

EMPOWERMENT AS A MANAGEMENT STRATEGY IN HYPERTENSIVE AFRICAN AMERICAN WOMEN

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ABSTRACT

Successful health management strategies can be challenging for everyone including the 25 million African-American (AA) women afflicted with high blood pressure. This study investigated if a psychological empowerment coaching (PEC) intervention had an impact on health promotion outcomes. The study measured the impact of health care empowerment intervention on health care outcomes in rural and urban hypertensive AA women (N=51). Pender's Revised Health Promotion Model served as the theoretical model for this quasi-experimental study utilizing pretest-posttest measurement with subjects serving as their own controls. A purposeful sample of hypertensive AA women from churches in rural and urban Texas were recruited and voluntarily attended a one-time psychological empowerment coaching class on hypertension management with a follow-up intervention session designed to reinforce positive behaviors and collect post-test data. There were statistically significant differences found in Blood Pressure Self Care, Exercise Log use, and Empowerment. These findings revealed that a directed psychological intervention aimed at promoting the self-confidence and health knowledge of AA women did increase their reported confidence and intent to manage the blood pressure in the future.

Keywords: empowerment, self-efficacy, hypertension, African-American women, health, disparities.

INTRODUCTION

One of the biggest problems for nurses seeking to promote healthy lives for African-American (AA) women with high blood pressure is getting them information about their condition and support for their health promotion efforts. Although much research has been conducted to establish the causes and effective treatment of high blood pressure, little had been done to explore what AA women think about health and disease management. To accomplish this goal, AA women were asked to share their insights about hypertension and their own roles in managing their health. The purpose of this research study was to determine if an informational coaching session intervention would help them increase their feelings of health care empowerment and the intent to exercise. Empowerment of AA women should help improve their self-management effectiveness which, in turn, may lead to better health outcomes. The goal of this study was to test an intervention that might pave the way to approach other AA women in the future to help them successfully manage their high blood pressure.

A psychological empowerment coaching (PEC) session about hypertension and self-management was provided to all subjects in the study. The PEC session was an evidence-based approach to assisting AA populations to change lifestyle behaviors to meet health goals (Table 1). Six to eight weeks after the implementation of the PEC intervention, a follow-up session was conducted in order to determine the effectiveness of the PEC intervention.

Incentives provided to the participants were a box of healthy option cereal and an automatic blood pressure cuff for home monitoring of blood pressure. A Certificate of Completion was given to each subject to acknowledge their participation and to remind them of their ability to take control of their health.

LITERATURE REVIEW

The bifocal threat of hypertension is underscored by the lack of overt symptoms during daily activities at the same time that cellular destruction is undermining the individual's potential to live a longer and healthier life. The Centers for Disease Control and Prevention (CDC) (2010) reports over 72 million persons (1 in 3 adults) in the United States have hypertension. The financial cost of hypertension hovered near \$73.4 billion in 2009. Neutel and Smith (2003) report less than one quarter of hypertensive clients have control of their blood pressure, and a disproportionate number of these persons are African-American women. If left untreated, hypertension will manifest as a drain on finances, longevity, and quality of life due to kidney failure, stroke, and death.

The primary reason for poor blood pressure control seems to lie with decreased patient compliance (Neutel and Smith, 2003). In 2005, approximately 395,000 Americans died from hypertension-related health problems, a number of similar to the population of Miami, Florida, or Oakland, California (Danaei et al., 2009). Evidence indicates that hypertensive African Americans have higher rates of morbidity and mortality, earlier on-set of hypertension, and more cardiovascular risk factors associated with hypertension than any other American ethnic group (Borde-Perry, Campbell, Murtaugh, Falkner, & Gidding, 2002). Intervention efforts should focus on empowerment of vulnerable populations in order to influence their own better lifestyle choices and more positive outcomes. Therefore, the purpose of this study was to investigate the efficacy of an empowerment intervention on the hypertension outcomes in rural and urban AA women in Southeast Texas.

