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Empowerment as a Hypertension Management Strategy for African American Women

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EMPOWERMENT AS A HYPERTENSION MANAGEMENT STRATEGY FOR AFRICAN AMERICAN WOMEN

by

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Abstract

EMPOWERMENT AS A MANAGEMENT STRATEGY FOR HYPERTENSIVE AFRICAN AMERICAN WOMEN

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Successful health management strategies remain elusive for the 25 million African-American (AA) women afflicted with high blood pressure. The purpose of this study was to determine if a psychological empowerment coaching (PEC) intervention had an impact on health promotion outcomes. The primary research strategy measured the impact of a PEC intervention on health care empowerment, self-efficacy, intent to exercise, and health outcomes among hypertensive AA women. Pender's Revised Health Promotion Model (Figure 1) served as the theoretical model for this quasi-experimental study utilizing pretest-posttest measurement with subjects serving as their own controls. A convenience sample of 35 hypertensive women from predominately-AA churches in rural and urban Texas attended a one-time psychological empowerment coaching class on hypertension management with a follow-up intervention session to reinforce positive behaviors and collect post-test data. Findings demonstrate that a directed psychological intervention aimed at promoting the self-confidence and health knowledge of AA women increase their feeling of empowerment and their intent to manage the blood pressure in

the future. Two articles derived from this study are included which describe a qualitative pre-study interview of AA women regarding perceptions of their hypertension which advised the main study. The second article is a report of the findings with recommendations for further research.

Keywords: Empowerment, Self-efficacy, Hypertension, African-American women, and Health Disparities

Overview of the Research Study

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 (General Mills) and an automatic blood pressure cuff (HoMedics) 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.

Overall purpose of the study

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 burden 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 onset 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 must focus on empowerment of vulnerable populations to influence their own health toward 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.

Introduction to articles appended

Included within this dissertation are two articles. The purpose of the first article, *Empowerment of Adult Hypertensive African American Women: A Small Descriptive Study*, is an exploration of the barriers to empowerment encountered by African American adults related to managing their hypertension, their perception of health, and their description of their interaction with healthcare providers. Understanding why minority populations do or do not advocate for themselves in relation to managing chronic health problems will assist the healthcare community in finding ways to improve access to health delivery systems and improve health outcomes in this vulnerable population. In this small descriptive qualitative study, African-American women were asked to share their insights into hypertension management through one-on-one interviews. The review of literature revealed a gap in research regarding empowerment levels, description of physician interaction/communication, and reasons for failure to make lifestyle modifications and adherence to prescribed pharmacological treatment among African Americans.

The coding of the data initially revealed ten common themes, which were consolidated into four themes related to why AA women do or do not engage in controlling their hypertension: 1) Incentive to seek information, 2) Getting trusted help, 3) Engaging social support system, and 4) Taking positive action. The study showed AA women can describe the challenges of hypertension but do not feel empowered to take a more aggressive role in self-management. More research is needed to develop culturally-

sensitive interventions which foster empowerment for health behaviors. The development of evidence-based interventions could be beneficial not only to clients who are diagnosed with hypertension but also to those affected by other chronic diseases, such as diabetes mellitus and diseases of the liver and kidney.

The second article, *Empowerment as a Management Strategy for Hypertensive African American Women,* describes a quantitative research study based on the results of the preliminary qualitative study. The observations and findings led to the development of a quantitative study to further explore the African American women's perspective and experience with high blood pressure. In addition, a psychological empowerment coaching (PEC) intervention was utilized to examine the effect of education/training on empowerment and health outcomes.

A convenience sample of hypertensive women from predominately-AA churches in rural and urban Texas served as the sample. Participants attended a one-time psychological empowerment coaching class on hypertension management with a follow-up intervention session to reinforce positive behaviors and collect post-test data, which was held six to eight weeks later. The findings revealed a significant improvement in level of empowerment and blood pressure self-care among rural and urban AA women after the PEC intervention. However, no significance was noted with the intent to exercise. More research is needed to create effective interventions to increase exercise levels in hypertensive AA women.

Modifications made to study based on pilot work

The quantitative instruments used for this study were selected based on the findings of a small qualitative descriptive study. In this study, funded by the University

of Texas at Tyler Office of Research Studies, one-on-one interviews were conducted with hypertensive African American women. The purpose of the study was to gain insight of the AA women's perspective of the challenges and barriers to the self-management of high blood pressure. Prior to this preliminary study, the intent was to find a way to educate about high blood pressure. However, the review of the four themes which emerged revealed AA women were knowledgeable about the complications associated with hypertension (stroke and kidney failure) but did not fully understand the hidden effects of the disease on the body over a period of time and the importance of diet, exercise, and medication adherence in controlling the high blood pressure. Furthermore, they lacked a feeling of control that they could actually influence their own outcomes. This idea of empowering the women to take active ownership and control of their own health became the basis for the intervention study.

Evaluation of the project

Both the preliminary study and the subsequent intervention study provided an opportunity to obtain insights into the African American woman's perspective about high blood pressure and self-management. The subjects were grateful to participate in the PEC sessions and expressed a desire to have weekly meetings to learn more about hypertension, diet, exercise program, and self-management to reduce the incidence of the complications associated with their high blood pressure. It is obvious that there is a need in the minority community for opportunities to interact in a safe social environment geared to educate and support individuals faced with health issues, which require long-term and diligent management.

Lessons learned from this study will advise the researcher in future research efforts. In hindsight, it is clear that initial contact with the community gatekeepers should have started with the Houston Ministerial Allegiance or African American Ministerial organization instead of the individual churches. The approach used was a call the church to request a meeting with the church minister or associate in order to gain support for the study. However, this usually resulted in the PI being directed to the church's Health and Wellness group or Community Outreach chairperson for assistance. There were two exceptions, which were both churches in which the PI was a former member. Once contact was made via telephone, an overview of the study sent via email at the request of the health ministry leader. The next step was presentation of the study to a committee; however, the researcher was not allowed to attend this meeting. After the committee approved, then the study was presented to the church's pastor for approval. This process was time consuming and took from one month to five months, averaging three months.

The timing of the study was also an issue. The IRB approval was received in November which marked the beginning of the holiday season in the African American churches; it was also the beginning of winter which brought cold and rainy weather and may have affected participation. Although interested participants were contacted via telephone before the scheduled session, there were some sessions in which five persons or less were in attendance.

The incentive of receiving a healthy option cereal and an automatic blood pressure cuff enhanced participation in the study and probably greatly influenced the likelihood that subjects came back for that second data collection event. Unlike newly diagnosed diabetic patients, hypertensive clients do not automatically receive the

equipment they will need to monitor their blood pressure. Prior to discharge, newly diagnosed diabetic clients receive diabetic teaching and must demonstrate how to take their blood glucose and self-administer their prescribed insulin dose based on their blood glucose reading. Unfortunately, the same principle and rationale or not provided to newly diagnosed hypertension clients.

In regard to incentives, it appears that a direct financial contribution to the church would have facilitated greater interest in the study by church congregants. The rural churches, in this study, had greater challenges providing educational support to their members in comparison to their urban counterparts. AAs showed a high level of respect for their ministerial leadership. Many strive to please and support the requests made by their pastor. A direct request made to the congregation by the pastor would have greater influence and elicit a greater interest in research studies than a request presented by the health/wellness group or primary researcher. However, due to the hierarchy and departments of the church, it was very difficult to make contact with the minister of the church.

An objective evaluation of the project leads to the conclusion that health education initiatives in the minority community are needed. The subjects stated they received little or no education about hypertension. It is also apparent that they have little access to measurement devices to effectively home monitor and manage their blood pressure and their body's response to pharmacological and lifestyle changes. This failure to properly educate the hypertensive population may account for the issues of noncompliance and the development of complications associated with hypertension among African American women. A majority of the subjects in the study stated they

received their diagnosis, were advised to lose weight, and were provided prescription medications; however, none of them received a blood pressure home monitoring system for the self-management of their blood pressure. This simple measure could have significant benefit when provided early after hypertension diagnosis.

Informing clients of their condition and ways to manage or delay progression may increase the likelihood that hypertensive clients engage in a commitment to comply with the recommended treatment plan prescribed by their healthcare provider. Unfortunately, the perceived lack of interest by providers and the lack of inclusion of the hypertensive client in health promotion and management planning often leads to noncompliance or even denial of the actual hypertensive diagnosis.

Although this study was very challenging, it was also very gratifying. The women wanted to be healthy and wanted to learn how to manage their blood pressure. Lack of external funding reduced the opportunity to have research assistants and other resources essential to providing an intervention. Travel to the rural communities was also demanding, but this intervention was considered invaluable to the rural participants who profess little opportunity for health education sessions in their community. Setting up the logistics and managing schedules was time-consuming and wearing. Yet, knowing that the empowerment intervention provided these women with the motivation to become more involved and take charge of their health made the experience worthwhile. The findings of this study will be used as a basis for the creation of exercise intervention for the hypertensive and high-risk populations, which will be, tested in future studies.

Recommendations based on findings

More research which seeks to capture the African American woman's perspective about the challenges and barriers encountered in the self-management of high blood pressure is needed. Initiation of an exercise regimen appears to be the next logical step since it was an area where women did not report positive findings. Financial support needs to be available to research scientists, nurse researchers, and graduate or novice researchers who explore the behavioral aspects of self-management of disease. More funding is needed for behavioral research in order to truly affect the AA woman's quality of life.

Psychological Empowerment Coaching (PEC) can be effective in increasing self-management of high blood pressure among hypertensive AA women and potentially affect among other high-risk populations. The average age of women in this study was mid-50's, and many had a hypertension diagnosis for more than 20 years. Longitudinal study of the long-lasting empowerment effects of the intervention should be undertaken. The PEC intervention, if implemented early in the hypertension diagnosis, may help to reduce the health disparity or poor hypertension outcomes and the complications which often adversely affect hypertensive AA women.

This one-time intervention should be developed into a yearlong program, which would allow for weekly meetings. Weekly sessions would permit more in-depth coverage of the pathophysiology of hypertension and the beneficial effects of diet, exercise, and therapeutic communication with healthcare providers in the self-management of hypertension. Focus group sessions and peer-coaching might enhance insight to challenges faced by AA women. The women in this study stated feeling a sense of pride

and gratitude for the opportunity to share their hypertension experience. They admitted it was encouraging to hear they were not alone and others had gone through similar experiences.

Exercise activities and home blood pressure monitoring should also be incorporated into the program. Intermittent measurements of weight and blood pressure along with completion of an exercise log might serve as incentives for continued health promotion efforts. Each subject in this study received a personal automatic blood pressure cuff free of charge. This perk might serve as an incentive to the churches who participated in this study to offer their support for subsequent hypertension research activities.

Grant funding for the establishment of health education centers in rural areas would be a great asset to hypertensive AA women in areas with minimal access to information. Due to limited church resources in the rural communities, many rural churches cannot afford internet access and computers. This was evident in the research findings, which showed rural AA women were more inclined to complete an exercise log but were shown to have limited or no access to community resources as a means to obtain health information. Only one of the churches in this study had a library on-site where members could obtain health information. The rural community did have access to a public library and local area schools, but many of the women reported they did not feel comfortable enough with their computer expertise to visit available public sites to access the Internet.

The response of the participants was optimistic. They voiced a desire to live healthy lives and to avoid complications of hypertension, but they wished the study was

longer so they could have better outcomes. Many stated they would like to exercise but felt unsafe doing it alone, did not know where to start, and desired to have group activities for exercise. An exercise program at their church would provide direction and structure to AAs as they begin to make lifestyle changes to improve health outcomes.

Results of original research in manuscript format

Methods

Research Questions

The research questions for this study were as follows: 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 and health promoting outcomes between rural and urban hypertensive AA women in Texas?

Sample

A convenience sample of 35 African American women (25 rural and 10 urban) agreed to participate in the study. Attrition consisted of two subjects who did not answer all the items within the survey. The participants were recruited through church announcements and flyers from two rural and three urban predominately-AA churches in the Southeast Texas. G Power analysis (Faul, Erdfelder, Buchner, & Lang, 2009) based on a one-tailed test, estimated moderate effect size, alpha .05, and power of .80 demonstrated a total sample size of 27 would be needed for this study Inclusion criteria

for the study was: 1) African American, 2) self-reported as having been diagnosed with HTN, and 3) at least 18 years of age. Persons of other ethnic backgrounds were excluded from this study since AA's are disproportionately affected by hypertension, and studies within this group are encouraged by national health agencies. A certain degree of homogeneity was expected and acceptable since the focus of this research is on one ethnic group.

Self-report is considered adequate for identification of HTN because perceived risk is being tested as an impetus to health actions, which was anticipated to be prompted and mitigated by the intervention. There were no significant differences between the rural and urban groups in age, general health, years of HTN diagnosis, marital status, and income. The age of the participants ranged from 37 to 82 years. The rural subjects were slightly older (M=53.7, sd 8.9) than their urban counterparts (M=58.7, sd 12.2). The rural subjects also reported a duration of hypertension diagnosis that was almost double that of the urban sample (M=15.2 years, sd 10.7 to M=8.4 years, sd 8.5). Overall, the years of education ranked at the high school level with urban AA women being slightly higher. The self-rated general health for the sample was satisfactory (M=3.07, sd .79) and a moderate-income level (M=2.89, sd 0.99) was reported.

Protocol for Psychological Empowerment Coaching (PEC) Intervention

The PEC intervention occurred at two rural and three metropolitan African American churches. Prior to the one-hour intervention session, the 62-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 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, 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 intervention was based on an educational pamphlet 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 entitled, *Blood Pressure and Your Health.* The goal of ASH is to reduce HTN as a health disparity by educating healthcare providers and patients about high blood pressure. The intervention, a one-hour empowerment-coaching session, 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 was 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.

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 (35) participants returned for the follow-up posttest session. Distribution of automatic blood pressure cuffs, donated by HoMedics, 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 (pretest-posttest) 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.

