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Exploring Predictors of Information Use to Self-Manage Blood Pressure in Midwestern African American Women with Hypertension

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Introduction

Background

African American women have the highest prevalence of hypertension of any group in the United States.^{1,2} Hypertension is a chronic disease that requires long-term self-management – daily tasks to manage the illness, which include lifestyle changes related to diet, exercise, medication, and smoking cessation.^{3,4} Approximately one of every two patients who are receiving treatment have uncontrolled blood pressure, which is indicative of the challenges of self-management.^{5,6} In particular, African American women are diagnosed with hypertension earlier and have higher average blood pressure readings, which increases their risk of stroke, end-stage renal disease, and death.^{1,2,7,8} Additionally, in previous studies challenges to self-management have been reported that are specific to the African American community, such as difficulties related to medication adherence and lack of knowledge or misconceptions about hypertension management.^{9,10} To develop effective strategies to address this disparity, a better understanding is needed of the factors underlying

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Compliance with Ethical Standards: Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: This study was declared exempt by the University of Michigan Institutional Review Board.

hypertension self-management behaviors in African American women. Information use is a central component of the self-management process. In order to successfully self-manage hypertension, patients must first find information and understand it so they can use it to problem-solve to manage their blood pressure.¹¹⁻¹³

Theoretical framework

This study was guided by an enhanced model based on the Theory of Planned Behavior (TPB).^{14,15} The TPB suggests that personal beliefs, such as attitude and social norms, are important predictors of behavior and has been used in multiple studies related to diet, exercise, and self-management of blood pressure in African Americans.¹⁶⁻²⁰ A recent extension of this model, the Intergrated Behavioral Model (IBM) included concepts based on information, such as knowledge and past experiences.¹⁴ However, this model does not include other informational concepts related to self-management behavior, such as information seeking, sharing, and use.¹⁵ Therefore, the model guiding this study used traditional concepts (attitude and social norms) as well as informational concepts (information seeking and sharing) to explore self-reported information use to self-manage blood pressure in African American women with hypertension.

Important factors related to information use to self-manage blood pressure include personal beliefs (attitude, social norms) and information behaviors (seeking and sharing).^{5,11,21,22} Patients' attitude towards a behavior, such as management of hypertension, is an important cognitive domain to consider when determining their capacity for self-management.²³⁻²⁵ Subjective norms, or social pressure that one perceives, is also related to participation in self-management activities.²⁶ In addition, self-management of hypertension requires that patients learn new information and skills.⁸

Information seeking is a specific action taken to obtain information on self-managing blood pressure to address a need.^{27,28} Another information behavior, information sharing, is a social activity in which one patient gives information about hypertension management to another peer or peers. Patients have reported that information sharing allowed them to use information and share their expertise with others.²⁹ They also reported that information sharing was a rewarding and uplifting experience.²⁹ In addition, previous studies suggest that relationships exist among information seeking, sharing, and use to self-manage chronic illness.³⁰ Yet few studies have explored African American women's information use to order to self-manage blood pressure. The purpose of this study was to determine which variables best predict information use to self-manage blood pressure in a sample of Midwestern African American women with hypertension.

Methods

A cross-sectional, correlational design was used. A convenience sample of women attending a large church conference in the Midwest were invited to participate in the study. Several methods (flyers, announcements, in-person verbal invitation) were used to offer women who attended the conference the opportunity to participate in the study. The church conference was used to access a large number of African American women at one time. This study was

declared exempt by the University of Michigan Institutional Review Board and approval to conduct the study was granted by the conference administrators.

Participants

The sample consisted of 94 African American women with hypertension who attended the church conference. Inclusion criteria were: (a) age 18 years of age or older, (b) diagnosed with high blood pressure or hypertension, and (c) self-identified as an African American. The mean age of the women was 59 years (standard deviation [SD] = 11.34, range 31-82). Most of the women had at least a high school education (98%) and were not working or had retired (47%). (See Table I for additional details of the characteristics of the sample).

The average blood pressure of the sample was 143/84 mm Hg (SD = 19/14), which is considered high.⁸ Many of the women (n = 78) were taking medications to control their blood pressure. Yet, the mean blood pressure of those who were taking medications was still elevated at 142/84 mm Hg (SD = 21/14). In fact, 46% of the women in the sample had systolic blood pressures greater than 140 mm Hg and 26% had diastolic pressures greater than 90 mm Hg.