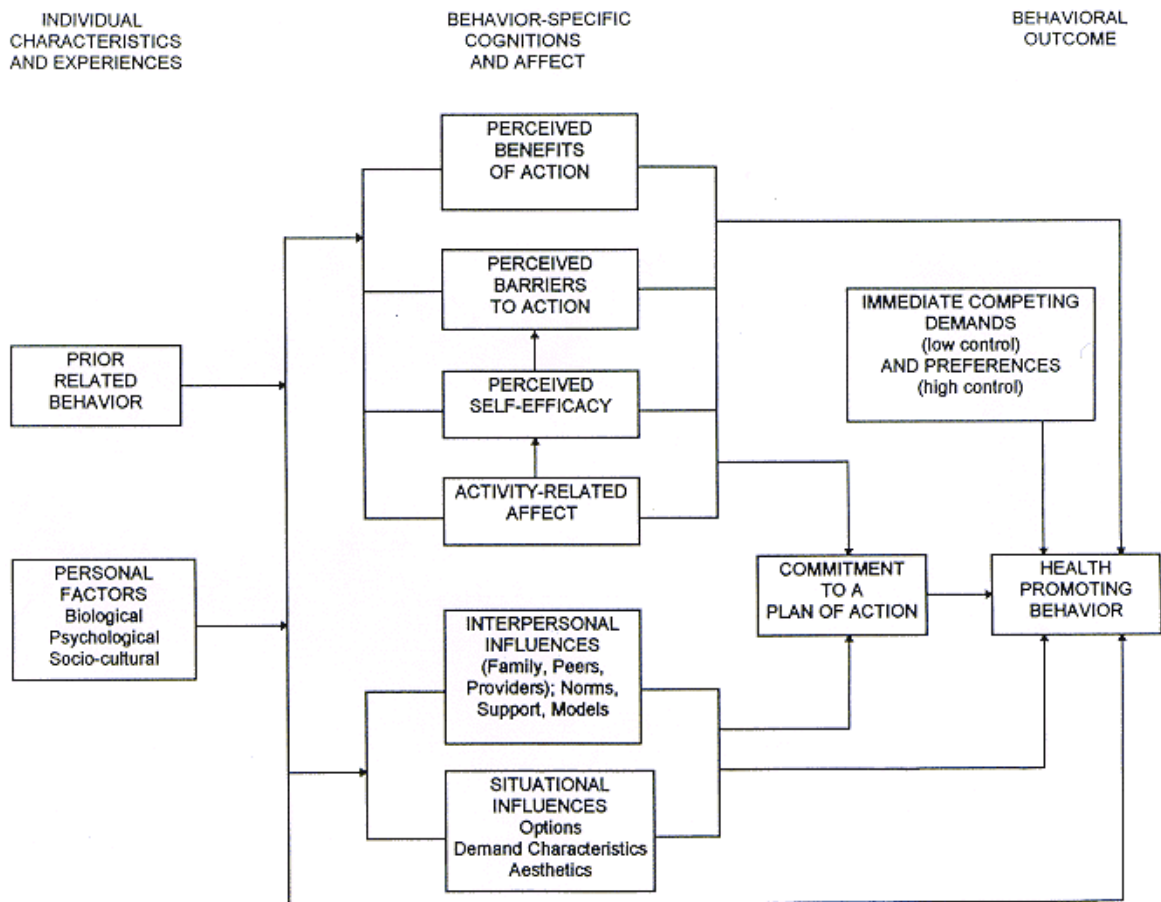
The review of literature suggests the level of patient involvement in treatment is vital to controlling hypertension. Lifestyle modification is the first line of treatment for hypertension. Modification of lifestyle behaviors (weight, physical activity, and medication adherence) has been effective in reducing blood pressure (Centers for Disease Control, 2005; 2009; Mayo Clinic, n.d.) Effective disease management of HTN through dietary control and exercise among AA women is central to slowing the progression of the disease; therefore, taking control of one's health was the theme of the psychological empowerment counseling group session. The Institute of Medicine (IOM), Sullivan Commission, and the Society of General Internal Medicine (SGIM) have addressed ways to reduce US health care disparities through the development and implementation of empowerment training programs (IOM, 2002; Sullivan Commission 2004).

Framework

Pender's Revised Health Promotion Model (Figure 1) guided the study. The behavior-specific cognitions and affect consist of: a) perceived benefits of action, b) perceived barriers to action, c) perceived self-efficacy, d) activity-related affect, e) interpersonal influence, and f) situational influences. These factors can be modified in order to achieve the desired result. Success, however, is determined by how the client is influenced by others. Clients with a strong support system and a healthy environment, physically and socially, should experience

compliance or success with the prescribed regimen (Pender, 1996; Pender, Murdaugh, & Parsons, 2006).