Findings

Sample Characteristics

There were no significant differences between the rural and urban groups in age, general health, years since hypertension diagnosis, marital status, and income. The age of the sample participants ranged from 37 to 82 years with a median age of 57.11. The rural

subjects were slightly younger (M=53.7, sd 8.9) than their urban counterparts (M=58.7, sd 12.2). The average length of time since HTN diagnosis for the sample was 13.5 years (10.7). The rural participants (M=15.2) reported a duration of hypertension diagnosis that was almost double than that of the urban (8.4) sample, which is consistent with the literature review. The sample described their general health as between good and very good based on 5 point scale, with a higher score indicative of better state of health. Over half of the rural women and two-thirds of the urban women, reported having an educational level beyond high school. Only one participant reported only having a high school education.

During the PEC intervention, the subjects in the urban group were noted to be more knowledgeable about HTN than those in the rural setting. However, there was more interest and appreciation for the presentation of knowledge about HTN among the rural subjects. They reported no one had ever asked them how their life was affected by HTN or challenges they encounter on a day-to-day basis.

Research Question #1

Research Question #1 asks: 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?

The pre-test scores of the each participant were compared to the posttest scores. The T-test for dependent samples was utilized to answer this question when the variables met the assumptions for parametric testing and the Related Samples Wilcoxon signed rank test was used when the assumptions were not met. Analysis of data revealed significant changes after the PEC intervention in both blood pressure self-care and

exercise log use. However, there was no significant difference in pre- and post-test scores noted in community recourses and physician communication. This could be in part due to the limited access to internet and community information in the rural area.

Table 1. Health Promoting Outcomes Measures

Health Promoting Outcomes	Pretest M	Posttest M	*P*
Blood Pressure Self-Care	40.38	35.53	**.001**
Exercise Log Use	.09	6.74	**.001**
Community Resources	.53	.71	.246
Physician Communication	1.12	1.65	.076

A significant relationship was noted between several variables (Table 2). Blood Pressure Self-Care was related to General Self-Efficacy indicating that those with higher general self-efficacy felt more in control of their blood pressure. Community Resources was negatively correlated with Empowerment reinforcing the ideal that having fewer community resources was indicative of lowered feelings of empowerment. Those who more likely to indicate comfort with Physician Communication were also more likely to use higher levels of Community Resources.

Table 2. Relationship Between Pender's Health Promotion Model Variables

VARIABLE	HEALTH PERCEP	GEN SE	PER SE	EMP	COMM SUPP	EXE INFLU	BP SELF CARE	EX LG USE	COMM RES	PHYS COMM
HEALTH PERCEP	1	Na	na	na	na	Na	na	na	na	na
GEN SE		1	na	na	na	Na	.452 .001 31	na	na	na
PER SE			1	na	na	Na	na	na	na	na
EMP				1	na	Na	na	na	-0.25 .000 35	na
COMM SUPP					1	Na	na	na	na	na
EXE INFLU						1	na	na	na	na
BP SELF CARE							1	na	na	na
EX LG USE								1	na	na
COMM RES									1	.562 .001 34
PHYS COMM										1

Research Question #2

Research Question #2 asks: Is there a 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?

The pretest scores of each participant were compared to the posttest scores. The T-test for dependent samples was used to answer this question when the variables met the assumption for parametric testing and the Related Samples Wilcoxon rank test was used when the assumptions were not met. Significance was only noted with the activity related affect factor (healthcare empowerment) (Table 3).

Table 3. Pre-test and Post-test Scores of Selected Variables

Factor (Pender's RHPM)	Pretest M	Posttest M	P
Prior Related Behavior	3.29	2.97	1.22
Perceived Self-Efficacy			
• General SE	33.09	31.85	.118
• Exercise SE	20.11	18.86	.418
• Chronic Disease Management SE	39.20	39.89	.600
Activity Related Affect	34.74	19.86	**.001**
Interpersonal Influences	30.11	29.63	.698
Situational Influences	8.37	8.94	.067

Research Question #3

Research Question #3 asks: Is there a difference in empowerment, self-efficacy, and health promoting outcomes between rural and urban hypertensive AA women?

The pretest scores of the rural participants were compared to the pretest scores and posttest scores of the urban participants (Table 4). The T-test for independent samples was used to answer this question when the variables met the assumptions and Mann Whitney test was used when the assumptions were not met. Only the empowerment score reflected a significant difference between the rural and urban participants in the posttest scores, no other significance was noted among the variables.

Interestingly, the posttest empowerment scores for both groups, especially the rural subjects, decreased from the pretest measurement (Table 4). The expectation was to

see an improvement in the empowerment scores. A possible explanation may be that calling attention to the seriousness of their condition may have results in the women indicating lower perception of their own empowerment to change even though the PEC intervention did improve their confidence in their ability to manage their blood pressure and their intent to monitor their exercise. This decrease in empowerment also is indicative of the insufficient education received by hypertensive AA women. Initially, the participants voiced a high level of understanding of hypertension during the small descriptive qualitative study and for this quantitative study. However, after receiving the PEC intervention, a majority of the participants realized they did not have a full or comprehensive understanding of HTN, the body's ability to compensate for fluctuation in blood pressure changes, and the long term affects of this compensation on the kidneys, heart, and brain. In addition, information was shared regarding how small modifications made to diet and physical activity can greatly improve one's life by reducing the development of complications associated with HTN. This new awareness may have caused a paradigm shift in the health constructs of the some of the participants. This internal change in beliefs may have prompted the change in action which was evident in the increase in intent and use of the exercise log.

Table 4. Comparison of Urban and Rural Subjects Pre- and Post-test Scores

Population	Empowerment		Self-Efficacy		Health Promoting Behaviors					
					Exercise Log Use		Community Resources		Physician Communication	
	Pretest	Post Test	Pretest	Post test	Pretest	Post test	Pretest	Post test	Pretest	Post test
Urban	34.00	32.40	57.40	57.60	.30	3.90	.40	.70	.90	1.60
Rural	35.04	14.80	60.80	59.08	.20	7.92	.56	.68	1.21	1.72
Significance	.418	**.001**	.273	.756	.525	.724	.785	.744	.518	.590

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; 1997) 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

Summary

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 (Table 5). 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.

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Table 5. Evidence-based Rationale for Psychological Empowerment Coaching Intervention

Author	Purpose	Population	Method	Findings
Alexander et al., 2003	To examine hypertensive patients' knowledge about their condition	1,762 participants from a large HMO Northern California region	Questionnaires blood pressure measurements, telephone interview	20.2% labeled their BP as "high", 38.4% labeled BP as "borderline high", 42% could not recall last BP reading, 71.7% % 61% did not know JNC VI guidelines for BP
Connell et al., , 2008	To synthesize diverse studies in a structured yielding focused on community –based interventions aimed at improving hypertension knowledge and control	Studies with Black adults, 18yr and older, of African descent	Narrative Review	27 studies included, interventions (collaboration with black communities, using local/ethnic staff conducting preliminary research with target groups, & canvass ideals for research design) were shown to be effective
Corsello & Tinkleman, 2008	To review disease management for COPD	Patient centered care, adherence to evidence-based medicine, integration of myriad medical disciplines, patient empowerment, ongoing home monitoring and feedback & formalized efforts to improve	Expert Opinion	Evidence provided which reflects patients want and respond to patient-centered care. This encourages patient participation and empowerment.

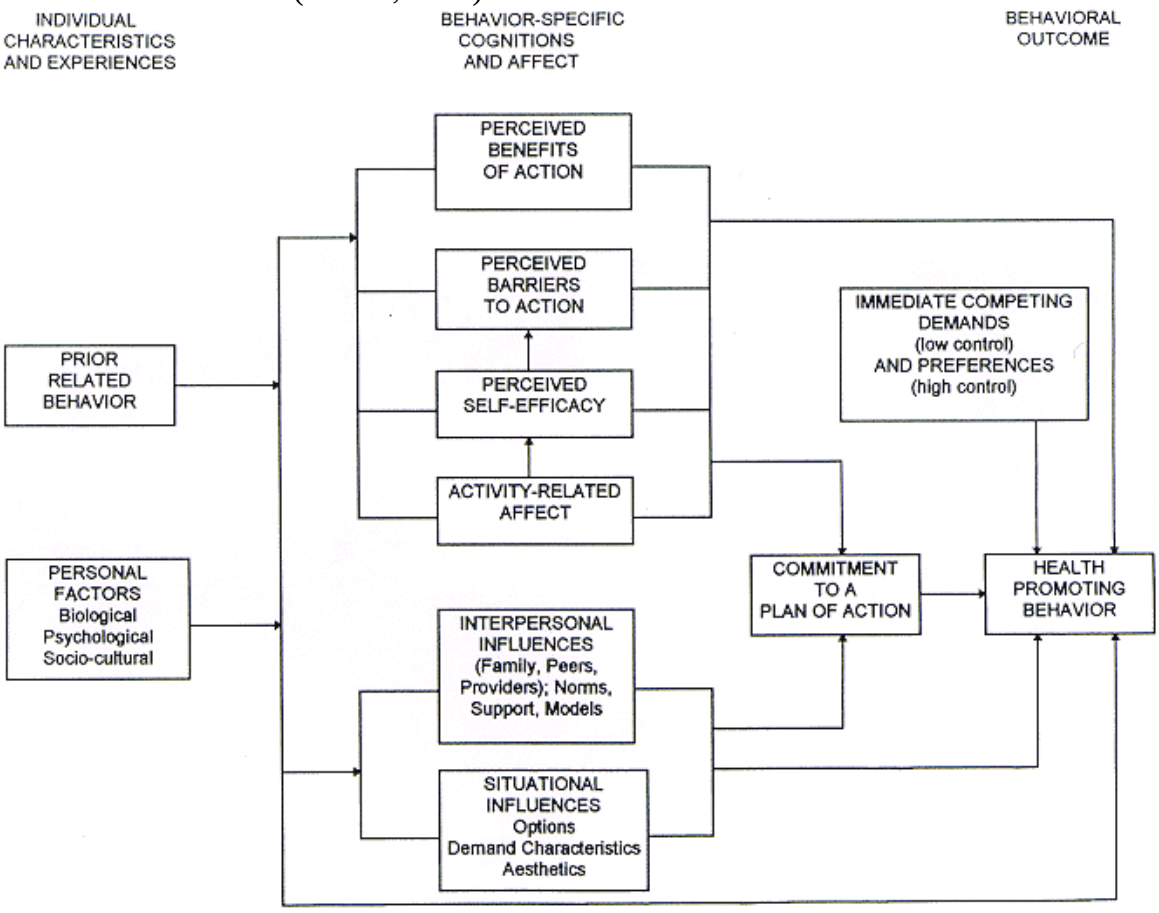
		patient/physician relationship		
Heckler et al., 2008	To examine illness beliefs, behaviors of HTN AAs for BP control	102 AA female outpatient treatment at Chandler Center in New Brunswick, NJ	Leventhal's Commonsense Model of Self-Regulation (CSM), interview, BP measurements, cross-sectional	Findings support – Stress and Medical Belief Model (MBM), MBM associated with lifestyle behaviors and med adherence, and Stress Relief Model (SBM) associated with stress-reduction behaviors

Author	Purpose	Population	Method	Findings
Holland et al., 2008	To assess the role on clinical inertia in the treatment of HTN	Physicians (18) and support staff (20) in North Carolina at Forsyth Medical Group	Cross-sectional survey, questionnaire 29, 15 items respectively	94%familiar with guidelines and understood relevance, reported lack of time, blames support staff, other reasons lifestyle modification 89%, education 67%, noncompliance to meds 56%, contribute resistant HTN to improper BP measurement, 655 recommend training
Martin 2007	To examine who or what influenced family NP students' implantation of JNC-7 guidelines for HTN management	55 hypertensive patients, eleven FNP students in final semester each student providing care based on JNC-7 guidelines	Descriptive study, 10-item tool (management data and perceived barriers or facilitators to use JNC-7	Students' findings were congruent with literature findings, barriers for implementation of JNC-7 guidelines noted from pt, peers, and physician
Peters et al., 2006	To explore attitudes and beliefs of AA regarding HTN preventive self-care behaviors	34 participants, community dwelling, healthy AA between 25-60 years of age	Qualitative study, interview, five focused groups (3 women's and 2 men's) Theory of Planned Behavior, purposeful sampling	Four themes identified; Circle of culture, attitude, perceived behavioral control, and subjective norm. Suggest inclusion of family and community to improve HTN preventive self-care
Rankins et al., 2005	To pilot-test the DASH-dinner with your Nutritionist,	82 participants, with medical diagnosis code of HTN pulled from computerized patient records, neighborhood health care center	12-15 pt with a guest provided with a weekly intervention program 11/2 hr to 2hrs sessions (beginning with BP and wt monitoring, followed by brief nutritional program, meal service, table talk, recipe demonstration, and ending with a taste testing, sessions audio-taped and transcribed Social Cognitive Theory	DASH-Dinner was associated with reduced SBP and DBP significantly lowered $P<0.05$, due to different study designs results not comparable to Premier or DEW-IT randomized DASH trials Can be helpful in reducing health disparities

Author	Purpose	Population	Method	Findings
Smith et al., 1997	To prepare a cadre of RNs as Church health Educators, and test the efficacy of HTN (HBP) education and support program in AA churches	97subjects with HBP	Convenience sample, two phases, intervention, pre-post test design	Significant 1) increase in knowledge scores from pre to post scores, 2) education, age, and number of years with HTN explained 49% of the variance, 3) decreased SBP and mean BP between pre & post measurements
Webb & Gonzales, 2006	To explore AA women's mental representation of HTN	47 participants, purposeful sampling, metropolitan southeastern US	Qualitative study, focused group methodology Self-Regulation Process Model (Leventhal et al 1997)	Four themes identified; 1) Vulnerability and Inevitability, 2) Biobehavioral Assaults, 3) Barriers to Effective Management and 4) Culturally Relevant Remedies. Knowing how AA women perceive HTN and their ability to reduce risk factors can assist in developing a model of stimulating change

Figure 1. Pender's Revised Health Promotion Model

(Pender, 1996)



Appendix A. Manuscript #1

Empowerment of Adult Hypertensive African American Women

A Small Descriptive Study

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Abstract

Background: A sense of fatalism about hypertension among affected clients often causes delay in getting help. Unfortunately, disease management of hypertension does not become a priority until there is loss of either physical or mental in function, sometimes both, which is frequently too late to prevent lasting damage.