Measures

Data Collection—Women interested in participating were invited to sit in a small, private area of the conference center. Potential participants were given written information describing the study. Completion of the questionnaire indicated agreement to participate in the study. Participants completed a 72-item questionnaire that included study measures and demographics. The time to complete the questionnaire was approximately 20 minutes. Each participant received a \$10 gift card for participating in the study. Given the variables in the study, 98.9% of the women had at least a high school education, and 77.2% had annual incomes greater than \$30,000. It is unlikely that a small amount (\$10) would influence participation in the study.

Blood pressure readings were obtained after the questionnaires were completed and the participant had been sitting still for at least five minutes. Guidelines outlined in the Seventh report of the Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC-7) were followed when obtaining blood pressures.⁸ The Omron Elite 7300W – Women's Advanced blood pressure monitor was used to measure the each participant's blood pressure. This monitor had been validated in previous studies.³¹

Outcome

Information use: Information use to self-manage blood pressure was measured by a subscale of the Modes of Information Acquisition, Sharing, and Use Scale.³⁰ It is an eight-item subscale that reflects factors associated with information use to self-manage blood pressure. This measure was adapted from a previous study conducted with African American participants regarding information behaviors and health related decision making.³⁰ The Cronbach's alpha reliability coefficient reported was 0.93.³² Possible responses included: I used information to “plan or make high blood pressure-friendly meals” and “monitor and track my blood pressure at home.” Responses were ranked on a five-point,

Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). An overall score was calculated by summing the number of responses the participant selected; higher scores indicated increased use of information to self-manage blood pressure. This measure had satisfactory internal consistency ($\alpha = 0.68$).

Predictors

Attitude: Attitude towards self-management of hypertension in African Americans was measured using three items adapted from the Health Beliefs Questionnaire.³³ Given that hypertension disproportionately affects African American women, and the goal was to assess attitude towards self-management of hypertension, this measure assessed perceived importance of the issue to one's identity group. Responses were based on the level of agreement with statements such as "African Americans need to know all they can about high blood pressure." Responses were ranked on a five-point, Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicate more positive attitudes towards taking action to self-manage blood pressure. The Cronbach's alpha reliability coefficient was 0.59 in this sample.

Subjective norms: Subjective norms related to blood pressure management among African Americans were measured using five items adapted from the Social Norms Questionnaire.³⁴ Responses were based on level of agreement with statements such as "It would be socially acceptable in the African American community to look for information on how to make food that helps to lower blood pressure." Responses were ranked on a five-point, Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated stronger perceived norms in favor of active blood pressure self-management. In this study, this measure had good internal consistency reliability with Cronbach's alpha coefficient = 0.88.

Information seeking: The reasons for and extent of information seeking on blood pressure management were measured using an eight-item subscale of the Modes of Information Acquisition, Sharing, and Use Scale.³⁰ Responses were based on level of agreement with statements such as "I look for information on high blood pressure by myself" and "I ask someone else to look for high blood pressure information for me." Responses were ranked on five-point, Likert-type scales ranging from 1 (never) to 5 (very often). These items were adapted from a previous study conducted with African American participants regarding information seeking and HIV testing.³⁰ The Cronbach's alpha reliability coefficient was 0.84 in this sample.

Information sharing: The reasons for and extent of information sharing related to blood pressure management were measured using a six-item subscale of the Modes of Information Acquisition, Sharing, and Use Scale.³⁰ These items were adapted from a previous study conducted with African American participants regarding HIV information sharing and HIV testing.³⁰ Possible responses included: "I tell people things I know about high blood pressure" and "I give people advice or encouragement about high blood pressure prevention or treatment." An overall score was calculated by summing the number of responses that the participant selected. In this study, this measure had a satisfactory reliability coefficient ($\alpha = 0.70$).

Demographic factors: Part of the survey included questions about demographic characteristics. The women were asked whether or not they had been clinically diagnosed with hypertension. Participants were asked additional information in order to examine the influence of demographic factors on information use. Specific characteristics measured included: current occupational status, annual individual income, and level of education.