Figure 1. Pender's Revised Health Promotion Model (RHPM)



The problem is that although African American women are knowledgeable about their increased risk and the debilitating complications associated with hypertension, they do not make lifestyle changes, which would decrease the development of poor health outcomes. In addition, AA women do not always communicate their needs to their healthcare provider. This further complicates the role the healthcare provider in finding ways to empower and engage AA women in their own positive health outcomes. The RHPM was tested to determine if an empowerment intervention based on self-efficacy and confidence building would increase the blood pressure self-care scores and actual reported health actions in AA women with hypertension.

METHODOLOGY

Human Subject Review

This study received approval from the Institutional Review Board (IRB) from the University of Texas at Tyler, for which the research is being conducted. Information regarding the study was given to the subjects prior to the survey. All the participants were informed about the study's objectives, potential benefits, and risks. All participants freely consented to participate and were given a copy of the consent form for their records.

Research Questions

The research questions for this study were as follows: 1. Will a psychological empowerment coaching (PEC) intervention impact health promoting outcomes (blood pressure self-care, exercise log use, community resources use and physician communication) in hypertensive AA women? 2. Is there a relationship between prior related behaviors, perceived self-efficacy, activity related affect, interpersonal influences, situational influences, and health promoting outcomes in hypertensive AA women? 3. Is there a difference in health care empowerment self-efficacy, physician communication, blood pressure self-care, and activity related effect, problem solving efficacy, community resource use, and exercise log, between rural and urban hypertensive African-American women?

Sample

There were 51 participants in the study examining whether a psychological empowerment coaching intervention would impact health promoting outcomes. All the participants were African-American women. Demographic data was gathered on this sample using the variables age, urban versus rural location, marital status, financial status, and years of education. The average age was 55.96 years old (SD=11.233, N=51). The age range was 58 years with the youngest being 24 and the oldest participant being 82. Please see Table 1 for the Demographic variable frequencies.

Table 1

Participant Demographics

Location	Frequency	Percent
Rural	26	51.0
Urban	25	49.0
Total	51	100.0
Marital Status		
Married	25	48.0
Single	13	25.5
Divorced	8	16.7
Widow	5	9.8
Total	51	100.0
Financial Status		
Poor	3	6.9
Marginal	12	23.5
Ok	22	42.2
Comfortable	12	23.5
Quite Secure	2	3.9
Total	51	100.0
Years of Education		
Less than high school	1	1.0
High school	12	24.5
More than high school	38	74.5
Total	51	100.0

Methods

The intervention was based on an educational pamphlet, *Blood Pressure and Your Health*, developed by American Society of Hypertension (ASH) for their Community Outreach Program. ASH provided support for this study by granting permission to use and copies of their educational pamphlet. The goal of ASH is to reduce HTN as a health disparity by educating healthcare providers and patients about high blood pressure. The Protocol for Psychological Empowerment Coaching (PEC) Intervention was a one-hour empowerment-coaching session, which consisted of three components: education, motivation, and action plan.

Education about high blood pressure consisted of the following; 1) risk factors, 2) classification 3) diagnosis, 3), management, 4) diet, and 5) complications (brain, kidney, and eyes). In addition, the ASH educational pamphlet provided a list of questions about pharmacological management and self-monitoring of blood pressure. The inclusion of an education component was based on the findings of the small descriptive study. During the qualitative study, the AA women stated they had never received HTN education from their physician. Some stated educational handouts were provided, but they were not explained. Improvements in communication between healthcare providers and patients can be effective in producing positive health outcomes in patients. Including clients in the decision-making process and providing them with the rationale for the treatment plan (weight loss, diet, exercise, and medications) enhances their involvement in taking a more active role in health management.

The motivation component of the PEC intervention was the result of receiving a thorough overview of hypertension and the benefits of self-management. For most of the participants, this was the first time they had received information about HTN and had the opportunity to dialogue with other AA about their experiences. Participants were also asked what barriers might interfere with blood pressure self-care management and what steps they plan to implement in order adhere to recommendations. The goal will be for each subject to develop an action plan to increase self-regulation. The subjects also put in writing their anticipated obstacles to managing their hypertension and what they plan do to in order to overcome them and accomplish their action plan.