Method: A descriptive study was utilized to explore how African American (AA) women handle hypertension issues and their interactions with healthcare providers. A purposeful sample of four hypertensive AA women aged 50 years and over was obtained from a local AA church in Southeast Texas. The respondents were paid $50 each for participation in the study. One-hour interviews were conducted, recorded, and transcribed for analysis. Data were manually coded to identify trends and themes.

Results: Coding of the data initially revealed ten common themes: 1) amount of symptom distress, 2) provider involvement, 3) family and friends, 4) taking positive action, 5) demonizing the disease, 6) ignorance of health information, 7) excuses, 8) denial, 9) guilt, and 10) non-compliance. The ten common themes were consolidated into four categories of activity: 1) Incentive to seek information, 2) Getting trusted help, 3) Engaging social support system, and 4) Taking positive action.

Conclusion: AA women can describe the challenges of hypertension but do not feel empowered to take a more aggressive role in self-management. Research on fostering empowerment for health behaviors could be beneficial to clients who are

diagnosed with hypertension and other chronic diseases, such as diabetes mellitus and diseases of the liver and kidney.

Empowerment of Adult Hypertensive African American Women

A Small Descriptive Study

High blood pressure, or hypertension, is a treatable condition. Today, there are many medical, pharmaceutical, and technological treatment strategies for the prevention and treatment of hypertension. Unfortunately, confusion among hypertensive clients concerning polypharmacy and other challenges may contribute to ineffective clinical and personal management (Bakris, 2007; Jiwa, McGowan, Gordon, & Freeman, 2004). There continues to be an increased incidence of hypertension (HTN) and the development of associated complications among African Americans and other minority populations. Although a great deal of research has been done to identify the causes, at-risk populations, and effective evidenced-based treatment interventions, there continue to be questions about the reasons for disparities in the management of hypertension in minorities and the underserved.

One of the goals of Healthy People 2010 was obtain 50% blood pressure control (140/90mmHg) in all hypertensive patients; this goal has not been achieved based on the Seventh Annual Report of the Joint Commission for the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (Chobanian et al., 2003). The goal was to reduce the number of adults with high blood pressure from 28 to 16 percent. Unfortunately, the percentage of adults with high blood pressure has instead risen to 29%. The second goal for HTN was to improve management. In 2009, an estimated 50% of hypertensive Americans had

control of their blood pressure, up from 27% in 1988. Chobanian et al. report the focus of hypertension management should be prevention through education, not treatment. They further note the benefits of behavioral modification strategies, which empower individuals to make the necessary lifestyle changes to their diet practices, exercise habits, and pharmacological adherence. Hertz et al. (2005) note that in 1999-2002, the incidence of HTN among African American adults increased to 41.4% from previous finding of 35.8% in 1998. In addition, African American women had the highest incidence of HTN at 44%. Douglas et al. (2003) further note higher blood pressure measurements among African American girls in comparison to their white counterparts starting as early as ten years of age.

Fatalism about hypertension often causes delays in getting help. Untreated hypertension may lead to kidney failure, stroke, and death. Unfortunately, this lingering chronic condition often does not become a priority until there is loss in either physical or mental function, which is frequently to prevent lasting damage. In order to reduce the incidence of complications associated with hypertension in vulnerable populations, perception of health and health promotion behaviors of African Americans must be examined.

The purpose of this study is to explore barriers to empowerment of African American adult women related to managing their hypertension, their perception of health, and their description of interaction with healthcare providers. In this small descriptive study, African-American women were asked to share their insights into hypertension management. Understanding why minority populations do or do not advocate for themselves in relation to managing chronic

health problems will assist the healthcare community to find ways to improve access to health delivery systems and improve health outcomes in this vulnerable population.

REVIEW OF LITERATURE

Managing Hypertension in the African American Population

The leading cause of death in African-American women in the U.S. is heart disease, in spite of efforts to promote healthier lifestyles, encourage earlier treatment, and provide better nutrition education for vulnerable minority populations. African-

American have a higher incidence of uncontrolled hypertension which often develops at an earlier age and leads to more negative health outcomes than their white or Hispanic counterparts (Cooper & Rotimi, 1997). It is known that the higher the blood pressure, the greater is the risk of heart attack, stroke, and other cardiovascular problems (U.S. Department of Health and Human Services, 2004). Among this vulnerable group, there continues to be a lack of acceptance of the benefits of a healthy diet, exercise, smoking cessation, and decreased salt consumption as ways to reduce cardiovascular risk (Flegal et al., 2002: Haijar & Kotchen, 2003). Absence of active counseling and information sharing by health providers has been noted as a reason for poor health outcomes in this population (Wexler, et al., 2008). Of particular concern is the poor dietary health of African-American women who consume the highest amount of calories, fat, and cholesterol daily than any other group (Daroszewski, 2004). Furthermore, the pharmacological management of AA women does not always make use of the

studies which indicate utilization of combination drugs rather than single drug intervention which appears to reduce the cardiovascular and renal disease sequelae (U.S. Department of Health and Human Services, 2004). The wide variety of risks and the multifocal aspects of managing hypertension in the AA population make it vital to engage these minority women in taking an active role in improving their own outcomes.

Patient Involvement

Getting AA women involved in their care remains a focus of research and an elusive aspect of hypertension management. The Center of Disease Control and Prevention (CDC) (2009) reports that less than one quarter of hypertensive clients have control over their blood pressure (140/90mmHg) despite the 76.6 billion dollars spent annually for hypertension in the United States alone. In 1994, McCombs, Nichol, Newman, and Sclar conducted a study in California in which hypertensive subjects were provided with free medical care. After one year of free treatment, less than one third of the subjects were taking their prescribed medications. The reason for poor blood pressure control seems to lie with decreased patient compliance. A higher level of patient involvement in their treatment is vital to controlling hypertension epidemic that is sweeping African American communities (Neutel & Smith, 2003).

Engagement of AA women in their care may be improved by getting them to talk about and share their concerns about treatment and recommended lifestyle changes. They may also need more information, although education interventions have had mixed success. The use of genetic counseling, a standard for diseases

such as breast cancer, was examined for its effectiveness with an African American female sample. Taylor and Wu (2009) found that the only significant difference between pre- and post-genetic counseling was a decrease in sodium intake. Other indicators (BMI, blood pressure, pulse pressure, physical activity) did not significantly change. Nevertheless, strategies to help reduce the stress of dealing with a chronic disease, such as hypertension, may be a key to involving patients in managing the outcomes of their conditions (Jones, Tucker, & Herman, 2009). Managing family friction and family adaptability has also been found to have a positive effect on systolic blood pressure management (Brittain, Taylor, & Wu, 2010).

Studies to engage AA women must focus on inclusion of hypertension management opportunities within the context of their daily lives. Buchholz and Artinain (2009) studied the expenditure of k/cal in the everyday activities of AA women as an adjunct to aerobic exercise. Explanations of lifestyle interventions should include these types of information in order to increase minority women's engagement in increasing physical activity. Improving hypertension knowledge and perceptions about weight management and increasing activity levels may result in encouraging engagement in positive health behaviors in African American women.

Empowerment

As defined by Chamberlin (1997), empowerment consists of processing a number of qualities: having decision making power, having access to information and resources, having a range of options from which to make choices, being

assertive, having a feeling that the individual can make a difference, and learning to think critically. Activities associated with empowerment are those that encourage a healthy lifestyle, prevent disease, and encourage detection and control of the symptomatic stage of disease (Polit & Beck, 2004). Patient compliance can be enhanced by the development of a sense of empowerment in the individual.

A sense of empowerment has been shown to reduce the development or complications of disease (Nash, 2002). At the 24th Annual Meeting of the Society of General Internal Medicine (SGIM), the issue of eliminating United States health care disparities among racial and ethnic groups was discussed. Due to the high incidence of diabetes and hypertension, African Americans are at a greater risk for end stage renal disease than any other group. In addition, African Americans have a greater rate of nonfatal stroke, fatal stroke, and end-stage kidney disease, 1.3, 1.5, and 4.2 respectively (Hertz et al., 2005). Health perception and perceived susceptibility to disease among African Americans is a complex and misunderstood phenomenon. Because hypertension has become so commonplace in the minority community, it is often not taken seriously and is somehow expected to occur.

Managing hypertension lies in the ability of the patient to assume some responsibility of care. Neutel and Smith (2003) identify safety, convenience, polypharmacy, cost, and education as reasons for poor adherence to pharmacological treatment. In addition, they acknowledge the disinclination of physicians in titrating antihypertensives for management of HTN. However, they

state the most essential component for the management of HTN is patient involvement. They recommend home monitoring of blood pressure by client as a cost effective way to improve blood pressure management. Increase patient involvement resulted in increased compliance to prescribed pharmacological regime. Nevertheless, it is clear that empowerment of AA women to control their own blood pressure is an area of research that has not been fully explored for improving outcomes of chronic disease management.

Methods

This study used a descriptive approach to gain insight regarding hypertension management among African American women. The descriptive approach allowed for exploration of this population with the intent of gaining insight to the lived human experience of hypertensive African American women through dialogue. Data was obtained through one-on-one interviews. The purpose of the interviews was to gather information from AA women regarding their perspective regarding health beliefs, self-management of HTN, and communication with their physician and/or practitioner. The findings of this small descriptive study increased awareness of the AA woman's HTN management experience and contributed to the development and/or selection of instruments for future quantitative study

Recruitment and Interviews

Study Participants

Recruitment of subjects was took place at a predominately African American church in a southern suburban community. An announcement was made at the beginning of Sunday church service and flyers were posted at the

church. The participants of this study meet the following inclusion criteria;1) African American descent, 2) at least 18 years of age, 3) medically diagnosed with HTN, and 4) resident of suburban community. On the day of the announcement over 1500 persons were in attendance (8am and 10am services). However, only four women agreed to be interviewed. The women were between the ages of 47-65. None of them had any history stroke but one reported having an episode of transient ischemic attack.

Diaz, Malnous, McCall, and Geesey (2008) assert that a lack of participation in research studies among African Americans may help to explain health disparities. They note poor participation in research as a problem in which the cause has not been thoroughly identified. A majority of available research consists primarily of Caucasian subjects; but due to cultural differences, these results may not be applicable to minority population (Diaz et al., 2008). Substantial amounts of research exists pertaining to the causes, treatment, and long term effects of the non-compliance to prescribed medical interventions. However, there is a gap in research, in regard to the perceptions or perspectives of African Americans. More needs to be done to encourage participation of minorities in research, and the African American church serves as a good place to start this movement.

Data Collection

The university institutional review board reviewed and approved this research study. All the participants were informed individually about the study's objectives, potential benefits and risks. All four women freely consented to

participate and to allow recording of their interview for data analysis. Participants were given a copy of the consent form for their records. Interviews were conducted in private without interruption. As an incentive, a fifty-dollar money order was provided at the end of the interview

All interviews were recorded using two tape recorders for transcription. One recording was used to transcribe the data, and the second recording was utilized to enhance reliability of the transcribed data. After the transcription was complete the primary research read the reports while listening to the recorded session for further validation of accuracy.

Results: Four Themes Emerged

The data were reviewed for common themes. Coding of the data initially revealed ten common themes. They are: 1) amount of symptom distress, 2) provider involvement, 3) family and friends, 4) taking positive action, 5) demonizing the disease, 6) ignorance of health information, 7) excuses, 8) denial, 9) guilt, and 10) non-compliance. The ten categories were consolidated into four categorical themes; 1) Incentive to seek information, 2) Getting trusted help, 3) Engaging social support system, and 4) Taking positive action. An experienced hypertension research scholar validated the themes identified and consolidation of themes (Figure 1).

Theme #1. *Incentive to seek information*

Theme collapsed into the category of "Incentive to Seek Information" were ignorance of health information, excuses, denial, guilt, and noncompliance. All four women reported their initial physician did not provide sufficient

education about high blood pressure. The health provider would inform of elevation of blood pressure and make a reference to the complications (stroke, kidney failure) associated with HTN, yet no educational training was provided at the time of the initial diagnosis.

One participant shared her concern about the lack of information when she said, (#2) "*I don't know hypertension…I've seen videos and, of the walls of the blood vessels and the pressure. I don't know as much as I probably should know."*

Her dismay was shared by another participant (#1) who noted, **"**My *blood pressure was high 200/140mmHg. He asked me if I knew what normal BP was, I had no idea. He gave me a prescription; I had the prescription filled at Eckerd's as I drove myself back to work".*

She stated that she did not know what normal blood pressure was, and the doctor did not seem alarmed or worried, so she did not think it was bad. It was not until later she fully understood the severity of a having blood pressure of 200/140mmHg. She admitted to having little knowledge about high blood pressure even though she had received educational pamphlets and brochures about healthy diets from her health provider, but they were not explained to her. Her reaction was, "*It was ridiculous, I was a walking stroke. I had no idea. I guess I should have educated myself more, but I just didn't. No, no, they were just given to me. I don't think I ever sat down with the doctor or someone on staff there, who went through it and explained anything. No, they were just given to me*."

The "silent" nature or absence of obvious symptoms or manifestations of high blood pressure are attributed to denial of the medical diagnosis of

hypertension. All four participants believed their blood pressure elevation was associated with stressful events in their lives. All the subjects initially experienced a state of denial in regards to their hypertension diagnosis. They believed their blood pressure would return to normal with a little rest and a reduction in stress.

