Acceptance and Expectations of Information Technology to Support Hypertension Self-Care in African Americans: A Qualitative Inquiry

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Abstract: The aim of this study was to explore African American patients’ experiences managing their hypertension and to investigate their perspective on how technology might be used to improve hypertension self-management. We conducted and analyzed four focus groups with 32 African American participants diagnosed with hypertension to develop a culturally tailored content for a home-based telecare program aimed at improving hypertension care in African Americans. The discussion about the use of technology was well accepted, demonstrated culturally and gender specific barriers in hypertension care, and generated a comprehensive list of concepts and features to be included to a home-based computerized hypertension telemanagement system.

Background: Hypertension is a chronic condition that affects approximately 41% of African American men and 44% of African American women. Focus group methodology has been widely used in healthcare and specifically in hypertension research. However, this approach has not been utilized to explore African American hypertensive patients’ views on using technology for self-care management. Although there are effective medications available to manage the disease, poor adherence to treatment plans is a challenging problem. Studies have suggested that improved monitoring of symptoms by the patient resulted in quicker treatment of symptoms, improved quality of life, and reduced utilization of healthcare resources.

A computerized self-care telemanagement system can be designed to help patients follow their self-care plans, help health care providers monitor their patients’ self-management process according to current clinical guidelines, and provide continuous education to patients about their chronic disease. To ensure successful implementation of such a system we conducted a qualitative inquiry aimed at establishing culturally tailored specifications of this telecare system.

Methods: African Americans with a clinical diagnosis of hypertension were invited to participate in the study. Four focus groups were conducted, two with women (n=18) and two with men (n=14). Discussion topics included knowledge of hypertension, experiences utilizing the healthcare system, self-management experiences, and views on using technology to address self-management issues. Using a Framework Analysis technique, each group was analyzed and then compared with other groups to elicit and organize emerging common theses and differences between groups.

Results: Several categories emerged across the groups, including Barriers, Facilitators, Consumer Suggestions and Technology. Participants identified six key health care components and indicated the skills and tasks they perceived as steps towards managing their hypertension. The health care components included: (1) the patient-physician relationship, (2) medication compliance, and (3) lifestyle changes, (4) healthy eating habits, (5) Information and education, (6) Support system. These components were discussed in relation to acquiring knowledge and skills, and then related to the different types of technology options and features. The focus group participants described ways to eliminate barriers and how technology might enhance their ability to master each of the key health care components towards improved health. Participants conceived of numerous ways technology could assist their self-care efforts including devices to provide reminders, reprimands, education, advice, monitoring, behavior management and support. This device most frequently took the shape of a portable robot or electronic “buddy.” They expected that acquiring an electronic buddy would improve their self-care and reduce their life stress at the same time.

There were gender similarities and differences among the groups of women and men. Both expressed their fears of experiencing a catastrophic event and dying prematurely of high blood pressure. Men discussed stress and depression more often than women, while women expressed proactive approaches to managing their disease.

Conclusions: With African Americans, technological interventions to enhance hypertension self-care are likely to succeed if they provide comprehensive multidisciplinary support in a user friendly and personalized manner. We believe that the use of home-based telecare systems by African Americans has the potential to improve healthcare outcomes by assisting patients to adhere to dietary and medication regiments, improving patient-physician relationships, and supporting healthier lifestyles.