Analysis

A power analysis was conducted using G*power 3.1. The highest level of analysis was a multivariate linear regression. It was determined that in order to reach 80% power with an alpha of .05, a minimum sample size of 92 participants was needed.³⁵ Preliminary analyses were conducted to ensure no violation of the statistical assumptions of normality and multicollinearity for regression analyses. Multiple regression was used to assess the ability of seven variables (occupational status, income, education, information seeking, attitude, social norms, and information sharing) to explain levels of information use in African American women with hypertension.

Model Testing—The regression modeling was conducted in serial steps, in order to first determine the influence of demographic factors (occupational status, income, and education); then individual factors (information seeking and personal beliefs); and finally the influence of factors that required interaction with another individual (information sharing). The steps were: Step 1 – demographic factors; Step 2 – information seeking; Step 3 – personal beliefs (attitude and subjective norms); and Step 4 – information sharing. All tests were two-tailed and *p* values <.05 were considered statistically significant. SPSS 21.0 was used to perform the statistical analyses.

Results

Descriptive Results

Table II provides a summary of the mean scores of major study variables.

Information Use—Nearly all of the women in the sample (89%) reported at least one mode of information use to self-manage blood pressure. As shown in Table II, the mean score reflects that information use scores fell between one and two modes of information use. Frequencies and percentages were used to describe the reasons for information use in the sample. As shown in Table III, the participants were most likely to report information use to change their overall approach to maintaining their health (47%). See Table III for a description of all the reasons reported for information use.

Predictors—Attitude towards blood pressure self-management and subjective norms scores were strongly positive. As shown in Table II, these scores reflect that, in general, the women in the sample had a positive attitude towards self-management of blood pressure and thought their peers would find self-management behaviors of hypertension to be socially acceptable.

Frequencies and percentages were used to describe the reasons for information seeking in the sample. Almost all of the women (91%) reported participating in at least one mode of

information seeking. The women were most likely to report that they unexpectedly learned things about high blood pressure from the media: watching television, listening to the radio, or reading the newspaper (71%). As shown in Table II, the mean information seeking scores were high, reflecting that, in general, the women in the sample were participating in this activity.

Frequencies and percentages were also used to describe the reasons for information sharing in the sample. The majority of the participants (86%) reported performing at least one mode of information sharing. The women were most likely to report that they told others things they knew about managing high blood pressure (56%). As shown in Table II, the mean score on the information sharing measure also indicated that, in general, women in the sample were reported two modes of information sharing to give blood pressure information to others.

Regression Results

Table IV provides a summary of the regression model.

The outcome for this study was information use. Demographic factors were entered at Step 1, explaining 4% of the variance in information use. After entry of information seeking at Step 2, the total variance explained by the model as a whole was 15%, $F(4, 82) = 3.47$, $p = .01$. After entry of the individual factors at Step 3, the total variance explained by the model as a whole was 20%, $F(6, 80) = 3.31$, $p = .01$. After the entry of information sharing at Step 4, the total variance explained by the model as a whole was 36%, $F(7, 79) = 6.29$, $p < .001$. As shown in Table IV, information sharing was statistically significant variable in the final model ($\beta = .46$, $p < .001$).

The final model suggests that the information sharing was the best predictor to explain information use to self-manage blood pressure. This means that women who reported sharing blood pressure information with others were almost twice as likely to report using information to self-manage their blood pressure. Initially, information seeking and subjective norms were significant in explaining information use. However, once information sharing was entered into the model, information seeking and subjective norms were no longer significant. Attitude, income, occupational status, and education were not significant explanatory variables in this model.

Discussion

Information Sharing as A Predictor of Information Use

The most significant contribution of this study was the identification of information sharing as a significant predictor of information use. The majority of the sample participated in some form of information sharing. This may be due in part to the fact that women in the sample likely had an available network to share information (their church). This is similar to other findings that highlight importance of belonging to a network in order to be able to participate in information sharing.³⁰ It is possible that the women in the sample were likely to report information sharing because they were attempting to meet psychosocial needs: feeling reassured or understanding other's experience with hypertension. Additionally, it is

possible that sharing information with others deepened participants' learning regarding blood pressure management information. Interactions with blood pressure information and each other could also be an opportune time to for the women to identify trusted healthcare professionals, specifically if additional care is needed (guidance on how to make lifestyle changes, initiating medication therapy).^{36,37} Exploration of potential motivations for information sharing is necessary as it can guide intervention development. Previous qualitative studies identified relationships among information seeking, sharing, and use among another high-risk community (African American men) with a different chronic illness (HIV).³⁰ To our knowledge, we are the first team to identify information sharing as a predictor of information use among African American women with hypertension. The findings extend prior work by demonstrating the strength of the association quantitatively. Additional studies are needed to continue examination information behaviors in this population, as well as other racial groups and populations with different chronic illnesses.