Almost all of the women offered some type of denial of the existence of the condition or of the impact it might have on them. They offered excuses for lack of engagement in the disease and a disbelief in the possibility that it might result in bad outcomes. (#1) "*I never thought I would have high blood pressure. I don't know if I never thought I would have it, or if I just didn't think about it, period. I didn't concentrate; didn't focus on it…Because, I just thought I was exhausted because I told her I have been exhausted all week….I thought if I could just go on home and rest, I would be alright. But as a result, I ended up being in the hospital five days."*One of the participants continued to express disbelief that she was affected by HTN. She noted (#3) *"I just do not think I really have high blood pressure. About two weeks before my physical I was at the dentist office and I noticed it was 150/89 and I thought, well the machine's not calibrated right."*

Some of the women attributed their response to their health issues as being influence by their parents' perception of health and healthcare providers. Subjects stated their parents' negative references to health providers or nonchalant attitude about altered health states, including hypertension, had an effect in their belief system. (#1) "*My mother never really talked about it, we just knew she had it…Both my parents, and then, my husband's parents had hypertension. I mean,*

they had it (HTN) realIy bad. I have to say I'm like my father. My father didn't believe in doctors, (laughter) and I follow experience."

Although all subjects were knowledgeable about reasons why antihypertensive medications are needed, they all admitted to some periods of non-compliance. They all professed the ability to obtain information, but non-compliance with practicing or developing health-promoting behaviors were evident. In regard to pharmacological treatments, all of the women altered their dose or frequency of their prescribed antihypertensive medication on occasion. (#1) "*I was exercising regularly, so I thought I could take the medicine when I felt like it….I felt I could wean myself of the medication".* Further evidence that medication compliance is variable in this population was the comment by one participant (#4) *"I just take it (medicine) whenever I think about it. Sometimes that's once a week, sometimes it's twice a week. I mean, I don't feel any different. So, I mean, I'm not taking it if I don't need it. Not since I went to the doctor, because I don't feel any different."*

Anderson and Klemm (2008) noted that the Internet can be a good source for current health information. However, they cautioned that it should neither serve as a replacement for actual patient-healthcare provider interaction nor be the sole source of health information (2008). One subject stated she stopped taking a prescribed medication based on information she obtained from the Internet. (#2) "*I went on the Internet. I Google everything. (laugher).*"

Theme #2. *Getting trusted help*

All four women stated that their current health provider was different from the physician or physician assistant who had made the initial hypertension diagnosis. The reasons for change in physician were due to a perceived lack of caring and lack of trust in the original healthcare provider. Thee out of four women stated they felt more comfortable talking with their pharmacist than their physician. They stated the pharmacist explained their medications to them and told them what to look out for while taking the medication.

One subject stated, (#2) *"I have thrown away many prescriptions. That doctor didn't know me, he was bearing in the room with me for 15 minutes, he doesn't know my body."* Another participant eloquently summed up the basic mistrust of the health provider community when she stated (#1) *"We were just on an assembly line. Okay, next.' You know. That's just the way they come in; they don't…it's like they are in a hurry to meet the next one. It is like have quotas. 'Okay, what's your problem today? Oh blah, blah, blah. Oh, you probably have such and such a thing. Let me write you a medicine.' I've had so many prescriptions that I have thrown away, because I knew, in my heart, that they were not treating what was wrong with me."*

All four women compared their doctor's visits to the "*herding of cattle, rush you in and rush you out*." Surprisingly, there was not resentment or anger towards the physicians. In fact, there was more compassion and understanding for the job and responsibilities. (#4*) "I mean, the doctor's give you a little bit of information; but they've got to move on to the next patient. So, what I did was, I just decided to read on hypertension myself to find out what was what, and what I*

needed to do." The subjects defended the physician, stating,(#4) *"…he has to see so many people, he is doing the best he can, it's not his fault."*

Another subject blamed the managed care system, stating, (#4) *"…it's all about the number, they don't have time to care. If they don't see the people they don't get paid."* There were instances noted when the subject was not happy during or after a session, but neither confronted the physicians. They simply terminate the relationship without having a dialogue with the physician about their concerns. Two of the women admitting to just nodding to the comments of physician, but mentally they were deciding that it would be their last visit.

Theme #3 Engaging social support system

Many African American women have a problem of saying "no" to others. There was a unanimous sense among the participants that they had to do their best to meet the needs of their jobs, family, and friends. They verbalized feeling of guilt when they placed themselves ahead of others, even when their health was at stake. One of the ladies mentioned the lack of support she got from her spouse, (#3) "*I think a lot of my problems, I'm going to tell you honestly, were because I had a husband who didn't do anything. He worked when he felt like it and he wasn't attentive to the many needs. To show you what I mean, he said to me one day, 'I don't care how horrible things get, you never quit.'"*

Three of the participants attributed their high blood pressure to their jobs, so they retired so they could rest. However, after retirement, all became involved in some form of volunteering activity 3-4 times a week. One participant talked about how difficult it was to take off time from work. She said, (#1) "*It seemed difficult because you feel guilt. Well,*

I did. I felt guilty. You know, sometimes I might call them back and say okay; but, over a period of time and since I have learned that I needed my space, my rest, to do what I wanted to do, I find that diminished after a while."

One subject suffered from a transient ischemic attack, (TIA). She stated that she arrived home exhausted from work and fell asleep. Upon arising, she stated she felt funny, unsteady gait, and sounded different. She called one of her friends to ask her how she sounded, her friend said she was talking a little slower, but she could understand her. She then had her grandson drive her to her daughter's house. Her daughter noted the changed speech and impaired memory recall. She encouraged her mother go to the emergency room. However, the subject resisted stating, (#1)*"…baby I'm just tried, I just need to get some rest."* Nevertheless, her daughter insisted and drove her to the ER, where she was admitted with TIA.

Most of the women in the study verbalized that they relied on God as their support system. Although they had family and friends to provide assistance and support, they admitted God alone was able to meet their needs. Prior to this realization they stated they had tired to do everything themselves or to seek help from family and friends, but found God could fix both their problems, provide comfort, and give peace of mind. The spiritual aspect of self-care is an important part of the AA approach to life. Participant #1 summed it up by saying,

> "*Most of all, I have been a God-fearing person since I was eleven years old. All right. And my spirituality has just increased, increased, increased. And, I recognize that I don't control this world and I don't control anybody and I'm not*

in control of nobody but myself. Even my children, I'm not in control of them…. I try to seek God's guidance in everything I do and say. I put him first and foremost in my life, and that's it. And I leave it to the Lord. If I'm going out and I get in my car, I say, 'God, drive me.' When I go to bed every night, I thank Him for being with me. If I encounter any problems, I say, 'Lord, you lead me. Should I be doing this? Your will be done.' I think that, in itself, has helped my illness a great deal. I know there are people who don't believe in medications, but I believe in God. And, God would direct you to the cure or the maintenance that you need to control these things."

Theme #4. Taking positive action

All four women took positive action to take control their blood pressure. They made a conscious decision to learn more about high blood pressure. Changes were made to their diet, exercise, medication adherence, and behavioral aspects of HTN management. They stated their decision was motivated due to frustration with healthcare providers and fear of the unknown. One participant admitted to being afraid to know, but the fear of the unknown was her stimulus. She states, (#4)"…. *I don't tell you that I'm not afraid of what I might find out. It's just that I know I need to speak up because if I talk now, it might help me later on. Or, you know, they might find something now, instead of waiting later on and it's a surprise."*

Failure to comply with a prescribed plan of care is associated with greater risk of the development of the complications associated with HTN (stroke and kidney failure). One participant stated a TIA served as the catalyst for her change.

She states until she suffered a TIA. She notes, (#1) *"…it wasn't until I suffered the TIA. It was at the point when I took hypertension serious. I was grateful that the effects had been short term, but never wanted to experience loss of function again. I take my medication daily and see my physician at least once a year or as needed. I am compliant with diet recommendations and remain physically active.* She currently has her blood pressure under control and has not experienced any more TIA episodes.

Some participants, after performing an independent search for health information, would initiate dialogue with their healthcare providers. The inquiry would consist of the severity of their HTN, purpose and rationale for medication, and suggestions for treatment. One woman stated, (#3) "*…I asked her, why is it up so high? She said over the past three years it has been going up and down, and it's interesting because she never said that to me before… she did not seem concerned. I told her I wanted to be treated. She said ok."* All four women admitted they no longer were with their initial diagnosing physician. They stated they selected a physician who they felt was more "concerned" about them medically and personally. Unfortunately, the concerns with their first physician were never addressed. The women were reluctant to discuss their dissatisfaction with the physician. This is detrimental because the physician may not be aware of their discontent, and the client did not have the opportunity to be heard. This leaves the line of communication unresolved for future AA clients.

Most of the women voiced a greater sense of control and confidence in their ability to self-manage their blood pressure. One stated, (#1) *"I'm in control*

of it now. I know exactly what to do both from a medication standpoint and from, how do you put it, from the personal standpoint of happiness and what I don't need to be bothered with. This life is mine and I have to live it." Another participant stated increasing physical activity and diet modification as her way of taking control of HTN. She proudly stated, (#4) "*I jump rope, I walk. I don't do no jogging, but I walk; and I use the treadmill three times a week. Fruits, vegetables, maybe a chicken, fish, turkey. That's really about it. I don't eat processed meats, either, or sandwiches."* By learning how to better manage hypertension and consistent implementation of changes, the women felt a sense of empowerment to consistently live a better life and to educate their family and friends.

All participants stated they were grateful for the opportunity to contribute to the study. They admitted this was the first time anyone has asked them about their HTN experience. It was their hope that other newly-diagnosed patients would get the information they needed to live a long and healthy life. One woman said, (#1) *"I just want to thank you for this opportunity. If I can help anybody to do better in managing and to avoid the pitfalls of hypertension, you know, please do so. That's all I want. I just want to be useful, in my own little way. I don't think we know enough about it. I don't think we are educated enough. Honestly, I think that's what it is. We don't know enough."* They admitted they did have some reservations about participating, but after completing the interview, they felt the information they shared would help someone else.

Summary of findings

In summary, there are indications that AA women are somewhat knowledgeable about the causes, lifestyle modifications, complications, and medications used for the treatment of hypertension. Due to the silent nature of HTN, the women feel the disease does not affect them and is not a threat. Because of their ability to continue to function and to miss medications without a sudden attack or loss of function, they are not motivated to make the recommended lifestyle changes and adhere to prescribed pharmacological plan.

They do not seem to have a good understanding of the compensatory mechanism that are taking place in the body when they skip their antihypertensive medications which place a physical strain on the heart and internal organs. This misconception affects their health perception and makes them feel they do need the medication; some even denied or refuted their physician's HTN diagnosis. None of the four women could even state with certainty their last blood pressure reading or when it was done. When asked about their laboratory studies, in particular with reference to kidney function (creatinine), they were only able to state that they had urinalysis testing but were unclear about what had been found or what it meant to their health.

There was also a sense of not wanting to appear as though they did not know about HTN. During the interview subjects would state what was considered "correct" to demonstrate their knowledge, but their management practices were not congruent with the information they were sharing.

Strengths and limitations of the study

The strength of this study is the insight provided to the AA women's perspective about HTN and their perception of health. Creditability was demonstrated through the utilization of two tape recordings by both the transcriptionist (during transcribing data) and the primary researcher (when reviewing the transcribed data). The ten themes and four consolidated themes were validated by an experienced hypertension research scholar.

Limitations of this study include the fact that the sample size was small consisting of only four women with age range of 47-65. This is the age group most affected by HTN. A larger sample may provide more insight into the AA women's perspectives of HTN and their health. A focus group may also serve well to increase data and feedback from AA participants.

Implications for clinical and research practice

The findings of this study show the need for more research to explore the African American perspective and to develop effective intervention for this high-risk population. Strategies are needed to improve the therapeutic communication between the physicians and clients and to guide development of educational programs to enhance self-management of HTN in vulnerable populations.

Therapeutic Physician-Patient Communication

This study shows how failure of healthcare providers to develop and maintain a therapeutic relationship with their clients can affect compliance with the prescribed plan of care. The lack of perceived compassion for both the client's

physical and psychosocial needs resulted in the selection of a new physician. Unfortunately, the AA women in this study did admit that they did not dialogue with their physician about their concerns. Failure to communicate their needs to the healthcare provider leaves issues unresolved and does not provide the physician the chance to address the issues.

The women voiced frustration with the limited amount of time with their healthcare provider. Surprisingly, the AA women were not upset or angry with the physicians, instead they defended them. Adding a cultural understanding component to continuing medical and nursing education offerings might impact the awareness of the interactions and expectations of African American women who are struggling to manage a chronic disease condition. The use of educational programs provided immediately after HTN diagnosis could help to reduce to the development of the complications associated with HTN and might serve as an indication of care and concern on the part of the provider. Referral of newly diagnosed clients to an educational program which would provide information about self-management of HTN might improve the perception of the health provider as an interested and equal participant in care management.

Educational Programs

Opportunity to attend educational programs about their condition appears to be a need for AA women with hypertension. This program could be administered over a period of time, meeting on a weekly basis to help meet the social expectations for support and input. A hypertension awareness and treatment

program could also be developed into an online format for persons with busy schedules. Participants in the program could be given incentives to maintain their attendance and interest, such as a free automatic home monitoring blood pressure system, pedometer, and exercise log. The exercise log would be used to measure blood pressure, weight, and physical activity on a weekly basis. The program would also include information about pharmacologic treatment options and Dietary Approaches to Stop Hypertension (DASH) diet meal preparation. Focus groups could also be utilized to allow sharing of experiences with peers, family, and friends. Participants need a way to discuss the challenges or barriers of living with HTN.

The findings of this study will be utilized to develop a quantitative research instrument to further assess AA women's physician interaction, lifestyle modification (diet, exercise, salt intake), and self-management of HTN. An intervention will be also used to improve health outcomes among this vulnerable population.

