americans [28,29,24,30]. Other studies show that African-American women with hypertension or hyperlipidemia identify unique barriers to self-management, such as difficulty maintaining healthy diets due to family expectations about food preparation practices [29]. For older African-Americans, research shows that the desire to spend time with grandchildren serves as a cue-to-action for increasing engagement in physical activity and better nutrition [31]. Such findings help inform the development of interventions aimed at improving disease self-management behaviors among African-Americans.

Few qualitative studies have focused exclusively on African-American men in the Southeast with hypertension and/or hyperlipidemia. Such gaps are problematic given the unique challenges African-American males face which impact health outcomes—daily racial stress, historical mistrust of the healthcare system, perceptions that masculinity conflicts with seeking medical help, and the pressures of embracing the traditional household provider role [20,32–34]. Targeted studies are needed to examine self-management behaviors and barriers among African-American men.

This study uses the Health Belief Model (HBM) to assess the knowledge, attitudes, and beliefs regarding self-management of hypertension and hyperlipidemia among a sample of African-American men, ages 40–65, living in the Southeastern United States. Examining how the constructs of the HBM—perceived susceptibility, perceived severity, perceived barriers, perceived benefits, and cues-to-action—manifest among these men, can further inform the development of interventions that increase engagement in behaviors that improve heart health [35].

2. Methods

2.1. Research design

Qualitative methods were employed to describe the knowledge, attitudes, and beliefs of African-American men, aged 40–65, regarding hypertension and hyperlipidemia. Four in-person focus groups were conducted using a semi-structured interview guide with questions informed by the HBM. Female participants were excluded from these focus groups to engender an environment of open communication among men, and to capture important interactions between participants through a shared "male" culture. Groups were led by an African-American male moderator to further encourage candid discussion.

The interview guide included open-ended questions accompanied by follow-up probes (See Table 1). All focus group sessions were videotaped, recorded, and transcribed. Each focus group lasted approximately two hours.

2.2. Participants

Thirty-four men participated in focus groups from two counties in the southeastern U.S.–Clayton County, Georgia and Richland County, South Carolina. Inclusion criteria were African-American males, 40–65 years old, who self-reported as having hypertension, hyperlipidemia, or both conditions. The majority of participants had been diagnosed with hypertension, was 40–54 years old, employed, earned 0–$34,000 per year, and had health insurance (See Table 2).

Recruitment and sampling was done through an online panel system based on a representative random sample of the U.S. population. Then, purposive case sampling, coupled with snowball sampling was used to recruit participants. Initially, eligible participants in the target counties were recruited through an existing proprietary database and notified by phone or e-mail with the study description. To access additional participants, the target respondents were asked for referrals that may be appropriate for the study. If a referral was given, an email was sent as an introduction, followed by a phone call to engage the potential participant. This sampling framework provided representation from the desired target demographic. Participants provided verbal consent by phone or written consent via e-mail or in-person.

2.3. Analysis

A codebook was developed, informed by constructs of the HBM. A deductive thematic analysis guided the grouping of themes into domains under the model constructs (i.e., knowledge of hypertension risk). Each domain was segmented into related subcategories (i.e. risk of death, denial of the condition).

Two coders conducted content analysis using NVIVO software version 10, using a combination of inductive and deductive approaches to identify and categorize focus group data by domain

Table 1
Example Focus Group Questions and Corresponding Health Belief Model Construct.

Example Questions	Health Belief Construct
What's a major consequence of high blood pressure?	Perceived Severity
What are some reasons you might not take your prescribed medication?	Perceived Barriers
How does the medication help you?	Perceived Benefits
How do you remember to take your medication?	Cues-to-action

Please cite this article in press as: E. Long, et al., Knowledge, attitudes, and beliefs related to hypertension and hyperlipidemia self-management among African-American men living in the southeastern United States, Patient Educ Couns (2016), http://dx.doi.org/10.1016/j.pec.2016.12.011