Personal Beliefs

Surprisingly, the personal belief variables of attitude and social norms were not independently significant in the final model. These results are consistent with other studies that found attitude and social norms did not have an independent effect on women's efforts to self-manage blood pressure.^{38,39} In contrast, other studies conducted in similar samples found that attitude and social norms do influence self-management.^{24,25} While it is possible that information behaviors were more important factors in this sample, it is important to note that there was little variance in attitudes and social norms in this sample. Future studies should further evaluate the importance of these concepts among African American women attempting to manage their hypertension.

Need For Improved Self-Management of Hypertension Among African American Women

African American women with hypertension, particularly those with uncontrolled blood pressures, have an increased risk of negative outcomes (having a stroke or suffering from end stage renal disease).^{1,8} Previous studies have shown that many African American women had multiple risk factors, such as diabetes, obesity, and hypercholesterolemia, which increased their susceptibility for negative outcomes.^{40,41} For these reasons, it is important for this group to use information to reduce and maintain their blood pressure within a safe range. The average blood pressure was elevated in this sample. Despite being on medications to treat hypertension, almost half of the women were unable to achieve blood pressure control. This finding is similar to what other studies have reported – less than half of those in treatment are able to maintain blood pressure less than or equal to 140/90.^{5,6} In fact, there is new evidence available that shows better outcomes when blood pressure is maintained less than or equal to 120/80.⁴²

Self-management interventions that include activities similar to information sharing (peer role modeling, social support, encouragement) have been shown to increase self-management behaviors and reduce blood pressure among African Americans with hypertension and diabetes.⁴³ African American patients with hypertension have reported that encouragement from family members and community health events were facilitators for their blood pressure self-management.⁴⁴ These findings are similar to our finding that

women who reported sharing information were more likely to use information to self-manage their blood pressures. Additional studies are needed to extend this work, to examine the effects of information sharing on self-management behaviors and blood pressure control.

Although it was not measured, some of the women in the sample may have had diabetes, which is another indication to maintain systolic blood pressure at less than 130.⁶ African American women are particularly vulnerable and are more likely to suffer a debilitating condition, such as stroke or renal failure, due to uncontrolled blood pressure.^{2,8} Therefore, it is extremely important that scientists determine what predicts taking action to self-manage blood pressure among African American women. Information sharing may be an avenue for interventions designed to increase information use to self-manage hypertension.

Limitations

A limitation was that the sample was constrained, by design, to this homogenous sample of African American women socially networked via their participation in a church. This focus is critical to advancing culturally- and gender-specific information interventions, but it significantly limits generalizability. Women who are not already connected to a network or connected with a different kind of network, such as a work community, may have different views. Additional studies are needed to explore predictors of information use among other African American women who are not a part of a church community and those who may not have the opportunity to participate in information sharing. Another limitation of this study is that a fuller theoretical model could have been used, specifically one that included measures of perceived behavioral control and self-efficacy. Given these possible limitations, this study was a unique opportunity to access African American women and explore predictors of their use of information to self-manage blood pressure. This study was an initial step towards understanding information use in, a population that suffers poor outcomes related to uncontrolled blood pressure.

Summary

The results yielded new evidence about of information use to self-manage hypertension that had not been previously known in African American women. Information sharing was identified as a significant predictor of information use. Future studies are needed to assess the magnitude and dynamics of the information sharing. Specially, studies are needed to examine the potential emotional benefits of information sharing such as patient empowerment, increased confidence in knowledge of self-management, and feeling uplifted due to helping others. These findings suggest the value of, and can also guide, the creation of interventions focusing on information sharing with family, friends, and patient peers for self-management of blood pressure. It is possible that an intervention to promote information interaction among African may be a useful approach to helping African American women self-manage their hypertension. For example, one potential intervention strategy might be to help women to identify a specific peer with whom to participate in information sharing activities. Another intervention might include teaching women which topics are most important to discuss when participating in an information sharing encounter. It is also possible that describing ways in which to create blood pressure information social networks to promote participation in information sharing may be useful to help women self-manage

their blood pressure. Information sharing interventions are a useful approach to improve self-management of hypertension in African American women, leading to the reduction of health disparities affecting this population.