Conclusions and Recommendations

This study identified barriers faced by AA women in the management of their HTN. The lack of trust of physicians or health providers was stated to be one of the reasons for nonadherence to medical and pharmacological regimens. The lack of attention and time spent with the physician was also a barrier to open communication and increased knowledge about the hypertension experience. In addition, frequent changes in physicians or healthcare providers also contributed to distrust. Most of the subjects expressed a higher degree of comfort and

satisfaction with their pharmacist who was perceived as having the patient's best interest at heart. The extended wait time to see physician and the rapid process of actual visits further compounds physician distrust. Surprisingly, the women did not confront their physician if they were displeased with services. Instead, they would just change physicians or throw away the prescription.

Information, education and/or training about high blood pressure were acquired by the subjects either through health screenings at their place of employment or the Internet. Subjects stated they would ask some questions during office visits, but they did not want to take up too much time because of concern about the physician's busy schedule. When asked if they ever considered themselves to be the customer with a right to attention and information, all four subjects defended the physicians' workload and did not feel they were to blame.

All of the participants believed their HTN was due to stress at work and believed that their condition would improve after retirement. However, of the two retired participants, both became involved in volunteer positions which often required equal or more time then their previous paid positions. An overwhelming issue among the AA women was a problem in saying no. There was a sense of having to do it all and be there for persons in their lives. They often sacrificed their own needs (physical, mental, and financial) in order to meet the needs of the people in their family, workplace, or church.

Unfortunately, AA women frequently do not take their disease seriously until it impairs their ability to function either physically or mentally. Evidence-based interventions are needed to reach hypertensive clients early in their

diagnosis. The program needs to include education about HTN, training about home monitoring of blood pressure, follow-up on implementation of lifestyle modifications and information about the effect personal decisions have on blood pressure. If this program can be performed early in the diagnosis, the chance of success is greater. The future challenge lies in motivating a population that does not feel a sense of urgency to take positive health actions for better outcomes before an actual emergency arises. Investment in positive outcomes for AA women with hypertension will affect both the quality of life for a vulnerable group and the stewardship of precious resources for a nation with finite resources. Empowering AA women to engage in healthy living is a winning situation for everyone.

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Appendix B: Manuscript #2: Report of Findings

EMPOWERMENT AS A HYPERTENSION MANAGEMENT STRATEGY FOR AFRICAN AMERICAN WOMEN

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Abstract

Successful health management strategies remain elusive for the 25 million African-American (AA) women afflicted with high blood pressure. The primary research strategy of this study was to determine if a psychological empowerment coaching (PEC) intervention had an impact on health promotion outcomes. The study purpose was to measure the impact of health care empowerment intervention on health care outcomes in rural and urban hypertensive AA women. 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 convenience sample of hypertensive women from predominately-AA churches in rural and urban Texas attended a one-time psychological empowerment coaching class on hypertension management with a follow-up intervention session to reinforce positive behaviors and collect post-test data. Findings demonstrate that a directed psychological intervention aimed at promoting the self-confidence and health knowledge of AA women will increase their confidence and intent to manage the blood pressure in the future.

Keywords: Empowerment, Self-efficacy, Hypertension, African-American women, and Health disparities

EMPOWERMENT AS A HYPERTENSION STRATEGY FOR AFRICAN AMERICAN WOMEN

The bifocal threat of hypertension is underscored by the lack of overt symptoms 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) (2009) reports over 72 million persons (1 in 3 adults) in the United States have hypertension (HTN). The financial burden of HTN 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, HTN 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 (AAs) have higher rates of morbidity and mortality, earlier onset 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 must focus on empowerment of vulnerable populations to influence their own health toward better lifestyle choices and more positive outcomes. Therefore, the primary research strategy of this study was to determine if a psychological empowerment coaching (PEC) intervention had an impact of health promoting outcomes. The purpose of this study was to investigate the efficacy of

an empowerment intervention on the hypertension outcomes in rural and metropolitan AA women.

Background

Hypertension

Management of hypertension must be at the forefront of the battle against health disparities and shortened lifespan of AA populations. According to the National Heart, Lung, and Blood Institute (USDHHS, 2004), "Undiagnosed, untreated, and uncontrolled hypertension clearly places a substantial strain on the health delivery system" (p. 4). They follow with an assertion that if one can control the rate of age-accompanied rise in blood pressure, one can reduce the chance of developing hypertension, cardiovascular and renal disease, and stroke.

The outcomes of hypertension in the AA community have a profound financial and physical impact. Because AA's exhibit high levels of cardiovascular ricks factors, engagement in health-promoting life-style behavioral activities, such a regular exercise and health nutrition al choices, is essential. Researchers identify a racial disparity regarding level of regular physical activity among African Americans and Whites (non-Hispanic). Taylor and Wu (2009) define regular physical activity as thirty minutes of aerobic activity each day for persons with hypertension. They also note AAs are twice as likely to live sedentary lifestyles when compared with Whites. In addition, AA are disproportionate affected by obesity, service availability, and socioeconomic disparities (Douglas, et. al., 2003).

The United States Department of Health and Human Services established a collaborative effort to improve health outcomes called *Healthy People 2010*, which

features 467 science-based objectives and 10 leading health indicators to meet the goals. The two overarching goals are to increase years and quality of life and to eliminate racial and ethnic disparities (Healthy People, 2010). 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). These institutions suggest that an empowered client will be more likely to comply with treatment and adhere to treatment over a longer period (Sullivan Commission, 2004). Former 16th United States Surgeon General David Satcher supports this call for empowerment of the African American population for the prevention, treatment, maintenance of hypertension as a means to decrease morbidity and mortality from hypertension-related health problems (USDHHS, 2000). However, the challenge lies in finding a way to reach the AA population with an appropriate message that will improve health outcomes.

Challenges of reaching AA and other minority populations at risk of chronic health disruptions are compounded by access issues based on location of residence. Significant differences have been found in health perception, health care utilization, and personal care needs between rural and urban diabetics (Remler, et al., 2011). Research to address the improvement in health and access to care is essential because inequities in rural racial minority populations are generally more severe in than in similar urban cohorts (Probst, Glover, & Samuels, 2004). The relationship of rural or urban residence to the management of hypertension has received scant attention and was included in this study to determine whether locale made a difference in hypertension outcomes

Scientific research has produced treatment modalities to allow for the effective management of high blood pressure. However, there continues to be an increased incidence of hypertension among African American (AA) and other minority population populations. Although much research has been conducted to establish the causes and effective treatment, little had been done to explore the levels of empowerment and self-efficacy among hypertensive AA women. Self-efficacy and empowerment have been shown to have an impact on patient outcomes in other populations (Burroughs et al., 2008) and thus served as the focus of the current study.

Empowerment

Managing hypertension lies in the ability of the patient to assume some responsibility of care. The literature suggests a need for studies about the role of empowerment as it relates to the health the African American population. Gagnon, Hebert, Dube, and Dubois (2006) state the development of empowerment is vital to the improvement of health outcomes. Chamberlin (1997) proposes that empowerment consists of possessing a number of qualities: a) having decision-making power, b) having access to information and resources, c) seeing a range of options from which to make choices, d) being assertive, e) having a feeling that the individual can make a difference, and f) learning to think critically. Activities associated with empowerment are those that encourage a healthy lifestyle, prevent disease, and allow detection and control of the symptomatic stage of disease (Pender, 1996). A sense of empowerment has been shown to increase patient compliance and reduce the development or complications associated with disease (Nash, 2003). Gagnon et al. (2006) state the perception of control and the motivation to exercise are essential to empowerment.

Self-Efficacy

Health promotion activities in AA women may be related to their beliefs about self-management of their health situation and their perception of their self-efficacy in controlling their health outcomes. Pender (1996) defines self-efficacy as the judgment of personal capability to organize and execute a health promoting behavior. Pender's definition is integral to Bandura's belief that self-efficacy serves as the foundation of human motivation, well-being, and personal accomplishment (Bandura, 1997). Therefore, a higher sense of efficacy has a greater probability of producing positive outcomes. Likewise, persons with low sense of efficacy are less likely to seek avenues to improve quality of life. General self-efficacy has been reported to be the "subjective confidence of being able to master stressful demands by means of adaptive action" (Rimm & Schwarzer, 1999, p. 329). Rimm and Schwarzer (1999) report that a strong sense of personal self-efficacy is related to better health, higher achievement, and more social integration. Since the expectation of engaging in active empowerment requires some adaptive action at a somewhat higher level in basic health actions, the current study will measure the impact of general self-efficacy on health actions.

Some AA women have reported having a feeling of inevitability to develop HTN due to its prevalence within the family for generations (Heckler et al., 2008). The role of the physician in enhancing to self-efficacy among hypertensive AA women may stem from the fact that many are not fully educated by their physician about the intricacies of disease when initially informed of their HTN diagnosis (Webb &Gonzales, 2006). The active involvement of the patient in seeking clarification of health status and encouragement of dialogue with healthcare providers may enhance understanding and

increase compliance. Therefore, self-efficacy in AA women was assessed in relation to empowerment toward better hypertension management and outcomes.

Theoretical 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, Murdaugh, & Parsons, 2006).

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.

Instruments and variable definitions.

Prior Related Behavior

Pender (2006) defines prior related behavior as the frequency of the same or similar health behavior in the past. The goal is to assess the direct and indirect effects of the likelihood of engaging on health promoting behaviors at some point in the future based on past behaviors. A single-item Self-Rated Health Scale will be utilized to obtain subject's general perception of personal health as being excellent, very good, good, fair, or poor. This single item has been utilized by the National Health Interview Survey and several other studies and has been shown to be an excellent predictor of future health (Lorig et al., 1996).

Personal Factors (Biological/Psychological/Socio-Cultural)

Pender (2006) define personal factors (biological, psychological and socio-cultural) as general characteristics of the individual that influence health behavior A five-item demographic survey was developed in order to obtain sample characteristics (age, marital status, income, education, and length of time diagnosed with hypertension).

Perceived Self-Efficacy

Rimm and Schwarzer (1999) define perceived self-efficacy as the subjective confidence of being able to master stressful demands by means of adaptive action. Self-efficacy was measured by the General Self-Efficacy scale based on total score with range from 10-40. It has been shown to be highly reliable with a Cronbach's alpha ranging from 0.75 to 0.91(Schwarzer & Jerusalem, 1995). The Chronic Disease Self-Efficacy Subscales for Regular Exercise and Disease Management (Perceived Self-Efficacy) were used to measure self-efficacy utilizing an 8-item scale which had a total score with range

of 8-80. Both scales, exercise and chronic disease management have high reliability, 0.83 and .091 respectively (Lorig et. al, 1996; Lorig, Sobel, Ritter, & Hobbs, 2001).

Activity Related Affect

Pender (2006) define activity related affect as subjective feeling states or emotions occurring prior to, during, or following a specific health behavior.
The Health Care Empowerment Scale (HCEQ) by Gagnon et al. (2006), is a 10-item questionnaire composed of two response scales to measure both control and motivation. However, only the motivation scale was employed for this study as the empowerment intervention was based on the idea of motivating persons to take future actions. The HCEQ findings were based on total score with a range of 10-40. The Cronbach's alpha of 0.83 for the total scale.

Interpersonal Influences

Pender (2006) defines interpersonal norms as norms, support, models perceptions concerning behaviors, beliefs, to attitudes of relevant others (family, peers, providers) on regard to engaging in a given health behavior. The Community Support 4-item Scale measured interpersonal influences based on total score with range of 0-40 and Cronbach's alpha of 0.77 (Lorig et al., 1996). The instrument measured the subject's confidence in being able to get physical and emotional support and assistance from friends and family.

Situational Influence

Pender (2006) defines situational influences as the perceptions of the compatibility of situations or the environment with engaging in a specific health behavior. Situational influence was operationalized by asking about the degree of belief

(or lack thereof) that exercise actually has an influence on blood pressure. This question was asked with a 10 point visual analogue reporting scale where 1 was "none," 5 was "somewhat," and 10 indicated "a great deal." This was a new item.

Health Promoting Behavior

Pender (2006) defines health-promoting behavior as the desired behavior end-point or outcome of health decision-making and preparation for action that results in positive health outcomes. Health outcomes to be measured for this study are: 1) Blood Pressure Self Care (Peters and Templin, 2008); 2) exercise log completion, 3) frequency community resources access, and 4) intent to question physician. The Blood Pressure Self-Care Scale has a Cronbach's alpha of .71. Peters and Templin note dropping both alcohol and tobacco items, may increase Cronbach's alpha to .73-.80 (2008). However, both items were kept in order to assess the lifestyles choices of this population. Positive health outcomes will be determined by improvement in post-test scores. Two items asked how many days the subject had logged her activity/exercise over the past two months and how many questions she had actually written down to ask her physician at the next visit. Both of these actions were prescribed within the empowerment intervention and were measured in actual numbers for analysis. The number of times the subject actually sought information from community sources was also recorded.

Methods

Research Questions

The research questions for this study were as follows: 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 and health promoting outcomes between rural and urban hypertensive AA women in Texas?

Sample

A convenience sample of 35 African American women (25 rural and 10 urban) agreed to participate in the study. Attrition consisted of two subjects who did not answer all the items within the survey. The participants were recruited through church announcements and flyers from two rural and three urban predominately-AA churches in the Southeast Texas. G Power analysis (Faul, Erdfelder, Buchner, & Lang, 2009) analysis based on a one-tailed test, estimated moderate effect size , alpha .05, and power of .80 derived a total sample size of 27 needed for this study Inclusion criteria for the study was: 1) African American, 2) self-reported as having been diagnosed with HTN, and 3) at least 18 years of age. Persons of other ethnic backgrounds were excluded from this study since AA's are disproportionately affected by hypertension, and studies within this group are encouraged by national health agencies. A certain degree of homogeneity was expected and acceptable since the focus of this research is on one ethnic group.

Self-report is considered adequate for identification of HTN because perceived risk is being tested as an impetus to health actions, which was anticipated to be prompted and mitigated by the intervention. There were no significant differences between the rural and urban groups in age, general health, years of HTN diagnosis, marital status, and income. The age of the participants ranged from 37 to 82 years. The rural subjects were

slightly younger (M=53.7, sd 8.9) than their urban counterparts (M=58.7, sd 12.2). The rural subjects also reported a duration of hypertension diagnosis that was almost double that of the urban sample (M=15.2 years, sd 10.7 to M=8.4 years, sd 8.5). Overall, the years of education ranked at the high school level with urban AA women being slightly higher. The self-rated general health for the sample was satisfactory (M=3.07, sd .79) and a moderate-income level (M=2.89, sd 0.99) was reported.

