FACTORS INFLUENCING MEDICATION COMPLIANCE AMONG HYPERTENSIVE OLDER AFRICAN AMERICAN ADULTS

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Objective: The purpose was to gain an in-depth understanding of the factors influencing hypertension medication compliance among hypertensive older African Americans.

Design: Qualitative descriptive. In depth semi-structured interviews were conducted with 28 patients. Interviews were recorded, transcribed, and analyzed by the Colaizzi-style method.

Setting: Patients at a cardiovascular clinic in the Southeast.

Patients: 28 African American males and females aged ≥55 with controlled and uncontrolled hypertension were recruited and interviewed.

Results: Stroke Heart Attack and Prevention Program (SHAPP) patients reported self-efficacy, patient-provider communication, and social support contributed to their hypertension regimen compliance. Patients reported higher self-efficacy contributed to their hypertension control. Patients also reported that open communication with the SHAPP nurses and social support from their family, friends, and coworkers provided emotional support, information and guidance to assist them in being compliant with their hypertension management regimen.

Conclusions: Our results can inform SHAPP providers and staff about patients' hypertension medication compliance, can improve patient-provider communication in other SHAPP clinics, and can aid in future patient hypertension management. Our results also suggest the importance of self-efficacy, patient-provider communication, and social support in hypertension regimen compliance. (*Ethn Dis.* 2013;23[4]:469–473)

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INTRODUCTION

Hypertension (HTN), a major health concern, affects more than 76 million Americans or approximately 1 in 3 adults in their lifetime.[1] Among adults surveyed with HTN, 69.1% of adults reported their HTN as undertreated, 45.4% of adults reported controlling their HTN, and 54.6% reported an inability to control their HTN.[1] Older adults reported the highest rates of uncontrolled HTN and the highest HTN prevalence.[1] African Americans reported poorer HTN control compared to Whites.[1]

Medication adherence or compliance is defined as "the extent to which a person's behavior—taking medications, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider."[2] Medication compliance related to HTN remains a complex issue for patients and physicians; numerous factors such as a patient's positive experiences with a physician, patient's trust in a physician, empathy of a physician, social support group, and financial aid improved the patients' HTN medication compliance.[2] Regardless, patients need self-motivation to control their HTN and adhere to their provider's treatment plan. Patient-provider communication also influences patient compliance, and physicians could encounter difficulty communicating with nurses or other health care professionals to reinforce patient instructions.[3] If clinicians fail to reinforce messages about behavioral risk factors for HTN and the importance of managing blood pressure (BP), or fail to educate their patients about lifestyle changes, non-compliance may occur.[3]

A patient's self-efficacy also influences compliance. Self-efficacy is defined as one's belief or confidence to achieve a certain task or behavior, such as blood pressure control.[4] A previous study focused on patients' level of self-efficacy in terms of managing HTN and making health behavior changes.[5] African American women reported low self-efficacy to improve their nutrition and physical activity and manage their HTN.[5]

Patient education and disease management programs with individual counseling improved compliance.[6–8] At post-test intervals, BP decreased to normal levels and patients improved compliance in previous studies.[6–7] These studies demonstrated improved blood pressure control using quantitative measures. However, the authors did not use qualitative methods to describe patient experiences influencing HTN control. Using qualitative methods to identify African Americans' experiences with HTN helps researchers design culturally competent interventions and HTN education strategies for African Americans.[9–12]

Our study contributes to the literature by using qualitative interview methods and sampling from older African Americans adults. The conceptual framework for our study was phenomenology, which aims at a deeper understanding of the meaning of everyday experiences as patients describe the details of an experience.[13] Phenomenology emphasizes the perception of what is happening[14] and its application benefits clinical practice as health care providers can gain

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METHODS

Research Design

Our research design was a descriptive qualitative study describing social phenomena so as to contribute to a deeper understanding about them.[14] We investigated the phenomenon of managing HTN with the goal of contributing to an in-depth understanding of older African American adults' compliance. This qualitative approach was chosen as it is more effective in elucidating an individual's experiences than quantitative survey methods.

Our research question was: "What are the experiences influencing the compliance among older African Americans diagnosed with HTN?" We asked the supporting questions during the interview: "1. Tell me about your experiences in this clinic;" 2. "Tell me how you control your blood pressure," and; 3. "What lessons have you learned from living with high blood pressure?"

Description of Sample Population and Surrounding Area

The patients were enrolled in a state health department clinic in a Southeastern city. The community consisted of a majority White population and low-income African Americans residing in close proximity to the clinic; 30.8% of the population lived below the poverty level.[15]

Site of Data Collection

A state-funded cardiovascular health clinic served as the site of data collection. The clinic participated in the state's Stroke Heart Attack and Prevention Program (SHAPP). The program aims to reduce illness and death from cardiovascular disease.[16] It is an awareness, detection, treatment and control program targeting low-income, uninsured or underinsured patients with uncontrolled high blood pressure.[16] The clinic accepted patients by physician referral or on a walk-in basis if patients met the screening criteria of HTN. A nurse offered eligible patients a six month supply of blood pressure medications for $30 and guidance on lifestyle changes. After an initial diagnosis, patients visited the clinic for continual BP checks, nutrition and weight management counseling by trained nurses.