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References

1. Roger VL, Go AS, Lloyd-Jones DM, et al. Heart disease and stroke statistics--2012 update: a report from the American Heart Association. *Circulation*. 2012; 125(1):e2–e220. [PubMed: 22179539]
2. Mozaffarian D, Benjamin EJ, Go AS, et al. Executive Summary: Heart Disease and Stroke Statistics—2015 Update: A Report From the American Heart Association. *Circulation*. 2015; 131(4):434–441.
3. Roger VL, Go AS, Lloyd-Jones DM, et al. Heart disease and stroke statistics--2011 update: a report from the American Heart Association. *Circulation*. 2011; 123(4):e18–e209. [PubMed: 21160056]
4. Lorig KR, Holman HR. Self-management education: History, definition, outcomes, and mechanisms. *Annals of Behavioral Medicine*. 2003; 26(1):1–7. [PubMed: 12867348]
5. Egan BM, Zhao Y, Axon RN. US trends in prevalence, awareness, treatment, and control of hypertension, 1988-2008. *JAMA: the journal of the American Medical Association*. 2010; 303(20):2043–2050. [PubMed: 20501926]
6. Go A, Mozaffarian D, Roger V, et al. On behalf of the American Heart Association statistics committee and stroke statistics subcommittee. Heart disease and stroke statistics—2013 update: a report from the American Heart Association *Circulation*. 2013; 127(1):e1–e240.
7. Mozaffarian D, Benjamin EJ, Go AS, et al. Executive Summary: Heart Disease and Stroke Statistics—2016 Update A Report From the American Heart Association. *Circulation*. 2016; 133(4):447–454. [PubMed: 26811276]
8. Chobanian AV, Bakris GL, Black HR, et al. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report. *JAMA: the journal of the American Medical Association*. 2003; 289(19):2560–2572. [PubMed: 12748199]
9. Ogedosu T, Schoenthaler A, Vieira DL, Agyemang C, Ogedegbe G. Overcoming barriers to hypertension control in African Americans. *Cleveland Clinic Journal of Medicine*. 2012; 79(1):46–56. [PubMed: 22219234]
10. Bosworth HB, Dudley T, Olsen MK, et al. Racial differences in blood pressure control: potential explanatory factors. *The American journal of medicine*. 2006; 119(1):70.e79–70.e15.
11. Bodenheimer T, Lorig K, Holman H, Grumbach K. Patient self-management of chronic disease in primary care. *Jama*. 2002; 288(19):2469–2475. [PubMed: 12435261]
12. James PA, Oparil S, Carter BL, et al. 2014 evidence-based guideline for the management of high blood pressure in adults: report from the panel members appointed to the Eighth Joint National Committee (JNC 8). *JAMA: the journal of the American Medical Association*. 2014; 311(5):507–520. [PubMed: 24352797]
13. Kazianus E, Ackerman MS, Veinot TC. Localizing chronic disease management: Information work and health translations. *Proceedings of the American Society for Information Science and Technology*. 2013; 50(1):1–10.
14. Montano DE, Kasprzyk D. Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. *Health behavior: Theory, research and practice*. 2015