The researcher used a role modeling approach to enhance acquiring health information from healthcare providers or community resources (library, internet) during the motivation component of the intervention. Positive reinforcement, encouragement, and cultural sensitivity congruent with the needs and concerns voiced by the participants were modeled. The participants stated they keep appointments with their primary physician but did not know the results of laboratory testing from previous visit. The women were aware of impaired kidney function and possible hemodialysis secondary HTN. Although they knew this was assessed through urinalysis (UA), they did not know which specific components of UA were indicative of impaired kidney function. Participants were encouraged to request a copy of laboratory results during their next physician visit for their personal records for comparison to future UA test results.

The action plan of the intervention required subjects to write three questions about hypertension, health status, or medical treatment plan to ask their physician or healthcare provider during the next scheduled visit. The last page of the ASH educational pamphlet was perforated. All participants were encouraged to store the last page, which contained their

three questions, on their refrigerator. This was suggested because a majority of the participants stated their next appointment would not occur within the next two month or before the follow-up session. Answers to these questions were to be obtained either directly from their physician or healthcare provider or indirectly from community resources. In addition, participants discussed potential obstacles or barriers, which could interfere with making lifestyle modification and obtaining answers to their questions. At the end of the session, each subject also received the literacy-appropriate, sixth grade level, ASH information booklet aimed at empowering the subject to take control of her hypertension and increase exercise. Each participant also received an incentive box of healthy cereal.

The Protocol for Psychological Empowerment Coaching (PEC) Intervention was provided at two rural and three metropolitan predominately African American churches. Prior to the one-hour intervention session, the 63-item survey was completed. Healthy refreshments, based on the DASH diet, were provided to all participants upon completion the pre-test surveys. This allowed the PEC intervention to be delivered at the same time to all participants in order to ensure a minimum of a one-hour dose exclusively for the intervention. Subjects were offered paper and pencil option or an interview method for completing the survey, but all chose to fill out their own surveys which were turned in prior to the start of the PEC intervention. The PI was readily available for assistance for persons who had difficulty completing the questionnaire.

The survey consisted of 63 questions in Likert format and continuous answer format. These were administered pre and post-test. The constructs it measured were blood pressure self-care, exercise log use, community resources use, physician communication, problem solving, activity related effect, interpersonal processes, self-efficacy, and empowerment. The survey was given twice to 51 African-American women both pre and post-test. The internal reliability Cronbach's Alpha was calculated for each of the factors and was adequate.

Post-test Data Collection

Six to eight weeks after the intervention, all subjects were invited to attend the final session of the study, which included a brief psychological empowerment reinforcement session, congratulatory remarks, questions and answers, disbursement of certificates of achievement, and post-test data collection. All 51 participants returned for the follow-up posttest session, as a result of reminder message via postal mail and/or telephone calls one week prior to scheduled visit. Distribution of automatic blood pressure cuffs were also offered as an incentive and in gratitude for attending the follow-up session. Participants were given the opportunity to ask any questions that may have arisen since the initial intervention.

Procedures to Enhance Control

The utilization of a one group pre-test-post-test) design poses a threat to internal validity due to the absence of a control group and randomization. The selection of a convenience sample further compromises internal validity and increases selection bias. The components of maturation, testing, instrumentation, mortality, and selection bias (Lobiondo-Wood & Haber, 2010) were addressed by using homogenous sampling where all research participants must meet the same inclusion criteria. For this study, homogeneity is based on age, medical diagnosis (HTN), gender, and ethnicity. Constancy in data collection was assured by having all participants complete the same instruments. Finally, internal validity was addressed by a

follow-up session conducted 6-8 weeks after the implementation of the intervention in order to reduce the threats of maturation, testing, instrumentation, mortality, and selection bias.

RESULTS

Research Question 1

Will a psychological empowerment coaching intervention impact health promoting outcomes (blood pressure self-care, exercise log use, community resources use, and physician communication) in hypertensive African American women?

A Mann Whitney U was done on blood pressure self-care, physician communication, while an Independent T-Test was done on exercise log use and community resource use. The Mann Whitney-U analysis found that there was a significant difference in blood pressure self-care from pre to post-test. The mean rank score went up significantly from a pre-test of 36.21 to a post-test of 56.21 with $U = 734$, $p = .003$. There was no significant difference found for physician communication.