Sampling

We used purposive sampling to select patients.[14] Inclusion criteria were African American adults aged $\geq$55, attending the cardiovascular health clinic, and with controlled HTN ($<$140/90 mm Hg) or uncontrolled HTN ($>$140/90 mm Hg) from the last 2 visits in the medical records. Exclusion criteria were non-fluency in English, multiple chronic diseases other than diabetes, or lacking the cognitive ability to complete the interview. No patients met the exclusion criteria.

Number of Patients

The number of patients necessary for a qualitative study depends on the richness of the interviews and the extent of the patient's willingness to respond to the interview questions.[17] We needed to interview enough patients to understand HTN medication compliance; when 28 interviews had been conducted, similar patterns and theoretical saturation occurred, thus designating adequate number for analysis. [17] Theoretical saturation was the "point at which gathering more data about a theoretical category revealed no new properties nor yields any further theoretical insights about the emerging theory."[18] The small sample size was suitable because qualitative research produces a great amount of detailed data about a small number of people.[19]

Training and Recruitment

Training of the nurse and clinic staff occurred prior to the advertisement, recruitment, and interviewing of patients during a 30-minute meeting. Also, the researcher, SHAPP nurse, and county health department manager discussed the screening inclusion criteria and exclusion criteria for recruitment.

The clinic staff screened patients from medical records to determine eligibility for the study. After completion of a regularly scheduled visit with the nurse, the nurse introduced the study and the researcher to prospective patients in a separate room. The patient then decided whether to participate in the study; all prospective patients agreed to participate.

Data Collection Procedures

Before starting the interview, we obtained informed consent from each patient and assigned each patient a pseudonym for the reporting of results. After signing the informed consent form, the researcher provided patients with a $20 gift card before starting the interview. A University Institutional Review Board approved the study prior to data collection.

We used face-to-face semi-structured interviews for data collection[13] and verified patient answers to ensure accuracy. We conducted preliminary interviews with four patients to test the

Table 1. Demographic characteristics of the patients ($N = 28$)

Characteristics	*n*	%
Sex		
Male	6	21.43
Female	22	78.57
Age, years		
55–59	11	39.29
60–64	8	28.57
65–69	4	14.29
70–74	4	14.29
≥75	1	3.57
Education level		
<high school	3	10.71
Some high school	7	25.00
High school graduate	13	46.43
Some college	5	17.86
Employment status		
Unemployed	13	46.43
Employed	11	39.29
Retired	4	14.29
Insurance status		
Insured	7	25.00
Uninsured	21	75.00
Hypertension control		
Controlled	24	85.71
Uncontrolled	4	14.29

interview protocol and timing of interviews, determine proper wording of questions, and analyze preliminary themes before conducting the interviews with the sample.

Data Analysis Procedures

After conducting interviews, the data were immediately transcribed and analyzed. Our sole reliance on verbatim transcripts reflected three methodological criteria of phenomenological interpretation – the emic approach, autonomy of the text, and bracketing.[20] We made no attempt to validate a patient's description from external sources since the patient's experiences are their truth. The interpretation did not integrate hypotheses, inferences, or assumptions outside the transcript.

Using the Colaizzi-style method of analysis (ie, ''reading the descriptions, extracting the significant statements, formulating meanings, organizing formulated meanings into clusters of themes, exhaustively describing the investigated phenomena [of HTN], and validating the exhaustive description by each patient.''[21]), we applied the following steps:

1. All patients' oral or written descriptions were read in order to obtain a feel for the whole;
2. Significant statements and phrases pertaining directly to the phenomenon were extracted;
3. Meanings were formulated from significant statements and phrases;
4. Meanings were clustered into themes, and;
5. Results were integrated into an exhaustive description of the phenomenon.

RESULTS

We conducted qualitative interviews with 28 African American patients. Patients ranged in age from 55 to 75 years, with a mean age of 62 ($SD = 5.62$); the demographics of the patients are shown in Table 1. The patients lived with HTN for an average of 18 years. Twenty-two of 28 patients reported HTN medication compliance in the SHAPP program. When patients discussed their experiences with HTN management, three themes emerged – self-efficacy, patient-provider communication, and social support – as the factors influencing their hypertension regimen compliance.

Theme 1: Self-efficacy

Twenty-two of 28 patients reported high self-efficacy in their HTN medication compliance. Patients believed in their ability to control their blood pressure. Prior to enrolling in the SHAPP program, patients reported low self-efficacy and an inability to make healthy behavior changes. While enrolled in the SHAPP program, patients reported a strong confidence to follow the nurse's instructions, make recommended behavior changes, and take their prescribed medications. Patients explained their initial noncompliance when first visiting the SHAPP clinic resulted from a refusal to accept their HTN diagnosis and change their unhealthy lifestyle behaviors. Also, patients explained their increased awareness and knowledge of the consequences of an unhealthy lifestyle and the risk factors of a stroke contributed to their HTN medication compliance.