15. Meadowbrooke CC, Veinot TC, Loveluck J, Hickok A, Bauermeister JA. Information Behavior and HIV Testing Intentions Among Young Men at Risk for HIV/AIDS. *Journal of the Association for Information Science and Technology*. 2014; 65(3):609–620. [PubMed: 25346934]
16. Ajzen I. The theory of planned behavior. *Organizational behavior and human decision processes*. 1991; 50(2):179–211.
17. Peters RM, Templin TN. Theory of planned behavior, self-care motivation, and blood pressure self-care. *Research and theory for nursing practice*. 2010; 24(3):172–186. [PubMed: 20949834]
18. Ross S, Walker A, MacLeod M. Patient compliance in hypertension: role of illness perceptions and treatment beliefs. *Journal of human hypertension*. 2004; 18(9):607–613. [PubMed: 15029218]
19. Blanchard C, Fisher J, Sparling P, et al. Understanding physical activity behavior in African American and Caucasian college students: an application of the theory of planned behavior. *Journal of American College Health*. 2008; 56(4):341–346. [PubMed: 18316275]
20. Fishbein M, Ajzen I. Belief, attitude, intention, and behavior: An introduction to theory and research. 1977
21. Scisney-Matlock M. Reliability and validity of the Lifestyle Hypertension Cognitive Representations scale. *The ABNF journal*. 1998; 9(2):28–34. [PubMed: 9677864]
22. Bosworth HB, Powers BJ, Oddone EZ. Patient self-management support: novel strategies in hypertension and heart disease. *Cardiology clinics*. 2010; 28(4):655–663. [PubMed: 20937448]
23. Scisney-Matlock M. Bootstrap methodology in validating accuracy of cognitive representations of hypertension scales. *Journal of theory construction & testing*. 1999; 3(1):20.
24. Lukoschek P. African Americans' beliefs and attitudes regarding hypertension and its treatment: a qualitative study. *Journal of Health Care for the Poor and Underserved*. 2003; 14(4):566–587. [PubMed: 14619556]
25. Scisney-Matlock, M., Brough, E., Daramola, O., Jones, M., Jones, L., Holmes, S. Therapeutic Lifestyle Changes to Decrease Unhealthy Eating Patterns and Improve Blood Pressure in African Americans. *Hypertension in High Risk African Americans*. Springer; 2015. p. 35-58.
26. Fleury J, Lee SM. The Social Ecological Model and Physical Activity in African American Women. *American Journal of Community Psychology*. 2006; 37(1-2):141–154. [PubMed: 16680542]
27. Case, DO. Looking for information: A survey of research on information seeking needs and behavior. Emerald Group Pub Limited; 2012.
28. Lambert SD, Loiselle CG. Health Information—Seeking Behavior. *Qualitative Health Research*. 2007; 17(8):1006–1019. [PubMed: 17928475]
29. Veinot TC. “We have a lot of information to share with each other”: Understanding the value of peer-based health information exchange. *Information Research*. 2010; 15(4):10.
30. Veinot TC, Meadowbrooke CC, Loveluck J, Hickok A, Bauermeister JA. How “community” matters for how people interact with information: mixed methods study of young men who have sex with other men. *Journal of medical Internet research*. 2013; 15(2)
31. Grim CE, Grim CM. The Omron Elite 7300W home blood pressure monitor passes the European Society of Hypertension International Validation Protocol for women and men. *Blood pressure monitoring*. 2009; 14(2):87–90. [PubMed: 19305188]
32. Meadowbrooke CC, Veinot TC, Loveluck J, Hickok A, Bauermeister JA. Information behavior and HIV testing intentions among young men at risk for HIV/AIDS. *Journal of the Association for Information Science and Technology*. 2014; 65(3):609–620. [PubMed: 25346934]
33. King JB. The impact of patients' perceptions of high blood pressure on attendance at screening: An extension of the health belief model. *Social Science & Medicine*. 1982; 16(10):1079–1091. [PubMed: 7112160]
34. Richards CR, Richards CR, Tucker CM, Brozyna A, Ferdinand LA, Shapiro MA. Subjective Norms Questionnaire. Social and cognitive factors associated with preventative health care behaviors of culturally diverse adolescents. 2009; 101(3):236–242.
35. Peng CYJ, So TSH. Logistic regression analysis and reporting: A primer. *Understanding Statistics: Statistical Issues in Psychology, Education, and the Social Sciences*. 2002; 1(1):31–70.