Protocol for Psychological Empowerment Coaching (PEC) Intervention

The PEC intervention occurred at two rural and three metropolitan African American churches. Prior to the one-hour intervention session, the 62-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 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, 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 intervention was based on an educational pamphlet 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 entitled, *Blood Pressure and Your Health.* The goal of ASH is to reduce HTN as a health disparity by educating healthcare providers and patients about high blood pressure. The intervention, a one-hour empowerment-coaching session, 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 women 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 was 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.

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 (35) participants returned for the follow-up posttest session. Distribution of automatic blood pressure cuffs, donated by HoMedics, 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 (pretest-posttest) 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.

Findings

Sample Characteristics

There were no significant differences between the rural and urban groups in age, general health, years since hypertension diagnosis, marital status, and income. The age of the sample participants ranged from 37 to 82 years with a median age of 57.11. The rural subjects were slightly younger (M=53.7, sd 8.9) than their urban counterparts (M=58.7, sd 12.2). The average length of time since HTN diagnosis for the sample was 13.5 years (10.7). The rural participants (M=15.2) reported a duration of hypertension diagnosis that was almost double than that of the urban (8.4) sample, which is consistent with the literature review. The sample described their general health as between good and very good based on 5 point scale, with a higher score indicative of better state of health. Over half of the rural women and two-thirds of the urban women, reported having an educational level beyond high school. Only one participant reporting only having a high school education.

During the PEC intervention, the subjects in the urban group were noted to be more knowledgeable about HTN than those in the rural setting. However, there was more interest and appreciation for the presentation of knowledge about HTN among the rural subjects. They reported no one had ever asked them how their life was affected by HTN or challenges they encounter on a day-to-day basis.

Research Question #1

Research Question #1 asks: 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?

The pre-test scores of the each participant were compared to the posttest scores. The T-test for dependent samples was utilized to answer this question when the variables met the assumptions for parametric testing and the Related Samples Wilcoxon signed rank test was used when the assumptions were not met. Analysis of data revealed significant changes after the PEC intervention in both blood pressure self-care and exercise log use. However, there was no significant difference in pre- and post-test scores noted in community recourses and physician communication. This could be in part due to the limited access to internet and community information in the rural area.

Table 1. Health Promoting Outcome Measures

Health Promoting Outcomes	Pretest M(sd)	Posttest M(sd)	*P*
Blood Pressure Self-Care	40.38	35.53	**.001**
Exercise Log Use	.09	6.74	**.001**
Community Resources	.53	.71	.246
Physician Communication	1.12	1.65	.076

A significant relationship was noted between several variables (Table 2). Blood Pressure Self-Care was related to General Self-Efficacy indicating that those with higher general self-efficacy felt more in control of their blood pressure. Community Resources was negatively correlated with Empowerment reinforcing the idea that having fewer community resources was indicative of lowered feelings of empowerment. Those who were more likely to indicate comfort with Physician Communication were also more likely to use higher levels of Community Resources.

Table 2. Relationship Between Pender's Health Promotion Model Variables

VARIABLE	HEALTH PERCEP	GEN SE	PER SE	EMP	COMM SUPP	EXE INFLU	BP SELF CARE	EX LG USE	COMM RES	PHYS COMM
HEALTH PERCEP	1	na	na	na	na	na	na	na	na	na
GEN SE		1	na	na	na	na	.452 .001 31	na	na	na
PER SE			1	na	na	na	na	na	na	na
EMP				1	na	na	na	na	-0.25 .000 35	na
COMM SUPP					1	na	na	na	na	na
EXE INFLU						1	na	na	na	na
BP SELF CARE							1	na	na	na
EX LG USE								1	na	na
COMM RES									1	.562 .001 34
PHYS COMM										1

Research Question #2

Research Question #2 asks: Is there a relationship between prior related behaviors (perceived health perception), perceived self-efficacy, and activity related affect, interpersonal influences, and situational influences and health outcomes in hypertensive African American women?

The pretest scores of each participant were compared to the posttest scores. The T-test for dependent samples was used to answer this question when the variables met the assumption for parametric testing and the Related Samples Wilcoxon rank test was used when the assumptions were not met. Significance was only noted with the activity related affect factor (healthcare empowerment) (Table 3).

Table 3. Pre-test and Post-test Scores of Selected Variables

Factor (Pender's RHPM)	Pretest M(sd)	Posttest M(sd)	P
Prior Related Behavior	3.29	2.97	1.22
Perceived Self-Efficacy			
• General SE	33.09	31.85	.118
• Exercise SE	20.11	18.86	.418
• Chronic Disease Management SE	39.20	39.89	.600
Activity Related Affect	34.74	19.86	**.001**
Interpersonal Influences	30.11	29.63	.698
Situational Influences	8.37	8.94	.067

Research Question #3

Research Question #3 asks: Is there a difference in empowerment, self-efficacy, and health promoting outcomes between rural and urban hypertensive AA women?

The pretest scores of the rural participants were compared to the pretest scores and posttest scores of the urban participants (Table 4). The T-test for independent samples was used to answer this question when the variables met the assumptions and Mann Whitney test was used when the assumptions were not met. Only the empowerment score reflected a significant difference between the rural and urban participants in the posttest scores, no other significance was noted among the variables.

Interestingly, the posttest empowerment scores for both groups, especially the rural subjects decreased from the pretest measurement (Table 4). The expectation was to

see an improvement in the empowerment scores. A possible explanation may be that calling attention to the seriousness of their condition may have resulted in the women indicating lower perception of their own empowerment to change even though the PEC intervention did improve their confidence in their ability to manage their blood pressure and their intent to monitor their exercise. This decrease in empowerment also is indicative of the insufficient education received by hypertensive AA women.

Initially, the participants voiced a high level of understanding of hypertension during the small descriptive qualitative study and for this quantitative study. However, after receiving the PEC intervention, a majority of the participants realized they did not have a full or comprehensive understanding of HTN, the body's ability to compensate for fluctuation in blood pressure changes, and the long term affects of this compensation on the kidneys, heart, and brain. In addition, information was shared regarding how small modifications made to diet and physical activity can greatly improve one's life by reducing the development of complications associated with HTN. This new awareness may have caused a paradigm shift in the health constructs of the some of the participants. This internal change in beliefs may have prompted the change in action which was evident in the increase in intent and use of the exercise log use as previously mentioned in research question #2.

Table 4. Comparison of Urban and Rural Subjects

Population	Empowerment		Self-Efficacy		Health Promoting Behaviors					
					Exercise Log Use		Community Resources		Physician Communication	
	Pretest	Post test	Pretest	Post test	Pretest	Post test	Pretest	Post test	Pretest	Post test
Urban	34.00	32.40	57.40	57.60	.30	3.90	.40	.70	.90	1.60
Rural	35.04	14.80	60.80	59.08	.20	7.92	.56	.68	1.21	1.72
Significance	.418	**.001**	.273	.756	.525	.724	.785	.744	.518	.590

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; 1997) 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.

Discussion

These research findings support the utilization of PEC intervention to improve self-management of high blood pressure among hypertensive AA women, in both rural and urban areas. Due to lack of access to health information in rural communities and the higher incidence of HTN more needs to be done in order to educate and train AA women to take a more active role in the self-management of their high blood pressure. Rural AA women were more excited about the presentation of HTN information and inquired about future studies and presentation about health conditions, which affect AAs. The subjects expressed gratitude for the opportunity to participate in the study. Many stated no one had asked them about their perspectives and thoughts about HTN and how it affected them. They voice a feeling of relief in being about to talk openly, with other hypertensive AA women about how their experiences with HTN and communicating with healthcare providers. This is encouraging for conducting more research with this often reluctant population.

Although AA women were shown to have high levels of self-efficacy, they do not demonstrate this knowledge for the management of their disease. More research needs to be done regarding implementation of current knowledge in the self-management of HTN in AA women. Although the subjects were informed of the benefits of weight loss, diet and exercise and rated them as being important to HTN management, AA women still did not significantly participant in exercise on a regular basis. The women in both groups were in support of weekly meetings in order to participate in group exercise, diet modification, and education in order to reduce their dependence on antihypertensive therapies. All women were strongly encouraged to discuss their concerns and not to stop any medications without discussing with their healthcare provider.

Due to limited church resources in the rural communities there was no money for internet access and computers. This was evident in the research findings, which show AA women were more inclined to complete exercise logs but were shown to have limited or no access to community resources as a means to obtain health information. Only one of the churches in this study had a library on-site where members could obtain health information. The rural community did have access to public library and local area school but did not feel comfortable with their computer use to visit available sites.

The response of the participants was optimistic. They voiced a desire to live healthy lives and to avoid complications of HTN but wished the study was longer so they could have better outcomes. Many stated they would like to exercise but felt unsafe to do alone, did not know where to start, and desired to have group activities for exercise. An exercise program at their church would provide direction and structure to AAs as they begin to make lifestyle changes to improve health outcomes.

Strengths and 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.

Recommendations

More research is needed to gain insight into African American women's perspectives about the challenges and barriers they encounter with the self-management of high blood pressure. Financial support needs to be made available to all research scientists, but especially to nurse researcher who explore the behavioral aspects of self-management of disease. Currently funding is more available for physicians, pharmaceutical companies, and corporations. Independent and qualitative researchers may encounter more difficulty obtain funding to explore the health beliefs and behaviors of AAs which are often the root cause of their noncompliance. Grant funding for the establishment of health education centers in rural areas would also be a great asset to the hypertensive AA women in both urban and rural areas, but especially rurally-dwellers.

Psychological Empowerment Coaching (PEC) can be effective in increasing self-management of high blood pressure among hypertensive AA women and may potentially affect other high-risk populations. The average age of women in this study was mid-50's and many had a HTN diagnosis for more than 20 years. PEC intervention if implement

early in HTN diagnosis can help to reduce this health disparity and the complications, which often adversely affect hypertensive AA women.

This one-time intervention should be developed into a yearlong program which would allow for weekly meetings. Weekly sessions will permit more in-depth coverage of the pathophysiology of HTN and the beneficial effects of diet, exercise, and therapeutic communication with healthcare providers in the self-management of HTN. Focus group sessions would be utilized to enhance insight to challenges faced by their peers. The women in this study stated feeling a sense of pride and gratitude for the opportunity to share their HTN experience. They admitted it was encouraging to hear they were not along and others had gone through similar experiences.

Exercise activities and home blood pressure monitoring should also be incorporated into the program. Intermittent measurements of weight, blood pressure, and exercise log should be documented. Each subject in this study received an automatic blood pressure cuff to keep for ongoing home monitoring of their blood pressure.

Summary

The review of literature supports the use of health promotion models to develop interventions to improve blood pressure control among AA women. In addition, researchers are encouraged to collaborate with local AA organizations as a means to gain community support and to enhance recruitment of participants. The literature also calls for interventions based on social cognitive and health promotion models. Self-regulation of health through control of diet and exercise among AA women is central to slowing the progression of hypertension.

The development and utilization of empowerment training may increase AA women's compliance with prescribed hypertension treatment plans which may in turn yield improved health outcomes. By utilizing an empowerment-training program to educate, encourage, and promote active involvement in their health, marginalized individuals may take a more active role in their own health management and enjoy the benefits of improved health outcomes.

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Empowerment as A Hypertension Management Strategy for African American Women

Appendix C. Research Instruments

Participant Questionnaire 62 items

1. What is your age in years?

_____years

2. Are you currently (check only one):

[ ] Married

[ ] Single

[ ] Separated

[ ] Divorced

[ ] Widowed

3. How long have you been diagnosed with high blood pressure?

_____ Years _____Months

4. Which of the following best describes your financial status?

[ ] Quite secure

[ ] Comfortable

[ ] OK

[ ] Marginal

[ ] Poor

5. Years of Education

[ ] less than high school

[ ] high school

[ ] more than high school

6. In general, would you say your health is :.....(Circle one)

[ ]Excellent

[ ]Very good

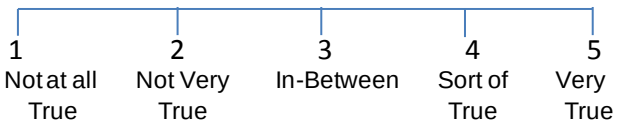
[ ]Good

[ ]Fair

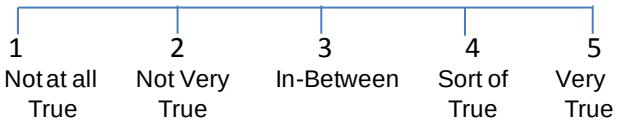
[ ]Poor

When you visit your doctor, how often do you do the following (please circle one number for each question)

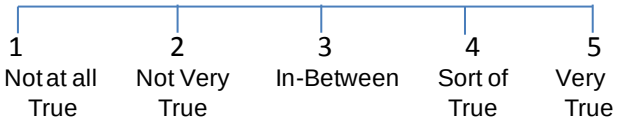
7. Prepare a list of questions for your doctor?



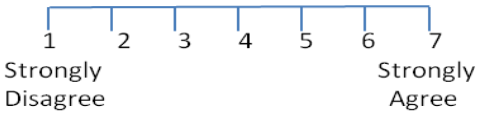
8. Ask questions about the things you don't understand about your treatment?



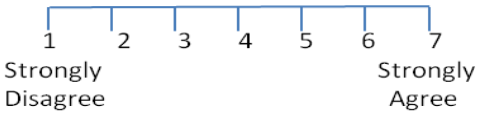
9. Discuss any personal problems that may be related to your illness?



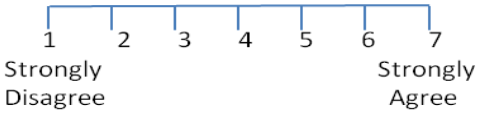
10. I am eating a low-fat diet each day.