Theme 2: Patient-provider Communication

All 28 patients reported positive communication with the nurse as a factor in controlling their blood pressure. The nurse talked about the purpose of taking blood pressure medication and provided patients recommendations for nutrition, physical activity, and stress management. The patients reported the nurse listened to their concerns and treated them with kindness, compassion, and respect. Patients felt comfortable asking the nurse questions about the instructions for taking their medications and HTN management. With knowledge of the consequences of uncontrolled HTN, patients believed in the importance of taking their blood pressure medicines.

Theme 3: Social Support

Twenty-four of 28 patients reported social support influenced their HTN medication compliance. Patients reported sources of social support from their spouse, children, grandchildren, relatives, friends, coworkers, and clinic staff. The sources of social support provided them with encouragement to manage their HTN and reminded them to take their blood pressure medications. They also encouraged them to lower their salt intake, manage their stress, drink water instead of sodas, and walk with them. The positive, supportive environment in the clinic contributed to their compliance with the nurse's instructions to control their HTN.

Overall, the three main themes contributing to the SHAPP patients' HTN regimen compliance were self-efficacy, patient-provider communication, and social support.

DISCUSSION

Overall, the three main themes contributing to the SHAPP patients' HTN regimen compliance were self-efficacy, patient-provider communication, and social support. The positive patient experiences, including the high patient-reported compliance rates, may indicate success of the SHAPP program.

Theme 1: Self-efficacy

Self–efficacy was a main influence in the patients' regimen compliance. Patients with high self-confidence felt empowered to control their blood pressure by taking their prescribed medicines and making lifestyle changes. Previous research addressed the positive association between high self-efficacy and improvement in nutrition and exercise in hypertensive women.[22–24] Many patients remarked the nurses gave them the medications and advised them about diet and exercise, but ultimately the decision to follow the regimen lies in their hands. The theme of personal responsibility was also common across the literature.[24–29] Patients' high self-efficacy contributed to their motivation to take their blood pressure medicines and control their blood pressure. After seeing the positive results of making lifestyle changes in their daily life, they remained motivated to continue the behavior changes.

Theme 2: Patient-provider Communication

The patient accounts support the importance of the nurse's compassionate nature, willingness to talk with patients in a gentle manner, and treatment of them as individuals rather than a disease to be cured. Patients felt the nurse accepted them despite their low-income, uninsured status. The nurse used active listening skills to pay attention to the details and facial expressions of the patients. A strong rapport formed between the nurse and the patient during the clinic visit. High quality patient-provider communication also influenced the patient's understanding of the provider's instructions and the purpose of taking the medications.

Our results complemented a recent qualitative study on the SHAPP program in another health district in the state[30] by adding information from an older African American population. In the previous study,[30] authors used mixed methods to interview physicians, nurses, and patients about their experiences with the program in different health districts. Patients described the great success of the program in reducing noncompliance and improving blood pressure control rates among patients.

Theme 3: Social Support

Social support was another important component of the patients' experiences with compliance. Family and friends showed genuine concern for the patient and provided accountability for their actions. They provided patients with encouragement when they lacked motivation to achieve their goals and provided information for healthy eating. The support from family and friends empowered the patients to control their high blood pressure and allowed them to feel valued as individuals. The results suggest people can and will make changes with adequate support from their environment.

STRENGTHS AND LIMITATIONS

First, the design allowed for the description of the factors influencing HTN medication compliance of older adults. Second, the design provided descriptive rather than statistical explanations of the factors influencing HTN medication compliance among African Americans. Third, the design will assist public health researchers and health educators in designing culturally sensitive interventions aimed at lowering HTN among older adults.

We acknowledge the limitations of using a qualitative research design for the study. One limitation was that the results represented experiences of the SHAPP patients and not the nursing or clinic staff. Participant bias was another limitation. Patients resided in the Southeast, visited a state-funded HTN control clinic, and agreed to converse in an in-depth interview. They were of low-income status, low education, and uninsured. Patients may feel the need to provide the interviewer with socially desirable answers.

Another limitation is the use of a convenience sample. We interviewed patients following their clinic appointment. Our results apply to older African American patients interviewed at the SHAPP clinic; results may differ from patients who missed their appointment, left the clinic, were not involved in the SHAPP program, or were untreated for HTN.

IMPLICATIONS FOR RESEARCH AND POLICY

These study results may inform health care providers in the SHAPP program about compliance among older African Americans attending the clinic. The study also provides state legislators with evidence of the SHAPP program's effectiveness in improving HTN medication compliance from the patient's perspective at one clinic. At the time of data collection, one nurse worked at the

health department clinic with a district nurse and physician providing occasional patient consultations. Our results may help to advocate for increased recruitment and retention of nurses, dietitians, and staff members in SHAPP clinics across the state.

CONCLUSION

In conclusion, our results contribute to understanding HTN medication and regimen compliance from the patient's perspective and aid future efforts in designing culturally sensitive HTN management strategies. By understanding African Americans' unique perceptions, the study helps to better understand and improve medication compliance and lifestyle change modifications among older African Americans in SHAPP.

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