36. Harvey I, Schulz A, Israel B, et al. The Healthy Connections project: a community-based participatory research project involving women at risk for diabetes and hypertension. *Progress in community health partnerships: research, education, and action*. 2009; 3(4):287–300.
37. Dennis CL. Peer support within a health care context: a concept analysis. *International journal of nursing studies*. 2003; 40(3):321–332. [PubMed: 12605954]
38. Taylor SD, Bagozzi RP, Gaither CA. Gender differences in the self-regulation of hypertension. *Journal of behavioral medicine*. 2001; 24(5):469–487. [PubMed: 11702360]
39. Turner BJ, Hollenbeak C, Weiner MG, Ten Have T, Roberts C. Barriers to adherence and hypertension control in a racially diverse representative sample of elderly primary care patients. *Pharmacoepidemiology and drug safety*. 2009; 18(8):672–681. [PubMed: 19479901]
40. Braun LT, Wilbur J, Buchholz SW, et al. Cardiovascular Risk in Midlife African American Women Participating in a Lifestyle Physical Activity Program. *Journal of Cardiovascular Nursing*. 2016; 31(4):304–312. [PubMed: 27074650]
41. Howard G, Safford MM, Moy CS, et al. Racial Differences in the Incidence of Cardiovascular Risk Factors in Older Black and White Adults. *J Am Geriatr Soc*. 2016
42. Cushman WC, Whelton PK, Fine LJ, et al. SPRINT Trial Results Latest News in Hypertension Management. *Hypertension*. 2016; 67(2):263–265. [PubMed: 26553234]
43. Tang TS, Funnell MM, Sinco B, Spencer MS, Heisler M. Peer-led, empowerment-based approach to self-management efforts in diabetes (PLEASED): a randomized controlled trial in an African American community. *The Annals of Family Medicine*. 2015; 13(Suppl 1):S27–S35. [PubMed: 26304969]
44. Flynn SJ, Ameling JM, Hill-Briggs F, et al. Facilitators and barriers to hypertension self-management in urban African Americans: perspectives of patients and family members. *Patient preference and adherence*. 2013

Table I**Sample Characteristics**

	(n = 94) % (n)
Income	
Less than 30,000	22.3% (21)
30,000 – 59,999	32.9% (31)
Greater than 60,000	31.9% (30)
Preferred not to say	10.6% (10)
Relationship Status	
Single or Never Married	12.8% (12)
Married, Partner, or Living with Another	42.6% (40)
Separated, Widowed, or Divorced	39.4% (37)
Education	
High School Graduate or Some College	28.7% (27)
College Graduate	28.7% (27)
Advanced Degree	30.4% (30)
Occupational Status	
Full time	38.3% (36)

Table II
Study Measures

Measure	Number of Items	Score range	Mean (SD)
Information Use	8	0-8	2.05 (1.67)
Information Seeking	8	8-34	19.61 (5.64)
Attitude	3	10 -15	14.43 (0.92)
Social Norms	5	17-25	23.80 (1.85)
Information Sharing	5	0-5	1.52 (1.22)

Table III
Reasons For Information Use

	(n = 94) % (n)
Change overall approach to maintaining health	47% (44)
Monitor and track blood pressure at home	33% (31)
Understand blood pressure test results	31% (29)
Plan or make high blood pressure-friendly meals	28% (26)
Evaluate my risk for high blood pressure	20% (19)
Decide how to treat high blood pressure	17% (16)
Ask a doctor questions, or get a second opinion from another doctor	17% (16)
Decide whether to see a doctor, nurse or other health care professional	11% (10)

Table IV
Linear Regression Explaining Information Use to Self-manage Blood Pressure

Step	Variable	Beta	P Value
1	Occupational Status	-.16	.16
	Income	.17	.15
	Education	.06	.58
2	Occupational Status	-.13	.23
	Income	.16	.14
	Education	-.02	.84
	Information Seeking	.37	.002
3	Occupational Status	-.13	.24
	Income	.13	.52
	Education	-.07	.28
	Information Seeking	.34	.002
	Attitude	-.06	.62
	Social Norms	.26	.03
4	Occupational Status	-.05	.62
	Income	.04	.65
	Education	-.11	.28
	Information Seeking	.17	.62
	Attitude	-.10	.62
	Social Norms	.22	.05
	Information Sharing	.46	<.001

Step 1: $F(3, 86) = 1.11, p = .35, R^2 = 0.04$

Step 2: $F(4, 82) = 3.47, p = .01, R^2 = 0.15$

Step 3: $F(6, 80) = 3.31, p = .01, R^2 = 0.20$

Step 4: $F(7, 79) = 6.29, p < .001, R^2 = 0.36$