The Independent T-test analysis found a significant difference for exercise log uses with pretest ($M = 3.00$, $SD = 1.63$) and post-test ($M = 13.50$, $SD = 14.83$). The obtained t score was -3.56 , $p < .001$. There was no difference found for community resource use.

Research Question 2

Is there a correlational relationship between prior related behaviors (perceived health perception), perceived self-efficacy, activity-related affect, interpersonal influences, and situational influences and health outcomes in hypertensive African American women?

Problem Solving Life Situation was significantly correlated with Activity-Related Affect ($r = 0.293$, $p = .003$), Interpersonal Processes ($r = 0.420$, $p < .001$), Self-Efficacy ($r = 0.244$, $p = .014$), Blood Pressure Self-care ($r = 0.283$, $p = 0.006$), and Physician Communication ($r = 0.435$, $p < .001$). Activity-Related Affect was significantly correlated with Self-Efficacy ($r = 0.449$, $p < .001$), Blood Pressure Self-Care ($r = 0.225$, $p = .028$), and Physician Communication ($r = 0.242$, $p = .015$). Inter-personal Processes was significantly correlated with Blood Pressure Self-Care ($r = 0.304$, $p = .003$). Self-Efficacy was significantly correlated with Blood Pressure Self-Care ($r = 0.254$, $p = .013$), and Physician Communication ($r = 0.312$, $p = .002$). Blood Pressure Self-Care was significantly correlated with Physician Communication ($r = 0.283$, $p = .006$).

Research Question 3

Is there a difference in empowerment, self-efficacy, physician communication, blood pressure self-care, and activity related effect, problem solving efficacy, community resource use, and exercise log, between rural and urban hypertensive African-American women?

A Mann Whitney U analysis was done on this and only empowerment was found to be statistically significant in the difference between rural and urban women. Rural women had significant lower scores ($MR = 39.30$) than Urban women ($MR = 64.19$) with $U = 665.00$, $p < .0001$.

DISCUSSION

Empowerment of AA women to improve their hypertension management has benefits in terms of improved health outcomes as well as optimal use of precious health resources. Evidence indicates that empowerment interventions can positively impact the health of persons with chronic illnesses. The implementation of a personal empowerment coaching session for AA women appears to be a cost-effective way to increase engagement in managing a chronic health condition. Recommendations for future research using longitudinal study methods, lengthening the duration of PEC sessions, and expanding resources in rural areas have been offered as a result of this study. Improving the ability and confidence of women to manage their hypertension is an excellent way to meet the Healthy People 2020 goals of improving length and quality of life and decreasing health disparities. This study offers one mechanism for bringing those goals closer to reality.

STRENGTHS/LIMITATIONS

This study of the use of an empowerment intervention to improve health outcomes in African American women has both strengths and limitations. The strengths revolve around the utilization of an African American sample measuring a chronic condition known to be prevalent and deadly in this group. The intervention was non-traditional in that it provided more than just knowledge information; subjects were given motivation, inspiration, and encouragement to take control of their health and to engage in positive actions to improve their own health. Use of familiar social groups, such as churches, decreased anxiety and allowed data collection to be less disruptive of normal activities. However, the study was not without limitations.

Empowerment of vulnerable populations is predicated on the idea that they will have the financial and social resources to take the actions indicated; this is not always the case. Self-report was the method of data collection as no lab testing was done and actual blood pressure measurements were not taken. Although self-report is a standard for most social research, there is always the possibility that subjects will respond in a socially-acceptable way rather than simply telling the truth. Finally, persons in this study will be largely independent-living adults able to get to church, so the results will not be generalizable to all vulnerable populations.

CONCLUSIONS

The findings of this study suggest the use of psychological empowerment coaching interventions in hypertensive African American women can improve health promoting outcomes. Consistent with social cognitive theory (Bandura, 1977) and Pender's RHPM it appears that a change in cognition can lead to a change in behavior. The majority of research available presents a dismal picture of the increased levels of risk, noncompliance, and development of HTN complications for the AA population. This insight of this study suggests this health disparity can be reduced by simply providing adequate education and rationale for a plan of care to hypertensive clients. The PEC intervention would better serve high-risk or newly diagnosed HTN clients, but it was noted to have an impact on HTN clients with an average length of HTN diagnosis greater than thirteen years.

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