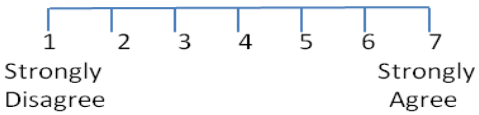
11. I am eating a low-salt diet each day.



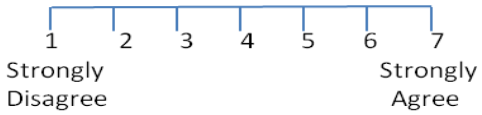
12. I am eating a diet with at least five fruits and vegetables each day.



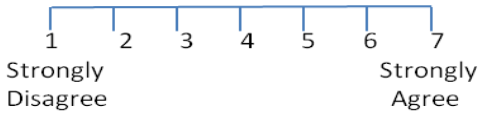
13. I am physically active at least 30 minutes each day.



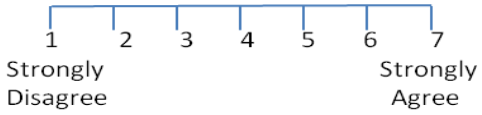
14. I am able to maintain a low level of stress each day.



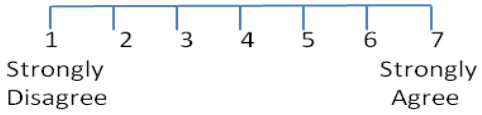
15. I am able to maintain a healthy weight.



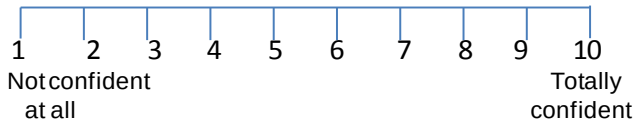
16. I see my doctor as often as he/she tells me to.



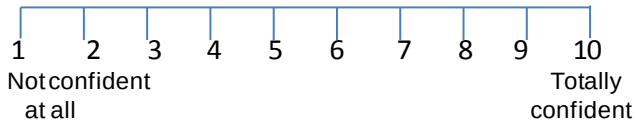
17. I am taking my blood pressure pills exactly as prescribed by my doctor each day.



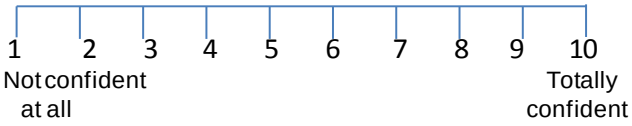
18. How confident are you that you can do gentle exercises for muscle strength and flexibility three to four times per week (range of motion, using weights, etc.)?



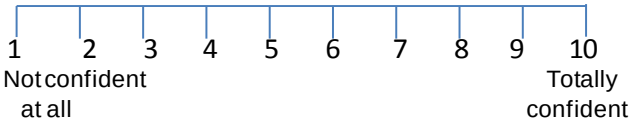
19. How confident are you that you can do aerobic exercise such as walking, swimming, or bicycling three to four times each week?



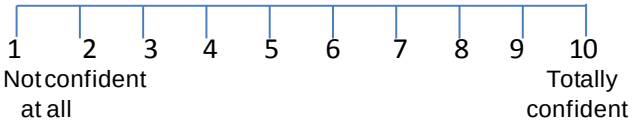
20. How confident are you that you can exercise without making symptoms worse?



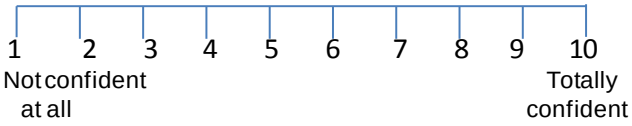
21. Having an illness often means doing different tasks and activities to manage your condition. How confident are you that you can do all the things necessary to manage your condition on a regular basis?



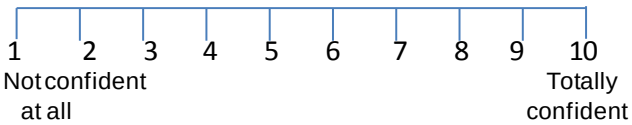
22. How confident are you that you can judge when the changes in your illness mean you should visit a doctor?



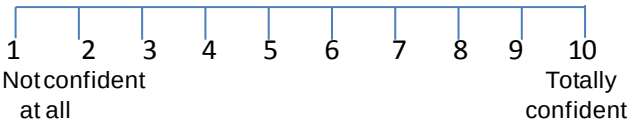
23. How confident are you that you can do the different tasks and activities needed to manage your health condition so as to reduce your need to see a doctor?



24. How confident are you that you can reduce the emotional stress caused by your health condition so that it does not affect your everyday life?

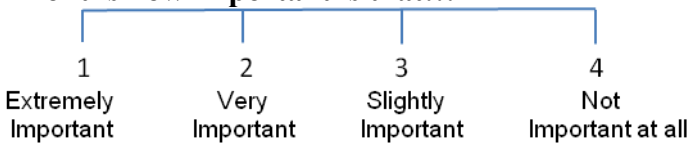


25. How confident are you that you can do things other than just taking medication to reduce how much your illness affects your everyday life?

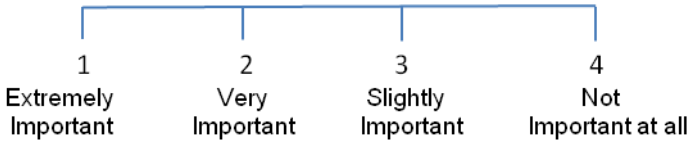


I will ask you the importance you give to different situations related to health services you received during last 2 months.

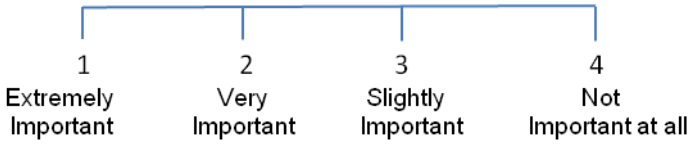
During last 2 months how important is that…



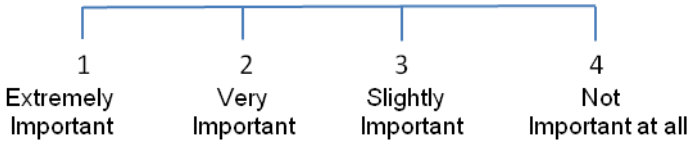
26. You and your loved ones decide the need for the health care and services?



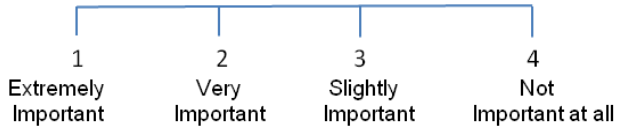
27. You and your loved ones decide the type of health care and services received?



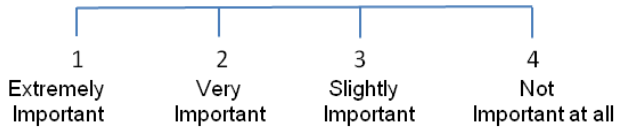
28. You and your loved ones decide the amount of health care and services?



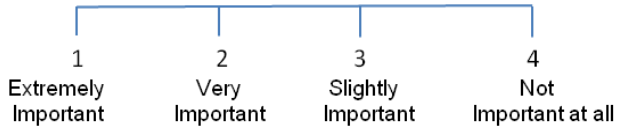
29. You are able to talk to a professional to answer your questions?



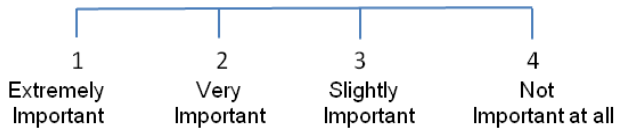
30. Your choices are respected?



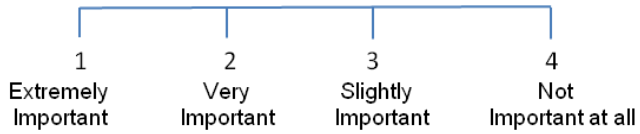
31. You obtain all the information you want?



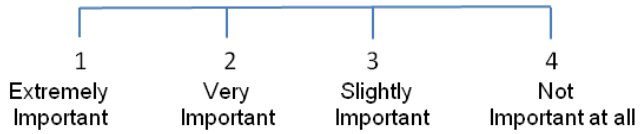
32. You get the help you need?



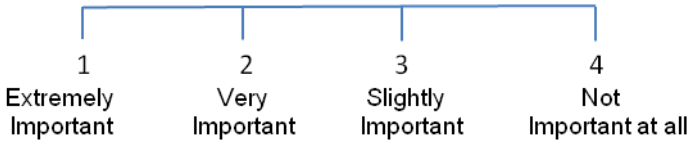
33. You ask for explanations?



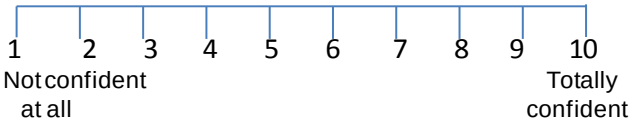
34. You ask questions?



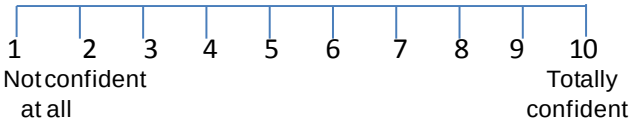
35. You ask for advice?



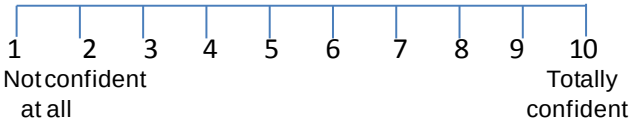
36. How confident are you that you can get help from family and friends to help you with the things you need (such as household chores like shopping, cooking, or transport)?



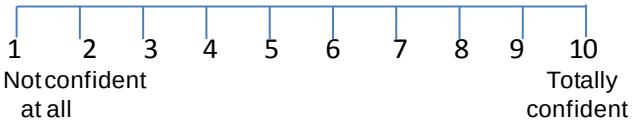
37. How confident are you that you can get emotional support from friends and family (such as listening or talking over your problems)?



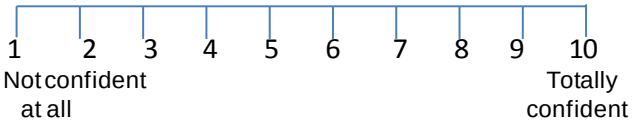
38. How confident are you that you can get emotional support from resources other than friends and family, if needed?



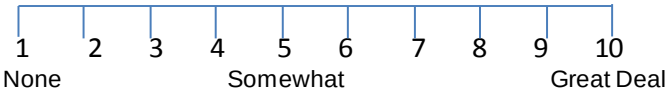
39. .How confident are you that you can get help with your daily tasks (such as household cleaning, yard work, meals, or personal hygiene) from recourses other than friends or family, if needed?



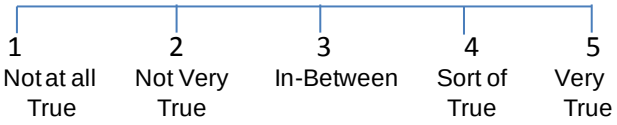
40. How confident are you that you can get information about your disease from community resources?



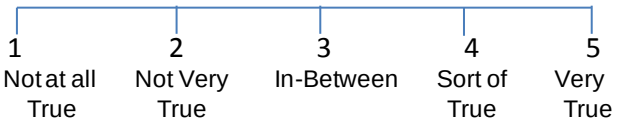
41. How much do you believe exercise has an influence on blood pressure?



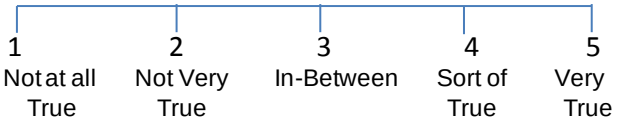
42. I could exercise even if I was tired.



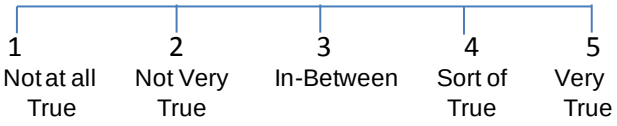
43. I could exercise even if I had other things I wanted to do.



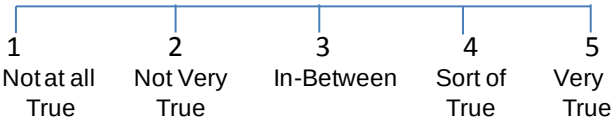
44. I could exercise even if I had to exercise alone.



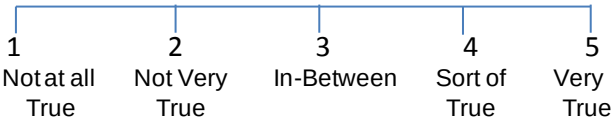
45. I could exercise even if I had a bad day.



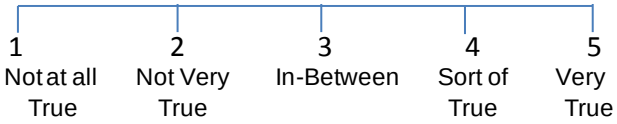
46. I could exercise even if I was feeling lazy.



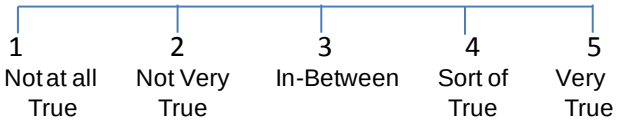
47. I could exercise even if I was not very good at it.



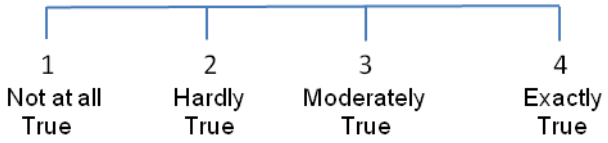
48. I could exercise even if I was sore from exercising the day before.



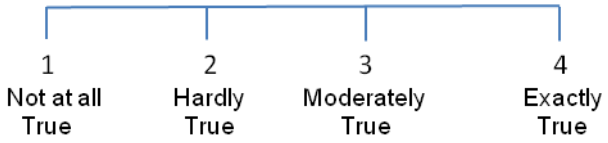
49. I could exercise even if I was not in the mood.



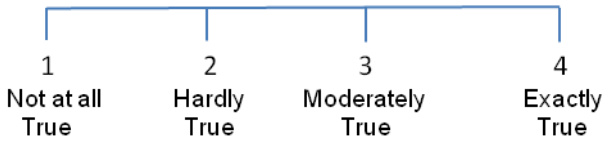
50. I can always manage to solve difficult problems if I try hard enough.



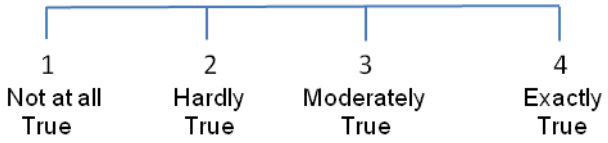
51. If someone opposes me, I can find the means and ways to get what I want.



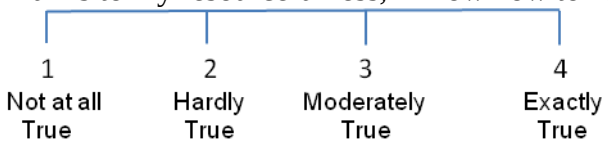
52. It is easy for me to stick to my aims and accomplish my goals.



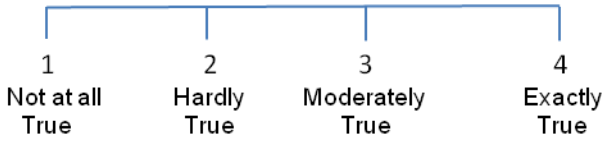
53. I am confident that I could deal efficiently with unexpected events.



54. Thanks to my resourcefulness, I know how to handle unforeseen events.

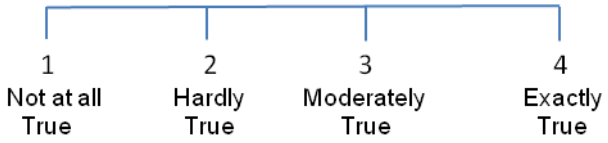


55. I can solve most problems if I invest the necessary effort.

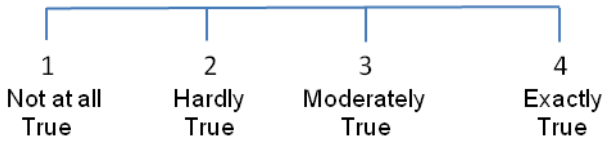


56. I can remain calm when facing difficulties because I can rely on my coping abilities.

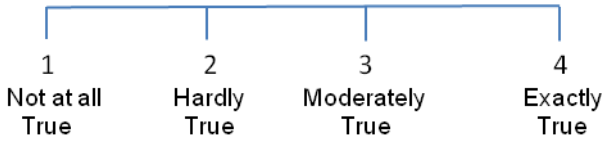
57. When I am confronted with a problem, I can usually find several solutions.



58. If I am in trouble, I can usually think of a solution.



59. I can usually handle whatever comes my way.



60. How many days during the past 60 days did you log your exercise activity?

_____ days

61. In the last week, how times did you use community resources to obtain health information?

_____ days

62. How many questions have you written to ask your physician?

0 1 2 3

Appendix C Permission to use Theory and Instruments

C.1 Pender Health Promotion Theory

and Self-Efficacy Scale

Re: 14 item self-efficacy scale
Nola Pender [npender@umich.edu]
Sent: Tuesday, April 06, 2010 9:48 PM
To: Simon, E'Loria

Dear E'Loria:

You can use the Health Promotion Theory without my permission. It is open information. Also, you can use the electronic copy of the Health Promotion Model on my website as well as any other information there on the site that may be helpful to you.

www.nursing.umich.edu/faculty/pender_nola.html

Wishing you academic success and good health,
Nola Pender
P.S. Thank you for sharing the picture.

Appendix C.2 Permission to use Peters Blood Pressure Self-care Scale

Peters Blood Pressure Self Care Scale

Re: Blood Pressure Knowledge and Self-Care Bahavior Scales
Rosalind M. Peters [ad7736@wayne.edu]
Sent: Thursday, August 05, 2010 9:23 AM
To: Simon, E'Loria
Attachments: Revised Knowledge and SC S~1.pdf (23 KB)

Hi E'Loria - Dr. Templin forwarded your email to me - Congratulations on pursuing doctoral study I hope the program's going well for you.

Attached you'll find a pdf with my two scales as well as information regarding the testing of the revised scales with a group of low income African Americans. If you have questions after you review this material please do not hesitate to contact me.

Good luck with your studies. I'll look forward to seeing your results.

Sincerely,

Rosalind M. Peters

Appendix C.3: Permission to Use Healthcare Empowerment Questionnaire

RE: HECQ
Rejean Hebert [Rejean.Hebert@USherbrooke.ca]
Sent: Tuesday, August 17, 2010 1:42 PM
To: Simon, E'Loria
Attachments: PRISMA impact Jgeront 2010.pdf (368 KB) ; Gagnon-HCEQ empowerment.pdf (104 KB)

Hello,

Sorry for the delay in responding. The validity and reliability studies available on this instrument were reported in the original paper (enclosed). In this paper, you have the wording of the items and the scale (we have only a clean French version of the scale) There are some data published (as a book chapter; see chapter 14 of the 1st PRISMA book:https://pod51000.outlook.com/owa/redir.aspx?C=8d141ffa15fc49ab9cf08a73f54eac8d&URL=http%3a%2f%2fwww.prismaquebec.ca%2fdocuments%2fdocument%2fPrisma_English.pdf) using this instrument.
It was one of the instrument used as an outcome variable in the PRISMA study (see paper enclosed and the chapter 12 of the 2nd PRISMA book: **MailScanner considère les adresses numériques comme dangereuses:** http://207.253.82.104/documents/document/PRISMA2ndbook2008.pdf).
Hope it helps.
Good luck.

(Voir fichier joint : Gagnon-HCEQ empowerment.pdf)(Voir fichier joint : PRISMA impact Jgeront 2010.pdf)

Appendix D: Institutional Review Board Approval

The University of Texas at Tyler
Institutional Review Board
November 15, 2010

Dear Ms. Simon-Campbell,

Your request to conduct the study entitled *Empowerment as a Hypertension Management Strategy for African American Women* is approved as an expedited study, IRB #F2010-25 by The University of Texas at Tyler Institutional Review Board. This approval includes use of written informed consent. Please ensure that any research assistants or co-investigators have completed human protection training, and have forwarded their certificates to the IRB office (G. Duke). **Please review the UT Tyler IRB Principal Investigator Responsibilities, and acknowledge your understanding of these responsibilities and the following through return of this email to the IRB Chair within one week after receipt of this approval letter**:

- This approval is for one year, as of the date of the approval letter
- Request for Continuing Review must be completed for projects extending past one year
- Prompt reporting to the UT Tyler IRB of any proposed changes to this research activity
- Prompt reporting to the UT Tyler IRB and academic department administration will be done of any unanticipated problems involving risks to subjects or others
- Suspension or termination of approval may be done if there is evidence of any serious or continuing noncompliance with Federal Regulations or any aberrations in original proposal.
- Any change in proposal procedures must be promptly reported to the IRB prior to implementing any changes except when necessary to eliminate apparent immediate hazards to the subject.

Best of luck in your research, and do not hesitate to contact me if you need any further assistance.

Sincerely,

Gloria Duke, PhD, RN

Gloria Duke, PhD, RN
Chair, UT Tyler IRB

Appendix E: Consent form

THE UNIVERSITY OF TEXAS AT TYLER

Informed Consent to Participate in Research

1. Project Title: Empowerment as a Hypertension Management Strategy for African American Women

2. Principal Investigator's Name: E'Loria Simon-Campbell

3. Participant's Name: _____

To the Participant:

You are being asked to take part in this study at The University of Texas at Tyler (UT Tyler). This consent form explains why this research study is being performed and what your role will be if you choose to participate. This form also describes the possible risks connected with being in this study. After reviewing this information with the person responsible for your enrollment, you should be able to understand and make an informed decision on whether you want to take part in this study.

DESCRIPTION OF PROJECT:

4. Purpose of the Study

I invite you to be in a study to see if attending a class about your high blood pressure will help you know more about your health and how to get answers to your questions.

5. Research Procedures

You will be asked to fill out two surveys: one will be done today and one in our next class in 6-8 weeks. The survey takes about 15-20 minutes, and we will help you to fill it out if you wish. This evening we will have a 1-hour educational session about high blood pressure and talk about how you can take control so you have better health. At the end of the class, we will discuss things that you think will help you make changes in your life. You will be asked to keep a log for two months about the amount of time you spent exercising. At the second session in 6-8 weeks, you will fill out the same survey to see if there is any change. At the end of this session you will receive a Certificate of Completion, an automatic blood pressure home monitoring system (free of charge), and answers to any question you may have about high blood pressure.

6. Side Effects/Risks

   The survey may contain questions that are sensitive in nature. You may refuse to answer any question that makes you feel uncomfortable. If you have any concerns after completing the surveys, please feel free to contact the principle investigator (contact information will be at the end of this consent form). We do not think there is any risk to this study, but please keep in mind that unpredicted risks may exist**.**

7. Potential Benefits

   Your participation in this study will help us understand the issues or concerns faced by African American Women with high blood pressure so we can try to improve their health outcomes. For being in our study, you will receive a box of healthy option cereal from General Mills at the beginning of the study and an automatic blood pressure home monitoring system at the end of this study.

UNDERSTANDING OF PARTICIPANTS

8. I have been given an opportunity to ask any questions concerning the survey and the education sessions involved and the investigator has been willing to answer my questions. This study is under the control of The University of Texas at Tyler and will be conducted at my church. It is a part of the project titled, numbered, and described above. I hereby authorize E'Loria Simon-Campbell, the principal investigator, and her research assistants **to** administer the questionnaires and hypertension education, and I agree to participate.

9. I am taking part in this study because I want to. I chose to take part in this study after having been told about the study and how it will affect me. I know that at anytime I can decide I do not want to do the study any more. I know that if I decide I do not want to do the study any more nothing will happen to me and it is OK to stop doing the study.

10. If I sign this consent form I know it means that I am saying that I have been told that I can stop being a part of this study at anytime. I know that if I do stop being a part of the study nothing will happen to me.

In addition, I understand the following:

- I will be informed of any new information or findings that may affect my willingness to continue participating in this study.
- The study may be changed or stopped at any time by the principal investigator or by The University of Texas at Tyler.
- The principal investigator will gain my written consent for any changes that may affect me

11. I have been assured that my participation is private and confidential and that my name will not be revealed in any reports or publications resulting from this study. I understand that qualified investigators from the Department of Health and Human Services may review my records where appropriate and necessary, but my information will still be confidential.

    I also understand that any personal health information or other information collected during this study may be shared with the following as long as no identifying information as to my name, address or other contact information is provided):

    - Information shared through presentations or publications

I understand The UT Tyler Institutional Review Board (the group that ensures that research is done correctly and that measures are in place to protect the safety of research participants) may review documents that have my identifying information on them as part of their compliance and monitoring process. I also understand that any personal information revealed during this process will be kept strictly confidential.

I also understand that any information regarding safety of drugs must be shared, but in regards to any other information, I may cancel my permission at any time to share information collected from me by contacting the researcher named in this consent at the following address:

E'Loria Simon-Campbell, RN. PhD I
The University of Texas at Tyler
Institutional Review Board
c/o Office of Sponsored Research
3900 University Blvd
Tyler, TX 75799

12. I have been informed of the reasonably foreseeable risks associated with participation in this research project. I have been informed that should I suffer any injury as a result of participation in this project, Emergency Services available at 911. I understand, however, that in the absence of negligence on the part of The University of Texas at Tyler personnel, I cannot expect to receive any payment for medical expenses or any financial compensation for such injury.

13. I understand that I will not be charged for any costs involved in this project.

    My insurer and/or I will be responsible for the cost of any supportive or treatment of any research-related complications or injuries**.**

    I also understand that I will not be compensated for any patents or discoveries that may result from my participation in this research.

14. If I have any questions concerning my participation in this project, I shall contact E'Loria Simon-Campbell at (713) 412-3929 or Dr. Lynn Wieck at (281) 375-8155. If I have any questions concerning my rights as a research subject, I shall contact Dr. Gloria Duke, Chair of the IRB, at (903) 566-7023. I understand that I may contact Dr. Duke with questions about research-related injuries.

15. CONSENT/PERMISSION FOR PARTICIPATION IN THIS RESEARCH STUDY

Based upon the above, I consent to participate in the research and attend the described hypertension education session. I give the principal investigator permission to enroll me in this study. I have received a signed copy of this consent form.

_____ _____

Signature of Participant Date

_____ _____

16. I have discussed this project with the participant using language that is understandable and appropriate. I believe that I have fully informed this participant of the nature of this study and its possible benefits and risks, and I believe the participant understood this explanation

_____ _____

Investigator Date

Appendix F: Biosketch

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME	POSITION TITLE
E'Loria Simon-Campbell	Assistant Clinical Professor
eRA COMMONS USER NAME	

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.*)

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Texas at Tyler	PhD	05/2011	Nursing
University of Texas at Tyler	MSN	2005	Nursing (Education Track)
Prairie View A&M University	BSN	1995	Nursing

NOTE: The Biographical Sketch may not exceed two pages:

A. Positions and Honors.

Positions:

Prairie View A&M University

Assistant Clinical Professor

Lead Instructor Adult Health I

Retention Team (Adult Health I & II)

Faculty Senator – Prairie View A&M University

Honors:

Texas A&M University Teaching Excellence Award – Spring 2009

B. Publications (Project Related) Selected peer-reviewed publications (in chronological order).